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STATISTICAL OFFICE OF THE REPUBLIC OF SERBIA

BULLETIN

RESEARCH AND DEVELOPMENT IN THE REPUBLIC OF SERBIA, 2016

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Research and development in the Republic of Serbia, 2016

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624 **BULLETIN** **624**

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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 2016, the territory of the Republic of Serbia, Srbija – sever, Srbija – jug and to the regions: Beogradski region, Region Vojvodine, Region Sumadije and Zapadne Srbije, and Region Juzne i Istocne 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, 2017

the Director

Miladin Kovačević, PhD

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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 first week of March. Three questionnaires are used for that purpose, the first relating to business entities and centres of extraordinary values (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 March of the current year, and 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;
- Centre of extraordinary values: 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; - tertiary education institutions;
- 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.

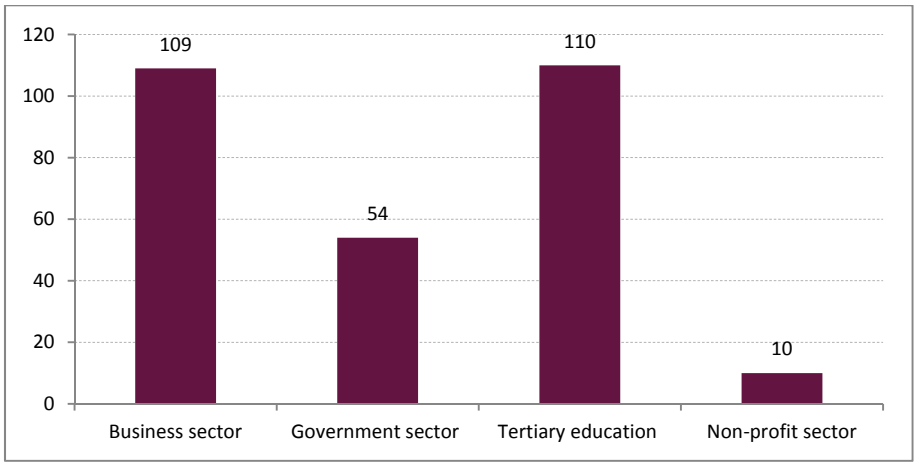
Symbols

-	= nil
…	= data not available
1)	= footnote
n	= average
( )	= incomplete, i.e. insufficiently checked data

Research and development, 2016

1.1. R&D organizations by sectors and fields of science, 2016

	Total	Business sector	Government sector	Tertiary education	Non-profit sector
REPUBLIC OF SERBIA	**283**	**109**	**54**	**110**	**10**
Natural sciences	47	18	11	17	1
Engineering and technology	107	72	9	23	3
Medical and health sciences	17	7	3	7	-
Agricultural sciences	27	9	11	6	1
Social sciences	63	3	9	46	5
Humanities	22	-	11	11	-
SRBIJA – SEVER	217	76	52	79	10
Natural sciences	40	13	11	15	1
Engineering and technology	70	46	8	13	3
Medical and health sciences	15	7	3	5	-
Agricultural sciences	23	7	10	5	1
Social sciences	50	3	9	33	5
Humanities	19	-	11	8	-
Beogradski region	**172**	**61**	**47**	**57**	**7**
Natural sciences	33	9	11	13	-
Engineering and technology	53	37	5	8	3
Medical and health sciences	13	7	3	3	-
Agricultural sciences	17	5	8	4	-
Social sciences	38	3	9	22	4
Humanities	18	-	11	7	-
Region Vojvodine	**45**	**15**	**5**	**22**	**3**
Natural sciences	7	4	-	2	1
Engineering and technology	17	9	3	5	-
Medical and health sciences	2	-	-	2	-
Agricultural sciences	6	2	2	1	1
Social sciences	12	-	-	11	1
Humanities	1	-	-	1	-
SRBIJA – JUG	66	33	2	31	-
Natural sciences	7	5	-	2	-
Engineering and technology	37	26	1	10	-
Medical and health sciences	2	-	-	2	-
Agricultural sciences	4	2	1	1	-
Social sciences	13	-	-	13	-
Humanities	3	-	-	3	-
Region Šumadije i Zapadne Srbije	**35**	**19**	**1**	**15**	**-**
Natural sciences	5	4	-	1	-
Engineering and technology	18	14	-	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	**31**	**14**	**1**	**16**	**-**
Natural sciences	2	1	-	1	-
Engineering and technology	19	12	1	6	-
Medical and health sciences	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, 2016 (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	**23542**	**11533**	**16592**	**8032**	**1819**	**876**	**3153**	**1632**	**567**	**203**	**1406**	**790**
Natural sciences	5503	2757	4110	2016	345	160	585	315	104	38	359	228
Engineering and technology	7419	2770	4860	1809	670	227	1154	445	244	62	486	227
Medical and health sciences	2755	1682	2350	1406	134	85	109	80	55	39	107	72
Agricultural sciences	2523	1267	1175	594	291	145	707	368	62	21	288	139
Social sciences	3552	1987	2666	1400	220	140	478	333	85	36	103	78
Humanities	1790	1070	1431	807	159	119	120	91	17	7	63	46
Business sector	**3849**	**1246**	**2071**	**632**	**701**	**237**	**581**	**189**	**243**	**79**	**248**	**109**
Natural sciences	1092	287	723	155	167	57	111	43	39	7	52	25
Engineering and technology	2426	769	1266	425	429	117	425	122	152	40	149	65
Medical and health sciences	130	87	11	8	76	47	6	3	35	27	2	2
Agricultural sciences	142	61	36	17	15	7	32	16	15	5	44	16
Social sciences	59	42	35	27	14	9	7	5	2	-	1	1
Government sector	**5378**	**2853**	**3011**	**1727**	**413**	**190**	**1329**	**636**	**127**	**35**	**498**	**265**
Natural sciences	2011	1164	1533	892	72	34	269	145	35	15	102	78
Engineering and technology	1256	532	371	190	138	54	461	180	61	9	225	99
Medical and health sciences	176	136	153	115	4	4	15	14	-	-	4	3
Agricultural sciences	1230	619	366	217	182	89	513	238	25	8	144	67
Social sciences	305	163	244	118	11	5	43	35	2	1	5	4
Humanities	400	239	344	195	6	4	28	24	4	2	18	14
Tertiary education	**14284**	**7415**	**11502**	**5667**	**701**	**445**	**1233**	**802**	**192**	**89**	**656**	**412**
Natural sciences	2400	1306	1854	969	106	69	205	127	30	16	205	125
Engineering and technology	3724	1463	3221	1193	103	56	261	140	29	13	110	61
Medical and health sciences	2449	1459	2186	1283	54	34	88	63	20	12	101	67
Agricultural sciences	1151	587	773	360	94	49	162	114	22	8	100	56
Social sciences	3170	1769	2381	1250	191	122	425	291	78	35	95	71
Humanities	1390	831	1087	612	153	115	92	67	13	5	45	32
Non-profit sector	**31**	**19**	**8**	**6**	**4**	**4**	**10**	**5**	**5**	**-**	**4**	**4**
Engineering and technology	13	6	2	1	-	-	7	3	2	-	2	2
Social sciences	18	13	6	5	4	4	3	2	3	-	2	2
SRBIJA – SEVER	19703	9588	13646	6564	1621	774	2780	1388	510	183	1146	679
Natural sciences	5039	2493	3726	1792	329	151	545	292	91	31	348	227
Engineering and technology	6032	2227	3936	1471	558	177	1013	366	214	57	311	156
Medical and health sciences	2062	1295	1736	1067	95	60	69	57	55	39	107	72
Agricultural sciences	2375	1191	1099	558	286	143	680	346	62	21	248	123
Social sciences	2943	1660	2153	1142	218	140	413	281	71	28	88	69
Humanities	1252	722	996	534	135	103	60	46	17	7	44	32
Business sector	**3485**	**1120**	**1944**	**579**	**656**	**221**	**502**	**153**	**211**	**74**	**172**	**93**
Natural sciences	1051	264	713	147	162	53	98	37	31	3	47	24
Engineering and technology	2179	705	1166	388	392	106	379	108	128	39	114	64
Medical and health sciences	130	87	11	8	76	47	6	3	35	27	2	2
Agricultural sciences	66	22	19	9	12	6	12	-	15	5	8	2
Social sciences	59	42	35	27	14	9	7	5	2	-	1	1
Government sector	**5166**	**2730**	**2944**	**1685**	**387**	**177**	**1303**	**614**	**127**	**35**	**405**	**219**
Natural sciences	2011	1164	1533	892	72	34	269	145	35	15	102	78
Engineering and technology	1069	425	323	161	114	42	437	159	61	9	134	54
Medical and health sciences	176	136	153	115	4	4	15	14	-	-	4	3
Agricultural sciences	1205	603	347	204	180	88	511	237	25	8	142	66
Social sciences	305	163	244	118	11	5	43	35	2	1	5	4
Humanities	400	239	344	195	6	4	28	24	4	2	18	14
Tertiary education	**11021**	**5719**	**8750**	**4294**	**574**	**372**	**965**	**616**	**167**	**74**	**565**	**363**
Natural sciences	1977	1065	1480	753	95	64	178	110	25	13	199	125
Engineering and technology	2771	1091	2445	921	52	29	190	96	23	9	61	36
Medical and health sciences	1756	1072	1572	944	15	9	48	40	20	12	101	67
Agricultural sciences	1104	566	733	345	94	49	157	109	22	8	98	55
Social sciences	2561	1442	1868	992	189	122	360	239	64	27	80	62
Humanities	852	483	652	339	129	99	32	22	13	5	26	18
Non-profit sector	**31**	**19**	**8**	**6**	**4**	**4**	**10**	**5**	**5**	**-**	**4**	**4**
Engineering and technology	13	6	2	1	-	-	7	3	2	-	2	2
Social sciences	18	13	6	5	4	4	3	2	3	-	2	2

2.1. Full-time employees engaged in R&D activities, by sectors, fields of science and sex, 2016 (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	**13405**	**6704**	**8952**	**4535**	**1198**	**568**	**2033**	**982**	**374**	**129**	**848**	**490**
Natural sciences	3845	2025	2728	1426	299	147	496	261	77	26	245	165
Engineering and technology	3748	1371	2073	811	447	134	799	253	144	34	285	139
Medical and health sciences	1323	852	1095	695	95	60	69	57	40	29	24	11
Agricultural sciences	1440	747	747	394	156	85	324	175	42	14	171	79
Social sciences	1852	1009	1357	691	66	39	291	195	58	20	80	64
Humanities	1197	700	952	518	135	103	54	41	13	6	43	32
Business sector	**1960**	**717**	**736**	**296**	**591**	**206**	**375**	**101**	**135**	**52**	**123**	**62**
Natural sciences	431	144	157	52	132	49	95	34	24	2	23	7
Engineering and technology	1300	433	529	208	357	95	255	59	63	19	96	52
Medical and health sciences	130	87	11	8	76	47	6	3	35	27	2	2
Agricultural sciences	40	11	4	1	12	6	12	-	11	4	1	-
Social sciences	59	42	35	27	14	9	7	5	2	-	1	1
Government sector	**4329**	**2319**	**2698**	**1551**	**211**	**103**	**978**	**462**	**115**	**31**	**327**	**172**
Natural sciences	2011	1164	1533	892	72	34	269	145	35	15	102	78
Engineering and technology	850	310	210	96	59	23	395	133	60	9	126	49
Medical and health sciences	176	136	153	115	4	4	15	14	-	-	4	3
Agricultural sciences	587	307	214	135	59	33	228	111	14	4	72	24
Social sciences	305	163	244	118	11	5	43	35	2	1	5	4
Humanities	400	239	344	195	6	4	28	24	4	2	18	14
Tertiary education	**7085**	**3649**	**5510**	**2682**	**392**	**255**	**670**	**414**	**119**	**46**	**394**	**252**
Natural sciences	1403	717	1038	482	95	64	132	82	18	9	120	80
Engineering and technology	1585	622	1332	506	31	16	142	58	19	6	61	36
Medical and health sciences	1017	629	931	572	15	9	48	40	5	2	18	6
Agricultural sciences	813	429	529	258	85	46	84	64	17	6	98	55
Social sciences	1470	791	1072	541	37	21	238	153	51	19	72	57
Humanities	797	461	608	323	129	99	26	17	9	4	25	18
Non-profit sector	**31**	**19**	**8**	**6**	**4**	**4**	**10**	**5**	**5**	**-**	**4**	**4**
Engineering and technology	13	6	2	1	-	-	7	3	2	-	2	2
Social sciences	18	13	6	5	4	4	3	2	3	-	2	2
Region Vojvodine	**6298**	**2884**	**4694**	**2029**	**423**	**206**	**747**	**406**	**136**	**54**	**298**	**189**
Natural sciences	1194	468	998	366	30	4	49	31	14	5	103	62
Engineering and technology	2284	856	1863	660	111	43	214	113	70	23	26	17
Medical and health sciences	739	443	641	372	-	-	-	-	15	10	83	61
Agricultural sciences	935	444	352	164	130	58	356	171	20	7	77	44
Social sciences	1091	651	796	451	152	101	122	86	13	8	8	5
Humanities	55	22	44	16	-	-	6	5	4	1	1	-
Business sector	**1525**	**403**	**1208**	**283**	**65**	**15**	**127**	**52**	**76**	**22**	**49**	**31**
Natural sciences	620	120	556	95	30	4	3	3	7	1	24	17
Engineering and technology	879	272	637	180	35	11	124	49	65	20	18	12
Agricultural sciences	26	11	15	8	-	-	-	-	4	1	7	2
Government sector	**837**	**411**	**246**	**134**	**176**	**74**	**325**	**152**	**12**	**4**	**78**	**47**
Engineering and technology	219	115	113	65	55	19	42	26	1	-	8	5
Agricultural sciences	618	296	133	69	121	55	283	126	11	4	70	42
Tertiary education	**3936**	**2070**	**3240**	**1612**	**182**	**117**	**295**	**202**	**48**	**28**	**171**	**111**
Natural sciences	574	348	442	271	-	-	46	28	7	4	79	45
Engineering and technology	1186	469	1113	415	21	13	48	38	4	3	-	-
Medical and health sciences	739	443	641	372	-	-	-	-	15	10	83	61
Agricultural sciences	291	137	204	87	9	3	73	45	5	2	-	-
Social sciences	1091	651	796	451	152	101	122	86	13	8	8	5
Humanities	55	22	44	16	-	-	6	5	4	1	1	-
SRBIJA – JUG	3839	1945	2946	1468	198	102	373	244	57	20	260	111
Natural sciences	464	264	384	224	16	9	40	23	13	7	11	1
Engineering and technology	1387	543	924	338	112	50	141	79	30	5	175	71
Medical and health sciences	693	387	614	339	39	25	40	23	-	-	-	-
Agricultural sciences	148	76	76	36	5	2	27	22	-	-	40	16
Social sciences	609	327	513	258	2	-	65	52	14	8	15	9
Humanities	538	348	435	273	24	16	60	45	-	-	19	14
Business sector	**364**	**126**	**127**	**53**	**45**	**16**	**79**	**36**	**32**	**5**	**76**	**16**
Natural sciences	41	23	10	8	5	4	13	6	8	4	5	1
Engineering and technology	247	64	100	37	37	11	46	14	24	1	35	1
Agricultural sciences	76	39	17	8	3	1	20	16	-	-	36	14
Government sector	**212**	**123**	**67**	**42**	**26**	**13**	**26**	**22**	**-**	**-**	**93**	**46**
Engineering and technology	187	107	48	29	24	12	24	21	-	-	91	45
Agricultural science	25	16	19	13	2	1	2	1	-	-	2	1
Tertiary education	**3263**	**1696**	**2752**	**1373**	**127**	**73**	**268**	**186**	**25**	**15**	**91**	**49**
Natural sciences	423	241	374	216	11	5	27	17	5	3	6	-
Engineering and technology	953	372	776	272	51	27	71	44	6	4	49	25

2.1. Full-time employees engaged in R&D activities, by sectors, fields of science and sex, 2016 (head count) (continued)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
Medical and health sciences	693	387	614	339	39	25	40	23	-	-	-	-
Agricultural sciences	47	21	40	15	-	-	5	5	-	-	2	1
Social sciences	609	327	513	258	2	-	65	52	14	8	15	9
Humanities	538	348	435	273	24	16	60	45	-	-	19	14
Region Šumadije i Zapadne Srbije	**1628**	**853**	**1234**	**642**	**101**	**48**	**203**	**127**	**41**	**15**	**44**	**21**
Natural sciences	270	163	190	123	16	9	40	23	13	7	11	1
Engineering and technology	400	123	293	90	37	12	35	12	16	-	14	9
Medical and health sciences	355	199	288	160	27	16	40	23	-	-	-	-
Agricultural sciences	88	49	66	33	3	1	15	13	-	-	4	2
Social sciences	323	185	245	130	2	-	49	38	12	8	15	9
Humanities	192	134	152	106	16	10	24	18	-	-	-	-
Business sector	**185**	**71**	**60**	**27**	**40**	**15**	**51**	**24**	**24**	**4**	**5**	**1**
Natural sciences	41	23	10	8	5	4	13	6	8	4	5	1
Engineering and technology	128	36	43	14	34	11	30	11	16	-	-	-
Agricultural sciences	16	12	7	5	1	-	8	7	-	-	-	-
Government sector	**25**	**16**	**19**	**13**	**2**	**1**	**2**	**1**	**-**	**-**	**2**	**1**
Agricultural sciences	25	16	19	13	2	1	2	1	-	-	2	1
Tertiary education	**1418**	**766**	**1155**	**602**	**59**	**32**	**150**	**102**	**17**	**11**	**37**	**19**
Natural sciences	229	140	180	115	11	5	27	17	5	3	6	-
Engineering and technology	272	87	250	76	3	1	5	1	-	-	14	9
Medical and health sciences	355	199	288	160	27	16	40	23	-	-	-	-
Agricultural sciences	47	21	40	15	-	-	5	5	-	-	2	1
Social sciences	323	185	245	130	2	-	49	38	12	8	15	9
Humanities	192	134	152	106	16	10	24	18	-	-	-	-
Region Južne i Istočne Srbije	**2211**	**1092**	**1712**	**826**	**97**	**54**	**170**	**117**	**16**	**5**	**216**	**90**
Natural sciences	194	101	194	101	-	-	-	-	-	-	-	-
Engineering and technology	987	420	631	248	75	38	106	67	14	5	161	62
Medical and health sciences	338	188	326	179	12	9	-	-	-	-	-	-
Agricultural sciences	60	27	10	3	2	1	12	9	-	-	36	14
Social sciences	286	142	268	128	-	-	16	14	2	-	-	-
Humanities	346	214	283	167	8	6	36	27	-	-	19	14
Business sector	**179**	**55**	**67**	**26**	**5**	**1**	**28**	**12**	**8**	**1**	**71**	**15**
Engineering and technology	119	28	57	23	3	-	16	3	8	1	35	1
Agricultural sciences	60	27	10	3	2	1	12	9	-	-	36	14
Government sector	**187**	**107**	**48**	**29**	**24**	**12**	**24**	**21**	**-**	**-**	**91**	**45**
Engineering and technology	187	107	48	29	24	12	24	21	-	-	91	45
Tertiary education	**1845**	**930**	**1597**	**771**	**68**	**41**	**118**	**84**	**8**	**4**	**54**	**30**
Natural sciences	194	101	194	101	-	-	-	-	-	-	-	-
Engineering and technology	681	285	526	196	48	26	66	43	6	4	35	16
Medical and health sciences	338	188	326	179	12	9	-	-	-	-	-	-
Social sciences	286	142	268	128	-	-	16	14	2	-	-	-
Humanities	346	214	283	167	8	6	36	27	-	-	19	14
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, 2016

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**21603,4**	**10614,3**	**15015,2**	**7261,7**	**1634,4**	**813,7**	**3034,0**	**1574,2**	**545,2**	**194,5**	**1374,2**	**770,2**
Natural sciences	5229,2	2646,4	3899,5	1932,7	311,4	147,1	563,9	303,6	96,6	36,2	357,8	226,8
Engineering and technology	6813,0	2558,6	4435,3	1656,3	560,0	201,9	1114,3	429,9	237,1	58,2	465,8	212,3
Medical and health sciences	2061,4	1264,1	1696,3	1011,1	117,0	75,4	87,0	67,5	54,9	38,9	106,2	71,2
Agricultural sciences	2435,9	1229,4	1124,1	569,8	289,4	144,2	684,7	358,8	57,8	20,2	279,9	136,4
Social sciences	3302,1	1857,1	2452,7	1293,5	202,0	128,7	464,1	323,4	81,8	34,0	101,5	77,5
Humanities	1762,0	1058,8	1407,3	798,3	154,7	116,5	120,0	91,0	17,0	7,0	63,0	46,0
Business sector	**3599,3**	**1182,0**	**1992,9**	**612,4**	**603,0**	**215,3**	**537,7**	**176,4**	**228,4**	**74,0**	**236,9**	**103,9**
Natural sciences	1024,4	263,4	712,6	153,6	133,9	44,6	92,3	34,0	33,6	6,2	52,0	25,0
Engineering and technology	2275,9	740,1	1209,1	411,5	367,4	109,7	408,0	119,4	146,1	36,7	144,8	62,8
Medical and health sciences	127,1	85,1	11,0	8,0	76,0	47,0	4,0	2,0	34,9	26,9	1,2	1,2
Agricultural sciences	116,4	53,8	26,4	13,0	13,4	6,2	26,4	16,0	11,8	4,2	38,4	14,4
Social sciences	55,6	39,6	33,8	26,3	12,3	7,8	7,0	5,0	2,0	-	0,5	0,5
Government sector	**5295,4**	**2818,0**	**2987,3**	**1714,1**	**376,4**	**180,2**	**1312,6**	**626,6**	**125,4**	**34,7**	**493,8**	**262,3**
Natural sciences	1994,6	1155,0	1519,5	885,6	71,8	33,8	268,1	144,1	34,4	14,7	100,8	76,8
Engineering and technology	1218,6	521,5	369,9	189,6	102,3	44,4	461,0	180,0	61,0	9,0	224,5	98,5
Medical and health sciences	172,2	132,9	149,2	111,9	4,0	4,0	15,0	14,0	-	-	4,0	3,0
Agricultural sciences	1211,0	609,5	366,0	217,0	182,0	89,0	497,5	229,5	24,0	8,0	141,5	66,0
Social sciences	303,1	162,3	242,8	117,3	10,3	5,0	43,0	35,0	2,0	1,0	5,0	4,0
Humanities	395,9	236,8	339,9	192,8	6,0	4,0	28,0	24,0	4,0	2,0	18,0	14,0
Tertiary education	**12681,0**	**6598,1**	**10028,9**	**4930,9**	**652,0**	**415,2**	**1173,7**	**766,2**	**186,9**	**85,8**	**639,5**	**400,0**
Natural sciences	2210,2	1228,0	1667,4	893,5	105,7	68,7	203,5	125,5	28,6	15,3	205,0	125,0
Engineering and technology	3305,5	1291,0	2854,4	1054,2	90,3	47,8	238,3	127,5	28,0	12,5	94,5	49,0
Medical and health sciences	1762,0	1046,0	1536,1	891,2	37,0	24,4	68,0	51,5	20,0	12,0	101,0	67,0
Agricultural sciences	1108,5	566,1	731,7	339,8	94,0	49,0	160,8	113,3	22,0	8,0	100,0	56,0
Social sciences	2928,6	1644,9	2171,9	1146,7	176,3	112,8	411,1	281,4	75,3	33,0	94,0	71,0
Humanities	1366,1	822,0	1067,4	605,5	148,7	112,5	92,0	67,0	13,0	5,0	45,0	32,0
Non-profit sector	**27,8**	**16,3**	**6,2**	**4,2**	**3,1**	**3,1**	**10,0**	**5,0**	**4,5**	**-**	**4,0**	**4,0**
Engineering and technology	13,0	6,0	2,0	1,0	-	-	7,0	3,0	2,0	-	2,0	2,0
Social sciences	14,8	10,3	4,2	3,2	3,1	3,1	3,0	2,0	2,5	-	2,0	2,0
SRBIJA – SEVER	18160,8	8862,3	12397,2	5950,1	1466,5	729,2	2692,0	1347,3	489,4	175,0	1115,7	660,7
Natural sciences	4771,9	2385,3	3522,2	1711,6	295,4	138,1	523,9	280,6	83,6	29,2	346,8	225,8
Engineering and technology	5576,0	2076,6	3630,7	1364,1	460,5	159,5	984,3	356,5	208,3	53,7	292,3	142,8
Medical and health sciences	1586,7	996,3	1266,3	771,6	92,2	58,6	67,0	56,0	54,9	38,9	106,2	71,2
Agricultural sciences	2287,9	1153,4	1048,1	533,8	284,4	142,2	657,7	336,8	57,8	20,2	239,9	120,4
Social sciences	2697,9	1532,3	1944,5	1037,7	200,0	128,7	399,1	271,4	67,8	26,0	86,5	68,5
Humanities	1240,5	718,4	985,4	531,3	134,1	102,1	60,0	46,0	17,0	7,0	44,0	32,0
Business sector	**3264,3**	**1066,6**	**1884,9**	**568,0**	**560,3**	**200,7**	**461,7**	**141,0**	**196,6**	**69,0**	**160,9**	**87,9**
Natural sciences	983,4	240,4	702,6	145,6	128,9	40,6	79,3	28,0	25,6	2,2	47,0	24,0
Engineering and technology	2057,9	686,7	1128,1	383,1	332,7	100,1	365,0	106,0	122,3	35,7	109,8	61,8
Medical and health sciences	127,1	85,1	11,0	8,0	76,0	47,0	4,0	2,0	34,9	26,9	1,2	1,2
Agricultural sciences	40,4	14,8	9,4	5,0	10,4	5,2	6,4	-	11,8	4,2	2,4	0,4
Social sciences	55,6	39,6	33,8	26,3	12,3	7,8	7,0	5,0	2,0	-	0,5	0,5
Government sector	**5083,4**	**2695,0**	**2920,3**	**1672,1**	**350,4**	**167,2**	**1286,6**	**604,6**	**125,4**	**34,7**	**400,8**	**216,3**
Natural sciences	1994,6	1155,0	1519,5	885,6	71,8	33,8	268,1	144,1	34,4	14,7	100,8	76,8
Engineering and technology	1031,6	414,5	321,9	160,6	78,3	32,4	437,0	159,0	61,0	9,0	133,5	53,5
Medical and health sciences	172,2	132,9	149,2	111,9	4,0	4,0	15,0	14,0	-	-	4,0	3,0
Agricultural sciences	1186,0	593,5	347,0	204,0	180,0	88,0	495,5	228,5	24,0	8,0	139,5	65,0
Social sciences	303,1	162,3	242,8	117,3	10,3	5,0	43,0	35,0	2,0	1,0	5,0	4,0
Humanities	395,9	236,8	339,9	192,8	6,0	4,0	28,0	24,0	4,0	2,0	18,0	14,0
Tertiary education	**9785,3**	**5084,4**	**7585,9**	**3705,7**	**552,8**	**358,2**	**933,7**	**596,7**	**162,9**	**71,3**	**550,0**	**352,5**
Natural sciences	1793,9	989,9	1300,1	680,4	94,7	63,7	176,5	108,5	23,6	12,3	199,0	125,0
Engineering and technology	2473,6	969,4	2178,8	819,4	49,5	27,0	175,3	88,5	23,0	9,0	47,0	25,5
Medical and health sciences	1287,3	778,3	1106,1	651,7	12,2	7,6	48,0	40,0	20,0	12,0	101,0	67,0
Agricultural sciences	1061,5	545,1	691,7	324,8	94,0	49,0	155,8	108,3	22,0	8,0	98,0	55,0
Social sciences	2324,4	1320,1	1663,7	890,9	174,3	112,8	346,1	229,4	61,3	25,0	79,0	62,0
Humanities	844,6	481,6	645,5	338,5	128,1	98,1	32,0	22,0	13,0	5,0	26,0	18,0
Non-profit sector	**27,8**	**16,3**	**6,2**	**4,2**	**3,1**	**3,1**	**10,0**	**5,0**	**4,5**	**-**	**4,0**	**4,0**
Engineering and technology	13,0	6,0	2,0	1,0	-	-	7,0	3,0	2,0	-	2,0	2,0
Social sciences	14,8	10,3	4,2	3,2	3,1	3,1	3,0	2,0	2,5	-	2,0	2,0

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, 2016 (continued)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
Beogradski region	**12526,4**	**6296,1**	**8268,9**	**4198,8**	**1100,2**	**543,2**	**1966,8**	**955,4**	**363,3**	**123,9**	**827,3**	**474,8**
Natural sciences	3633,3	1939,4	2572,4	1367,2	270,4	134,6	474,9	249,6	71,8	24,2	243,8	163,8
Engineering and technology	3405,0	1242,0	1841,7	714,6	386,4	126,8	771,0	243,5	139,1	30,8	266,8	126,3
Medical and health sciences	1151,4	727,6	929,1	573,9	92,2	58,6	67,0	56,0	39,9	28,9	23,2	10,2
Agricultural sciences	1388,0	725,8	706,4	374,8	154,4	84,2	314,2	173,8	42,0	14,0	171,0	79,0
Social sciences	1763,3	964,9	1277,9	653,0	62,7	36,9	285,7	191,5	57,5	20,0	79,5	63,5
Humanities	1185,5	696,4	941,4	515,3	134,1	102,1	54,0	41,0	13,0	6,0	43,0	32,0
Business sector	**1777,3**	**671,9**	**696,7**	**289,6**	**501,0**	**186,9**	**335,4**	**89,0**	**126,8**	**47,9**	**117,5**	**58,5**
Natural sciences	377,7	121,4	153,7	51,1	103,9	37,1	76,3	25,0	20,8	1,2	23,0	7,0
Engineering and technology	1185,0	415,6	495,0	203,2	298,4	89,8	241,7	57,0	58,1	15,8	91,8	49,8
Medical and health sciences	127,1	85,1	11,0	8,0	76,0	47,0	4,0	2,0	34,9	26,9	1,2	1,2
Agricultural sciences	32,0	10,2	3,2	1,0	10,4	5,2	6,4	-	11,0	4,0	1,0	-
Social sciences	55,6	39,6	33,8	26,3	12,3	7,8	7,0	5,0	2,0	-	0,5	0,5
Government sector	**4299,8**	**2303,5**	**2675,4**	**1538,6**	**210,1**	**102,8**	**974,1**	**460,6**	**114,4**	**30,7**	**325,8**	**170,8**
Natural sciences	1994,6	1155,0	1519,5	885,6	71,8	33,8	268,1	144,1	34,4	14,7	100,8	76,8
Engineering and technology	850,0	310,0	210,0	96,0	59,0	23,0	395,0	133,0	60,0	9,0	126,0	49,0
Medical and health sciences	172,2	132,9	149,2	111,9	4,0	4,0	15,0	14,0	-	-	4,0	3,0
Agricultural sciences	584,0	306,5	214,0	135,0	59,0	33,0	225,0	110,5	14,0	4,0	72,0	24,0
Social sciences	303,1	162,3	242,8	117,3	10,3	5,0	43,0	35,0	2,0	1,0	5,0	4,0
Humanities	395,9	236,8	339,9	192,8	6,0	4,0	28,0	24,0	4,0	2,0	18,0	14,0
Tertiary education	**6421,6**	**3304,4**	**4890,7**	**2366,4**	**386,0**	**250,4**	**647,3**	**400,8**	**117,6**	**45,3**	**380,0**	**241,5**
Natural sciences	1261,0	663,0	899,2	430,5	94,7	63,7	130,5	80,5	16,6	8,3	120,0	80,0
Engineering and technology	1357,1	510,4	1134,8	414,4	29,0	14,0	127,3	50,5	19,0	6,0	47,0	25,5
Medical and health sciences	852,1	509,6	768,9	454,0	12,2	7,6	48,0	40,0	5,0	2,0	18,0	6,0
Agricultural sciences	772,0	409,1	489,2	238,8	85,0	46,0	82,8	63,3	17,0	6,0	98,0	55,0
Social sciences	1389,8	752,7	997,1	506,2	37,0	21,0	232,7	149,5	51,0	19,0	72,0	57,0
Humanities	789,6	459,6	601,5	322,5	128,1	98,1	26,0	17,0	9,0	4,0	25,0	18,0
Non-profit sector	**27,8**	**16,3**	**6,2**	**4,2**	**3,1**	**3,1**	**10,0**	**5,0**	**4,5**	**-**	**4,0**	**4,0**
Engineering and technology	13,0	6,0	2,0	1,0	-	-	7,0	3,0	2,0	-	2,0	2,0
Social sciences	14,8	10,3	4,2	3,2	3,1	3,1	3,0	2,0	2,5	-	2,0	2,0
Region Vojvodine	**5634,3**	**2566,2**	**4128,3**	**1751,2**	**366,4**	**186,0**	**725,2**	**391,9**	**126,1**	**51,1**	**288,4**	**185,9**
Natural sciences	1138,6	445,9	949,8	344,4	25,0	3,5	49,0	31,0	11,8	5,0	103,0	62,0
Engineering and technology	2171,0	834,6	1789,0	649,5	74,1	32,7	213,3	113,0	69,2	22,9	25,5	16,5
Medical and health sciences	435,2	268,7	337,2	197,7	-	-	-	-	15,0	10,0	83,0	61,0
Agricultural sciences	899,9	427,6	341,7	159,0	130,0	58,0	343,5	163,0	15,8	6,2	68,9	41,4
Social sciences	934,6	567,4	666,6	384,7	137,3	91,8	113,4	79,9	10,3	6,0	7,0	5,0
Humanities	55,0	22,0	44,0	16,0	-	-	6,0	5,0	4,0	1,0	1,0	-
Business sector	**1487,0**	**394,7**	**1188,2**	**278,4**	**59,3**	**13,8**	**126,3**	**52,0**	**69,8**	**21,1**	**43,4**	**29,4**
Natural sciences	605,7	119,0	548,9	94,5	25,0	3,5	3,0	3,0	4,8	1,0	24,0	17,0
Engineering and technology	872,9	271,1	633,1	179,9	34,3	10,3	123,3	49,0	64,2	19,9	18,0	12,0
Agricultural sciences	8,4	4,6	6,2	4,0	-	-	-	-	0,8	0,2	1,4	0,4
Government sector	**783,6**	**391,5**	**244,9**	**133,6**	**140,3**	**64,4**	**312,5**	**144,0**	**11,0**	**4,0**	**75,0**	**45,5**
Engineering and technology	181,6	104,5	111,9	64,6	19,3	9,4	42,0	26,0	1,0	-	7,5	4,5
Agricultural sciences	602,0	287,0	133,0	69,0	121,0	55,0	270,5	118,0	10,0	4,0	67,5	41,0
Tertiary education	**3363,7**	**1780,0**	**2695,2**	**1339,3**	**166,8**	**107,8**	**286,4**	**195,9**	**45,3**	**26,0**	**170,0**	**111,0**
Natural sciences	532,9	326,9	400,9	249,9	-	-	46,0	28,0	7,0	4,0	79,0	45,0
Engineering and technology	1116,5	459,0	1044,0	405,0	20,5	13,0	48,0	38,0	4,0	3,0	-	-
Medical and health sciences	435,2	268,7	337,2	197,7	-	-	-	-	15,0	10,0	83,0	61,0
Agricultural sciences	289,5	136,0	202,5	86,0	9,0	3,0	73,0	45,0	5,0	2,0	-	-
Social sciences	934,6	567,4	666,6	384,7	137,3	91,8	113,4	79,9	10,3	6,0	7,0	5,0
Humanities	55,0	22,0	44,0	16,0	-	-	6,0	5,0	4,0	1,0	1,0	-
SRBIJA – JUG	3442,7	1752,1	2618,0	1311,6	167,9	84,6	342,0	226,9	55,8	19,5	258,5	109,5
Natural sciences	457,3	261,1	377,3	221,1	16,0	9,0	40,0	23,0	13,0	7,0	11,0	1,0
Engineering and technology	1237,0	482,0	804,7	292,2	99,5	42,4	130,0	73,4	28,8	4,5	173,5	69,5
Medical and health sciences	474,7	267,8	430,0	239,5	24,8	16,8	20,0	11,5	-	-	-	-
Agricultural sciences	148,0	76,0	76,0	36,0	5,0	2,0	27,0	22,0	-	-	40,0	16,0
Social sciences	604,2	324,8	508,2	255,8	2,0	-	65,0	52,0	14,0	8,0	15,0	9,0
Humanities	521,5	340,4	421,9	267,0	20,6	14,4	60,0	45,0	-	-	19,0	14,0
Business sector	**335,0**	**115,4**	**108,0**	**44,4**	**42,7**	**14,6**	**76,0**	**35,4**	**31,8**	**5,0**	**76,0**	**16,0**
Natural sciences	41,0	23,0	10,0	8,0	5,0	4,0	13,0	6,0	8,0	4,0	5,0	1,0
Engineering and technology	218,0	53,4	81,0	28,4	34,7	9,6	43,0	13,4	23,8	1,0	35,0	1,0
Agricultural sciences	76,0	39,0	17,0	8,0	3,0	1,0	20,0	16,0	-	-	36,0	14,0
Government sector	**212,0**	**123,0**	**67,0**	**42,0**	**26,0**	**13,0**	**26,0**	**22,0**	**-**	**-**	**93,0**	**46,0**
Engineering and technology	187,0	107,0	48,0	29,0	24,0	12,0	24,0	21,0	-	-	91,0	45,0
Agricultural sciences	25,0	16,0	19,0	13,0	2,0	1,0	2,0	1,0	-	-	2,0	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, 2016 (continued)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
Tertiary education	**2895,7**	**1513,7**	**2443,0**	**1225,2**	**99,2**	**57,0**	**240,0**	**169,5**	**24,0**	**14,5**	**89,5**	**47,5**
Natural sciences	416,3	238,1	367,3	213,1	11,0	5,0	27,0	17,0	5,0	3,0	6,0	-
Engineering and technology	832,0	321,6	675,7	234,8	40,8	20,8	63,0	39,0	5,0	3,5	47,5	23,5
Medical and health sciences	474,7	267,8	430,0	239,5	24,8	16,8	20,0	11,5	-	-	-	-
Agricultural sciences	47,0	21,0	40,0	15,0	-	-	5,0	5,0	-	-	2,0	1,0
Social sciences	604,2	324,8	508,2	255,8	2,0	-	65,0	52,0	14,0	8,0	15,0	9,0
Humanities	521,5	340,4	421,9	267,0	20,6	14,4	60,0	45,0	-	-	19,0	14,0
Region Šumadije i Zapadne Srbije	**1297,0**	**691,5**	**953,7**	**505,8**	**81,1**	**36,8**	**178,4**	**114,4**	**40,8**	**15,0**	**42,5**	**19,5**
Natural sciences	264,1	160,3	184,1	120,3	16,0	9,0	40,0	23,0	13,0	7,0	11,0	1,0
Engineering and technology	303,4	88,0	209,5	59,0	34,7	10,6	30,4	10,9	15,8	-	12,5	7,5
Medical and health sciences	138,5	81,3	105,8	62,0	12,8	7,8	20,0	11,5	-	-	-	-
Agricultural sciences	88,0	49,0	66,0	33,0	3,0	1,0	15,0	13,0	-	-	4,0	2,0
Social sciences	320,7	183,7	242,7	128,7	2,0	-	49,0	38,0	12,0	8,0	15,0	9,0
Humanities	182,3	129,2	145,7	102,8	12,6	8,4	24,0	18,0	-	-	-	-
Business sector	**157,2**	**60,4**	**41,3**	**18,4**	**37,7**	**13,6**	**48,9**	**23,4**	**23,8**	**4,0**	**5,0**	**1,0**
Natural sciences	41,0	23,0	10,0	8,0	5,0	4,0	13,0	6,0	8,0	4,0	5,0	1,0
Engineering and technology	100,2	25,4	24,3	5,4	31,7	9,6	27,9	10,4	15,8	-	-	-
Agricultural sciences	16,0	12,0	7,0	5,0	1,0	-	8,0	7,0	-	-	-	-
Government sector	**25,0**	**16,0**	**19,0**	**13,0**	**2,0**	**1,0**	**2,0**	**1,0**	**-**	**-**	**2,0**	**1,0**
Agricultural sciences	25,0	16,0	19,0	13,0	2,0	1,0	2,0	1,0	-	-	2,0	1,0
Tertiary education	**1114,8**	**615,1**	**893,4**	**474,4**	**41,4**	**22,2**	**127,5**	**90,0**	**17,0**	**11,0**	**35,5**	**17,5**
Natural sciences	223,1	137,3	174,1	112,3	11,0	5,0	27,0	17,0	5,0	3,0	6,0	-
Engineering and technology	203,2	62,6	185,2	53,6	3,0	1,0	2,5	0,5	-	-	12,5	7,5
Medical and health sciences	138,5	81,3	105,8	62,0	12,8	7,8	20,0	11,5	-	-	-	-
Agricultural sciences	47,0	21,0	40,0	15,0	-	-	5,0	5,0	-	-	2,0	1,0
Social sciences	320,7	183,7	242,7	128,7	2,0	-	49,0	38,0	12,0	8,0	15,0	9,0
Humanities	182,3	129,2	145,7	102,8	12,6	8,4	24,0	18,0	-	-	-	-
Region Južne i Istočne Srbije	**2145,7**	**1060,6**	**1664,3**	**805,8**	**86,8**	**47,8**	**163,6**	**112,5**	**15,0**	**4,5**	**216,0**	**90,0**
Natural sciences	193,2	100,8	193,2	100,8	-	-	-	-	-	-	-	-
Engineering and technology	933,6	394,0	595,2	233,2	64,8	31,8	99,6	62,5	13,0	4,5	161,0	62,0
Medical and health sciences	336,2	186,5	324,2	177,5	12,0	9,0	-	-	-	-	-	-
Agricultural sciences	60,0	27,0	10,0	3,0	2,0	1,0	12,0	9,0	-	-	36,0	14,0
Social sciences	283,5	141,1	265,5	127,1	-	-	16,0	14,0	2,0	-	-	-
Humanities	339,2	211,2	276,2	164,2	8,0	6,0	36,0	27,0	-	-	19,0	14,0
Business sector	**177,8**	**55,0**	**66,7**	**26,0**	**5,0**	**1,0**	**27,1**	**12,0**	**8,0**	**1,0**	**71,0**	**15,0**
Engineering and technology	117,8	28,0	56,7	23,0	3,0	-	15,1	3,0	8,0	1,0	35,0	1,0
Agricultural sciences	60,0	27,0	10,0	3,0	2,0	1,0	12,0	9,0	-	-	36,0	14,0
Government sector	**187,0**	**107,0**	**48,0**	**29,0**	**24,0**	**12,0**	**24,0**	**21,0**	**-**	**-**	**91,0**	**45,0**
Engineering and technology	187,0	107,0	48,0	29,0	24,0	12,0	24,0	21,0	-	-	91,0	45,0
Tertiary education	**1780,9**	**898,6**	**1549,6**	**750,8**	**57,8**	**34,8**	**112,5**	**79,5**	**7,0**	**3,5**	**54,0**	**30,0**
Natural sciences	193,2	100,8	193,2	100,8	-	-	-	-	-	-	-	-
Engineering and technology	628,8	259,0	490,5	181,2	37,8	19,8	60,5	38,5	5,0	3,5	35,0	16,0
Medical and health sciences	336,2	186,5	324,2	177,5	12,0	9,0	-	-	-	-	-	-
Social sciences	283,5	141,1	265,5	127,1	-	-	16,0	14,0	2,0	-	-	-
Humanities	339,2	211,2	276,2	164,2	8,0	6,0	36,0	27,0	-	-	19,0	14,0
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2016 (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	**16592**	**8032**	**10286**	**4968**	**2890**	**1435**	**218**	**102**	**3198**	**1527**
Natural sciences	4110	2016	2367	1209	862	396	80	59	801	352
Engineering and technology	4860	1809	2595	974	821	336	103	28	1341	471
Medical and health sciences	2350	1406	1472	857	453	277	31	13	394	259
Agricultural sciences	1175	594	899	431	100	48	1	1	175	114
Social sciences	2666	1400	2072	1000	366	233	1	-	227	167
Humanities	1431	807	881	497	288	145	2	1	260	164
Business sector	**2071**	**632**	**302**	**124**	**436**	**125**	**15**	**4**	**1318**	**379**
Natural sciences	723	155	43	14	286	62	-	-	394	79
Computer and information sciences	555	95	1	-	238	38	-	-	316	57
Chemical sciences	50	30	13	5	31	20	-	-	6	5
Earth and related environmental sciences	11	3	4	1	1	-	-	-	6	2
Other Natural sciences	107	27	25	8	16	4	-	-	66	15
Engineering and technology	1266	425	219	87	134	53	15	4	898	281
Civil engineering	2	1	-	-	-	-	-	-	2	1
Electrical engineering, electronic engineering and information engineering	748	209	67	20	85	33	2	-	594	156
Mechanical engineering	104	25	44	15	20	7	-	-	40	3
Chemical engineering	229	124	46	30	16	9	-	-	167	85
Materials engineering	80	39	30	14	8	4	7	2	35	19
Medical engineering	18	4	8	2	1	-	-	-	9	2
Environmental engineering	30	8	16	3	-	-	1	-	13	5
Environmental biotechnology	5	3	3	2	1	-	-	-	1	1
Other technologies and engineering	50	12	5	1	3	-	5	2	37	9
Medical and health sciences	11	8	-	-	-	-	-	-	11	8
Other medical sciences	11	8	-	-	-	-	-	-	11	8
Agricultural sciences	36	17	21	11	10	4	-	-	5	2
Agriculture, forestry and fishery	16	8	5	4	7	2	-	-	4	2
Agricultural biotechnology	20	9	16	7	3	2	-	-	1	-
Social sciences	35	27	19	12	6	6	-	-	10	9
Economics and business	15	9	11	5	4	4	-	-	-	-
Other Social sciences	20	18	8	7	2	2	-	-	10	9
Government sector	**3011**	**1727**	**2027**	**1103**	**683**	**413**	**84**	**62**	**217**	**149**
Natural sciences	1533	892	999	540	368	229	77	57	89	66
Mathematics	265	153	176	96	89	57	-	-	-	-
Physical sciences	666	301	416	156	138	59	77	57	35	29
Biological sciences	405	332	280	234	108	90	-	-	17	8
Other Natural sciences	197	106	127	54	33	23	-	-	37	29
Engineering and technology	371	190	226	106	99	51	5	4	41	29
Civil engineering	27	19	20	13	7	6	-	-	-	-
Electrical engineering, electronic engineering and information engineering	75	20	50	9	13	4	-	-	12	7
Materials engineering	43	20	25	11	18	9	-	-	-	-
Environmental biotechnology	115	66	78	42	23	13	1	1	13	10
Industrial biotechnology	31	18	22	11	-	-	3	3	6	4
Other technologies and engineering	80	47	31	20	38	19	1	-	10	8
Medical and health sciences	153	115	108	78	25	20	2	1	18	16
Basic medicine	62	43	56	38	1	1	2	1	3	3
Other medical sciences	91	72	52	40	24	19	-	-	15	13
Agricultural sciences	366	217	282	171	46	22	-	-	38	24
Animal and dairy science	25	12	17	9	8	3	-	-	-	-
Veterinary sciences	58	31	39	22	19	9	-	-	-	-
Agricultural biotechnology	233	139	181	110	14	5	-	-	38	24
Other Agricultural sciences	50	35	45	30	5	5	-	-	-	-
Social sciences	244	118	179	78	56	37	-	-	9	3
Psychology	40	22	34	17	6	5	-	-	-	-
Economics and business	46	25	30	12	16	13	-	-	-	-
Sociology	22	7	17	5	-	-	-	-	5	2
Law	40	19	27	11	11	8	-	-	2	-
Political science	71	25	51	16	19	9	-	-	1	-
Other social science	25	20	20	17	4	2	-	-	1	1
Humanities	344	195	233	130	89	54	-	-	22	11
History and archeology	185	78	134	59	30	9	-	-	21	10
Languages and literature	93	68	48	34	44	33	-	-	1	1
Art (art, history of arts, performing arts, music)	13	10	8	6	5	4	-	-	-	-
Other Humanities	53	39	43	31	10	8	-	-	-	-
Tertiary education	**11502**	**5667**	**7956**	**3740**	**1764**	**892**	**119**	**36**	**1663**	**999**
Natural sciences	1854	969	1325	655	208	105	3	2	318	207
Mathematics	957	539	635	346	70	36	2	1	250	156
Computer and information sciences	252	110	182	78	67	32	-	-	3	-
Physical sciences	82	25	63	18	19	7	-	-	-	-
Chemical sciences	141	74	119	59	7	6	-	-	15	9

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2016 (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
Earth and related environmental sciences	172	86	122	57	39	21	-	-	11	8
Biological sciences	173	110	134	76	-	-	-	-	39	34
Other Natural sciences	77	25	70	21	6	3	1	1	-	-
Engineering and technology	3221	1193	2150	781	586	231	83	20	402	161
Civil engineering	333	136	224	92	89	35	-	-	20	9
Electrical engineering, electronic engineering and information engineering	1571	500	973	315	357	114	12	-	229	71
Mechanical engineering	398	84	278	49	10	4	71	20	39	11
Chemical engineering	201	122	176	110	9	3	-	-	16	9
Environmental engineering	213	91	154	63	51	26	-	-	8	2
Other technologies and engineering	505	260	345	152	70	49	-	-	90	59
Medical and health sciences	2186	1283	1364	779	428	257	29	12	365	235
Basic medicine	1244	700	966	515	85	59	17	8	176	118
Other medical sciences	942	583	398	264	343	198	12	4	189	117
Agricultural sciences	773	360	596	249	44	22	1	1	132	88
Agriculture, forestry and fishery	363	159	269	102	29	12	1	1	64	44
Veterinary sciences	119	62	81	39	-	-	-	-	38	23
Agricultural biotechnology	29	9	22	5	7	4	-	-	-	-
Other Agricultural sciences	262	130	224	103	8	6	-	-	30	21
Social sciences	2381	1250	1873	909	299	186	1	-	208	155
Psychology	81	46	57	23	-	-	-	-	24	23
Economics and business	725	372	579	275	73	50	-	-	73	47
Educational sciences	464	243	356	174	64	34	-	-	44	35
Law	430	180	347	123	45	28	-	-	38	29
Political sciences	131	56	91	34	33	16	1	-	6	6
Media and communications	43	26	30	17	13	9	-	-	-	-
Other Social sciences	507	327	413	263	71	49	-	-	23	15
Humanities	1087	612	648	367	199	91	2	1	238	153
Languages and literature	374	253	225	147	51	26	-	-	98	80
Phylosophy, ethics and religion	450	224	299	142	56	27	-	-	95	55
Art (arts, history of arts, performing arts, music)	190	98	66	49	88	35	2	1	34	13
Other Humanities	73	37	58	29	4	3	-	-	11	5
Non-profit sector	**8**	**6**	**1**	**1**	**7**	**5**	**-**	**-**	**-**	**-**
Engineering and technology	2	1	-	-	2	1	-	-	-	-
Other technologies and engineeering	2	1	-	-	2	1	-	-	-	-
Social sciences	6	5	1	1	5	4	-	-	-	-
Educational sciences	4	3	-	-	4	3	-	-	-	-
Law	2	2	1	1	1	1	-	-	-	-
SRBIJA – SEVER	13646	6564	8303	4026	2557	1274	196	92	2590	1172
Natural sciences	3726	1792	2115	1069	833	382	78	58	700	283
Engineering and technology	3936	1471	2002	766	709	289	102	28	1123	388
Medical and health sciences	1736	1067	1007	610	442	272	14	5	273	180
Agricultural sciences	1099	558	835	400	95	46	1	1	168	111
Social sciences	2153	1142	1652	805	320	200	1	-	180	137
Humanities	996	534	692	376	158	85	-	-	146	73
Business sector	**1944**	**579**	**269**	**110**	**419**	**118**	**15**	**4**	**1241**	**347**
Natural sciences	713	147	43	14	284	62	-	-	386	71
Computer and information sciences	555	95	1	-	238	38	-	-	316	57
Chemical sciences	43	25	13	5	29	20	-	-	1	-
Earth and related environmental sciences	11	3	4	1	1	-	-	-	6	2
Other Natural sciences	104	24	25	8	16	4	-	-	63	12
Engineering and technology	1166	388	200	79	122	48	15	4	829	257
Civil engineering	2	1	-	-	-	-	-	-	2	1
Electrical engineering, electronic engineering and information engineering	703	188	58	15	76	28	2	-	567	145
Mechanical engineering	100	25	44	15	20	7	-	-	36	3
Chemical engineering	225	123	46	30	16	9	-	-	163	84
Materials engineering	59	29	30	14	8	4	7	2	14	9
Environmental engineering	30	8	16	3	-	-	1	-	13	5
Environmental biotechnology	5	3	3	2	1	-	-	-	1	1
Other technologies and engineering	42	11	3	-	1	-	5	2	33	9
Medical and health sciences	11	8	-	-	-	-	-	-	11	8
Other medical sciences	11	8	-	-	-	-	-	-	11	8
Agricultural sciences	19	9	7	5	7	2	-	-	5	2
Agriculture, forestry and fisheries	16	8	5	4	7	2	-	-	4	2
Agricultural biotechnology	3	1	2	1	-	-	-	-	1	-
Social sciences	35	27	19	12	6	6	-	-	10	9
Economics and business	15	9	11	5	4	4	-	-	-	-
Other Social sciences	20	18	8	7	2	2	-	-	10	9
Government sector	**2944**	**1685**	**1990**	**1078**	**664**	**404**	**83**	**62**	**207**	**141**
Natural sciences	1533	892	999	540	368	229	77	57	89	66
Mathematics	265	153	176	96	89	57	-	-	-	-
Physical sciences	666	301	416	156	138	59	77	57	35	29

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2016 (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
Biological sciences	405	332	280	234	108	90	-	-	17	8
Other Natural sciences	197	106	127	54	33	23	-	-	37	29
Engineering and technology	323	161	208	94	80	42	4	4	31	21
Civil engineering	27	19	20	13	7	6	-	-	-	-
Electrical engineering, electronic engineering and information engineering	75	20	50	9	13	4	-	-	12	7
Materials engineering	43	20	25	11	18	9	-	-	-	-
Environmental biotechnology	115	66	78	42	23	13	1	1	13	10
Industrial biotechnology	31	18	22	11	-	-	3	3	6	4
Other technologies and engineering	32	18	13	8	19	10	-	-	-	-
Medical and health sciences	153	115	108	78	25	20	2	1	18	16
Basic medicines	62	43	56	38	1	1	2	1	3	3
Other medical science	91	72	52	40	24	19	-	-	15	13
Agricultural sciences	347	204	263	158	46	22	-	-	38	24
Animal and dairy science	25	12	17	9	8	3	-	-	-	-
Veterinary sciences	58	31	39	22	19	9	-	-	-	-
Agricultural biotechnology	233	139	181	110	14	5	-	-	38	24
Other Agricultural sciences	31	22	26	17	5	5	-	-	-	-
Social sciences	244	118	179	78	56	37	-	-	9	3
Psychology	40	22	34	17	6	5	-	-	-	-
Economics and business	46	25	30	12	16	13	-	-	-	-
Sociology	22	7	17	5	-	-	-	-	5	2
Law	40	19	27	11	11	8	-	-	2	-
Political sciences	71	25	51	16	19	9	-	-	1	-
Other Social sciences	25	20	20	17	4	2	-	-	1	1
Humanities	344	195	233	130	89	54	-	-	22	11
History and archeology	185	78	134	59	30	9	-	-	21	10
Languages and literature	93	68	48	34	44	33	-	-	1	1
Arts (arts, history of arts, performing arts, music)	13	10	8	6	5	4	-	-	-	-
Other Humanities	53	39	43	31	10	8	-	-	-	-
Tertiary education	**8750**	**4294**	**6043**	**2837**	**1467**	**747**	**98**	**26**	**1142**	**684**
Natural sciences	1480	753	1073	515	181	91	1	1	225	146
Mathematics	583	323	383	206	43	22	-	-	157	95
Computer and information sciences	252	110	182	78	67	32	-	-	3	-
Physical sciences	82	25	63	18	19	7	-	-	-	-
Chemical sciences	141	74	119	59	7	6	-	-	15	9
Earth and related environmental sciences	172	86	122	57	39	21	-	-	11	8
Biological sciences	173	110	134	76	-	-	-	-	39	34
Other Natural sciences	77	25	70	21	6	3	1	1	-	-
Engineering and technology	2445	921	1594	593	505	198	83	20	263	110
Civil engineering	244	94	173	69	51	16	-	-	20	9
Electrical engineering, electronic engineering and information engineering	1269	405	747	237	338	109	12	-	172	59
Mechanical engineering	249	57	176	35	2	2	71	20	-	-
Chemical engineering	148	99	131	90	4	2	-	-	13	7
Environmental engineering	158	66	109	42	49	24	-	-	-	-
Other technologies and engineering	377	200	258	120	61	45	-	-	58	35
Medical and health sciences	1572	944	899	532	417	252	12	4	244	156
Basic medicine	630	361	501	268	74	54	-	-	55	39
Other medical sciences	942	583	398	264	343	198	12	4	189	117
Agricultural sciences	733	345	565	237	42	22	1	1	125	85
Agriculture, forestry and fisheries	323	144	238	90	27	12	1	1	57	41
Veterinary sciences	119	62	81	39	-	-	-	-	38	23
Agricultural biotechnology	29	9	22	5	7	4	-	-	-	-
Other Agricultural sciences	262	130	224	103	8	6	-	-	30	21
Social sciences	1868	992	1453	714	253	153	1	-	161	125
Psychology	81	46	57	23	-	-	-	-	24	23
Economics and business	489	243	385	178	59	37	-	-	45	28
Educational sciences	344	186	263	133	40	18	-	-	41	35
Law	323	143	251	92	41	27	-	-	31	24
Political sciences	131	56	91	34	33	16	1	-	6	6
Media and communications	43	26	30	17	13	9	-	-	-	-
Other Social sciences	457	292	376	237	67	46	-	-	14	9
Humanities	652	339	459	246	69	31	-	-	124	62
Languages and literature	222	147	183	121	1	1	-	-	38	25
Phylosophy, ethics and religion	275	108	183	67	51	22	-	-	41	19
Arts (arts, history of arts, performing arts, music)	82	47	35	29	13	5	-	-	34	13
Other Humanities	73	37	58	29	4	3	-	-	11	5
Non-profit sector	**8**	**6**	**1**	**1**	**7**	**5**	**-**	**-**	**-**	**-**
Engineering and technology	2	1	-	-	2	1	-	-	-	-
Other technologies and engineering	2	1	-	-	2	1	-	-	-	-
Social sciences	6	5	1	1	5	4	-	-	-	-
Educational science	4	3	-	-	4	3	-	-	-	-
Law	2	2	1	1	1	1	-	-	-	-

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2016 (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
Beogradski region	**8952**	**4535**	**6188**	**3040**	**1415**	**792**	**181**	**87**	**1168**	**616**
Natural sciences	2728	1426	1798	882	586	337	78	58	266	149
Engineering and technology	2073	811	1282	510	281	120	99	27	411	154
Medical and earth sciences	1095	695	846	514	105	78	2	1	142	102
Agricultural sciences	747	394	577	294	64	31	1	1	105	68
Social sciences	1357	691	1025	474	222	142	1	-	109	75
Humanities	952	518	660	366	157	84	-	-	135	68
Business sector	**736**	**296**	**252**	**104**	**137**	**68**	**13**	**4**	**334**	**120**
Natural sciences	157	52	42	14	46	24	-	-	69	14
Chemical sciences	42	25	13	5	29	20	-	-	-	-
Earth and related environmental sciences	11	3	4	1	1	-	-	-	6	2
Other Natural sciences	104	24	25	8	16	4	-	-	63	12
Engineering and technology	529	208	189	77	85	38	13	4	242	89
Civil engineering	2	1	-	-	-	-	-	-	2	1
Electrical engineering, electronic engineering and information engineering	216	74	56	15	52	23	-	-	108	36
Mechanical engineering	98	25	44	15	20	7	-	-	34	3
Chemical engineering	83	59	41	30	5	4	-	-	37	25
Materials engineering	59	29	30	14	8	4	7	2	14	9
Environmental engineering	30	8	16	3	-	-	1	-	13	5
Environmental biotechnology	1	1	-	-	-	-	-	-	1	1
Other technologies and engineering	40	11	2	-	-	-	5	2	33	9
Medical and health sciences	11	8	-	-	-	-	-	-	11	8
Other medical sciences	11	8	-	-	-	-	-	-	11	8
Agricultural sciences	4	1	2	1	-	-	-	-	2	-
Agriculture, forestry and fisheries	1	-	-	-	-	-	-	-	1	-
Agricultural biotechnology	3	1	2	1	-	-	-	-	1	-
Social science	35	27	19	12	6	6	-	-	10	9
Economics and business	15	9	11	5	4	4	-	-	-	-
Other Social sciences	20	18	8	7	2	2	-	-	10	9
Government sector	**2698**	**1551**	**1808**	**981**	**617**	**378**	**82**	**61**	**191**	**131**
Natural sciences	1533	892	999	540	368	229	77	57	89	66
Mathematics	265	153	176	96	89	57	-	-	-	-
Physical sciences	666	301	416	156	138	59	77	57	35	29
Biological sciences	405	332	280	234	108	90	-	-	17	8
Other Natural sciences	197	106	127	54	33	23	-	-	37	29
Engineering and technology	210	96	130	51	51	26	3	3	26	16
Civil engineering	27	19	20	13	7	6	-	-	-	-
Electrical engineering, electronic engineering and information engineering	75	20	50	9	13	4	-	-	12	7
Materials engineering	43	20	25	11	18	9	-	-	-	-
Environmental biotechnology	34	19	13	7	13	7	-	-	8	5
Industrial biotechnology	31	18	22	11	-	-	3	3	6	4
Medical and health sciences	153	115	108	78	25	20	2	1	18	16
Basic medicine	62	43	56	38	1	1	2	1	3	3
Other medical sciences	91	72	52	40	24	19	-	-	15	13
Agricultural sciences	214	135	159	104	28	12	-	-	27	19
Animal and dairy science	25	12	17	9	8	3	-	-	-	-
Veterinary science	24	13	15	10	9	3	-	-	-	-
Agricultural biotechnology	134	88	101	68	6	1	-	-	27	19
Other Agricultural sciences	31	22	26	17	5	5	-	-	-	-
Social sciences	244	118	179	78	56	37	-	-	9	3
Psychology	40	22	34	17	6	5	-	-	-	-
Economics and business	46	25	30	12	16	13	-	-	-	-
Sociology	22	7	17	5	-	-	-	-	5	2
Law	40	19	27	11	11	8	-	-	2	-
Political sciences	71	25	51	16	19	9	-	-	1	-
Other Social sciences	25	20	20	17	4	2	-	-	1	1
Humanities	344	195	233	130	89	54	-	-	22	11
History and archeology	185	78	134	59	30	9	-	-	21	10
Languages and literature	93	68	48	34	44	33	-	-	1	1
Arts (arts, history of arts, performing arts, music)	13	10	8	6	5	4	-	-	-	-
Other Humanities	53	39	43	31	10	8	-	-	-	-
Tertiary education	**5510**	**2682**	**4127**	**1954**	**654**	**341**	**86**	**22**	**643**	**365**
Natural sciences	1038	482	757	328	172	84	1	1	108	69
Mathematics	183	76	97	36	36	15	-	-	50	25
Computer and information engineering	252	110	182	78	67	32	-	-	3	-
Physical sciences	82	25	63	18	19	7	-	-	-	-
Chemical sciences	141	74	119	59	7	6	-	-	15	9
Earth and environmental sciences	130	62	92	40	37	21	-	-	1	1
Biological sciences	173	110	134	76	-	-	-	-	39	34
Other Natural sciences	77	25	70	21	6	3	1	1	-	-
Engineering and technology	1332	506	963	382	143	55	83	20	143	49
Civili engineering	210	81	139	56	51	16	-	-	20	9
Electrical engineering, electronic engineering and	420	141	295	114	32	9	12	-	81	18

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2016 (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
information engineering										
Mechanical engineering	249	57	176	35	2	2	71	20	-	-
Chemical engineering	148	99	131	90	4	2	-	-	13	7
Environmental engineering	158	66	109	42	49	24	-	-	-	-
Other technologies and engineering	147	62	113	45	5	2	-	-	29	15
Medical and health sciences	931	572	738	436	80	58	-	-	113	78
Basic medicine	630	361	501	268	74	54	-	-	55	39
Other medical sciences	301	211	237	168	6	4	-	-	58	39
Agricultural sciences	529	258	416	189	36	19	1	1	76	49
Agriculture, forestry and fisheries	119	57	89	42	21	9	1	1	8	5
Veterinary science	119	62	81	39	-	-	-	-	38	23
Agricultural biotechnology	29	9	22	5	7	4	-	-	-	-
Other Agricultural sciences	262	130	224	103	8	6	-	-	30	21
Social sciences	1072	541	826	383	155	95	1	-	90	63
Economics and business	325	162	263	126	35	21	-	-	27	15
Educational sciences	214	105	163	76	30	12	-	-	21	17
Law	201	92	157	58	20	17	-	-	24	17
Political sciences	131	56	91	34	33	16	1	-	6	6
Media and communications	43	26	30	17	13	9	-	-	-	-
Other Social sciences	158	100	122	72	24	20	-	-	12	8
Humanities	608	323	427	236	68	30	-	-	113	57
Languages and literature	222	147	183	121	1	1	-	-	38	25
Phylosophy, ethics and religion	275	108	183	67	51	22	-	-	41	19
Arts (arts, history of arts, performing arts, music)	82	47	35	29	13	5	-	-	34	13
Other Humanities	29	21	26	19	3	2	-	-	-	-
Non-profit sector	**8**	**6**	**1**	**1**	**7**	**5**	**-**	**-**	**-**	**-**
Engineering and technology	2	1	-	-	2	1	-	-	-	-
Other technologies and engineering	2	1	-	-	2	1	-	-	-	-
Social sciences	6	5	1	1	5	4	-	-	-	-
Economics and business	4	3	-	-	4	3	-	-	-	-
Law	2	2	1	1	1	1	-	-	-	-
Region Vojvodine	**4694**	**2029**	**2115**	**986**	**1142**	**482**	**15**	**5**	**1422**	**556**
Natural sciences	998	366	317	187	247	45	-	-	434	134
Engineering and technology	1863	660	720	256	428	169	3	1	712	234
Medical and health sciences	641	372	161	96	337	194	12	4	131	78
Agricultural sciences	352	164	258	106	31	15	-	-	63	43
Social sciences	796	451	627	331	98	58	-	-	71	62
Humanities	44	16	32	10	1	1	-	-	11	5
Business sector	**1208**	**283**	**17**	**6**	**282**	**50**	**2**	**-**	**907**	**227**
Natural sciences	556	95	1	-	238	38	-	-	317	57
Computer and information sciences	555	95	1	-	238	38	-	-	316	57
Chemical engineering	1	-	-	-	-	-	-	-	1	-
Engineering and technology	637	180	11	2	37	10	2	-	587	168
Electrical engineering, electronic engineering and information engineering	487	114	2	-	24	5	2	-	459	109
Mechanical engineering	2	-	-	-	-	-	-	-	2	-
Chemical engineering	142	64	5	-	11	5	-	-	126	59
Environmental biotechnology	4	2	3	2	1	-	-	-	-	-
Other technologies and engineering	2	-	1	-	1	-	-	-	-	-
Agricultural sciences	15	8	5	4	7	2	-	-	3	2
Agriculture, forestry and fisheries	15	8	5	4	7	2	-	-	3	2
Government sector	**246**	**134**	**182**	**97**	**47**	**26**	**1**	**1**	**16**	**10**
Engineering and technology	113	65	78	43	29	16	1	1	5	5
Environmental biotechnology	81	47	65	35	10	6	1	1	5	5
Other technologies and engineering	32	18	13	8	19	10	-	-	-	-
Agricultural sciences	133	69	104	54	18	10	-	-	11	5
Veterinary sciences	34	18	24	12	10	6	-	-	-	-
Agricultural biotechnology	99	51	80	42	8	4	-	-	11	5
Tertiary education	**3240**	**1612**	**1916**	**883**	**813**	**406**	**12**	**4**	**499**	**319**
Natural sciences	442	271	316	187	9	7	-	-	117	77
Mathematics	400	247	286	170	7	7	-	-	107	70
Earth and related environmental sciences	42	24	30	17	2	-	-	-	10	7
Engineering and technology	1113	415	631	211	362	143	-	-	120	61
Civil engineering	34	13	34	13	-	-	-	-	-	-
Electrical engineering, electronic engineering and information engineering	849	264	452	123	306	100	-	-	91	41
Other technologies and engineering	230	138	145	75	56	43	-	-	29	20
Medical and health sciences	641	372	161	96	337	194	12	4	131	78
Other medical sciences	641	372	161	96	337	194	12	4	131	78
Agricultural sciences	204	87	149	48	6	3	-	-	49	36
Agriculture, forestry and fisheries	204	87	149	48	6	3	-	-	49	36
Social sciences	796	451	627	331	98	58	-	-	71	62
Psychology	81	46	57	23	-	-	-	-	24	23
Economics and business	164	81	122	52	24	16	-	-	18	13

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2016 (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
Educational sciences	130	81	100	57	10	6	-	-	20	18
Law	122	51	94	34	21	10	-	-	7	7
Other Social sciences	299	192	254	165	43	26	-	-	2	1
Humanities	44	16	32	10	1	1	-	-	11	5
Other Humanities	44	16	32	10	1	1	-	-	11	5
SRBIJA – JUG	2946	1468	1983	942	333	161	22	10	608	355
Natural sciences	384	224	252	140	29	14	2	1	101	69
Engineering and technology	924	338	593	208	112	47	1	-	218	83
Medical and health sciences	614	339	465	247	11	5	17	8	121	79
Agricultural sciences	76	36	64	31	5	2	-	-	7	3
Social sciences	513	258	420	195	46	33	-	-	47	30
Humanities	435	273	189	121	130	60	2	1	114	91
Business sector	**127**	**53**	**33**	**14**	**17**	**7**	**-**	**-**	**77**	**32**
Natural sciences	10	8	-	-	2	-	-	-	8	8
Chemical engineering	7	5	-	-	2	-	-	-	5	5
Other Natural sciences	3	3	-	-	-	-	-	-	3	3
Engineering and technology	100	37	19	8	12	5	-	-	69	24
Electrical engineering, electronic engineering and information engineering	45	21	9	5	9	5	-	-	27	11
Materials engineering	4	-	-	-	-	-	-	-	4	-
Chemical engineering	4	1	-	-	-	-	-	-	4	1
Materials engineering	21	10	-	-	-	-	-	-	21	10
Medical engineering	18	4	8	2	1	-	-	-	9	2
Other technologies and engineering	8	1	2	1	2	-	-	-	4	-
Agricultural sciences	17	8	14	6	3	2	-	-	-	-
Agricultural biotechnology	17	8	14	6	3	2	-	-	-	-
Government sector	**67**	**42**	**37**	**25**	**19**	**9**	**1**	**-**	**10**	**8**
Engineering and technology	48	29	18	12	19	9	1	-	10	8
Other technologies and engineering	48	29	18	12	19	9	1	-	10	8
Agricultural sciences	19	13	19	13	-	-	-	-	-	-
Other Agricultural sciences	19	13	19	13	-	-	-	-	-	-
Tertiary education	**2752**	**1373**	**1913**	**903**	**297**	**145**	**21**	**10**	**521**	**315**
Natural sciences	374	216	252	140	27	14	2	1	93	61
Mathematics	374	216	252	140	27	14	2	1	93	61
Engineering and technology	776	272	556	188	81	33	-	-	139	51
Civil engineering	89	42	51	23	38	19	-	-	-	-
Electrical engineering, electronic engineering and information engineering	302	95	226	78	19	5	-	-	57	12
Mechanical engineering	149	27	102	14	8	2	-	-	39	11
Chemical engineering	53	23	45	20	5	1	-	-	3	2
Environmental engineering	55	25	45	21	2	2	-	-	8	2
Other technologies and engineering	128	60	87	32	9	4	-	-	32	24
Medical and health sciences	614	339	465	247	11	5	17	8	121	79
Basic medicine	614	339	465	247	11	5	17	8	121	79
Agricultural sciences	40	15	31	12	2	-	-	-	7	3
Agriculture, forestry and fisheries	40	15	31	12	2	-	-	-	7	3
Social sciences	513	258	420	195	46	33	-	-	47	30
Economics and business	236	129	194	97	14	13	-	-	28	19
Educational sciences	120	57	93	41	24	16	-	-	3	-
Law	107	37	96	31	4	1	-	-	7	5
Other Social sciences	50	35	37	26	4	3	-	-	9	6
Humanities	435	273	189	121	130	60	2	1	114	91
Languages and literature	152	106	42	26	50	25	-	-	60	55
Phylosophy, ethics and religion	175	116	116	75	5	5	-	-	54	36
Arts (arts, history of arts, performing arts, music)	108	51	31	20	75	30	2	1	-	-
Region Šumadije i Zapadne Srbije	**1234**	**642**	**742**	**358**	**103**	**55**	**17**	**8**	**372**	**221**
Natural sciences	190	123	114	69	3	1	-	-	73	53
Engineering and technology	293	90	175	51	16	8	-	-	102	31
Medical and health sciences	288	160	167	90	6	3	17	8	98	59
Agricultural sciences	66	33	55	28	4	2	-	-	7	3
Social sciences	245	130	189	94	24	16	-	-	32	20
Humanities	152	106	42	26	50	25	-	-	60	55
Business sector	**60**	**27**	**13**	**5**	**5**	**2**	**-**	**-**	**42**	**20**
Natural sciences	10	8	-	-	2	-	-	-	8	8
Chemical sciences	7	5	-	-	2	-	-	-	5	5
Other Natural sciences	3	3	-	-	-	-	-	-	3	3
Engineering and technology	43	14	8	2	1	-	-	-	34	12
Mechanical engineering	4	-	-	-	-	-	-	-	4	-
Materials engineering	21	10	-	-	-	-	-	-	21	10
Medical engineering	18	4	8	2	1	-	-	-	9	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, 2016 (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	**19**	**13**	**19**	**13**	**-**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	19	13	19	13	-	-	-	-	-	-
Other Agricultural sciences	19	13	19	13	-	-	-	-	-	-
Tertiary education	**1155**	**602**	**710**	**340**	**98**	**53**	**17**	**8**	**330**	**201**
Natural sciences	180	115	114	69	1	1	-	-	65	45
Mathematics	180	115	114	69	1	1	-	-	65	45
Engineering and technology	250	76	167	49	15	8	-	-	68	19
Electrical engineering, electronic engineering and information engineering	163	51	114	37	6	3	-	-	43	11
Mechanical engineering	46	7	28	2	2	1	-	-	16	4
Other technologies and engineering	41	18	25	10	7	4	-	-	9	4
Medical and health sciences	288	160	167	90	6	3	17	8	98	59
Basic medicine	288	160	167	90	6	3	17	8	98	59
Agricultural sciences	40	15	31	12	2	-	-	-	7	3
Agriculture, forestry and fisheries	40	15	31	12	2	-	-	-	7	3
Social sciences	245	130	189	94	24	16	-	-	32	20
Economic and business	124	64	94	43	7	7	-	-	23	14
Educational sciences	41	23	32	18	9	5	-	-	-	-
Law	30	8	26	7	4	1	-	-	-	-
Other Social sciences	50	35	37	26	4	3	-	-	9	6
Humanities	152	106	42	26	50	25	-	-	60	55
Languages and literature	152	106	42	26	50	25	-	-	60	55
Region Južne i Istočne Srbije	**1712**	**826**	**1241**	**584**	**230**	**106**	**5**	**2**	**236**	**134**
Natural sciences	194	101	138	71	26	13	2	1	28	16
Engineering and technology	631	248	418	157	96	39	1	-	116	52
Medical and health sciences	326	179	298	157	5	2	-	-	23	20
Agricultural sciences	10	3	9	3	1	-	-	-	-	-
Social sciences	268	128	231	101	22	17	-	-	15	10
Humanities	283	167	147	95	80	35	2	1	54	36
Business sector	**67**	**26**	**20**	**9**	**12**	**5**	**-**	**-**	**35**	**12**
Engineering and technologies	57	23	11	6	11	5	-	-	35	12
Electrical engineering, electronic engineering and information engineering	45	21	9	5	9	5	-	-	27	11
Chemical engineering	4	1	-	-	-	-	-	-	4	1
Other technologies and engineering	8	1	2	1	2	-	-	-	4	-
Agricultural sciences	10	3	9	3	1	-	-	-	-	-
Agricultural biotechnology	10	3	9	3	1	-	-	-	-	-
Government sector	**48**	**29**	**18**	**12**	**19**	**9**	**1**	**-**	**10**	**8**
Engineering and technology	48	29	18	12	19	9	1	-	10	8
Other technology and engineering	48	29	18	12	19	9	1	-	10	8
Tertiary education	**1597**	**771**	**1203**	**563**	**199**	**92**	**4**	**2**	**191**	**114**
Natural sciences	194	101	138	71	26	13	2	1	28	16
Mathematics	194	101	138	71	26	13	2	1	28	16
Engineering and technology	526	196	389	139	66	25	-	-	71	32
Civil engineering	89	42	51	23	38	19	-	-	-	-
Electrical engineering, electronic engineering and information engineering	139	44	112	41	13	2	-	-	14	1
Mechanical engineering	103	20	74	12	6	1	-	-	23	7
Chemical engineering	53	23	45	20	5	1	-	-	3	2
Environmental engineering	55	25	45	21	2	2	-	-	8	2
Other technologies and engineering	87	42	62	22	2	-	-	-	23	20
Medical and health sciences	326	179	298	157	5	2	-	-	23	20
Basic medicines	326	179	298	157	5	2	-	-	23	20
Social sciences	268	128	231	101	22	17	-	-	15	10
Economics and business	112	65	100	54	7	6	-	-	5	5
Educational sciences	79	34	61	23	15	11	-	-	3	-
Law	77	29	70	24	-	-	-	-	7	5
Humanities	283	167	147	95	80	35	2	1	54	36
Phylosophy, ethics and religion	175	116	116	75	5	5	-	-	54	36
Arts (arts, history of arts, performing arts, music)	108	51	31	20	75	30	2	1	-	-
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, 2016

	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	**15015,2**	**7261,7**	**9305,1**	**4490,4**	**2590,4**	**1288,5**	**190,0**	**94,8**	**2929,7**	**1388,0**
Natural sciences	3899,5	1932,7	2199,0	1146,2	841,9	386,6	80,0	59,0	778,7	340,9
Engineering and technology	4435,3	1656,3	2306,9	850,5	761,2	322,6	93,4	28,0	1273,8	455,2
Medical and health sciences	1696,3	1011,1	1158,0	659,4	264,6	166,8	12,6	5,8	261,1	179,2
Agricultural sciences	1124,1	569,8	861,0	412,2	96,0	47,2	1,0	1,0	166,1	109,4
Social sciences	2452,7	1293,5	1912,1	932,4	342,8	221,3	1,0	-	196,8	139,8
Humanities	1407,3	798,3	868,1	489,8	283,9	144,0	2,0	1,0	253,3	163,5
Business sector	**1992,9**	**612,4**	**288,9**	**119,4**	**425,8**	**122,0**	**14,2**	**4,0**	**1264,0**	**367,0**
Natural sciences	712,6	153,6	41,8	13,7	282,3	61,5	-	-	388,5	78,4
Computer and information sciences	547,9	94,5	1,0	-	234,6	37,5	-	-	312,3	57,0
Chemical sciences	50,0	30,0	13,0	5,0	31,0	20,0	-	-	6,0	5,0
Earth and related environmental sciences	7,7	2,1	2,8	0,7	0,7	-	-	-	4,2	1,4
Other natural sciences	107,0	27,0	25,0	8,0	16,0	4,0	-	-	66,0	15,0
Engineering and technology	1209,1	411,5	210,6	84,8	131,5	51,3	14,2	4,0	852,8	271,4
Civil engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Electrical engineering, electronic engineering and information engineering	727,1	205,6	58,1	18,8	83,5	32,3	1,2	-	584,3	154,5
Mechanical engineering	90,9	24,5	44,0	15,0	20,0	7,0	-	-	26,9	2,5
Chemical engineering	229,0	124,0	46,0	30,0	16,0	9,0	-	-	167,0	85,0
Materials engineering	62,3	29,9	29,5	14,0	7,0	3,0	7,0	2,0	18,8	10,9
Medical engineering	15,5	3,5	8,5	1,0	1,0	-	-	-	6,0	2,5
Environmental engineering	29,3	8,0	16,0	3,0	-	-	1,0	-	12,3	5,0
Environmental biotechnology	5,0	3,0	3,0	2,0	1,0	-	-	-	1,0	1,0
Other technologies and engineering	48,0	12,0	5,5	1,0	3,0	-	5,0	2,0	34,5	9,0
Medical and health sciences	11,0	8,0	-	-	-	-	-	-	11,0	8,0
Other medical sciences	11,0	8,0	-	-	-	-	-	-	11,0	8,0
Agricultural sciences	26,4	13,0	18,5	9,4	6,0	3,2	-	-	1,9	0,4
Agriculture, forestry and fisheries	6,5	4,0	2,6	2,4	3,0	1,2	-	-	0,9	0,4
Agricultural biotechnology	19,9	9,0	15,9	7,0	3,0	2,0	-	-	1,0	-
Social sciences	33,8	26,3	18,0	11,5	6,0	6,0	-	-	9,8	8,8
Economics and business	14,0	8,5	10,0	4,5	4,0	4,0	-	-	-	-
Other social sciences	19,8	17,8	8,0	7,0	2,0	2,0	-	-	9,8	8,8
Government sector	**2987,3**	**1714,1**	**2004,8**	**1091,2**	**684,3**	**413,3**	**84,0**	**62,0**	**214,2**	**147,6**
Natural sciences	1519,5	885,6	983,5	532,8	370,8	229,8	77,0	57,0	88,3	66,0
Mathematics	259,5	150,5	167,5	92,5	92,0	58,0	-	-	-	-
Physical sciences	665,6	300,6	415,8	155,8	137,8	58,8	77,0	57,0	35,0	29,0
Biological sciences	401,0	329,7	276,0	231,7	108,0	90,0	-	-	17,0	8,0
Other natural sciences	193,4	104,8	124,1	52,8	33,0	23,0	-	-	36,3	29,0
Engineering and technology	369,9	189,6	224,9	105,6	99,0	51,0	5,0	4,0	41,0	29,0
Civil engineering	27,0	19,0	20,0	13,0	7,0	6,0	-	-	-	-
Electrical engineering, electronic engineering and information engineering	75,0	20,0	50,0	9,0	13,0	4,0	-	-	12,0	7,0
Materials engineering	43,0	20,0	25,0	11,0	18,0	9,0	-	-	-	-
Environmental biotechnology	114,4	66,0	77,4	42,0	23,0	13,0	1,0	1,0	13,0	10,0
Industrial biotechnology	31,0	18,0	22,0	11,0	-	-	3,0	3,0	6,0	4,0
Other technologies and engineering	79,5	46,6	30,5	19,6	38,0	19,0	1,0	-	10,0	8,0
Medical and health sciences	149,2	111,9	106,3	76,3	25,0	20,0	2,0	1,0	15,9	14,6
Basic medicine	62,0	43,0	56,0	38,0	1,0	1,0	2,0	1,0	3,0	3,0
Other medical sciences	87,2	68,9	50,3	38,3	24,0	19,0	-	-	12,9	11,6
Agricultural sciences	366,0	217,0	282,0	171,0	46,0	22,0	-	-	38,0	24,0
Animal and dairy science	25,0	12,0	17,0	9,0	8,0	3,0	-	-	-	-
Veterinary science	58,0	31,0	39,0	22,0	19,0	9,0	-	-	-	-
Agricultural biotechnology	233,0	139,0	181,0	110,0	14,0	5,0	-	-	38,0	24,0
Other agricultural sciences	50,0	35,0	45,0	30,0	5,0	5,0	-	-	-	-
Social sciences	242,8	117,3	177,8	77,3	56,0	37,0	-	-	9,0	3,0
Psychology	39,5	22,0	33,5	17,0	6,0	5,0	-	-	-	-
Economics and business	46,0	25,0	30,0	12,0	16,0	13,0	-	-	-	-
Sociology	22,0	7,0	17,0	5,0	-	-	-	-	5,0	2,0
Law	40,0	19,0	27,0	11,0	11,0	8,0	-	-	2,0	-
Political sciences	70,3	24,3	50,3	15,3	19,0	9,0	-	-	1,0	-
Other social sciences	25,0	20,0	20,0	17,0	4,0	2,0	-	-	1,0	1,0
Humanities	339,9	192,8	230,4	128,3	87,5	53,5	-	-	22,0	11,0
History and archeology	184,5	77,5	134,0	59,0	29,5	8,5	-	-	21,0	10,0
Languages and literature	90,8	67,0	46,3	33,0	43,5	33,0	-	-	1,0	1,0
Arts (arts, history of arts, performing arts, music)	13,0	10,0	8,0	6,0	5,0	4,0	-	-	-	-
Other humanities	51,6	38,3	42,1	30,3	9,5	8,0	-	-	-	-
Tertiary education	**10028,9**	**4930,9**	**7011,4**	**3279,7**	**1474,2**	**749,1**	**91,8**	**28,8**	**1451,6**	**873,4**
Natural sciences	1667,4	893,5	1173,7	599,7	188,8	95,3	3,0	2,0	301,9	196,5
Mathematics	929,9	529,3	617,5	341,3	68,4	36,0	2,0	1,0	242,0	151,0
Computer and information sciences	239,4	104,0	171,8	73,9	64,6	30,1	-	-	3,0	-
Physical sciences	37,0	14,2	18,8	8,0	18,2	6,2	-	-	-	-
Chemical sciences	141,0	74,0	119,0	59,0	7,0	6,0	-	-	15,0	9,0
Earth and related environmental sciences	77,3	39,4	49,8	22,9	24,6	14,0	-	-	2,9	2,5
Biological sciences	168,2	107,6	129,2	73,6	-	-	-	-	39,0	34,0
Other natural sciences	74,6	25,0	67,6	21,0	6,0	3,0	1,0	1,0	-	-

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2016 (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
Engineering and technology	2854,4	1054,2	1871,5	660,1	528,7	219,3	74,2	20,0	380,0	154,8
Civil engineering	333,0	136,0	224,0	92,0	89,0	35,0	-	-	20,0	9,0
Electrical engineering, electronic engineering and information engineering	1314,3	418,0	782,8	242,0	308,5	106,9	3,2	-	219,8	69,1
Mechanical engineering	396,4	83,3	276,4	48,3	10,0	4,0	71,0	20,0	39,0	11,0
Chemical engineering	148,1	89,9	128,2	79,5	6,5	2,0	-	-	13,4	8,4
Environmental engineering	185,5	78,5	131,5	52,5	50,0	25,0	-	-	4,0	1,0
Other technologies and engineering	477,2	248,5	328,7	145,8	64,7	46,4	-	-	83,8	56,3
Medical and health sciences	1536,1	891,2	1051,7	583,1	239,6	146,8	10,6	4,8	234,2	156,6
Basic medicine	974,9	550,4	775,5	411,3	72,4	49,7	4,3	2,0	122,8	87,5
Other medical sciences	561,2	340,8	276,3	171,8	167,2	97,2	6,4	2,8	111,4	69,1
Agricultural sciences	731,7	339,8	560,5	231,8	44,0	22,0	1,0	1,0	126,2	85,0
Agriculture, forestry and fisheries	361,5	158,0	267,5	101,0	29,0	12,0	1,0	1,0	64,0	44,0
Veterinary sciences	80,7	42,8	48,5	22,8	-	-	-	-	32,2	20,0
Agricultural biotechnology	27,5	9,0	20,5	5,0	7,0	4,0	-	-	-	-
Other agricultural sciences	262,0	130,0	224,0	103,0	8,0	6,0	-	-	30,0	21,0
Social sciences	2171,9	1146,7	1716,2	843,5	276,7	175,2	1,0	-	178,0	128,0
Psychology	40,5	23,0	28,5	12,5	-	-	-	-	12,0	10,5
Economics and business	661,5	345,5	530,3	257,8	63,9	43,9	-	-	67,3	43,8
Educational sciences	415,2	215,2	321,0	156,0	60,1	33,1	-	-	34,1	26,1
Law	390,5	163,2	316,2	110,4	37,7	25,2	-	-	36,6	27,6
Political sciences	123,6	53,8	84,2	31,8	32,3	16,0	1,0	-	6,0	6,0
Media and communications	36,4	21,2	23,4	12,2	13,0	9,0	-	-	-	-
Other social sciences	504,3	324,9	412,6	262,9	69,7	48,0	-	-	22,0	14,0
Humanities	1067,4	605,5	637,7	361,5	196,4	90,5	2,0	1,0	231,3	152,5
Languages and literature	366,8	249,8	222,2	144,3	51,0	26,0	-	-	93,6	79,5
Phylosophy, ethics and religion	450,0	224,0	299,0	142,0	56,0	27,0	-	-	95,0	55,0
Arts (arts, history of arts, performing arts, music)	177,6	94,7	58,5	46,2	85,4	34,5	2,0	1,0	31,7	13,0
Other humanities	73,0	37,0	58,0	29,0	4,0	3,0	-	-	11,0	5,0
Non-profit sector	**6,2**	**4,2**	**0,1**	**0,1**	**6,1**	**4,1**	**-**	**-**	**-**	**-**
Engineering and technology	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Other technologies and engineering	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Social sciences	4,2	3,2	0,1	0,1	4,1	3,1	-	-	-	-
Economics and business	4,0	3,0	-	-	4,0	3,0	-	-	-	-
Law	0,2	0,2	0,1	0,1	0,1	0,1	-	-	-	-
SRBIJA – SEVER	12397,2	5950,1	7529,4	3646,6	2270,2	1133,7	180,8	90,8	2416,9	1079,1
Natural sciences	3522,2	1711,6	1949,2	1007,4	812,9	372,6	78,0	58,0	682,2	273,6
Engineering and technology	3630,7	1364,1	1794,5	672,3	656,0	279,2	92,4	28,0	1087,8	384,6
Medical and health sciences	1266,3	771,6	806,6	473,1	258,1	164,1	8,4	3,8	193,3	130,7
Agricultural sciences	1048,1	533,8	797,0	381,2	91,0	45,2	1,0	1,0	159,1	106,4
Social sciences	1944,5	1037,7	1495,6	738,3	297,1	188,6	1,0	-	150,8	110,8
Humanities	985,4	531,3	686,6	374,3	155,1	84,0	-	-	143,7	73,0
Business sector	**1884,9**	**568,0**	**255,7**	**106,4**	**408,8**	**115,0**	**14,2**	**4,0**	**1206,2**	**342,6**
Natural sciences	702,6	145,6	41,8	13,7	280,3	61,5	-	-	380,5	70,4
Computer and information sciences	547,9	94,5	1,0	-	234,6	37,5	-	-	312,3	57,0
Chemical sciences	43,0	25,0	13,0	5,0	29,0	20,0	-	-	1,0	-
Earth and related environmental sciences	7,7	2,1	2,8	0,7	0,7	-	-	-	4,2	1,4
Other natural sciences	104,0	24,0	25,0	8,0	16,0	4,0	-	-	63,0	12,0
Engineering and technology	1128,1	383,1	191,4	77,8	119,5	46,3	14,2	4,0	803,0	255,0
Civil engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Electrical engineering, electronic engineering and information engineering	682,4	184,6	49,4	13,8	74,5	27,3	1,2	-	557,3	143,5
Mechanical engineering	86,9	24,5	44,0	15,0	20,0	7,0	-	-	22,9	2,5
Chemical engineering	225,0	123,0	46,0	30,0	16,0	9,0	-	-	163,0	84,0
Materials engineering	57,5	28,0	29,5	14,0	7,0	3,0	7,0	2,0	14,0	9,0
Environmental engineering	29,3	8,0	16,0	3,0	-	-	1,0	-	12,3	5,0
Environmental biotechnology	5,0	3,0	3,0	2,0	1,0	-	-	-	1,0	1,0
Other technologies and engineering	40,0	11,0	3,5	-	1,0	-	5,0	2,0	30,5	9,0
Medical and health sciences	11,0	8,0	-	-	-	-	-	-	11,0	8,0
Other medical sciences	11,0	8,0	-	-	-	-	-	-	11,0	8,0
Agricultural sciences	9,4	5,0	4,5	3,4	3,0	1,2	-	-	1,9	0,4
Agriculture, forestry and fisheries	6,5	4,0	2,6	2,4	3,0	1,2	-	-	0,9	0,4
Agricultural biotechnology	2,9	1,0	1,9	1,0	-	-	-	-	1,0	-
Social sciences	33,8	26,3	18,0	11,5	6,0	6,0	-	-	9,8	8,8
Economics and business	14,0	8,5	10,0	4,5	4,0	4,0	-	-	-	-
Other social sciences	19,8	17,8	8,0	7,0	2,0	2,0	-	-	9,8	8,8
Government sciences	**2920,3**	**1672,1**	**1967,8**	**1066,2**	**665,3**	**404,3**	**83,0**	**62,0**	**204,2**	**139,6**
Natural sciences	1519,5	885,6	983,5	532,8	370,8	229,8	77,0	57,0	88,3	66,0
Mathematics	259,5	150,5	167,5	92,5	92,0	58,0	-	-	-	-
Physical sciences	665,6	300,6	415,8	155,8	137,8	58,8	77,0	57,0	35,0	29,0
Biological sciences	401,0	329,7	276,0	231,7	108,0	90,0	-	-	17,0	8,0
Other natural sciences	193,4	104,8	124,1	52,8	33,0	23,0	-	-	36,3	29,0
Engineering and technology	321,9	160,6	206,9	93,6	80,0	42,0	4,0	4,0	31,0	21,0
Civil engineering	27,0	19,0	20,0	13,0	7,0	6,0	-	-	-	-

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2016 (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
Electrical engineering, electronic engineering and information engineering	75,0	20,0	50,0	9,0	13,0	4,0	-	-	12,0	7,0
Materials engineering	43,0	20,0	25,0	11,0	18,0	9,0	-	-	-	-
Environmental biotechnology	114,4	66,0	77,4	42,0	23,0	13,0	1,0	1,0	13,0	10,0
Industrial biotechnology	31,0	18,0	22,0	11,0	-	-	3,0	3,0	6,0	4,0
Other technologies and engineering	31,5	17,6	12,5	7,6	19,0	10,0	-	-	-	-
Medical and health sciences	149,2	111,9	106,3	76,3	25,0	20,0	2,0	1,0	15,9	14,6
Basic medicine	62,0	43,0	56,0	38,0	1,0	1,0	2,0	1,0	3,0	3,0
Other medical sciences	87,2	68,9	50,3	38,3	24,0	19,0	-	-	12,9	11,6
Agricultural sciences	347,0	204,0	263,0	158,0	46,0	22,0	-	-	38,0	24,0
Animal and dairy science	25,0	12,0	17,0	9,0	8,0	3,0	-	-	-	-
Veterinary science	58,0	31,0	39,0	22,0	19,0	9,0	-	-	-	-
Agricultural biotechnology	233,0	139,0	181,0	110,0	14,0	5,0	-	-	38,0	24,0
Other agricultural sciences	31,0	22,0	26,0	17,0	5,0	5,0	-	-	-	-
Social sciences	242,8	117,3	177,8	77,3	56,0	37,0	-	-	9,0	3,0
Psychology	39,5	22,0	33,5	17,0	6,0	5,0	-	-	-	-
Economics and business	46,0	25,0	30,0	12,0	16,0	13,0	-	-	-	-
Sociology	22,0	7,0	17,0	5,0	-	-	-	-	5,0	2,0
Law	40,0	19,0	27,0	11,0	11,0	8,0	-	-	2,0	-
Political sciences	70,3	24,3	50,3	15,3	19,0	9,0	-	-	1,0	-
Other social sciences	25,0	20,0	20,0	17,0	4,0	2,0	-	-	1,0	1,0
Humanities	339,9	192,8	230,4	128,3	87,5	53,5	-	-	22,0	11,0
History and archeology	184,5	77,5	134,0	59,0	29,5	8,5	-	-	21,0	10,0
Languages and literature	90,8	67,0	46,3	33,0	43,5	33,0	-	-	1,0	1,0
Art (arts, history of arts, performing arts, music)	13,0	10,0	8,0	6,0	5,0	4,0	-	-	-	-
Other humanities	51,6	38,3	42,1	30,3	9,5	8,0	-	-	-	-
Tertiary education	**7585,9**	**3705,7**	**5305,8**	**2473,8**	**1190,0**	**610,3**	**83,6**	**24,8**	**1006,5**	**596,9**
Natural sciences	1300,1	680,4	923,9	460,9	161,8	81,3	1,0	1,0	213,4	137,2
Mathematics	562,6	316,2	367,7	202,5	41,4	22,0	-	-	153,5	91,7
Computer and information sciences	239,4	104,0	171,8	73,9	64,6	30,1	-	-	3,0	-
Physical sciences	37,0	14,2	18,8	8,0	18,2	6,2	-	-	-	-
Chemical sciences	141,0	74,0	119,0	59,0	7,0	6,0	-	-	15,0	9,0
Earth and related environmental sciences	77,3	39,4	49,8	22,9	24,6	14,0	-	-	2,9	2,5
Biological sciences	168,2	107,6	129,2	73,6	-	-	-	-	39,0	34,0
Other natural sciences	74,6	25,0	67,6	21,0	6,0	3,0	1,0	1,0	-	-
Engineering and technology	2178,8	819,4	1396,3	500,9	454,5	189,9	74,2	20,0	253,8	108,6
Civil engineering	244,0	94,0	173,0	69,0	51,0	16,0	-	-	20,0	9,0
Electrical engineering, electronic engineering and information engineering	1053,6	334,2	595,6	174,7	290,0	101,9	3,2	-	164,8	57,6
Mechanical engineering	249,0	57,0	176,0	35,0	2,0	2,0	71,0	20,0	-	-
Chemical engineering	97,5	68,5	85,0	60,5	1,5	1,0	-	-	11,0	7,0
Environmental engineering	158,0	66,0	109,0	42,0	49,0	24,0	-	-	-	-
Other technologies and engineering	376,7	199,7	257,7	119,7	61,0	45,0	-	-	58,0	35,0
Medical and health sciences	1106,1	651,7	700,3	396,8	233,1	144,1	6,4	2,8	166,4	108,1
Basic medicine	544,9	310,9	424,0	225,0	65,9	46,9	-	-	55,0	39,0
Other medical sciences	561,2	340,8	276,3	171,8	167,2	97,2	6,4	2,8	111,4	69,1
Agricultural sciences	691,7	324,8	529,5	219,8	42,0	22,0	1,0	1,0	119,2	82,0
Agriculture, forestry and fisheries	321,5	143,0	236,5	89,0	27,0	12,0	1,0	1,0	57,0	41,0
Veterinary science	80,7	42,8	48,5	22,8	-	-	-	-	32,2	20,0
Agricultural biotechnology	27,5	9,0	20,5	5,0	7,0	4,0	-	-	-	-
Other agricultural sciences	262,0	130,0	224,0	103,0	8,0	6,0	-	-	30,0	21,0
Social sciences	1663,7	890,9	1299,7	649,4	231,0	142,5	1,0	-	132,0	99,0
Psychology	40,5	23,0	28,5	12,5	-	-	-	-	12,0	10,5
Economics and business	427,2	216,5	338,0	160,8	49,9	30,9	-	-	39,3	24,8
Educational sciences	295,2	158,2	228,0	115,0	36,1	17,1	-	-	31,1	26,1
Law	285,6	127,4	222,0	80,3	34,0	24,5	-	-	29,6	22,6
Political sciences	123,6	53,8	84,2	31,8	32,3	16,0	1,0	-	6,0	6,0
Media and communications	36,4	21,2	23,4	12,2	13,0	9,0	-	-	-	-
Other social sciences	455,3	290,9	375,6	236,9	65,7	45,0	-	-	14,0	9,0
Humanities	645,5	338,5	456,2	246,0	67,6	30,5	-	-	121,7	62,0
Languages and literature	221,1	147,0	182,1	121,0	1,0	1,0	-	-	38,0	25,0
Phylosophy, ethics and religion	275,0	108,0	183,0	67,0	51,0	22,0	-	-	41,0	19,0
Art (arts, history of arts, performing arts, music)	76,4	46,5	33,1	29,0	11,6	4,5	-	-	31,7	13,0
Other humanities	73,0	37,0	58,0	29,0	4,0	3,0	-	-	11,0	5,0
Non-profit sector	**6,2**	**4,2**	**0,1**	**0,1**	**6,1**	**4,1**	**-**	**-**	**-**	**-**
Engineering and technology	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Other technologies and engineering	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Social sciences	4,2	3,2	0,1	0,1	4,1	3,1	-	-	-	-
Educational sciences	4,0	3,0	-	-	4,0	3,0	-	-	-	-
Law	0,2	0,2	0,1	0,1	0,1	0,1	-	-	-	-
Beogradski region	**8268,9**	**4198,8**	**5634,8**	**2753,9**	**1359,3**	**761,9**	**172,2**	**87,0**	**1102,7**	**596,0**
Natural sciences	2572,4	1367,2	1663,9	834,5	570,9	328,1	78,0	58,0	259,7	146,6
Engineering and technology	1841,7	714,6	1109,3	421,9	264,3	115,0	90,2	27,0	377,9	150,7
Medical and health sciences	929,1	573,9	700,1	408,4	96,9	70,9	2,0	1,0	130,1	93,6

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2016 (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	706,4	374,8	542,9	277,8	64,0	31,0	1,0	1,0	98,5	65,0
Social sciences	1277,9	653,0	964,0	447,0	209,1	133,9	1,0	-	103,8	72,1
Humanities	941,4	515,3	654,6	364,3	154,1	83,0	-	-	132,7	68,0
Business sector	**696,7**	**289,6**	**241,3**	**102,0**	**135,0**	**66,3**	**13,0**	**4,0**	**307,4**	**117,3**
Natural sciences	153,7	51,1	40,8	13,7	45,7	24,0	-	-	67,2	13,4
Chemical sciences	42,0	25,0	13,0	5,0	29,0	20,0	-	-	-	-
Earth and related environmental sciences	7,7	2,1	2,8	0,7	0,7	-	-	-	4,2	1,4
Other natural sciences	104,0	24,0	25,0	8,0	16,0	4,0	-	-	63,0	12,0
Engineering and technology	495,0	203,2	180,6	75,8	83,3	36,3	13,0	4,0	218,1	87,1
Civil engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Electrical engineering, electronic engineering and information engineering	199,3	70,7	47,6	13,8	51,3	22,3	-	-	100,4	34,6
Mechanical engineering	84,9	24,5	44,0	15,0	20,0	7,0	-	-	20,9	2,5
Chemical engineering	83,0	59,0	41,0	30,0	5,0	4,0	-	-	37,0	25,0
Materials engineering	57,5	28,0	29,5	14,0	7,0	3,0	7,0	2,0	14,0	9,0
Environmental engineering	29,3	8,0	16,0	3,0	-	-	1,0	-	12,3	5,0
Environmental biotechnology	1,0	1,0	-	-	-	-	-	-	1,0	1,0
Other technologies and engineering	38,0	11,0	2,5	-	-	-	5,0	2,0	30,5	9,0
Medical and health sciences	11,0	8,0	-	-	-	-	-	-	11,0	8,0
Other medical sciences	11,0	8,0	-	-	-	-	-	-	11,0	8,0
Agricultural sciences	3,2	1,0	1,9	1,0	-	-	-	-	1,3	-
Agriculture, forestry and fisheries	0,3	-	-	-	-	-	-	-	0,3	-
Agricultural biotechnology	2,9	1,0	1,9	1,0	-	-	-	-	1,0	-
Social sciences	33,8	26,3	18,0	11,5	6,0	6,0	-	-	9,8	8,8
Economics and business	14,0	8,5	10,0	4,5	4,0	4,0	-	-	-	-
Other social sciences	19,8	17,8	8,0	7,0	2,0	2,0	-	-	9,8	8,8
Government sector	**2675,4**	**1538,6**	**1787,0**	**969,7**	**618,3**	**378,3**	**82,0**	**61,0**	**188,2**	**129,6**
Natural sciences	1519,5	885,6	983,5	532,8	370,8	229,8	77,0	57,0	88,3	66,0
Mathematics	259,5	150,5	167,5	92,5	92,0	58,0	-	-	-	-
Physical sciences	665,6	300,6	415,8	155,8	137,8	58,8	77,0	57,0	35,0	29,0
Biological sciences	401,0	329,7	276,0	231,7	108,0	90,0	-	-	17,0	8,0
Other natural sciences	193,4	104,8	124,1	52,8	33,0	23,0	-	-	36,3	29,0
Engineering and technology	210,0	96,0	130,0	51,0	51,0	26,0	3,0	3,0	26,0	16,0
Civil engineering	27,0	19,0	20,0	13,0	7,0	6,0	-	-	-	-
Electrical engineering, electronic engineering and information engineering	75,0	20,0	50,0	9,0	13,0	4,0	-	-	12,0	7,0
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	31,0	18,0	22,0	11,0	-	-	3,0	3,0	6,0	4,0
Medical and health sciences	149,2	111,9	106,3	76,3	25,0	20,0	2,0	1,0	15,9	14,6
Basic medicine	62,0	43,0	56,0	38,0	1,0	1,0	2,0	1,0	3,0	3,0
Other medical sciences	87,2	68,9	50,3	38,3	24,0	19,0	-	-	12,9	11,6
Agricultural sciences	214,0	135,0	159,0	104,0	28,0	12,0	-	-	27,0	19,0
Animal and dairy science	25,0	12,0	17,0	9,0	8,0	3,0	-	-	-	-
Veterinary science	24,0	13,0	15,0	10,0	9,0	3,0	-	-	-	-
Agricultural biotechnology	134,0	88,0	101,0	68,0	6,0	1,0	-	-	27,0	19,0
Other agricultural sciences	31,0	22,0	26,0	17,0	5,0	5,0	-	-	-	-
Social sciences	242,8	117,3	177,8	77,3	56,0	37,0	-	-	9,0	3,0
Psychology	39,5	22,0	33,5	17,0	6,0	5,0	-	-	-	-
Economics and business	46,0	25,0	30,0	12,0	16,0	13,0	-	-	-	-
Sociocology	22,0	7,0	17,0	5,0	-	-	-	-	5,0	2,0
Law	40,0	19,0	27,0	11,0	11,0	8,0	-	-	2,0	-
Political sciences	70,3	24,3	50,3	15,3	19,0	9,0	-	-	1,0	-
Other social sciences	25,0	20,0	20,0	17,0	4,0	2,0	-	-	1,0	1,0
Humanities	339,9	192,8	230,4	128,3	87,5	53,5	-	-	22,0	11,0
History and archeology	184,5	77,5	134,0	59,0	29,5	8,5	-	-	21,0	10,0
Languages and literature	90,8	67,0	46,3	33,0	43,5	33,0	-	-	1,0	1,0
Art (arts, history of arts, performing arts, music)	13,0	10,0	8,0	6,0	5,0	4,0	-	-	-	-
Other humanities	51,6	38,3	42,1	30,3	9,5	8,0	-	-	-	-
Tertiary education	**4890,7**	**2366,4**	**3606,5**	**1682,1**	**599,9**	**313,2**	**77,2**	**22,0**	**607,1**	**349,1**
Natural sciences	899,2	430,5	639,6	288,0	154,4	74,3	1,0	1,0	104,2	67,2
Mathematics	172,9	73,2	91,5	34,2	34,4	15,0	-	-	47,0	24,0
Computer and information sciences	239,4	104,0	171,8	73,9	64,6	30,1	-	-	3,0	-
Physical sciences	37,0	14,2	18,8	8,0	18,2	6,2	-	-	-	-
Chemical sciences	141,0	74,0	119,0	59,0	7,0	6,0	-	-	15,0	9,0
Earth and related environmental sciences	66,1	32,5	41,7	18,3	24,2	14,0	-	-	0,2	0,2
Biological sciences	168,2	107,6	129,2	73,6	-	-	-	-	39,0	34,0
Other natural sciences	74,6	25,0	67,6	21,0	6,0	3,0	1,0	1,0	-	-
Engineering and technology	1134,8	414,4	798,8	295,1	128,0	51,7	74,2	20,0	133,8	47,6
Civil engineering	210,0	81,0	139,0	56,0	51,0	16,0	-	-	20,0	9,0
Electrical engineering, electronic engineering and information engineering	273,6	80,2	177,1	56,9	19,5	6,7	3,2	-	73,8	16,6
Mechanical engineering	249,0	57,0	176,0	35,0	2,0	2,0	71,0	20,0	-	-
Chemical engineering	97,5	68,5	85,0	60,5	1,5	1,0	-	-	11,0	7,0
Environmental engineering	158,0	66,0	109,0	42,0	49,0	24,0	-	-	-	-

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2016 (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
Other technologies and engineering	146,7	61,7	112,7	44,7	5,0	2,0	-	-	29,0	15,0
Medical and health sciences	768,9	454,0	593,8	332,1	71,9	50,9	-	-	103,2	71,0
Basic medicine	544,9	310,9	424,0	225,0	65,9	46,9	-	-	55,0	39,0
Other medical sciences	224,0	143,1	169,8	107,1	6,0	4,0	-	-	48,2	32,0
Agricultural sciences	489,2	238,8	382,0	172,8	36,0	19,0	1,0	1,0	70,2	46,0
Agriculture, forestry and fisheries	119,0	57,0	89,0	42,0	21,0	9,0	1,0	1,0	8,0	5,0
Veterinary science	80,7	42,8	48,5	22,8	-	-	-	-	32,2	20,0
Agricultural biotechnology	27,5	9,0	20,5	5,0	7,0	4,0	-	-	-	-
Other agricultural sciences	262,0	130,0	224,0	103,0	8,0	6,0	-	-	30,0	21,0
Social sciences	997,1	506,2	768,1	358,1	143,0	87,8	1,0	-	85,0	60,3
Economics and business	274,2	139,1	224,2	110,5	27,0	15,3	-	-	23,0	13,3
Educational sciences	208,6	103,7	159,4	75,0	28,5	12,0	-	-	20,7	16,7
Law	198,1	89,6	155,3	56,8	19,5	16,5	-	-	23,3	16,3
Political sciences	123,6	53,8	84,2	31,8	32,3	16,0	1,0	-	6,0	6,0
Media and communications	36,4	21,2	23,4	12,2	13,0	9,0	-	-	-	-
Other social sciences	156,3	98,9	121,6	71,9	22,7	19,0	-	-	12,0	8,0
Humanities	601,5	322,5	424,2	236,0	66,6	29,5	-	-	110,7	57,0
Languages and literature	221,1	147,0	182,1	121,0	1,0	1,0	-	-	38,0	25,0
Phylosophy, ethics and religion	275,0	108,0	183,0	67,0	51,0	22,0	-	-	41,0	19,0
Art (arts, history of arts, performing arts, music)	76,4	46,5	33,1	29,0	11,6	4,5	-	-	31,7	13,0
Other humanities	29,0	21,0	26,0	19,0	3,0	2,0	-	-	-	-
Non-profit sector	**6,2**	**4,2**	**0,1**	**0,1**	**6,1**	**4,1**	**-**	**-**	**-**	**-**
Engineering and technology	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Other technologies and engineering	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Social sciences	4,2	3,2	0,1	0,1	4,1	3,1	-	-	-	-
Educational sciences	4,0	3,0	-	-	4,0	3,0	-	-	-	-
Law	0,2	0,2	0,1	0,1	0,1	0,1	-	-	-	-
Region Vojvodine	**4128,3**	**1751,2**	**1894,6**	**892,7**	**910,9**	**371,8**	**8,6**	**3,8**	**1314,2**	**483,1**
Natural sciences	949,8	344,4	285,3	172,9	242,0	44,5	-	-	422,5	127,0
Engineering and technology	1789,0	649,5	685,2	250,4	391,7	164,2	2,2	1,0	709,9	233,9
Medical and health sciences	337,2	197,7	106,5	64,7	161,2	93,2	6,4	2,8	63,2	37,1
Agricultural sciences	341,7	159,0	254,1	103,4	27,0	14,2	-	-	60,6	41,4
Social sciences	666,6	384,7	531,6	291,3	88,0	54,7	-	-	47,0	38,7
Humanities	44,0	16,0	32,0	10,0	1,0	1,0	-	-	11,0	5,0
Business sector	**1188,2**	**278,4**	**14,4**	**4,4**	**273,8**	**48,7**	**1,2**	**-**	**898,8**	**225,3**
Natural sciences	548,9	94,5	1,0	-	234,6	37,5	-	-	313,3	57,0
Computer and information sciences	547,9	94,5	1,0	-	234,6	37,5	-	-	312,3	57,0
Chemical sciences	1,0	-	-	-	-	-	-	-	1,0	-
Engineering and technology	633,1	179,9	10,8	2,0	36,2	10,0	1,2	-	584,9	167,9
Electrical engineering, electronic engineering and information engineering	483,1	113,9	1,8	-	23,2	5,0	1,2	-	456,9	108,9
Mechanical engineering	2,0	-	-	-	-	-	-	-	2,0	-
Chemical engineering	142,0	64,0	5,0	-	11,0	5,0	-	-	126,0	59,0
Materials engineering	4,0	2,0	3,0	2,0	1,0	-	-	-	-	-
Other technologies and engineering	2,0	-	1,0	-	1,0	-	-	-	-	-
Agricultural sciences	6,2	4,0	2,6	2,4	3,0	1,2	-	-	0,6	0,4
Agricultural biotechnology	6,2	4,0	2,6	2,4	3,0	1,2	-	-	0,6	0,4
Government sector	**244,9**	**133,6**	**180,9**	**96,6**	**47,0**	**26,0**	**1,0**	**1,0**	**16,0**	**10,0**
Engineering and technology	111,9	64,6	76,9	42,6	29,0	16,0	1,0	1,0	5,0	5,0
Environmental biotechnology	80,4	47,0	64,4	35,0	10,0	6,0	1,0	1,0	5,0	5,0
Other technologies and engineering	31,5	17,6	12,5	7,6	19,0	10,0	-	-	-	-
Agricultural sciences	133,0	69,0	104,0	54,0	18,0	10,0	-	-	11,0	5,0
Veterinary sciences	34,0	18,0	24,0	12,0	10,0	6,0	-	-	-	-
Agricultural biotechnology	99,0	51,0	80,0	42,0	8,0	4,0	-	-	11,0	5,0
Tertiary education	**2695,2**	**1339,3**	**1699,4**	**791,7**	**590,1**	**297,1**	**6,4**	**2,8**	**399,4**	**247,8**
Natural sciences	400,9	249,9	284,3	172,9	7,4	7,0	-	-	109,2	70,0
Mathematics	389,7	243,0	276,2	168,3	7,0	7,0	-	-	106,5	67,7
Earth and related environmental sciences	11,2	6,9	8,1	4,6	0,4	-	-	-	2,7	2,3
Engineering and technology	1044,0	405,0	597,5	205,8	326,5	138,2	-	-	120,0	61,0
Civil engineering	34,0	13,0	34,0	13,0	-	-	-	-	-	-
Electrical engineering, electronic engineering and information engineering	780,0	254,0	418,5	117,8	270,5	95,2	-	-	91,0	41,0
Other technologies and engineering	230,0	138,0	145,0	75,0	56,0	43,0	-	-	29,0	20,0
Medical and health sciences	337,2	197,7	106,5	64,7	161,2	93,2	6,4	2,8	63,2	37,1
Other medical sciences	337,2	197,7	106,5	64,7	161,2	93,2	6,4	2,8	63,2	37,1
Agricultural sciences	202,5	86,0	147,5	47,0	6,0	3,0	-	-	49,0	36,0
Agriculture, forestry and fisheries	202,5	86,0	147,5	47,0	6,0	3,0	-	-	49,0	36,0
Social sciences	666,6	384,7	531,6	291,3	88,0	54,7	-	-	47,0	38,7
Psychology	40,5	23,0	28,5	12,5	-	-	-	-	12,0	10,5
Economics and business	153,0	77,4	113,8	50,3	22,9	15,6	-	-	16,3	11,5
Educational sciences	86,6	54,5	68,6	40,0	7,6	5,1	-	-	10,4	9,4
Law	87,5	37,8	66,7	23,5	14,5	8,0	-	-	6,3	6,3
Other social sciences	299,0	192,0	254,0	165,0	43,0	26,0	-	-	2,0	1,0
Humanities	44,0	16,0	32,0	10,0	1,0	1,0	-	-	11,0	5,0
Other humanities	44,0	16,0	32,0	10,0	1,0	1,0	-	-	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, 2016 (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	2618,0	1311,6	1775,7	843,9	320,2	154,9	9,3	4,0	512,9	308,9
Natural sciences	377,3	221,1	249,8	138,8	29,0	14,0	2,0	1,0	96,5	67,3
Engineering and technology	804,7	292,2	512,5	178,2	105,2	43,4	1,0	-	186,0	70,6
Medical and health sciences	430,0	239,5	351,5	186,3	6,5	2,8	4,3	2,0	67,8	48,5
Agricultural sciences	76,0	36,0	64,0	31,0	5,0	2,0	-	-	7,0	3,0
Social sciences	508,2	255,8	416,5	194,1	45,7	32,7	-	-	46,0	29,0
Humanities	421,9	267,0	181,5	115,5	128,8	60,0	2,0	1,0	109,6	90,5
Business sector	**108,0**	**44,4**	**33,2**	**13,0**	**17,0**	**7,0**	**-**	**-**	**57,8**	**24,4**
Natural sciences	10,0	8,0	-	-	2,0	-	-	-	8,0	8,0
Chemical sciences	7,0	5,0	-	-	2,0	-	-	-	5,0	5,0
Other natural sciences	3,0	3,0	-	-	-	-	-	-	3,0	3,0
Engineering and technology	81,0	28,4	19,2	7,0	12,0	5,0	-	-	49,8	16,4
Electrical engineering, electronic engineering and information engineering	44,7	21,0	8,7	5,0	9,0	5,0	-	-	27,0	11,0
Materials engineering	4,0	-	-	-	-	-	-	-	4,0	-
Chemical engineering	4,0	1,0	-	-	-	-	-	-	4,0	1,0
Materials engineering	4,8	1,9	-	-	-	-	-	-	4,8	1,9
Medical engineering	15,5	3,5	8,5	1,0	1,0	-	-	-	6,0	2,5
Other technologies and engineering	8,0	1,0	2,0	1,0	2,0	-	-	-	4,0	-
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	**67,0**	**42,0**	**37,0**	**25,0**	**19,0**	**9,0**	**1,0**	**-**	**10,0**	**8,0**
Engineering and technology	48,0	29,0	18,0	12,0	19,0	9,0	1,0	-	10,0	8,0
Other technologies and engineering	48,0	29,0	18,0	12,0	19,0	9,0	1,0	-	10,0	8,0
Agricultural sciences	19,0	13,0	19,0	13,0	-	-	-	-	-	-
Other agricultural sciences	19,0	13,0	19,0	13,0	-	-	-	-	-	-
Tertiary education	**2443,0**	**1225,2**	**1705,5**	**805,9**	**284,2**	**138,9**	**8,3**	**4,0**	**445,1**	**276,5**
Natural sciences	367,3	213,1	249,8	138,8	27,0	14,0	2,0	1,0	88,5	59,3
Mathematics	367,3	213,1	249,8	138,8	27,0	14,0	2,0	1,0	88,5	59,3
Engineering and technology	675,7	234,8	475,3	159,2	74,2	29,4	-	-	126,2	46,2
Civil engineering	89,0	42,0	51,0	23,0	38,0	19,0	-	-	-	-
Electrical engineering, electronic engineering and information engineering	260,7	83,8	187,2	67,3	18,5	5,0	-	-	55,0	11,5
Mechanical engineering	147,4	26,3	100,4	13,3	8,0	2,0	-	-	39,0	11,0
Chemical engineering	50,6	21,4	43,2	19,0	5,0	1,0	-	-	2,4	1,4
Environmental engineering	27,5	12,5	22,5	10,5	1,0	1,0	-	-	4,0	1,0
Other technologies and engineering	100,5	48,8	71,0	26,1	3,7	1,4	-	-	25,8	21,3
Medicial and health engineering	430,0	239,5	351,5	186,3	6,5	2,8	4,3	2,0	67,8	48,5
Basic medicine	430,0	239,5	351,5	186,3	6,5	2,8	4,3	2,0	67,8	48,5
Agricultural sciences	40,0	15,0	31,0	12,0	2,0	-	-	-	7,0	3,0
Agriculture, forestry and fisheries	40,0	15,0	31,0	12,0	2,0	-	-	-	7,0	3,0
Social sciences	508,2	255,8	416,5	194,1	45,7	32,7	-	-	46,0	29,0
Economics and business	234,3	129,0	192,3	97,0	14,0	13,0	-	-	28,0	19,0
Educational sciences	120,0	57,0	93,0	41,0	24,0	16,0	-	-	3,0	-
Law	104,9	35,8	94,2	30,1	3,7	0,7	-	-	7,0	5,0
Other social sciences	49,0	34,0	37,0	26,0	4,0	3,0	-	-	8,0	5,0
Humanities	421,9	267,0	181,5	115,5	128,8	60,0	2,0	1,0	109,6	90,5
Languages and literature	145,7	102,8	40,1	23,3	50,0	25,0	-	-	55,6	54,5
Phylosophy, ethics and religion	175,0	116,0	116,0	75,0	5,0	5,0	-	-	54,0	36,0
Art (arts, history of arts, performing arts, music)	101,2	48,2	25,4	17,2	73,8	30,0	2,0	1,0	-	-
Region Šumadije i Zapadne Srbije	**953,7**	**505,8**	**574,5**	**277,5**	**92,9**	**49,9**	**4,3**	**2,0**	**282,1**	**176,5**
Natural sciences	184,1	120,3	112,0	68,0	3,0	1,0	-	-	69,1	51,3
Engineering and technology	209,5	59,0	124,2	33,4	10,7	5,4	-	-	74,6	20,2
Medical and health sciences	105,8	62,0	55,3	30,8	1,5	0,8	4,3	2,0	44,8	28,5
Agricultural sciences	66,0	33,0	55,0	28,0	4,0	2,0	-	-	7,0	3,0
Social sciences	242,7	128,7	188,0	94,0	23,7	15,7	-	-	31,0	19,0
Humanities	145,7	102,8	40,1	23,3	50,0	25,0	-	-	55,6	54,5
Business sector	**41,3**	**18,4**	**13,5**	**4,0**	**5,0**	**2,0**	**-**	**-**	**22,8**	**12,4**
Natural sciences	10,0	8,0	-	-	2,0	-	-	-	8,0	8,0
Chemical sciences	7,0	5,0	-	-	2,0	-	-	-	5,0	5,0
Other natural sciences	3,0	3,0	-	-	-	-	-	-	3,0	3,0
Engineering and technology	24,3	5,4	8,5	1,0	1,0	-	-	-	14,8	4,4
Mechanical engineering	4,0	-	-	-	-	-	-	-	4,0	-
Materials engineering	4,8	1,9	-	-	-	-	-	-	4,8	1,9
Medical engineering	15,5	3,5	8,5	1,0	1,0	-	-	-	6,0	2,5
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	**19,0**	**13,0**	**19,0**	**13,0**	**-**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	19,0	13,0	19,0	13,0	-	-	-	-	-	-
Other agricultural sciences	19,0	13,0	19,0	13,0	-	-	-	-	-	-
Tertiary education	**893,4**	**474,4**	**542,0**	**260,5**	**87,9**	**47,9**	**4,3**	**2,0**	**259,3**	**164,1**
Natural sciences	174,1	112,3	112,0	68,0	1,0	1,0	-	-	61,1	43,3
Mathematics	174,1	112,3	112,0	68,0	1,0	1,0	-	-	61,1	43,3

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2016 (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
Engineering and technology	185,2	53,6	115,7	32,4	9,7	5,4	-	-	59,8	15,8
Electrical engineering, electronic engineering and information engineering	125,8	40,5	78,8	27,0	6,0	3,0	-	-	41,0	10,5
Mechanical engineering	44,4	6,3	26,4	1,3	2,0	1,0	-	-	16,0	4,0
Other technologies and engineering	15,0	6,8	10,5	4,1	1,7	1,4	-	-	2,8	1,3
Medical and health sciences	105,8	62,0	55,3	30,8	1,5	0,8	4,3	2,0	44,8	28,5
Basic medicine	105,8	62,0	55,3	30,8	1,5	0,8	4,3	2,0	44,8	28,5
Agricultural sciences	40,0	15,0	31,0	12,0	2,0	-	-	-	7,0	3,0
Agriculture, forestry and fisheries	40,0	15,0	31,0	12,0	2,0	-	-	-	7,0	3,0
Social sciences	242,7	128,7	188,0	94,0	23,7	15,7	-	-	31,0	19,0
Economics and business	123,0	64,0	93,0	43,0	7,0	7,0	-	-	23,0	14,0
Educational sciences	41,0	23,0	32,0	18,0	9,0	5,0	-	-	-	-
Law	29,7	7,7	26,0	7,0	3,7	0,7	-	-	-	-
Other social sciences	49,0	34,0	37,0	26,0	4,0	3,0	-	-	8,0	5,0
Humanities	145,7	102,8	40,1	23,3	50,0	25,0	-	-	55,6	54,5
Languages and literature	145,7	102,8	40,1	23,3	50,0	25,0	-	-	55,6	54,5
Region Juzne i Istočne Srbije	**1664,3**	**805,8**	**1201,2**	**566,4**	**227,3**	**105,0**	**5,0**	**2,0**	**230,8**	**132,4**
Natural sciences	193,2	100,8	137,8	70,8	26,0	13,0	2,0	1,0	27,4	16,0
Engineering and technology	595,2	233,2	388,3	144,8	94,5	38,0	1,0	-	111,4	50,4
Medical and health sciences	324,2	177,5	296,2	155,5	5,0	2,0	-	-	23,0	20,0
Agricultural sciences	10,0	3,0	9,0	3,0	1,0	-	-	-	-	-
Social sciences	265,5	127,1	228,5	100,1	22,0	17,0	-	-	15,0	10,0
Humanities	276,2	164,2	141,4	92,2	78,8	35,0	2,0	1,0	54,0	36,0
Business sector	**66,7**	**26,0**	**19,7**	**9,0**	**12,0**	**5,0**	**-**	**-**	**35,0**	**12,0**
Engineering and technology	56,7	23,0	10,7	6,0	11,0	5,0	-	-	35,0	12,0
Electrical engineering, electronic engineering and information engineering	44,7	21,0	8,7	5,0	9,0	5,0	-	-	27,0	11,0
Chemical engineering	4,0	1,0	-	-	-	-	-	-	4,0	1,0
Other technologies and engineering	8,0	1,0	2,0	1,0	2,0	-	-	-	4,0	-
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**	**29,0**	**18,0**	**12,0**	**19,0**	**9,0**	**1,0**	**-**	**10,0**	**8,0**
Engineering and technology	48,0	29,0	18,0	12,0	19,0	9,0	1,0	-	10,0	8,0
Other technologies and engineering	48,0	29,0	18,0	12,0	19,0	9,0	1,0	-	10,0	8,0
Tertiary education	**1549,6**	**750,8**	**1163,5**	**545,4**	**196,3**	**91,0**	**4,0**	**2,0**	**185,8**	**112,4**
Natural sciences	193,2	100,8	137,8	70,8	26,0	13,0	2,0	1,0	27,4	16,0
Mathematics	193,2	100,8	137,8	70,8	26,0	13,0	2,0	1,0	27,4	16,0
Engineering and technology	490,5	181,2	359,6	126,8	64,5	24,0	-	-	66,4	30,4
Civil engineering	89,0	42,0	51,0	23,0	38,0	19,0	-	-	-	-
Electrical engineering, electronic engineering and information engineering	134,9	43,3	108,4	40,3	12,5	2,0	-	-	14,0	1,0
Mechanical engineering	103,0	20,0	74,0	12,0	6,0	1,0	-	-	23,0	7,0
Chemical engineering	50,6	21,4	43,2	19,0	5,0	1,0	-	-	2,4	1,4
Environmental engineering	27,5	12,5	22,5	10,5	1,0	1,0	-	-	4,0	1,0
Other technologies and engineering	85,5	42,0	60,5	22,0	2,0	-	-	-	23,0	20,0
Medical and health sciences	324,2	177,5	296,2	155,5	5,0	2,0	-	-	23,0	20,0
Basic medicine	324,2	177,5	296,2	155,5	5,0	2,0	-	-	23,0	20,0
Social sciences	265,5	127,1	228,5	100,1	22,0	17,0	-	-	15,0	10,0
Economics and business	111,3	65,0	99,3	54,0	7,0	6,0	-	-	5,0	5,0
Educational sciences	79,0	34,0	61,0	23,0	15,0	11,0	-	-	3,0	-
Law	75,2	28,1	68,2	23,1	-	-	-	-	7,0	5,0
Humanities	276,2	164,2	141,4	92,2	78,8	35,0	2,0	1,0	54,0	36,0
Phylosophy, ethics and religion	175,0	116,0	116,0	75,0	5,0	5,0	-	-	54,0	36,0
Art (arts, history of arts, performing arts, music)	101,2	48,2	25,4	17,2	73,8	30,0	2,0	1,0	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2016

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**13904**	**6730**	**2688**	**1302**	**1542**	**777**	**277**	**99**
Under 25	123	59	20	7	23	12	4	3
25 - 29	1610	755	210	101	163	88	33	13
30 - 34	2856	1311	317	157	254	136	43	14
35 - 39	2128	1170	322	159	238	129	54	21
40 - 44	1844	984	360	192	229	125	52	17
45 - 49	1531	788	386	200	206	107	25	9
50 - 54	1321	626	383	193	179	98	22	10
55 - 59	1113	516	322	152	132	50	21	7
60 - 64	1049	419	290	117	97	32	20	5
65 - 69	318	101	69	22	16	-	1	-
70 and over	11	1	9	2	5	-	2	-
Business sector - total	**1916**	**599**	**155**	**33**	**555**	**205**	**146**	**32**
Under 25	22	11	1	-	13	5	1	-
25 - 29	408	121	40	6	74	33	15	3
30 - 34	834	179	27	7	80	34	24	4
35 - 39	226	116	15	4	80	31	26	4
40 - 44	143	71	8	4	73	26	18	5
45 - 49	89	44	12	3	76	34	19	5
50 - 54	58	23	20	5	60	23	13	4
55 - 59	59	19	6	-	56	14	16	5
60 - 64	59	11	13	3	26	5	11	2
65 - 69	13	3	7	-	12	-	1	-
70 and over	5	1	6	1	5	-	2	-
Government sector - total	**2955**	**1700**	**56**	**27**	**370**	**178**	**43**	**12**
Under 25	10	5	-	-	5	3	-	-
25 - 29	233	143	3	-	26	12	-	-
30 - 34	596	367	2	1	52	26	4	2
35 - 39	608	366	8	6	55	31	12	6
40 - 44	526	283	9	5	58	29	22	3
45 - 49	359	217	6	4	60	31	-	-
50 - 54	228	126	12	7	39	22	-	-
55 - 59	188	112	6	3	39	15	4	1
60 - 64	170	68	8	1	33	9	1	-
65 - 69	36	13	2	-	3	-	-	-
70 and over	1	-	-	-	-	-	-	-
Tertiary education - total	**9027**	**4427**	**2475**	**1240**	**614**	**391**	**87**	**54**
Under 25	91	43	19	7	5	4	3	3
25 - 29	968	490	167	95	62	42	17	9
30 - 34	1424	763	287	148	122	76	15	8
35 - 39	1292	688	299	149	102	66	16	11
40 - 44	1174	629	343	183	98	70	12	9
45 - 49	1083	527	368	193	70	42	6	4
50 - 54	1035	477	350	180	79	52	9	6
55 - 59	866	385	310	149	37	21	1	1
60 - 64	820	340	269	113	38	18	8	3
65 - 69	269	85	60	22	1	-	-	-
70 and over	5	-	3	1	-	-	-	-
Non-profit sector - total	**6**	**4**	**2**	**2**	**3**	**3**	**1**	**1**
25–29	1	1	-	-	1	1	1	1
30–34	2	2	1	1	-	-	-	-
35 - 39	2	-	-	-	1	1	-	-
40 - 44	1	1	-	-	-	-	-	-
50 - 54	-	-	1	1	1	1	-	-
SRBIJA – SEVER	11507	5525	2139	1039	1403	710	218	64
Under 25	120	57	13	4	21	11	1	-
25 - 29	1443	662	157	67	151	82	20	7
30 - 34	2504	1116	215	112	238	131	35	11
35 - 39	1785	978	259	127	220	122	46	13
40 - 44	1506	789	305	166	209	114	44	12
45 - 49	1211	624	310	163	187	96	20	6
50 - 54	984	472	310	156	155	81	14	5
55 - 59	876	405	267	130	117	45	21	7
60 - 64	817	332	242	99	85	28	14	3
65 - 69	252	89	53	14	15	-	1	-
70 and over	9	1	8	1	5	-	2	-
Business sector - total	**1813**	**556**	**131**	**23**	**516**	**192**	**140**	**29**
Under 25	22	11	1	-	13	5	1	-
25 - 29	392	115	40	6	73	33	12	1
30 - 34	808	167	20	4	76	33	21	3
35 - 39	216	112	13	4	72	29	26	4
40 - 44	130	66	7	4	68	24	18	5

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2016 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
45 - 49	71	37	8	1	70	31	19	5
50 - 54	51	18	16	2	52	18	13	4
55 - 59	52	18	5	-	52	14	16	5
60 - 64	55	9	8	1	24	5	11	2
65 - 69	11	2	7	-	11	-	1	-
70 and over	5	1	6	1	5	-	2	-
Government sector - total	**2888**	**1658**	**56**	**27**	**344**	**165**	**43**	**12**
Under 25	10	5	-	-	5	3	-	-
25 - 29	223	140	3	-	26	12	-	-
30 - 34	589	363	2	1	52	26	4	2
35 - 39	602	360	8	6	55	31	12	6
40 - 44	516	276	9	5	54	27	22	3
45 - 49	342	204	6	4	51	27	-	-
50 - 54	220	122	12	7	35	19	-	-
55 - 59	184	109	6	3	34	13	4	1
60 - 64	167	67	8	1	29	7	1	-
65 - 69	34	12	2	-	3	-	-	-
70 and over	1	-	-	-	-	-	-	-
Tertiary education - total	**6800**	**3307**	**1950**	**987**	**540**	**350**	**34**	**22**
Under 25	88	41	12	4	3	3	-	-
25 - 29	827	406	114	61	51	36	7	5
30 - 34	1105	584	192	106	110	72	10	6
35 - 39	965	506	238	117	92	61	8	3
40 - 44	859	446	289	157	87	63	4	4
45 - 49	798	383	296	158	66	38	1	1
50 - 54	713	332	281	146	67	43	1	1
55 - 59	640	278	256	127	31	18	1	1
60 - 64	595	256	226	97	32	16	2	1
65 - 69	207	75	44	14	1	-	-	-
70 and over	3	-	2	-	-	-	-	-
Non-profit - total	**6**	**4**	**2**	**2**	**3**	**3**	**1**	**1**
25 - 29	1	1	-	-	1	1	1	1
30 - 34	2	2	1	1	-	-	-	-
35 – 39	2	-	-	-	1	1	-	-
40 – 44	1	1	-	-	-	-	-	-
50 – 54	-	-	1	1	1	1	-	-
Beogradski region	**7782**	**3974**	**1170**	**561**	**1054**	**531**	**144**	**37**
Under 25	61	32	6	2	14	8	1	-
25 - 29	814	428	82	44	99	51	13	2
30 - 34	1403	788	102	53	173	96	20	3
35 - 39	1262	695	111	57	160	85	27	5
40 - 44	1121	588	154	83	163	89	19	8
45 - 49	917	470	167	83	142	76	18	6
50 - 54	745	361	198	93	112	59	14	5
55 - 59	689	314	166	84	96	42	16	5
60 - 64	584	241	144	55	78	25	13	3
65 - 69	177	56	32	6	12	-	1	-
70 and over	9	1	8	1	5	-	2	-
Business sector - total	**649**	**280**	**87**	**16**	**460**	**179**	**131**	**27**
Under 25	12	7	-	-	11	5	1	-
25 - 29	102	46	17	4	64	31	12	1
30 - 34	211	99	12	3	68	29	18	2
35 - 39	93	46	10	2	68	27	24	3
40 - 44	57	24	5	3	60	22	16	5
45 - 49	48	24	6	1	64	31	17	5
50 - 54	34	9	13	1	42	15	13	4
55 - 59	39	14	4	-	47	14	16	5
60 - 64	37	8	7	1	21	5	11	2
65 - 69	11	2	7	-	10	-	1	-
70 and over	5	1	6	1	5	-	2	-
Governmet sector - total	**2648**	**1527**	**50**	**24**	**209**	**102**	**2**	**1**
Under 25	10	5	-	-	-	-	-	-
25 - 29	200	129	3	-	6	3	-	-
30 - 34	520	322	2	1	28	13	-	-
35 - 39	561	337	7	5	32	19	-	-
40 - 44	483	256	9	5	38	19	1	1
45 - 49	312	184	3	2	30	16	-	-
50 - 54	203	115	11	7	25	15	-	-
55 - 59	170	104	6	3	22	11	-	-
60 - 64	156	64	7	1	27	6	1	-
65 - 69	32	11	2	-	1	-	-	-
70 and over	1	-	-	-	-	-	-	-

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2016 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
Tertiary education - total	**4479**	**2163**	**1031**	**519**	**382**	**247**	**10**	**8**
Under 25	39	20	6	2	3	3	-	-
25 - 29	511	252	62	40	28	16	-	-
30 - 34	670	365	87	48	77	54	2	1
35 - 39	606	312	94	50	59	38	3	2
40 - 44	580	307	140	75	65	48	2	2
45 - 49	557	262	158	80	48	29	1	1
50 - 54	508	237	173	84	44	28	1	1
55 - 59	480	196	156	81	27	17	-	-
60 - 64	391	169	130	53	30	14	1	1
65 - 69	134	43	23	6	1	-	-	-
70 and over	3	-	2	-	-	-	-	-
Non-profit sector - total	**6**	**4**	**2**	**2**	**3**	**3**	**1**	**1**
25 - 29	1	1	-	-	1	1	1	1
30 -34	2	2	1	1	-	-	-	-
35 – 39	2	-	-	-	1	1	-	-
40 – 44	1	1	-	-	-	-	-	-
50 - 54	-	-	1	1	1	1	-	-
Region Vojvodine	**3725**	**1551**	**969**	**478**	**349**	**179**	**74**	**27**
Under 25	59	25	7	2	7	3	-	-
25 - 29	629	234	75	23	52	31	7	5
30 - 34	1101	328	113	59	65	35	15	8
35 - 39	523	283	148	70	60	37	19	8
40 - 44	385	201	151	83	46	25	25	4
45 - 49	294	154	143	80	45	20	2	-
50 - 54	239	111	112	63	43	22	-	-
55 - 59	187	91	101	46	21	3	5	2
60 - 64	233	91	98	44	7	3	1	-
65 - 69	75	33	21	8	3	-	-	-
Business sector - total	**1164**	**276**	**44**	**7**	**56**	**13**	**9**	**2**
Under 25	10	4	1	-	2	-	-	-
25 - 29	290	69	23	2	9	2	-	-
30 - 34	597	68	8	1	8	4	3	1
35 - 39	123	66	3	2	4	2	2	1
40 - 44	73	42	2	1	8	2	2	-
45 - 49	23	13	2	-	6	-	2	-
50 - 54	17	9	3	1	10	3	-	-
55 - 59	13	4	1	-	5	-	-	-
60 - 64	18	1	1	-	3	-	-	-
65 - 69	-	-	-	-	1	-	-	-
Government sector - total	**240**	**131**	**6**	**3**	**135**	**63**	**41**	**11**
Under 25	-	-	-	-	5	3	-	-
25 - 29	23	11	-	-	20	9	-	-
30 - 34	69	41	-	-	24	13	4	2
35 - 39	41	23	1	1	23	12	12	6
40 - 44	33	20	-	-	16	8	21	2
45 - 49	30	20	3	2	21	11	-	-
50 - 54	17	7	1	-	10	4	-	-
55 - 59	14	5	-	-	12	2	4	1
60 - 64	11	3	1	-	2	1	-	-
65 - 69	2	1	-	-	2	-	-	-
Tertiary education - total	**2321**	**1144**	**919**	**468**	**158**	**103**	**24**	**14**
Under 25	49	21	6	2	-	-	-	-
25 - 29	316	154	52	21	23	20	7	5
30 - 34	435	219	105	58	33	18	8	5
35 - 39	359	194	144	67	33	23	5	1
40 - 44	279	139	149	82	22	15	2	2
45 - 49	241	121	138	78	18	9	-	-
50 - 54	205	95	108	62	23	15	-	-
55 - 59	160	82	100	46	4	1	1	1
60 - 64	204	87	96	44	2	2	1	-
65 - 69	73	32	21	8	-	-	-	-
SRBIJA – JUG	2397	1205	549	263	139	67	59	35
Under 25	3	2	7	3	2	1	3	3
25 - 29	167	93	53	34	12	6	13	6
30 - 34	352	195	102	45	16	5	8	3
35 - 39	343	192	63	32	18	7	8	8
40 - 44	338	195	55	26	20	11	8	5
45 - 49	320	164	76	37	19	11	5	3
50 - 54	337	154	73	37	24	17	8	5
55 - 59	237	111	55	22	15	5	-	-
60 - 64	232	87	48	18	12	4	6	2
65 - 69	66	12	16	8	1	-	-	-
70 and over	2	-	1	1	-	-	-	-

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2016 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
Business sector - total	**103**	**43**	**24**	**10**	**39**	**13**	**6**	**3**
25 - 29	16	6	-	-	1	-	3	2
30 - 34	26	12	7	3	4	1	3	1
35 - 39	10	4	2	-	8	2	-	-
40 - 44	13	5	1	-	5	2	-	-
45 - 49	18	7	4	2	6	3	-	-
50 - 54	7	5	4	3	8	5	-	-
55 - 59	7	1	1	-	4	-	-	-
60 - 64	4	2	5	2	2	-	-	-
65 - 69	2	1	-	-	1	-	-	-
Government sector - total	**67**	**42**	**-**	**-**	**26**	**13**	**-**	**-**
25 - 29	10	3	-	-	-	-	-	-
30 - 34	7	4	-	-	-	-	-	-
35 - 39	6	6	-	-	-	-	-	-
40 - 44	10	7	-	-	4	2	-	-
45 - 49	17	13	-	-	9	4	-	-
50 - 54	8	4	-	-	4	3	-	-
55 - 59	4	3	-	-	5	2	-	-
60 - 64	3	1	-	-	4	2	-	-
65 - 69	2	1	-	-	-	-	-	-
Tertiary education - total	**2227**	**1120**	**525**	**253**	**74**	**41**	**53**	**32**
Under 25	3	2	7	3	2	1	3	3
25 - 29	141	84	53	34	11	6	10	4
30 - 34	319	179	95	42	12	4	5	2
35 - 39	327	182	61	32	10	5	8	8
40 - 44	315	183	54	26	11	7	8	5
45 - 49	285	144	72	35	4	4	5	3
50 - 54	322	145	69	34	12	9	8	5
55 - 59	226	107	54	22	6	3	-	-
60 - 64	225	84	43	16	6	2	6	2
65 - 69	62	10	16	8	-	-	-	-
70 and over	2	-	1	1	-	-	-	-
Region Šumadije i Zapadne Srbije	**777**	**417**	**457**	**225**	**62**	**25**	**39**	**23**
Under 25	2	1	7	3	2	1	3	3
25 - 29	78	49	52	33	9	5	8	4
30 - 34	148	81	92	44	4	1	8	3
35 - 39	105	60	51	26	11	3	5	5
40 - 44	103	58	43	21	9	3	5	3
45 - 49	77	41	64	31	7	4	2	2
50 - 54	104	57	63	34	12	7	6	3
55 - 59	78	42	40	12	6	1	-	-
60 - 64	68	25	36	15	1	-	2	-
65 - 69	14	3	8	5	1	-	-	-
70 and over	-	-	1	1	-	-	-	-
Business sector - total	**37**	**17**	**23**	**10**	**34**	**12**	**6**	**3**
25 - 29	5	1	-	-	1	-	3	2
30 - 34	8	3	7	3	2	1	3	1
35 - 39	2	1	2	-	8	2	-	-
40 - 44	9	3	1	-	5	2	-	-
45 - 49	3	3	4	2	6	3	-	-
50 - 54	4	3	4	3	7	4	-	-
55 - 59	2	1	1	-	4	-	-	-
60 - 64	3	2	4	2	-	-	-	-
65 - 69	1	-	-	-	1	-	-	-
Government sector - total	**19**	**13**	**-**	**-**	**2**	**1**	**-**	**-**
30–34	3	1	-	-	-	-	-	-
35–39	2	2	-	-	-	-	-	-
40–44	5	3	-	-	-	-	-	-
45–49	4	4	-	-	-	-	-	-
50–54	2	1	-	-	1	1	-	-
55–59	-	-	-	-	1	-	-	-
60–64	1	1	-	-	-	-	-	-
65–69	2	1	-	-	-	-	-	-
Tertiary education - total	**721**	**387**	**434**	**215**	**26**	**12**	**33**	**20**
Under 25	2	1	7	3	2	1	3	3
25 - 29	73	48	52	33	8	5	5	2
30 - 34	137	77	85	41	2	-	5	2
35 - 39	101	57	49	26	3	1	5	5
40 - 44	89	52	42	21	4	1	5	3
45 - 49	70	34	60	29	1	1	2	2
50 - 54	98	53	59	31	4	2	6	3
55 - 59	76	41	39	12	1	1	-	-
60 - 64	64	22	32	13	1	-	2	-
65 - 69	11	2	8	5	-	-	-	-
70 and over	-	-	1	1	-	-	-	-

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2016 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
Region Južne i Istočne Srbije	**1620**	**788**	**92**	**38**	**77**	**42**	**20**	**12**
Under 25	1	1	-	-	-	-	-	-
25 - 29	89	44	1	1	3	1	5	2
30 - 34	204	114	10	1	12	4	-	-
35 - 39	238	132	12	6	7	4	3	3
40 - 44	235	137	12	5	11	8	3	2
45 - 49	243	123	12	6	12	7	3	1
50 - 54	233	97	10	3	12	10	2	2
55 - 59	159	69	15	10	9	4	-	-
60 - 64	164	62	12	3	11	4	4	2
65 - 69	52	9	8	3	-	-	-	-
70 and over	2	-	-	-	-	-	-	-
Business sector - total	**66**	**26**	**1**	**-**	**5**	**1**	**-**	**-**
25 - 29	11	5	-	-	-	-	-	-
30 - 34	18	9	-	-	2	-	-	-
35 - 39	8	3	-	-	-	-	-	-
40 - 44	4	2	-	-	-	-	-	-
45 - 49	15	4	-	-	-	-	-	-
50 - 54	3	2	-	-	1	1	-	-
55 - 59	5	-	-	-	-	-	-	-
60 - 64	1	-	1	-	2	-	-	-
65 - 69	1	1	-	-	-	-	-	-
Government sector - total	**48**	**29**	**-**	**-**	**24**	**12**	**-**	**-**
25–29	10	3	-	-	-	-	-	-
30–34	4	3	-	-	-	-	-	-
35–39	4	4	-	-	-	-	-	-
40–44	5	4	-	-	4	2	-	-
45–49	13	9	-	-	9	4	-	-
50–54	6	3	-	-	3	2	-	-
55–59	4	3	-	-	4	2	-	-
60–64	2	-	-	-	4	2	-	-
Tertiary education - total	**1506**	**733**	**91**	**38**	**48**	**29**	**20**	**12**
Under 25	1	1	-	-	-	-	-	-
25 - 29	68	36	1	1	3	1	5	2
30 - 34	182	102	10	1	10	4	-	-
35 - 39	226	125	12	6	7	4	3	3
40 - 44	226	131	12	5	7	6	3	2
45 - 49	215	110	12	6	3	3	3	1
50 - 54	224	92	10	3	8	7	2	2
55 - 59	150	66	15	10	5	2	-	-
60 - 64	161	62	11	3	5	2	4	2
65 - 69	51	8	8	3	-	-	-	-
70 and over	2	-	-	-	-	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

5.1. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science and sex, 2016

(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	**1819**	**876**	**192**	**93**	**236**	**111**	**25**	**9**	**1366**	**663**
Natural sciences	345	160	32	8	47	20	9	2	257	130
Engineering and technology	670	227	82	36	100	39	6	-	482	152
Medical and health sciences	134	85	6	3	13	8	3	2	112	72
Agricultural sciences	291	145	37	23	18	5	6	5	230	112
Social sciences	220	140	15	7	22	10	1	-	182	123
Humanities	159	119	20	16	36	29	-	-	103	74
Business sector	**701**	**237**	**62**	**22**	**56**	**16**	**7**	**1**	**576**	**198**
Natural sciences	167	57	19	2	27	9	-	-	121	46
Engineering and technology	429	117	35	17	20	1	6	-	368	99
Medical and health sciences	76	47	-	-	4	3	1	1	71	43
Agricultural sciences	15	7	4	1	2	-	-	-	9	6
Social sciences	14	9	4	2	3	3	-	-	7	4
Government sector	**413**	**190**	**67**	**29**	**74**	**37**	**11**	**5**	**261**	**119**
Natural sciences	72	34	9	4	9	5	6	1	48	24
Engineering and technology	138	54	25	5	39	18	-	-	74	31
Medical and health sciences	4	4	-	-	2	2	1	1	1	1
Agricultural sciences	182	89	30	19	15	5	4	3	133	62
Social sciences	11	5	3	1	6	4	-	-	2	-
Humanities	6	4	-	-	3	3	-	-	3	1
Tertiary education	**701**	**445**	**63**	**42**	**105**	**57**	**7**	**3**	**526**	**343**
Natural sciences	106	69	4	2	11	6	3	1	88	60
Engineering and technology	103	56	22	14	41	20	-	-	40	22
Medical and health sciences	54	34	6	3	7	3	1	-	40	28
Agricultural sciences	94	49	3	3	1	-	2	2	88	44
Social sciences	191	122	8	4	12	2	1	-	170	116
Humanities	153	115	20	16	33	26	-	-	100	73
Non-profit sector	**4**	**4**	**-**	**-**	**1**	**1**	**-**	**-**	**3**	**3**
Social sciences	4	4	-	-	1	1	-	-	3	3
SRBIJA – SEVER	1621	774	178	83	199	92	24	9	1220	590
Natural sciences	329	151	30	7	46	19	9	2	244	123
Engineering and technology	558	177	72	28	86	34	6	-	394	115
Medical and health sciences	95	60	5	3	9	6	2	2	79	49
Agricultural sciences	286	143	36	22	16	5	6	5	228	111
Social sciences	218	140	15	7	20	10	1	-	182	123
Humanities	135	103	20	16	22	18	-	-	93	69
Business sector	**656**	**221**	**61**	**21**	**53**	**16**	**7**	**1**	**535**	**183**
Natural sciences	162	53	19	2	27	9	-	-	116	42
Engineering and technology	392	106	35	17	18	1	6	-	333	88
Medical and health sciences	76	47	-	-	4	3	1	1	71	43
Agricultural sciences	12	6	3	-	1	-	-	-	8	6
Social sciences	14	9	4	2	3	3	-	-	7	4
Government sector	**387**	**177**	**65**	**27**	**68**	**34**	**11**	**5**	**243**	**111**
Natural sciences	72	34	9	4	9	5	6	1	48	24
Engineering and technology	114	42	23	3	34	15	-	-	57	24
Medical and health sciences	4	4	-	-	2	2	1	1	1	1
Agricultural sciences	180	88	30	19	14	5	4	3	132	61
Social sciences	11	5	3	1	6	4	-	-	2	-
Humanities	6	4	-	-	3	3	-	-	3	1
Tertiary education	**574**	**372**	**52**	**35**	**77**	**41**	**6**	**3**	**439**	**293**
Natural sciences	95	64	2	1	10	5	3	1	80	57
Engineering and technology	52	29	14	8	34	18	-	-	4	3
Medical and health sciences	15	9	5	3	3	1	-	-	7	5
Agricultural sciences	94	49	3	3	1	-	2	2	88	44
Social sciences	189	122	8	4	10	2	1	-	170	116
Humanities	129	99	20	16	19	15	-	-	90	68
Non-profit sector	**4**	**4**	**-**	**-**	**1**	**1**	**-**	**-**	**3**	**3**
Social sciences	4	4	-	-	1	1	-	-	3	3
Beogradski region	**1198**	**568**	**128**	**74**	**153**	**72**	**21**	**8**	**896**	**414**
Natural sciences	299	147	12	5	34	17	9	2	244	123
Engineering and technology	447	134	43	22	58	17	6	-	340	95
Medical and health sciences	95	60	5	3	9	6	2	2	79	49
Agricultural sciences	156	85	35	22	10	4	4	4	107	55
Social sciences	66	39	13	6	20	10	-	-	33	23
Humanities	135	103	20	16	22	18	-	-	93	69
Business sector	**591**	**206**	**43**	**19**	**40**	**13**	**7**	**1**	**501**	**173**
Natural sciences	132	49	1	-	15	7	-	-	116	42
Engineering and technology	357	95	35	17	17	-	6	-	299	78
Medical and health sciences	76	47	-	-	4	3	1	1	71	43
Agricultural sciences	12	6	3	-	1	-	-	-	8	6
Social sciences	14	9	4	2	3	3	-	-	7	4

5.1. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science and sex, 2016
(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
Government sector	**211**	**103**	**44**	**25**	**45**	**25**	**9**	**4**	**113**	**49**
Natural sciences	72	34	9	4	9	5	6	1	48	24
Engineering and technology	59	23	3	1	17	7	-	-	39	15
Medical and health sciences	4	4	-	-	2	2	1	1	1	1
Agricultural sciences	59	33	29	19	8	4	2	2	20	8
Social sciences	11	5	3	1	6	4	-	-	2	-
Humanities	6	4	-	-	3	3	-	-	3	1
Tertiary education	**392**	**255**	**41**	**30**	**67**	**33**	**5**	**3**	**279**	**189**
Natural sciences	95	64	2	1	10	5	3	1	80	57
Engineering and technology	31	16	5	4	24	10	-	-	2	2
Medical and health sciences	15	9	5	3	3	1	-	-	7	5
Agricultural sciences	85	46	3	3	1	-	2	2	79	41
Social sciences	37	21	6	3	10	2	-	-	21	16
Humanities	129	99	20	16	19	15	-	-	90	68
Non-profit sector	**4**	**4**	**-**	**-**	**1**	**1**	**-**	**-**	**3**	**3**
Social sciences	4	4	-	-	1	1	-	-	3	3
Region Vojvodine	**423**	**206**	**50**	**9**	**46**	**20**	**3**	**1**	**324**	**176**
Natural sciences	30	4	18	2	12	2	-	-	-	-
Engineering and technology	111	43	29	6	28	17	-	-	54	20
Agricultural sciences	130	58	1	-	6	1	2	1	121	56
Social sciences	152	101	2	1	-	-	1	-	149	100
Business sector	**65**	**15**	**18**	**2**	**13**	**3**	**-**	**-**	**34**	**10**
Natural sciences	30	4	18	2	12	2	-	-	-	-
Engineering and technology	35	11	-	-	1	1	-	-	34	10
Government sector	**176**	**74**	**21**	**2**	**23**	**9**	**2**	**1**	**130**	**62**
Engineering and technology	55	19	20	2	17	8	-	-	18	9
Agricultural sciences	121	55	1	-	6	1	2	1	112	53
Tertiary education	**182**	**117**	**11**	**5**	**10**	**8**	**1**	**-**	**160**	**104**
Engineering and technology	21	13	9	4	10	8	-	-	2	1
Agricultural sciences	9	3	-	-	-	-	-	-	9	3
Social sciences	152	101	2	1	-	-	1	-	149	100
SRBIJA – JUG	198	102	14	10	37	19	1	-	146	73
Natural sciences	16	9	2	1	1	1	-	-	13	7
Engineering and technology	112	50	10	8	14	5	-	-	88	37
Medical and health sciences	39	25	1	-	4	2	1	-	33	23
Agricultural sciences	5	2	1	1	2	-	-	-	2	1
Social sciences	2	-	-	-	2	-	-	-	-	-
Humanities	24	16	-	-	14	11	-	-	10	5
Business sector	**45**	**16**	**1**	**1**	**3**	**-**	**-**	**-**	**41**	**15**
Natural sciences	5	4	-	-	-	-	-	-	5	4
Engineering and technology	37	11	-	-	2	-	-	-	35	11
Agricultural sciences	3	1	1	1	1	-	-	-	1	-
Government sector	**26**	**13**	**2**	**2**	**6**	**3**	**-**	**-**	**18**	**8**
Engineering and technology	24	12	2	2	5	3	-	-	17	7
Agricultural sciences	2	1	-	-	1	-	-	-	1	1
Tertiary education	**127**	**73**	**11**	**7**	**28**	**16**	**1**	**-**	**87**	**50**
Natural sciences	11	5	2	1	1	1	-	-	8	3
Engineering and technology	51	27	8	6	7	2	-	-	36	19
Medical and health sciences	39	25	1	-	4	2	1	-	33	23
Social sciences	2	-	-	-	2	-	-	-	-	-
Humanities	24	16	-	-	14	11	-	-	10	5
Region Šumadije i Zapadne Srbije	**101**	**48**	**3**	**1**	**18**	**8**	**1**	**-**	**79**	**39**
Natural sciences	16	9	2	1	1	1	-	-	13	7
Engineering and technology	37	12	-	-	4	-	-	-	33	12
Medical and health sciences	27	16	1	-	4	2	1	-	21	14
Agricultural sciences	3	1	-	-	1	-	-	-	2	1
Social sciences	2	-	-	-	2	-	-	-	-	-
Humanities	16	10	-	-	6	5	-	-	10	5
Business sector	**40**	**15**	**-**	**-**	**2**	**-**	**-**	**-**	**38**	**15**
Natural sciences	5	4	-	-	-	-	-	-	5	4
Engineering and technology	34	11	-	-	2	-	-	-	32	11
Agricultural sciences	1	-	-	-	-	-	-	-	1	-
Government sector	**2**	**1**	**-**	**-**	**1**	**-**	**-**	**-**	**1**	**1**
Agricultural sciences	2	1	-	-	1	-	-	-	1	1

5.1. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science and sex, 2016 (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
Tertiary education	**59**	**32**	**3**	**1**	**15**	**8**	**1**	**-**	**40**	**23**
Natural sciences	11	5	2	1	1	1	-	-	8	3
Engineering and technology	3	1	-	-	2	-	-	-	1	1
Medical and health sciences	27	16	1	-	4	2	1	-	21	14
Social sciences	2	-	-	-	2	-	-	-	-	-
Humanities	16	10	-	-	6	5	-	-	10	5
Region Južne i Istočne Srbije	**97**	**54**	**11**	**9**	**19**	**11**	**-**	**-**	**67**	**34**
Engineering and technology	75	38	10	8	10	5	-	-	55	25
Medical and health sciences	12	9	-	-	-	-	-	-	12	9
Agricultural sciences	2	1	1	1	1	-	-	-	-	-
Humanities	8	6	-	-	8	6	-	-	-	-
Business sector	**5**	**1**	**1**	**1**	**1**	**-**	**-**	**-**	**3**	**-**
Engineering and technology	3	-	-	-	-	-	-	-	3	-
Agricultural sciences	2	1	1	1	1	-	-	-	-	-
Government sector	**24**	**12**	**2**	**2**	**5**	**3**	**-**	**-**	**17**	**7**
Engineering and technology	24	12	2	2	5	3	-	-	17	7
Tertiary education	**68**	**41**	**8**	**6**	**13**	**8**	**-**	**-**	**47**	**27**
Engineering and technology	48	26	8	6	5	2	-	-	35	18
Medical and health sciences	12	9	-	-	-	-	-	-	12	9
Humanities	8	6	-	-	8	6	-	-	-	-
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, 2016

	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	**1634,3**	**813,7**	**164,8**	**86,9**	**212,9**	**101,0**	**24,0**	**9,0**	**1232,7**	**616,8**
Natural sciences	311,4	147,1	27,8	8,0	42,0	17,4	9,0	2,0	232,6	119,7
Engineering and technology	560,0	201,9	62,4	31,6	85,4	33,6	6,0	-	406,2	136,7
Medical and health sciences	117,0	75,4	4,1	2,3	10,3	6,8	2,5	2,0	100,1	64,3
Agricultural sciences	289,4	144,2	37,0	23,0	18,0	5,0	6,0	5,0	228,4	111,2
Social sciences	201,9	128,6	13,5	6,0	21,3	9,3	0,5	-	166,6	113,3
Humanities	154,7	116,5	20,0	16,0	36,0	29,0	-	-	98,7	71,5
Business sector	**603,0**	**215,3**	**55,6**	**21,5**	**47,8**	**12,7**	**7,0**	**1,0**	**492,6**	**180,1**
Natural sciences	133,9	44,6	14,8	2,0	22,0	6,4	-	-	97,1	36,2
Engineering and technology	367,4	109,7	33,3	17,0	17,5	1,0	6,0	-	310,6	91,7
Medical and health sciences	76,0	47,0	-	-	4,0	3,0	1,0	1,0	71,0	43,0
Agricultural sciences	13,4	6,2	4,0	1,0	2,0	-	-	-	7,4	5,2
Social sciences	12,3	7,8	3,5	1,5	2,3	2,3	-	-	6,5	4,0
Government sector	**376,4**	**180,2**	**52,1**	**27,1**	**63,4**	**32,6**	**11,0**	**5,0**	**249,9**	**115,5**
Natural sciences	71,8	33,8	9,0	4,0	9,0	5,0	6,0	1,0	47,8	23,8
Engineering and technology	102,3	44,4	10,1	3,1	28,4	13,6	-	-	63,8	27,7
Medical and health sciences	4,0	4,0	-	-	2,0	2,0	1,0	1,0	1,0	1,0
Agricultural sciences	182,0	89,0	30,0	19,0	15,0	5,0	4,0	3,0	133,0	62,0
Social sciences	10,3	5,0	3,0	1,0	6,0	4,0	-	-	1,3	-
Humanities	6,0	4,0	-	-	3,0	3,0	-	-	3,0	1,0
Tertiary education	**651,9**	**415,1**	**57,1**	**38,3**	**100,8**	**54,8**	**6,0**	**3,0**	**488,1**	**319,1**
Natural sciences	105,7	68,7	4,0	2,0	11,0	6,0	3,0	1,0	87,7	59,7
Engineering and technology	90,3	47,8	19,0	11,5	39,5	19,0	-	-	31,8	17,3
Medical and health sciences	37,0	24,4	4,1	2,3	4,3	1,8	0,5	-	28,1	20,3
Agricultural sciences	94,0	49,0	3,0	3,0	1,0	-	2,0	2,0	88,0	44,0
Social sciences	176,3	112,8	7,0	3,5	12,0	2,0	0,5	-	156,8	107,3
Humanities	148,7	112,5	20,0	16,0	33,0	26,0	-	-	95,7	70,5
Non-profit sector	**3,0**	**3,0**	**-**	**-**	**1,0**	**1,0**	**-**	**-**	**2,0**	**2,0**
Social sciences	3,0	3,0	-	-	1,0	1,0	-	-	2,0	2,0
SRBIJA – SEVER	1466,5	729,2	152,8	78,4	180,8	84,3	23,5	9,0	1109,4	557,5
Natural sciences	295,4	138,1	25,8	7,0	41,0	16,4	9,0	2,0	219,6	112,7
Engineering and technology	460,5	159,5	53,9	25,1	73,6	29,6	6,0	-	327,0	104,8
Medical and health sciences	92,2	58,6	3,6	2,3	9,0	6,0	2,0	2,0	77,6	48,3
Agricultural sciences	284,4	142,2	36,0	22,0	16,0	5,0	6,0	5,0	226,4	110,2
Social sciences	199,9	128,6	13,5	6,0	19,3	9,3	0,5	-	166,6	113,3
Humanities	134,1	102,1	20,0	16,0	22,0	18,0	-	-	92,1	68,1

5.2. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science, expressed in full-time equivalent, 2016 (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	**560,3**	**200,7**	**54,6**	**20,5**	**45,5**	**12,7**	**7,0**	**1,0**	**453,2**	**166,5**
Natural sciences	128,9	40,6	14,8	2,0	22,0	6,4	-	-	92,1	32,2
Engineering and technology	332,7	100,1	33,3	17,0	16,2	1,0	6,0	-	277,2	82,1
Medical and health sciences	76,0	47,0	-	-	4,0	3,0	1,0	1,0	71,0	43,0
Agricultural sciences	10,4	5,2	3,0	-	1,0	-	-	-	6,4	5,2
Social sciences	12,3	7,8	3,5	1,5	2,3	2,3	-	-	6,5	4,0
Government sector	**350,4**	**167,2**	**50,1**	**25,1**	**57,4**	**29,6**	**11,0**	**5,0**	**231,9**	**107,5**
Natural sciences	71,8	33,8	9,0	4,0	9,0	5,0	6,0	1,0	47,8	23,8
Engineering and technology	78,3	32,4	8,1	1,1	23,4	10,6	-	-	46,8	20,7
Medical and health sciences	4,0	4,0	-	-	2,0	2,0	1,0	1,0	1,0	1,0
Agricultural sciences	180,0	88,0	30,0	19,0	14,0	5,0	4,0	3,0	132,0	61,0
Social sciences	10,3	5,0	3,0	1,0	6,0	4,0	-	-	1,3	-
Humanities	6,0	4,0	-	-	3,0	3,0	-	-	3,0	1,0
Tertiary education	**552,8**	**358,2**	**48,1**	**32,8**	**77,0**	**41,0**	**5,5**	**3,0**	**422,2**	**281,4**
Natural sciences	94,7	63,7	2,0	1,0	10,0	5,0	3,0	1,0	79,7	56,7
Engineering and technology	49,5	27,0	12,5	7,0	34,0	18,0	-	-	3,0	2,0
Medical and health sciences	12,2	7,6	3,6	2,3	3,0	1,0	-	-	5,6	4,3
Agricultural sciences	94,0	49,0	3,0	3,0	1,0	-	2,0	2,0	88,0	44,0
Social sciences	174,3	112,8	7,0	3,5	10,0	2,0	0,5	-	156,8	107,3
Humanities	128,1	98,1	20,0	16,0	19,0	15,0	-	-	89,1	67,1
Non-profit sector	**3,0**	**3,0**	**-**	**-**	**1,0**	**1,0**	**-**	**-**	**2,0**	**2,0**
Social sciences	3,0	3,0	-	-	1,0	1,0	-	-	2,0	2,0
Beogradski region	**1100,2**	**543,2**	**123,4**	**71,8**	**146,3**	**69,2**	**21,0**	**8,0**	**809,5**	**394,2**
Natural sciences	270,4	134,6	12,0	5,0	29,8	14,9	9,0	2,0	219,6	112,7
Engineering and technology	386,4	126,8	40,3	21,0	56,2	17,0	6,0	-	283,9	88,8
Medical and health sciences	92,2	58,6	3,6	2,3	9,0	6,0	2,0	2,0	77,6	48,3
Agricultural sciences	154,4	84,2	35,0	22,0	10,0	4,0	4,0	4,0	105,4	54,2
Social sciences	62,6	36,8	12,5	5,5	19,3	9,3	-	-	30,8	22,0
Humanities	134,1	102,1	20,0	16,0	22,0	18,0	-	-	92,1	68,1
Business sector	**501,0**	**186,9**	**40,8**	**18,5**	**33,3**	**10,2**	**7,0**	**1,0**	**419,9**	**157,2**
Natural sciences	103,9	37,1	1,0	-	10,8	4,9	-	-	92,1	32,2
Engineering and technology	298,4	89,8	33,3	17,0	15,2	-	6,0	-	243,9	72,8
Medical and health sciences	76,0	47,0	-	-	4,0	3,0	1,0	1,0	71,0	43,0
Agricultural sciences	10,4	5,2	3,0	-	1,0	-	-	-	6,4	5,2
Social sciences	12,3	7,8	3,5	1,5	2,3	2,3	-	-	6,5	4,0
Government sector	**210,1**	**102,8**	**44,0**	**25,0**	**45,0**	**25,0**	**9,0**	**4,0**	**112,1**	**48,8**
Natural sciences	71,8	33,8	9,0	4,0	9,0	5,0	6,0	1,0	47,8	23,8
Engineering and technology	59,0	23,0	3,0	1,0	17,0	7,0	-	-	39,0	15,0
Medical and health sciences	4,0	4,0	-	-	2,0	2,0	1,0	1,0	1,0	1,0
Agricultural sciences	59,0	33,0	29,0	19,0	8,0	4,0	2,0	2,0	20,0	8,0
Social sciences	10,3	5,0	3,0	1,0	6,0	4,0	-	-	1,3	-
Humanities	6,0	4,0	-	-	3,0	3,0	-	-	3,0	1,0
Tertiary education	**386,0**	**250,4**	**38,6**	**28,3**	**67,0**	**33,0**	**5,0**	**3,0**	**275,4**	**186,1**
Natural sciences	94,7	63,7	2,0	1,0	10,0	5,0	3,0	1,0	79,7	56,7
Engineering and technology	29,0	14,0	4,0	3,0	24,0	10,0	-	-	1,0	1,0
Medical and health sciences	12,2	7,6	3,6	2,3	3,0	1,0	-	-	5,6	4,3
Agricultural sciences	85,0	46,0	3,0	3,0	1,0	-	2,0	2,0	79,0	41,0
Social sciences	37,0	21,0	6,0	3,0	10,0	2,0	-	-	21,0	16,0
Humanities	128,1	98,1	20,0	16,0	19,0	15,0	-	-	89,1	67,1
Non-profit sector	**3,0**	**3,0**	**-**	**-**	**1,0**	**1,0**	**-**	**-**	**2,0**	**2,0**
Social sciences	3,0	3,0	-	-	1,0	1,0	-	-	2,0	2,0
Region Vojvodine	**366,4**	**186,0**	**29,4**	**6,6**	**34,5**	**15,1**	**2,5**	**1,0**	**299,9**	**163,3**
Natural sciences	25,0	3,5	13,8	2,0	11,2	1,5	-	-	-	-
Engineering and technology	74,1	32,7	13,6	4,1	17,3	12,6	-	-	43,1	16,0
Agricultural sciences	130,0	58,0	1,0	-	6,0	1,0	2,0	1,0	121,0	56,0
Social sciences	137,3	91,8	1,0	0,5	-	-	0,5	-	135,8	91,3
Business sector	**59,3**	**13,8**	**13,8**	**2,0**	**12,2**	**2,5**	**-**	**-**	**33,3**	**9,3**
Natural sciences	25,0	3,5	13,8	2,0	11,2	1,5	-	-	-	-
Engineering and technology	34,3	10,3	-	-	1,0	1,0	-	-	33,3	9,3
Government sector	**140,3**	**64,4**	**6,1**	**0,1**	**12,3**	**4,6**	**2,0**	**1,0**	**119,8**	**58,7**
Engineering and technology	19,3	9,4	5,1	0,1	6,3	3,6	-	-	7,8	5,7
Agricultural sciences	121,0	55,0	1,0	-	6,0	1,0	2,0	1,0	112,0	53,0
Tertiary education	**166,8**	**107,8**	**9,5**	**4,5**	**10,0**	**8,0**	**0,5**	**-**	**146,8**	**95,3**
Engineering and technology	20,5	13,0	8,5	4,0	10,0	8,0	-	-	2,0	1,0
Agricultural sciences	9,0	3,0	-	-	-	-	-	-	9,0	3,0
Social sciences	137,3	91,8	1,0	0,5	-	-	0,5	-	135,8	91,3

5.2. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science, expressed in full-time equivalent, 2016 (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
SRBIJA – JUG	167,8	84,6	12,0	8,5	32,0	16,8	0,5	-	123,3	59,3
Natural sciences	16,0	9,0	2,0	1,0	1,0	1,0	-	-	13,0	7,0
Engineering and technology	99,5	42,4	8,5	6,5	11,8	4,0	-	-	79,2	31,9
Medical and health sciences	24,8	16,8	0,5	-	1,3	0,8	0,5	-	22,5	16,0
Agricultural sciences	5,0	2,0	1,0	1,0	2,0	-	-	-	2,0	1,0
Social sciences	2,0	-	-	-	2,0	-	-	-	-	-
Humanities	20,6	14,4	-	-	14,0	11,0	-	-	6,6	3,4
Business sector	**42,7**	**14,6**	**1,0**	**1,0**	**2,3**	**-**	**-**	**-**	**39,4**	**13,6**
Engineering and technology	5,0	4,0	-	-	-	-	-	-	5,0	4,0
Agricultural sciences	34,7	9,6	-	-	1,3	-	-	-	33,4	9,6
Social sciences	3,0	1,0	1,0	1,0	1,0	-	-	-	1,0	-
Government sector	**26,0**	**13,0**	**2,0**	**2,0**	**6,0**	**3,0**	**-**	**-**	**18,0**	**8,0**
Engineering and technology	24,0	12,0	2,0	2,0	5,0	3,0	-	-	17,0	7,0
Agricultural sciences	2,0	1,0	-	-	1,0	-	-	-	1,0	1,0
Tertiary education	**99,2**	**56,9**	**9,0**	**5,5**	**23,8**	**13,8**	**0,5**	**-**	**65,9**	**37,7**
Natural sciences	11,0	5,0	2,0	1,0	1,0	1,0	-	-	8,0	3,0
Engineering and technology	40,8	20,8	6,5	4,5	5,5	1,0	-	-	28,8	15,3
Medical and health sciences	24,8	16,8	0,5	-	1,3	0,8	0,5	-	22,5	16,0
Social sciences	2,0	-	-	-	2,0	-	-	-	-	-
Humanities	20,6	14,4	-	-	14,0	11,0	-	-	6,6	3,4
Region Šumadije i Zapadne Srbije	**81,0**	**36,8**	**2,5**	**1,0**	**14,6**	**6,8**	**0,5**	**-**	**63,5**	**29,0**
Natural sciences	16,0	9,0	2,0	1,0	1,0	1,0	-	-	13,0	7,0
Engineering and technology	34,7	10,6	-	-	3,3	-	-	-	31,4	10,6
Medical and health sciences	12,8	7,8	0,5	-	1,3	0,8	0,5	-	10,5	7,0
Agricultural sciences	3,0	1,0	-	-	1,0	-	-	-	2,0	1,0
Social sciences	2,0	-	-	-	2,0	-	-	-	-	-
Humanities	12,6	8,4	-	-	6,0	5,0	-	-	6,6	3,4
Business sector	**37,7**	**13,6**	**-**	**-**	**1,3**	**-**	**-**	**-**	**36,4**	**13,6**
Natural sciences	5,0	4,0	-	-	-	-	-	-	5,0	4,0
Engineering and technology	31,7	9,6	-	-	1,3	-	-	-	30,4	9,6
Agricultural sciences	1,0	-	-	-	-	-	-	-	1,0	-
Government sector	**2,0**	**1,0**	**-**	**-**	**1,0**	**-**	**-**	**-**	**1,0**	**1,0**
Agricultural sciences	2,0	1,0	-	-	1,0	-	-	-	1,0	1,0
Tertiary education	**41,4**	**22,1**	**2,5**	**1,0**	**12,3**	**6,8**	**0,5**	**-**	**26,1**	**14,4**
Natural sciences	11,0	5,0	2,0	1,0	1,0	1,0	-	-	8,0	3,0
Engineering and technology	3,0	1,0	-	-	2,0	-	-	-	1,0	1,0
Medical and health sciences	12,8	7,8	0,5	-	1,3	0,8	0,5	-	10,5	7,0
Social sciences	2,0	-	-	-	2,0	-	-	-	-	-
Humanities	12,6	8,4	-	-	6,0	5,0	-	-	6,6	3,4
Region Južne i Istočne Srbije	**86,8**	**47,8**	**9,5**	**7,5**	**17,5**	**10,0**	**-**	**-**	**59,8**	**30,3**
Engineering and technology	64,8	31,8	8,5	6,5	8,5	4,0	-	-	47,8	21,3
Medical and health sciences	12,0	9,0	-	-	-	-	-	-	12,0	9,0
Agricultural sciences	2,0	1,0	1,0	1,0	1,0	-	-	-	-	-
Humanities	8,0	6,0	-	-	8,0	6,0	-	-	-	-
Business sector	**5,0**	**1,0**	**1,0**	**1,0**	**1,0**	**-**	**-**	**-**	**3,0**	**-**
Engineering and technology	3,0	-	-	-	-	-	-	-	3,0	-
Agricultural sciences	2,0	1,0	1,0	1,0	1,0	-	-	-	-	-
Government sector	**24,0**	**12,0**	**2,0**	**2,0**	**5,0**	**3,0**	**-**	**-**	**17,0**	**7,0**
Engineering and technology	24,0	12,0	2,0	2,0	5,0	3,0	-	-	17,0	7,0
Tertiary education	**57,8**	**34,8**	**6,5**	**4,5**	**11,5**	**7,0**	**-**	**-**	**39,8**	**23,3**
Engineering and technology	37,8	19,8	6,5	4,5	3,5	1,0	-	-	27,8	14,3
Medical and health sciences	12,0	9,0	-	-	-	-	-	-	12,0	9,0
Humanities	8,0	6,0	-	-	8,0	6,0	-	-	-	-
Region Kosovo i Metohija	...	...	...	...	...	...	...	...	...	...

6.1. Engaged on the basis of work on contract and author contract (head count), 2016

	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	**2579**	**1306**	**2064**	**1095**	**279**	**113**	**236**	**98**
Natural sciences	928	418	705	315	102	46	121	57
Engineering and technology	366	91	178	48	103	18	85	25
Medical and health sciences	866	591	831	565	24	17	11	9
Agricultural sciences	31	14	29	13	2	1	-	-
Social sciences	236	120	204	101	24	17	8	2
Humanities	152	72	117	53	24	14	11	5
Business sector	**1104**	**632**	**909**	**572**	**95**	**26**	**100**	**34**
Natural sciences	46	13	23	4	12	4	11	5
Engineering and technology	209	40	73	15	59	5	77	20
Medical and health sciences	843	577	808	551	24	17	11	9
Agricultural sciences	4	2	4	2	-	-	-	-
Social sciences	2	-	1	-	-	-	1	-
Government sector	**441**	**211**	**231**	**114**	**121**	**57**	**89**	**40**
Natural sciences	275	125	154	67	44	24	77	34
Engineering and technology	48	16	7	5	41	11	-	-
Medical and health sciences	12	7	12	7	-	-	-	-
Agricultural sciences	7	4	6	3	1	1	-	-
Social sciences	39	28	25	18	13	9	1	1
Humanities	60	31	27	14	22	12	11	5
Tertiary education	**1025**	**457**	**919**	**405**	**61**	**29**	**45**	**23**
Natural sciences	607	280	528	244	46	18	33	18
Engineering and technology	109	35	98	28	3	2	8	5
Medical and health sciences	11	7	11	7	-	-	-	-
Agricultural sciences	19	8	19	8	-	-	-	-
Social sciences	187	86	173	79	10	7	4	-
Humanities	92	41	90	39	2	2	-	-
Non-profit sector	**9**	**6**	**5**	**4**	**2**	**1**	**2**	**1**
Engineering and technology	1	-	-	-	1	-	-	-
Agricultural sciences	8	6	5	4	1	1	2	1
SRBIJA – SEVER	2391	1224	1904	1023	261	108	226	93
Natural sciences	908	406	692	307	95	42	121	57
Engineering and technology	281	65	114	28	92	17	75	20
Medical and health sciences	866	591	831	565	24	17	11	9
Agricultural sciences	30	13	28	12	2	1	-	-
Social sciences	221	108	189	89	24	17	8	2
Humanities	85	41	50	22	24	14	11	5
Business sector	**1075**	**625**	**893**	**566**	**84**	**25**	**98**	**34**
Natural sciences	46	13	23	4	12	4	11	5
Engineering and technology	181	34	58	10	48	4	75	20
Medical and health sciences	843	577	808	551	24	17	11	9
Agricultural sciences	3	1	3	1	-	-	-	-
Social sciences	2	-	1	-	-	-	1	-
Government sector	**440**	**211**	**230**	**114**	**121**	**57**	**89**	**40**
Natural sciences	275	125	154	67	44	24	77	34
Engineering and technology	47	16	6	5	41	11	-	-
Medical and health sciences	12	7	12	7	-	-	-	-
Agricultural sciences	7	4	6	3	1	1	-	-
Social sciences	39	28	25	18	13	9	1	1
Humanities	60	31	27	14	22	12	11	5
Tertiary education	**867**	**382**	**776**	**339**	**54**	**25**	**37**	**18**
Natural sciences	587	268	515	236	39	14	33	18
Engineering and technology	53	15	50	13	3	2	-	-
Medical and health sciences	11	7	11	7	-	-	-	-
Agricultural sciences	19	8	19	8	-	-	-	-
Social sciences	172	74	158	67	10	7	4	-
Humanities	25	10	23	8	2	2	-	-
Non-profit sector	**9**	**6**	**5**	**4**	**2**	**1**	**2**	**1**
Engineering and technology	1	-	-	-	1	-	-	-
Agricultural sciences	8	6	5	4	1	1	2	1
Beogradski region	**1983**	**1025**	**1582**	**852**	**200**	**91**	**201**	**82**
Natural sciences	604	241	428	157	79	38	97	46
Engineering and technology	226	50	104	26	48	4	74	20
Medical and health sciences	866	591	831	565	24	17	11	9
Agricultural sciences	7	4	6	3	1	1	-	-
Social sciences	195	98	163	79	24	17	8	2
Humanities	85	41	50	22	24	14	11	5
Business sector	**1040**	**618**	**868**	**562**	**77**	**23**	**95**	**33**
Natural sciences	20	7	6	1	5	2	9	4
Engineering and technology	172	33	50	9	48	4	74	20
Medical and health sciences	843	577	808	551	24	17	11	9
Agricultural sciences	3	1	3	1	-	-	-	-
Social sciences	2	-	1	-	-	-	1	-
Government sector	**396**	**199**	**227**	**113**	**80**	**46**	**89**	**40**
Natural sciences	275	125	154	67	44	24	77	34
Engineering and technology	6	5	6	5	-	-	-	-
Medical and health sciences	12	7	12	7	-	-	-	-

6.1. Engaged on the basis of work on contract and author contract (head count), 2016 (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
Agricultural sciences	4	3	3	2	1	1	-	-
Social sciences	39	28	25	18	13	9	1	1
Humanities	60	31	27	14	22	12	11	5
Tertiary education	**539**	**202**	**482**	**173**	**42**	**21**	**15**	**8**
Natural sciences	309	109	268	89	30	12	11	8
Engineering and technology	48	12	48	12	-	-	-	-
Medical and health sciences	11	7	11	7	-	-	-	-
Agricultural sciences	146	64	132	57	10	7	4	-
Humanities	25	10	23	8	2	2	-	-
Non-profit sector	**8**	**6**	**5**	**4**	**1**	**1**	**2**	**1**
Social sciences	8	6	5	4	1	1	2	1
Region Vojvodine	**408**	**199**	**322**	**171**	**61**	**17**	**25**	**11**
Natural sciences	304	165	264	150	16	4	24	11
Engineering and technology	55	15	10	2	44	13	1	-
Agricultural sciences	23	9	22	9	1	-	-	-
Social sciences	26	10	26	10	-	-	-	-
Business sector	**35**	**7**	**25**	**4**	**7**	**2**	**3**	**1**
Natural sciences	26	6	17	3	7	2	2	1
Engineering and technology	9	1	8	1	-	-	1	-
Government sector	**44**	**12**	**3**	**1**	**41**	**11**	**-**	**-**
Engineering and technology	41	11	-	-	41	11	-	-
Agricultural sciences	3	1	3	1	-	-	-	-
Tertiary education	**328**	**180**	**294**	**166**	**12**	**4**	**22**	**10**
Natural sciences	278	159	247	147	9	2	22	10
Engineering and technology	5	3	2	1	3	2	-	-
Agricultural sciences	19	8	19	8	-	-	-	-
Social sciences	26	10	26	10	-	-	-	-
Non-profit sector	**1**	**-**	**-**	**-**	**1**	**-**	**-**	**-**
Agricultural sciences	1	-	-	-	1	-	-	-
SRBIJA – JUG	188	82	160	72	18	5	10	5
Natural sciences	20	12	13	8	7	4	-	-
Engineering and technology	85	26	64	20	11	1	10	5
Agricultural sciences	1	1	1	1	-	-	-	-
Social sciences	15	12	15	12	-	-	-	-
Humanities	67	31	67	31	-	-	-	-
Business sector	**29**	**7**	**16**	**6**	**11**	**1**	**2**	**-**
Engineering and technology	28	6	15	5	11	1	2	-
Social sciences	1	1	1	1	-	-	-	-
Government sector	**1**	**-**	**1**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	1	-	1	-	-	-	-	-
Tertiary education	**158**	**75**	**143**	**66**	**7**	**4**	**8**	**5**
Natural sciences	20	12	13	8	7	4	-	-
Engineering and technology	56	20	48	15	-	-	8	5
Social sciences	15	12	15	12	-	-	-	-
Humanities	67	31	67	31	-	-	-	-
Region Južne i Istočne Srbije	**118**	**59**	**109**	**55**	**7**	**4**	**2**	**-**
Natural sciences	20	12	13	8	7	4	-	-
Engineering and technology	18	5	16	5	-	-	2	-
Social sciences	13	11	13	11	-	-	-	-
Humanities	67	31	67	31	-	-	-	-
Business sector	**17**	**5**	**15**	**5**	**-**	**-**	**2**	**-**
Engineering and technology	17	5	15	5	-	-	2	-
Tertiary education	**101**	**54**	**94**	**50**	**7**	**4**	**-**	**-**
Natural scienes	20	12	13	8	7	4	-	-
Engineering and technology	1	-	1	-	-	-	-	-
Social sciences	13	11	13	11	-	-	-	-
Humanities	67	31	67	31	-	-	-	-
Region Južnne i Istočne Srbije	**70**	**23**	**51**	**17**	**11**	**1**	**8**	**5**
Engineering and technology	67	21	48	15	11	1	8	5
Agricultural sciences	1	1	1	1	-	-	-	-
Social sciences	2	1	2	1	-	-	-	-
Business sector	**12**	**2**	**1**	**1**	**11**	**1**	**-**	**-**
Engineering and technology	11	1	-	-	11	1	-	-
Agricultural sciences	1	1	1	1	-	-	-	-
Government sector	**1**	**-**	**1**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	1	-	1	-	-	-	-	-
Tertiary education	**57**	**21**	**49**	**16**	**-**	**-**	**8**	**5**
Engineering and technology	55	20	47	15	-	-	8	5
Social sciences	2	1	2	1	-	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

6.2. Engaged on the basis of work on contract and author contract, expressed in full-time equivalent, 2016

	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	**963,2**	**396,3**	**714,9**	**312,2**	**120,4**	**40,0**	**127,8**	**44,2**
Natural sciences	508,1	212,3	393,9	160,2	59,9	24,2	54,3	27,9
Engineering and technology	180,0	36,5	81,3	24,1	40,5	2,6	58,3	9,8
Medical and health sciences	100,4	69,9	89,9	62,1	7,2	5,1	3,3	2,7
Agricultural sciences	13,3	6,6	12,8	6,2	0,5	0,4	-	-
Social sciences	102,2	46,9	88,9	40,5	8,8	5,2	4,4	1,2
Humanities	59,3	24,1	48,2	19,1	3,5	2,5	7,5	2,5
Business sector	**264,9**	**94,0**	**146,8**	**71,6**	**51,2**	**8,5**	**67,0**	**13,9**
Natural sciences	35,0	8,8	19,0	3,3	9,2	2,6	6,8	2,9
Engineering and technology	129,7	16,3	39,1	7,2	34,8	0,8	55,9	8,3
Medical and health sciences	96,9	67,8	86,4	60,0	7,2	5,1	3,3	2,7
Agricultural sciences	1,3	1,1	1,3	1,1	-	-	-	-
Social sciences	2,0	-	1,0	-	-	-	1,0	-
Government sector	**177,4**	**79,2**	**114,7**	**50,4**	**24,6**	**11,5**	**38,1**	**17,3**
Natural sciences	132,4	55,5	88,4	33,4	13,6	7,6	30,4	14,5
Engineering and technology	12,3	6,4	7,0	5,0	5,3	1,4	-	-
Medical and health sciences	2,4	1,4	2,4	1,4	-	-	-	-
Agricultural sciences	2,4	1,5	2,0	1,1	0,4	0,4	-	-
Social sciences	13,1	8,4	9,8	7,3	3,1	0,9	0,2	0,2
Humanities	14,9	6,0	5,2	2,3	2,2	1,2	7,5	2,5
Tertiary education	**514,2**	**218,0**	**449,4**	**187,1**	**43,6**	**18,9**	**21,2**	**12,0**
Natural sciences	340,7	148,0	286,5	123,5	37,1	14,0	17,1	10,5
Engineering and technology	38,1	13,8	35,2	11,9	0,5	0,4	2,4	1,5
Medical and health sciences	1,1	0,7	1,1	0,7	-	-	-	-
Agricultural sciences	9,5	4,0	9,5	4,0	-	-	-	-
Social sciences	80,5	33,4	74,1	30,2	4,8	3,3	1,7	-
Humanities	44,3	18,1	43,0	16,8	1,3	1,3	-	-
Non-profit sector	**6,6**	**5,0**	**4,0**	**3,0**	**1,1**	**1,0**	**1,5**	**1,0**
Agricultural sciences	0,1	-	-	-	0,1	-	-	-
Social sciences	6,5	5,0	4,0	3,0	1,0	1,0	1,5	1,0
SRBIJA – SEVER	884,5	359,0	648,6	278,1	111,2	38,3	124,6	42,7
Natural sciences	495,3	203,7	385,5	153,0	55,5	22,8	54,3	27,9
Engineering and technology	144,3	24,8	53,5	14,2	35,7	2,3	55,1	8,3
Medical and health sciences	100,4	69,9	89,9	62,1	7,2	5,1	3,3	2,7
Agricultural sciences	12,3	5,6	11,8	5,2	0,5	0,4	-	-
Social sciences	95,1	41,1	81,8	34,8	8,8	5,2	4,4	1,2
Humanities	37,1	13,9	26,1	8,9	3,5	2,5	7,5	2,5
Business sector	**251,9**	**90,8**	**139,4**	**68,7**	**46,3**	**8,2**	**66,2**	**13,9**
Natural sciences	35,0	8,8	19,0	3,3	9,2	2,6	6,8	2,9
Engineering and technology	117,8	14,1	32,8	5,3	29,9	0,5	55,1	8,3
Medical and health sciences	96,9	67,8	86,4	60,0	7,2	5,1	3,3	2,7
Agricultural sciences	0,3	0,1	0,3	0,1	-	-	-	-
Social sciences	2,0	-	1,0	-	-	-	1,0	-
Government sector	**176,4**	**79,2**	**113,7**	**50,4**	**24,6**	**11,5**	**38,1**	**17,3**
Natural sciences	132,4	55,5	88,4	33,4	13,6	7,6	30,4	14,5
Engineering and technology	11,3	6,4	6,0	5,0	5,3	1,4	-	-
Medical and health sciences	2,4	1,4	2,4	1,4	-	-	-	-
Agricultural sciences	2,4	1,5	2,0	1,1	0,4	0,4	-	-
Social sciences	13,1	8,4	9,8	7,3	3,1	0,9	0,2	0,2
Humanities	14,9	6,0	5,2	2,3	2,2	1,2	7,5	2,5
Tertiary education	**449,4**	**183,9**	**391,4**	**155,9**	**39,3**	**17,6**	**18,8**	**10,5**
Natural sciences	327,9	139,4	278,1	116,3	32,7	12,6	17,1	10,5
Engineering and technology	15,3	4,3	14,8	3,9	0,5	0,4	-	-
Medical and health sciences	1,1	0,7	1,1	0,7	-	-	-	-
Agricultural sciences	9,5	4,0	9,5	4,0	-	-	-	-
Social sciences	73,4	27,6	67,0	24,4	4,8	3,3	1,7	-
Humanities	22,2	7,9	20,9	6,6	1,3	1,3	-	-
Non-profit sector	**6,6**	**5,0**	**4,0**	**3,0**	**1,1**	**1,0**	**1,5**	**1,0**
Agricultural sciences	0,1	-	-	-	0,1	-	-	-
Social sciences	6,5	5,0	4,0	3,0	1,0	1,0	1,5	1,0
Beogradski region	**741,8**	**293,9**	**531,1**	**221,4**	**95,6**	**33,8**	**115,0**	**38,7**
Natural sciences	386,1	150,1	294,6	106,0	45,8	20,2	45,7	23,9
Engineering and technology	130,1	21,7	46,0	12,9	29,9	0,5	54,1	8,3
Medical and health sciences	100,4	69,9	89,9	62,1	7,2	5,1	3,3	2,7
Agricultural sciences	2,0	1,4	1,6	1,0	0,4	0,4	-	-
Social sciences	86,2	36,9	72,9	30,6	8,8	5,2	4,4	1,2
Humanities	37,1	13,9	26,1	8,9	3,5	2,5	7,5	2,5
Business sector	**217,8**	**83,8**	**115,3**	**64,7**	**39,3**	**6,2**	**63,2**	**12,9**
Natural sciences	9,0	2,8	2,0	0,3	2,2	0,6	4,8	1,9
Engineering and technology	109,7	13,1	25,6	4,3	29,9	0,5	54,1	8,3
Medical and health sciences	96,9	67,8	86,4	60,0	7,2	5,1	3,3	2,7
Agricultural sciences	0,3	0,1	0,3	0,1	-	-	-	-
Social sciences	2,0	-	1,0	-	-	-	1,0	-

6.2. Engaged on the basis of work on contract and author contract, expressed in full-time equivalent, 2016 (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
Government sector	**170,5**	**77,6**	**113,0**	**50,2**	**19,3**	**10,1**	**38,1**	**17,3**
Natural sciences	132,4	55,5	88,4	33,4	13,6	7,6	30,4	14,5
Engineering and technology	6,0	5,0	6,0	5,0	-	-	-	-
Medical and health sciences	2,4	1,4	2,4	1,4	-	-	-	-
Agricultural sciences	1,7	1,3	1,3	0,9	0,4	0,4	-	-
Social sciences	13,1	8,4	9,8	7,3	3,1	0,9	0,2	0,2
Humanities	14,9	6,0	5,2	2,3	2,2	1,2	7,5	2,5
Tertiary education	**346,9**	**127,5**	**298,7**	**103,4**	**36,0**	**16,6**	**12,2**	**7,5**
Natural sciences	244,7	91,8	204,2	72,3	30,0	12,0	10,5	7,5
Engineering and technology	14,4	3,6	14,4	3,6	-	-	-	-
Medical and health sciences	1,1	0,7	1,1	0,7	-	-	-	-
Social sciences	64,5	23,4	58,1	20,2	4,8	3,3	1,7	-
Humanities	22,2	7,9	20,9	6,6	1,3	1,3	-	-
Non-profit sector	**6,5**	**5,0**	**4,0**	**3,0**	**1,0**	**1,0**	**1,5**	**1,0**
Social sciences	6,5	5,0	4,0	3,0	1,0	1,0	1,5	1,0
Region Vojvodine	**142,7**	**65,1**	**117,5**	**56,7**	**15,6**	**4,4**	**9,6**	**4,0**
Natural sciences	109,2	53,6	90,9	47,0	9,7	2,6	8,6	4,0
Engineering and technology	14,3	3,1	7,5	1,3	5,8	1,8	1,0	-
Agricultural sciences	10,3	4,2	10,2	4,2	0,1	-	-	-
Social sciences	8,9	4,2	8,9	4,2	-	-	-	-
Business sector	**34,1**	**7,0**	**24,1**	**4,0**	**7,0**	**2,0**	**3,0**	**1,0**
Natural sciences	26,0	6,0	17,0	3,0	7,0	2,0	2,0	1,0
Engineering and technology	8,1	1,0	7,1	1,0	-	-	1,0	-
Government sector	**6,0**	**1,6**	**0,7**	**0,2**	**5,3**	**1,4**	**-**	**-**
Engineering and technology	5,3	1,4	-	-	5,3	1,4	-	-
Agricultural sciences	0,7	0,2	0,7	0,2	-	-	-	-
Tertirary education	**102,5**	**56,5**	**92,7**	**52,5**	**3,2**	**1,0**	**6,6**	**3,0**
Natural sciences	83,2	47,6	73,9	44,0	2,7	0,6	6,6	3,0
Engineering and technology	0,9	0,7	0,4	0,3	0,5	0,4	-	-
Agricultural sciences	9,5	4,0	9,5	4,0	-	-	-	-
Social sciences	8,9	4,2	8,9	4,2	-	-	-	-
Non-profit sector	**0,1**	**-**	**-**	**-**	**0,1**	**-**	**-**	**-**
Agricultural sciences	0,1	-	-	-	0,1	-	-	-
SRBIJA – JUG	78,7	37,3	66,3	34,1	9,3	1,7	3,2	1,5
Natural sciences	12,8	8,6	8,4	7,2	4,4	1,4	-	-
Engineering and technology	35,7	11,7	27,7	9,9	4,8	0,3	3,2	1,5
Agricultural sciences	1,0	1,0	1,0	1,0	-	-	-	-
Social sciences	7,1	5,8	7,1	5,8	-	-	-	-
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Business sector	**12,9**	**3,2**	**7,3**	**2,9**	**4,8**	**0,3**	**0,8**	**-**
Engineering and technology	11,9	2,2	6,3	1,9	4,8	0,3	0,8	-
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	**64,8**	**34,1**	**58,0**	**31,2**	**4,4**	**1,4**	**2,4**	**1,5**
Natural sciences	12,8	8,6	8,4	7,2	4,4	1,4	-	-
Engineering and technology	22,8	9,5	20,4	8,0	-	-	2,4	1,5
Social sciences	7,1	5,8	7,1	5,8	-	-	-	-
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Region Šumadije i Zapadne Srbije	**49,5**	**26,2**	**44,3**	**24,8**	**4,4**	**1,4**	**0,8**	**-**
Natural sciences	12,8	8,6	8,4	7,2	4,4	1,4	-	-
Engineering and technology	8,1	1,9	7,3	1,9	-	-	0,8	-
Social sciences	6,5	5,5	6,5	5,5	-	-	-	-
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Business sector	**7,1**	**1,9**	**6,3**	**1,9**	**-**	**-**	**0,8**	**-**
Engineering and technology	7,1	1,9	6,3	1,9	-	-	0,8	-
Tertiary education	**42,4**	**24,3**	**38,0**	**22,9**	**4,4**	**1,4**	**-**	**-**
Natural sciences	12,8	8,6	8,4	7,2	4,4	1,4	-	-
Engineering and technology	1,0	-	1,0	-	-	-	-	-
Social sciences	6,5	5,5	6,5	5,5	-	-	-	-
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Region Južne i Istočne Srbije	**29,3**	**11,1**	**22,0**	**9,3**	**4,8**	**0,3**	**2,4**	**1,5**
Engineering and technology	27,6	9,8	20,4	8,0	4,8	0,3	2,4	1,5
Agricultural sciences	1,0	1,0	1,0	1,0	-	-	-	-
Social sciences	0,6	0,3	0,6	0,3	-	-	-	-
Business sector	**5,8**	**1,3**	**1,0**	**1,0**	**4,8**	**0,3**	**-**	**-**
Engineering and technology	4,8	0,3	-	-	4,8	0,3	-	-
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	**22,4**	**9,8**	**20,0**	**8,3**	**-**	**-**	**2,4**	**1,5**
Engineering and technology	21,8	9,5	19,4	8,0	-	-	2,4	1,5
Social sciences	0,6	0,3	0,6	0,3	-	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

7.1. Research works (projects and studies), by sectors and territories, 2016

	Research works (projects and studies), 2016							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
REPUBLIC OF SERBIA	**9896**	**4825**	**3490**	**1581**	**37956275**	**11550937**	**14849463**	**11555875**
Business sector	1174	186	478	510	14239377	404892	7128166	6706319
Government sector	2483	1392	698	393	9897012	4596632	3588361	1712019
Tertiary education	6212	3245	2289	678	13779088	6547443	4094108	3137537
Non-profit sector	27	2	25	0	40798	1970	38828	0
SRBIJA – SEVER	7792	3232	3222	1338	35332198	10724930	14098188	10509080
Business sector	1018	179	409	430	13624449	391596	6881871	6350982
Government sector	2462	1391	695	376	9780248	4594382	3543651	1642215
Tertiary education	4285	1660	2093	532	11886703	5736982	3633838	2515883
Non-profit sector	27	2	25	0	40798	1970	38828	0
Beogradski region	**5225**	**2556**	**1604**	**1065**	**24397360**	**8933748**	**8858992**	**6604620**
Business sector	953	179	376	398	8680440	391596	5276384	3012460
Government sector	2261	1378	532	351	8012100	4500560	1994049	1517491
Tertiary education	1995	997	682	316	7665830	4039622	1551539	2074669
Non-profit sector	16	2	14	0	38990	1970	37020	0
Region Vojvodine	**2567**	**676**	**1618**	**273**	**10934838**	**1791182**	**5239196**	**3904460**
Business sector	65	0	33	32	4944009	0	1605487	3338522
Government sector	201	13	163	25	1768148	93822	1549602	124724
Tertiary education	2290	663	1411	216	4220873	1697360	2082299	441214
Non-profit sector	11	0	11	0	1808	0	1808	0
SRBIJA – JUG	2104	1593	268	243	2624077	826007	751275	1046795
Business sector	156	7	69	80	614928	13296	246295	355337
Government sector	21	1	3	17	116764	2250	44710	69804
Tertiary education	1927	1585	196	146	1892385	810461	460270	621654
Region Šumadije i Zapadne Srbije	**525**	**308**	**132**	**85**	**1140112**	**500286**	**369076**	**270750**
Business sector	53	1	32	20	227325	10470	58536	158319
Government sector	3	0	3	0	44710	0	44710	0
Tertiary education	469	307	97	65	868077	489816	265830	112431
Region Južne i Istočne Srbije	**1579**	**1285**	**136**	**158**	**1483965**	**325721**	**382199**	**776045**
Business sector	103	6	37	60	387603	2826	187759	197018
Government sector	18	1	0	17	72054	2250	0	69804
Tertiary education	1458	1278	99	81	1024308	320645	194440	509223
Region Kosovo i Metohija	...	...	...	...	...	...	...	...

7.2. Research works (projects and studies), by sectors and fields of science, 2016

	Research works (projects and studies), 2016							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
REPUBLIC OF SERBIA	**9896**	**4825**	**3490**	**1581**	**37956275**	**11550937**	**14849463**	**11555875**
Natural sciences	1695	1148	355	192	10669474	4920792	1964952	3783730
Engineering and technology	3468	446	2101	921	14953591	785969	8078056	6089566
Medical and health sciences	542	366	148	28	1925537	813061	891677	220799
Agricultural sciences	510	35	311	164	3697566	337218	2402458	957890
Social sciences	2749	2181	478	90	5047154	3274592	1336031	436531
Humanities	932	649	97	186	1662953	1419305	176289	67359
Business sector	**1174**	**186**	**478**	**510**	**14239377**	**404892**	**7128166**	**6706319**
Natural sciences	219	61	66	92	3822242	159909	614236	3048097
Engineering and technology	701	31	318	352	9066504	148716	5585339	3332449
Medical and health sciences	109	39	51	19	966231	65770	709094	191367
Agricultural sciences	42	-	21	21	316778	-	206558	110220
Social sciences	103	55	22	26	67622	30497	12939	24186
Government sector	**2483**	**1392**	**698**	**393**	**9897012**	**4596632**	**3588361**	**1712019**
Natural sciences	618	441	137	40	3487808	2912566	498439	76803
Engineering and technology	420	28	273	119	2345003	193655	1058011	1093337
Medical and health sciences	163	123	38	2	234213	217525	16688	-
Agricultural sciences	215	10	146	59	2451955	102205	1872630	477120
Social sciences	456	425	26	5	518539	439848	56522	22169
Humanities	611	365	78	168	859494	730833	86071	42590
Tertiary education	**6212**	**3245**	**2289**	**678**	**13779088**	**6547443**	**4094108**	**3137537**
Natural sciences	852	646	146	60	3358870	1848317	851723	658830
Engineering and technology	2344	386	1508	450	3518723	443412	1411531	1663780
Medical and health sciences	270	204	59	7	725093	529766	165895	29432
Agricultural sciences	252	25	143	84	928779	235013	323216	370550
Social sciences	2173	1700	414	59	4444164	2802463	1251525	390176
Humanities	321	284	19	18	803459	688472	90218	24769
Non-profit sector	**27**	**2**	**25**	**-**	**40798**	**1970**	**38828**	**-**
Natural sciences	6	-	6	-	554	-	554	-
Engineering and technology	3	1	2	-	23361	186	23175	-
Agricultural sciences	1	-	1	-	54	-	54	-
Social sciences	17	1	16	-	16829	1784	15045	-
SRBIJA – SEVER	7792	3232	3222	1338	35332198	10724930	14098188	10509080
Natural sciences	1254	748	322	184	10076395	4522793	1819798	3733804
Engineering and technology	2956	360	1898	698	13617190	687594	7726165	5203431
Medical and health sciences	493	317	148	28	1793480	681004	891677	220799
Agricultural sciences	485	32	289	164	3529665	333684	2238091	957890
Social sciences	1702	1153	469	80	4704218	3130843	1246468	326907
Humanities	902	622	96	184	1611250	1369012	175989	66249
Business sector	**1018**	**179**	**409**	**430**	**13624449**	**391596**	**6881871**	**6350982**
Natural sciences	211	61	63	87	3776149	159909	603672	3012568
Engineering and technology	555	24	254	277	8601130	135420	5453069	3012641
Medical and health sciences	109	39	51	19	966231	65770	709094	191367
Agricultural sciences	40	-	19	21	213317	-	103097	110220
Social sciences	103	55	22	26	67622	30497	12939	24186
Government sector	**2462**	**1391**	**695**	**376**	**9780248**	**4594382**	**3543651**	**1642215**
Natural sciences	618	441	137	40	3487808	2912566	498439	76803
Engineering and technology	402	27	273	102	2272949	191405	1058011	1023533
Medical and health sciences	163	123	38	2	234213	217525	16688	-
Agricultural sciences	212	10	143	59	2407245	102205	1827920	477120
Social sciences	456	425	26	5	518539	439848	56522	22169
Humanities	611	365	78	168	859494	730833	86071	42590
Tertiary education	**4285**	**1660**	**2093**	**532**	**11886703**	**5736982**	**3633838**	**2515883**
Natural sciences	419	246	116	57	2811884	1450318	717133	644433
Engineering and technology	1996	308	1369	319	2719750	360583	1191910	1167257
Medical and health sciences	221	155	59	7	593036	397709	165895	29432
Agricultural sciences	232	22	126	84	909049	231479	307020	370550
Social sciences	1126	672	405	49	4101228	2658714	1161962	280552
Humanities	291	257	18	16	751756	638179	89918	23659
Non-profit sector	**27**	**2**	**25**	**-**	**40798**	**1970**	**38828**	**-**
Natural sciences	6	-	6	-	554	-	554	-
Engineering and technology	3	1	2	-	23361	186	23175	-
Agricultural sciences	1	-	1	-	54	-	54	-
Social sciences	17	1	16	-	16829	1784	15045	-

7.2. Research works (projects and studies), by sectors and fields of science, 2016 (continued)

	Research works (projects and studies), 2016							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
Beogradski region	**5225**	**2556**	**1604**	**1065**	**24397360**	**8933748**	**8858992**	**6604620**
Natural sciences	1096	705	244	147	6564373	4076731	1105363	1382279
Engineering and technology	1535	222	782	531	9599918	422859	5257944	3919115
Medical and health sciences	384	231	125	28	1674956	593152	861005	220799
Agricultural sciences	317	31	163	123	2100378	332450	898878	869050
Social sciences	1005	747	198	60	2982737	2181468	633181	168088
Humanities	888	620	92	176	1474998	1327088	102621	45289
Business sector	**953**	**179**	**376**	**398**	**8680440**	**391596**	**5276384**	**3012460**
Natural sciences	185	61	53	71	1485266	159909	514267	811090
Engineering and technology	523	24	236	263	5978043	135420	3953487	1889136
Medical and health sciences	109	39	51	19	966231	65770	709094	191367
Agricultural sciences	33	-	14	19	183278	-	86597	96681
Social sciences	103	55	22	26	67622	30497	12939	24186
Government sector	**2261**	**1378**	**532**	**351**	**8012100**	**4500560**	**1994049**	**1517491**
Natural sciences	618	441	137	40	3487808	2912566	498439	76803
Engineering and technology	259	14	168	77	1778083	97583	781691	898809
Medical and health sciences	163	123	38	2	234213	217525	16688	-
Agricultural sciences	154	10	85	59	1133963	102205	554638	477120
Social sciences	456	425	26	5	518539	439848	56522	22169
Humanities	611	365	78	168	859494	730833	86071	42590
Tertiary education	**1995**	**997**	**682**	**316**	**7665830**	**4039622**	**1551539**	**2074669**
Natural sciences	293	203	54	36	1591299	1004256	92657	494386
Engineering and technology	750	183	376	191	1820431	189670	499591	1131170
Medical and health sciences	112	69	36	7	474512	309857	135223	29432
Agricultural sciences	130	21	64	45	783137	230245	257643	295249
Social sciences	433	266	138	29	2380947	1709339	549875	121733
Humanities	277	255	14	8	615504	596255	16550	2699
Non-profit sector	**16**	**2**	**14**	**-**	**38990**	**1970**	**37020**	**-**
Engineering and technology	3	1	2	-	23361	186	23175	-
Social sciences	13	1	12	-	15629	1784	13845	-
Region Vojvodine	**2567**	**676**	**1618**	**273**	**10934838**	**1791182**	**5239196**	**3904460**
Natural sciences	158	43	78	37	3512022	446062	714435	2351525
Engineering and technology	1421	138	1116	167	4017272	264735	2468221	1284316
Medical and health sciences	109	86	23	-	118524	87852	30672	-
Agricultural sciences	168	1	126	41	1429287	1234	1339213	88840
Social sciences	697	406	271	20	1721481	949375	613287	158819
Humanities	14	2	4	8	136252	41924	73368	20960
Business sector	**65**	**-**	**33**	**32**	**4944009**	**-**	**1605487**	**3338522**
Natural sciences	26	-	10	16	2290883	-	89405	2201478
Engineering and technology	32	-	18	14	2623087	-	1499582	1123505
Agricultural sciences	7	-	5	2	30039	-	16500	13539
Government sector	**201**	**13**	**163**	**25**	**1768148**	**93822**	**1549602**	**124724**
Engineering and technology	143	13	105	25	494866	93822	276320	124724
Agricultural sciences	58	-	58	-	1273282	-	1273282	-
Tertiary education	**2290**	**663**	**1411**	**216**	**4220873**	**1697360**	**2082299**	**441214**
Natural sciences	126	43	62	21	1220585	446062	624476	150047
Engineering and technology	1246	125	993	128	899319	170913	692319	36087
Medical and health sciences	109	86	23	-	118524	87852	30672	-
Agricultural sciences	102	1	62	39	125912	1234	49377	75301
Social sciences	693	406	267	20	1720281	949375	612087	158819
Humanities	14	2	4	8	136252	41924	73368	20960
Non-profit sector	**11**	**-**	**11**	**-**	**1808**	**-**	**1808**	**-**
Natural sciences	6	-	6	-	554	-	554	-
Agricultural sciences	1	-	1	-	54	-	54	-
Social sciences	4	-	4	-	1200	-	1200	-
SRBIJA – JUG	2104	1593	268	243	2624077	826007	751275	1046795
Natural sciences	441	400	33	8	593079	397999	145154	49926
Engineering and technology	512	86	203	223	1336401	98375	351891	886135
Medical and health sciences	49	49	-	-	132057	132057	-	-
Agricultural sciences	25	3	22	-	167901	3534	164367	-
Social sciences	1047	1028	9	10	342936	143749	89563	109624
Humanities	30	27	1	2	51703	50293	300	1110

7.2. Research works (projects and studies), by sectors and fields of science, 2016 (continued)

	Research works (projects and studies), 2016							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
Business sector	**156**	**7**	**69**	**80**	**614928**	**13296**	**246295**	**355337**
Natural sciences	8	-	3	5	46093	-	10564	35529
Engineering and technology	146	7	64	75	465374	13296	132270	319808
Agricultural sciences	2	-	2	-	103461	-	103461	-
Government sector	**21**	**1**	**3**	**17**	**116764**	**2250**	**44710**	**69804**
Engineering and technology	18	1	-	17	72054	2250	-	69804
Agricultural sciences	3	-	3	-	44710	-	44710	-
Tertiary education	**1927**	**1585**	**196**	**146**	**1892385**	**810461**	**460270**	**621654**
Natural sciences	433	400	30	3	546986	397999	134590	14397
Engineering and technology	348	78	139	131	798973	82829	219621	496523
Medical and health sciences	49	49	-	-	132057	132057	-	-
Agricultural sciences	20	3	17	-	19730	3534	16196	-
Social sciences	1047	1028	9	10	342936	143749	89563	109624
Humanities	30	27	1	2	51703	50293	300	1110
Region Šumadije i Zapadne Srbije	**525**	**308**	**132**	**85**	**1140112**	**500286**	**369076**	**270750**
Natural sciences	164	150	6	8	477387	297669	129792	49926
Engineering and technology	211	41	97	73	345909	37909	88815	219185
Medical and health sciences	43	43	-	-	60353	60353	-	-
Agricultural sciences	23	3	20	-	64440	3534	60906	-
Social sciences	82	69	9	4	174274	83072	89563	1639
Humanities	2	2	-	-	17749	17749	-	-
Business sector	**53**	**1**	**32**	**20**	**227325**	**10470**	**58536**	**158319**
Natural sciences	6	-	1	5	45363	-	9834	35529
Engineering and technology	47	1	31	15	181962	10470	48702	122790
Government sector	**3**	**-**	**3**	**-**	**44710**	**-**	**44710**	**-**
Agricultural sciences	3	-	3	-	44710	-	44710	-
Tertiary education	**469**	**307**	**97**	**65**	**868077**	**489816**	**265830**	**112431**
Natural sciences	158	150	5	3	432024	297669	119958	14397
Engineering and technology	164	40	66	58	163947	27439	40113	96395
Medical and health sciences	43	43	-	-	60353	60353	-	-
Agricultural sciences	20	3	17	-	19730	3534	16196	-
Social sciences	82	69	9	4	174274	83072	89563	1639
Humanities	2	2	-	-	17749	17749	-	-
Region Južne i Istočne Srbije	**1579**	**1285**	**136**	**158**	**1483965**	**325721**	**382199**	**776045**
Natural sciences	277	250	27	-	115692	100330	15362	-
Engineering and technology	301	45	106	150	990492	60466	263076	666950
Medical sciences	6	6	-	-	71704	71704	-	-
Agricultural sciences	2	-	2	-	103461	-	103461	-
Social sciences	965	959	-	6	168662	60677	-	107985
Humanities	28	25	1	2	33954	32544	300	1110
Business sector	**103**	**6**	**37**	**60**	**387603**	**2826**	**187759**	**197018**
Natural sciences	2	-	2	-	730	-	730	-
Engineering and technology	99	6	33	60	283412	2826	83568	197018
Agricultural sciences	2	-	2	-	103461	-	103461	-
Government sector	**18**	**1**	**-**	**17**	**72054**	**2250**	**-**	**69804**
Engineering and technology	18	1	-	17	72054	2250	-	69804
Tertiary education	**1458**	**1278**	**99**	**81**	**1024308**	**320645**	**194440**	**509223**
Natural sciences	275	250	25	-	114962	100330	14632	-
Engineering and technology	184	38	73	73	635026	55390	179508	400128
Medical and health sciences	6	6	-	-	71704	71704	-	-
Social sciences	965	959	-	6	168662	60677	-	107985
Humanities	28	25	1	2	33954	32544	300	1110
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	**722**	**115**	**396**	**211**	**5500**	**3174**	**1485**	**841**
Natural sciences	87	0	33	54	1332	1004	243	85
Engineering and technology	584	115	318	151	1292	207	664	421
Medical and health sciences	3	0	3	0	298	242	47	9
Agricultural sciences	6	0	5	1	298	26	172	100
Social sciences	42	0	37	5	1718	1369	302	47
Humanities	0	0	0	0	562	326	57	179
Business sector	**170**	**4**	**61**	**105**	**427**	**138**	**109**	**180**
Natural sciences	74	0	25	49	98	59	21	18
Engineering and technology	87	4	31	52	225	24	61	140
Medical and health sciences	3	0	3	0	0	0	0	0
Agricultural sciences	2	0	2	0	10	0	5	5
Social sciences	4	0	0	4	94	55	22	17
Government sector	**37**	**1**	**34**	**2**	**1870**	**1080**	**482**	**308**
Natural sciences	3	0	2	1	523	373	115	35
Engineering and technology	33	1	32	0	309	20	205	84
Medical and health sciences	0	0	0	0	122	115	5	2
Agricultural sciences	1	0	0	1	96	6	75	15
Social sciences	0	0	0	0	329	299	26	4
Humanities	0	0	0	0	491	267	56	168
Tertiary education	**515**	**110**	**301**	**104**	**3203**	**1956**	**894**	**353**
Natural sciences	10	0	6	4	711	572	107	32
Engineering and technology	464	110	255	99	758	163	398	197
Medical and health sciences	0	0	0	0	176	127	42	7
Agricultural sciences	3	0	3	0	192	20	92	80
Social sciences	38	0	37	1	1295	1015	254	26
Humanities	0	0	0	0	71	59	1	11
Non-profit sector	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Natural sciences	0	0	0	0	0	0	0	0
Engineering and technology	0	0	0	0	0	0	0	0
Agricultural sciences	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0
SRBIJA – SEVER	628	105	361	162	4092	2007	1347	738
Natural sciences	87	0	33	54	899	604	213	82
Engineering and technology	491	105	283	103	1066	158	583	325
Medical and health sciences	3	0	3	0	287	231	47	9
Agricultural sciences	6	0	5	1	273	23	150	100
Social sciences	41	0	37	4	1035	692	298	45
Humanities	0	0	0	0	532	299	56	177
Business sector	**125**	**0**	**45**	**80**	**417**	**137**	**105**	**175**
Natural sciences	74	0	25	49	98	59	21	18
Engineering and technology	42	0	15	27	217	23	59	135
Medical and health sciences	3	0	3	0	0	0	0	0
Agricultural sciences	2	0	2	0	8	0	3	5
Social sciences	4	0	0	4	94	55	22	17
Government sector	**37**	**1**	**34**	**2**	**1849**	**1079**	**479**	**291**
Natural sciences	3	0	2	1	523	373	115	35
Engineering and technology	33	1	32	0	291	19	205	67
Medical and health sciences	0	0	0	0	122	115	5	2
Agricultural sciences	1	0	0	1	93	6	72	15
Social sciences	0	0	0	0	329	299	26	4
Humanities	0	0	0	0	491	267	56	168
Tertiary education	**466**	**104**	**282**	**80**	**1826**	**791**	**763**	**272**
Natural sciences	10	0	6	4	278	172	77	29
Engineering and technology	416	104	236	76	558	116	319	123
Medical and health sciences	0	0	0	0	165	116	42	7
Agricultural sciences	3	0	3	0	172	17	75	80
Social sciences	37	0	37	0	612	338	250	24
Humanities	0	0	0	0	41	32	0	9
Non-profit sector	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Natural sciences	0	0	0	0	0	0	0	0
Engineering and technology	0	0	0	0	0	0	0	0
Agricultural sciences	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0
Beogradski region	**573**	**92**	**331**	**150**	**2920**	**1579**	**732**	**609**
Natural sciences	85	0	33	52	792	561	175	56
Engineering and technology	444	92	259	93	668	107	278	283
Medical and health sciences	3	0	3	0	203	165	29	9
Agricultural sciences	4	0	3	1	182	22	101	59
Social sciences	37	0	33	4	553	427	93	33
Humanities	0	0	0	0	522	297	56	169

and type of research, 2016

Ordering parties								
Ministries				Other				
Total	Basic	Applied	Development	Total	Basic	Applied	Development	
2405	**961**	**1093**	**351**	**1269**	**575**	**516**	**178**	**REPUBLIC OF SERBIA**
118	34	49	35	158	110	30	18	Natural sciences
1200	105	874	221	392	19	245	128	Engineering and technology
69	62	7	0	172	62	91	19	Medical and health sciences
114	3	53	58	92	6	81	5	Agricultural sciences
672	561	81	30	317	251	58	8	Social sciences
232	196	29	7	138	127	11	0	Humanities
317	**13**	**162**	**142**	**260**	**31**	**146**	**83**	**Business sector**
31	2	18	11	16	0	2	14	Natural sciences
243	1	130	112	146	2	96	48	Engineering and technology
10	10	0	0	96	29	48	19	Medical and health sciences
29	0	14	15	1	0	0	1	Agricultural sciences
4	0	0	4	1	0	0	1	Social sciences
242	**112**	**64**	**66**	**334**	**199**	**118**	**17**	**Government sector**
7	1	5	1	85	67	15	3	Natural sciences
36	5	10	21	42	2	26	14	Engineering and technology
0	0	0	0	41	8	33	0	Medical and health sciences
80	2	35	43	38	2	36	0	Agricultural sciences
69	68	0	1	58	58	0	0	Social sciences
50	36	14	0	70	62	8	0	Humanities
1822	**834**	**845**	**143**	**672**	**345**	**249**	**78**	**Tertiary education**
74	31	20	23	57	43	13	1	Natural sciences
918	98	732	88	204	15	123	66	Engineering and technology
59	52	7	0	35	25	10	0	Medical and health sciences
4	1	3	0	53	4	45	4	Agricultural sciences
585	492	68	25	255	193	55	7	Social sciences
182	160	15	7	68	65	3	0	Humanities
24	**2**	**22**	**0**	**3**	**0**	**3**	**0**	**Non-profit sector**
6	0	6	0	0	0	0	0	Natural sciences
3	1	2	0	0	0	0	0	Engineering and technology
1	0	1	0	0	0	0	0	Agricultural sciences
14	1	13	0	3	0	3	0	Social sciences
1994	637	1040	317	1078	483	474	121	SRBIJA – SEVER
110	34	46	30	158	110	30	18	Natural sciences
1119	95	826	198	280	2	206	72	Engineering and technology
31	24	7	0	172	62	91	19	Medical and health sciences
114	3	53	58	92	6	81	5	Agricultural sciences
388	285	79	24	238	176	55	7	Social sciences
232	196	29	7	138	127	11	0	Humanities
267	**13**	**133**	**121**	**209**	**29**	**126**	**54**	**Business sector**
23	2	15	6	16	0	2	14	Natural sciences
201	1	104	96	95	0	76	19	Engineering and technology
10	10	0	0	96	29	48	19	Medical and health sciences
29	0	14	15	1	0	0	1	Agricultural sciences
4	0	0	4	1	0	0	1	Social sciences
242	**112**	**64**	**66**	**334**	**199**	**118**	**17**	**Government sector**
7	1	5	1	85	67	15	3	Natural sciences
36	5	10	21	42	2	26	14	Engineering and technology
0	0	0	0	41	8	33	0	Medical and health sciences
80	2	35	43	38	2	36	0	Agricultural sciences
69	68	0	1	58	58	0	0	Social sciences
50	36	14	0	70	62	8	0	Humanities
1461	**510**	**821**	**130**	**532**	**255**	**227**	**50**	**Tertiary education**
74	31	20	23	57	43	13	1	Natural sciences
879	88	710	81	143	0	104	39	Engineering and technology
21	14	7	0	35	25	10	0	Medical and health sciences
4	1	3	0	53	4	45	4	Agricultural sciences
301	216	66	19	176	118	52	6	Social sciences
182	160	15	7	68	65	3	0	Humanities
24	**2**	**22**	**0**	**3**	**0**	**3**	**0**	**Non-profit sector**
6	0	6	0	0	0	0	0	Natural sciences
3	1	2	0	0	0	0	0	Engineering and technology
1	0	1	0	0	0	0	0	Agricultural sciences
14	1	13	0	3	0	3	0	Social sciences
972	**455**	**292**	**225**	**760**	**430**	**249**	**81**	**Beogradski region**
71	34	13	24	148	110	23	15	Natural sciences
297	23	158	116	126	0	87	39	Engineering and technology
12	10	2	0	166	56	91	19	Medical and health sciences
112	3	51	58	19	6	8	5	Agricultural sciences
249	189	40	20	166	131	32	3	Social sciences
231	196	28	7	135	127	8	0	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	**118**	**0**	**43**	**75**	**403**	**137**	**102**	**164**
Natural sciences	72	0	25	47	89	59	21	9
Engineering and technology	39	0	15	24	217	23	59	135
Medical and health sciences	3	0	3	0	0	0	0	0
Agricultural sciences	0	0	0	0	3	0	0	3
Social sciences	4	0	0	4	94	55	22	17
Government sector	**30**	**0**	**28**	**2**	**1732**	**1071**	**376**	**285**
Natural sciences	3	0	2	1	523	373	115	35
Engineering and technology	26	0	26	0	203	11	131	61
Medical and health sciences	0	0	0	0	122	115	5	2
Agricultural sciences	1	0	0	1	64	6	43	15
Social sciences	0	0	0	0	329	299	26	4
Humanities	0	0	0	0	491	267	56	168
Tertiary education	**425**	**92**	**260**	**73**	**785**	**371**	**254**	**160**
Natural sciences	10	0	6	4	180	129	39	12
Engineering and technology	379	92	218	69	248	73	88	87
Medical and health sciences	0	0	0	0	81	50	24	7
Agricultural sciences	3	0	3	0	115	16	58	41
Social sciences	33	0	33	0	130	73	45	12
Humanities	0	0	0	0	31	30	0	1
Non-profit sector	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Engineering and technology	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0
Region Vojvodine	**55**	**13**	**30**	**12**	**1172**	**428**	**615**	**129**
Natural sciences	2	0	0	2	107	43	38	26
Engineering and technology	47	13	24	10	398	51	305	42
Medical and health sciences	0	0	0	0	84	66	18	0
Agricultural sciences	2	0	2	0	91	1	49	41
Social sciences	4	0	4	0	482	265	205	12
Humanities	0	0	0	0	10	2	0	8
Business sector	**7**	**0**	**2**	**5**	**14**	**0**	**3**	**11**
Natural sciences	2	0	0	2	9	0	0	9
Engineering and technology	3	0	0	3	0	0	0	0
Agricultural sciences	2	0	2	0	5	0	3	2
Government sector	**7**	**1**	**6**	**0**	**117**	**8**	**103**	**6**
Engineering and technology	7	1	6	0	88	8	74	6
Agricultural sciences	0	0	0	0	29	0	29	0
Tertiary education	**41**	**12**	**22**	**7**	**1041**	**420**	**509**	**112**
Natural sciences	0	0	0	0	98	43	38	17
Engineering and technology	37	12	18	7	310	43	231	36
Medical and health sciences	0	0	0	0	84	66	18	0
Agricultural sciences	0	0	0	0	57	1	17	39
Social sciences	4	0	4	0	482	265	205	12
Humanities	0	0	0	0	10	2	0	8
Non-profit sector	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Natural sciences	0	0	0	0	0	0	0	0
Agricultural sciences	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0
SRBIJA – JUG	94	10	35	49	1408	1167	138	103
Natural sciences	0	0	0	0	433	400	30	3
Engineering and technology	93	10	35	48	226	49	81	96
Medical and health sciences	0	0	0	0	11	11	0	0
Agricultural sciences	0	0	0	0	25	3	22	0
Social sciences	1	0	0	1	683	677	4	2
Humanities	0	0	0	0	30	27	1	2
Business sector	**45**	**4**	**16**	**25**	**10**	**1**	**4**	**5**
Natural sciences	0	0	0	0	0	0	0	0
Engineering and technology	45	4	16	25	8	1	2	5
Agricultural sciences	0	0	0	0	2	0	2	0
Government sector	**0**	**0**	**0**	**0**	**21**	**1**	**3**	**17**
Engineering and technology	0	0	0	0	18	1	0	17
Agricultural sciences	0	0	0	0	3	0	3	0
Tertiary education	**49**	**6**	**19**	**24**	**1377**	**1165**	**131**	**81**
Natural sciences	0	0	0	0	433	400	30	3
Engineering and technology	48	6	19	23	200	47	79	74
Medical and health sciences	0	0	0	0	11	11	0	0
Agricultural sciences	0	0	0	0	20	3	17	0
Social sciences	1	0	0	1	683	677	4	2
Humanities	0	0	0	0	30	27	1	2

and type of research, 2016 (continued)

Ordering parties								
Ministries				Other				
Total	Basic	Applied	Development	Total	Basic	Applied	Development	
241	**13**	**118**	**110**	**191**	**29**	**113**	**49**	**Business sector**
10	2	5	3	14	0	2	12	Natural sciences
188	1	99	88	79	0	63	16	Engineering and technology
10	10	0	0	96	29	48	19	Medical and health sciences
29	0	14	15	1	0	0	1	Agricultural sciences
4	0	0	4	1	0	0	1	Social sciences
228	**110**	**61**	**57**	**271**	**197**	**67**	**7**	**Government sector**
7	1	5	1	85	67	15	3	Natural sciences
23	3	8	12	7	0	3	4	Engineering and technology
0	0	0	0	41	8	33	0	Medical and health sciences
79	2	34	43	10	2	8	0	Agricultural sciences
69	68	0	1	58	58	0	0	Social sciences
50	36	14	0	70	62	8	0	Humanities
490	**330**	**102**	**58**	**295**	**204**	**66**	**25**	**Tertiary education**
54	31	3	20	49	43	6	0	Natural sciences
83	18	49	16	40	0	21	19	Engineering and technology
2	0	2	0	29	19	10	0	Medical and health sciences
4	1	3	0	8	4	0	4	Agricultural sciences
166	120	31	15	104	73	29	2	Social sciences
181	160	14	7	65	65	0	0	Humanities
13	**2**	**11**	**0**	**3**	**0**	**3**	**0**	**Non-profit sector**
3	1	2	0	0	0	0	0	Engineering and technology
10	1	9	0	3	0	3	0	Social sciences
1022	**182**	**748**	**92**	**318**	**53**	**225**	**40**	**Region Vojvodine**
39	0	33	6	10	0	7	3	Natural sciences
822	72	668	82	154	2	119	33	Engineering and technology
19	14	5	0	6	6	0	0	Medical and health sciences
2	0	2	0	73	0	73	0	Agricultural sciences
139	96	39	4	72	45	23	4	Social sciences
1	0	1	0	3	0	3	0	Humanities
26	**0**	**15**	**11**	**18**	**0**	**13**	**5**	**Business sector**
13	0	10	3	2	0	0	2	Natural sciences
13	0	5	8	16	0	13	3	Engineering and technology
0	0	0	0	0	0	0	0	Agricultural sciences
14	**2**	**3**	**9**	**63**	**2**	**51**	**10**	**Government sector**
13	2	2	9	35	2	23	10	Engineering and technology
1	0	1	0	28	0	28	0	Agricultural sciences
971	**180**	**719**	**72**	**237**	**51**	**161**	**25**	**Tertiary education**
20	0	17	3	8	0	7	1	Natural sciences
796	70	661	65	103	0	83	20	Engineering and technology
19	14	5	0	6	6	0	0	Medical and health sciences
0	0	0	0	45	0	45	0	Agricultural sciences
135	96	35	4	72	45	23	4	Social sciences
1	0	1	0	3	0	3	0	Humanities
11	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**Non-profit sector**
6	0	6	0	0	0	0	0	Natural sciences
1	0	1	0	0	0	0	0	Agricultural sciences
4	0	4	0	0	0	0	0	Social sciences
411	324	53	34	191	92	42	57	SRBIJA – JUG
8	0	3	5	0	0	0	0	Natural sciences
81	10	48	23	112	17	39	56	Engineering and technology
38	38	0	0	0	0	0	0	Medical and health sciences
0	0	0	0	0	0	0	0	Agricultural sciences
284	276	2	6	79	75	3	1	Social sciences
0	0	0	0	0	0	0	0	Humanities
50	**0**	**29**	**21**	**51**	**2**	**20**	**29**	**Business sector**
8	0	3	5	0	0	0	0	Natural sciences
42	0	26	16	51	2	20	29	Engineering and technology
0	0	0	0	0	0	0	0	Agricultural sciences
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Government sector**
0	0	0	0	0	0	0	0	Engineering and technology
0	0	0	0	0	0	0	0	Agricultural sciences
361	**324**	**24**	**13**	**140**	**90**	**22**	**28**	**Tertiary education**
0	0	0	0	0	0	0	0	Natural sciences
39	10	22	7	61	15	19	27	Engineering and technology
38	38	0	0	0	0	0	0	Medical and health sciences
0	0	0	0	0	0	0	0	Agricultural sciences
284	276	2	6	79	75	3	1	Social sciences
0	0	0	0	0	0	0	0	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	**37**	**6**	**21**	**10**	**314**	**240**	**51**	**23**
Natural sciences	0	0	0	0	158	150	5	3
Engineering and technology	36	6	21	9	56	14	22	20
Medical and health sciences	0	0	0	0	5	5	0	0
Agricultural sciences	0	0	0	0	23	3	20	0
Social sciences	1	0	0	1	70	66	4	0
Humanities	0	0	0	0	2	2	0	0
Business sector	**9**	**0**	**9**	**0**	**1**	**1**	**0**	**0**
Natural sciences	0	0	0	0	0	0	0	0
Engineering and technology	9	0	9	0	1	1	0	0
Government sector	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**0**
Agricultural sciences	0	0	0	0	3	0	3	0
Tertiary education	**28**	**6**	**12**	**10**	**310**	**239**	**48**	**23**
Natural sciences	0	0	0	0	158	150	5	3
Engineering and technology	27	6	12	9	55	13	22	20
Medical and health sciences	0	0	0	0	5	5	0	0
Agricultural sciences	0	0	0	0	20	3	17	0
Social sciences	1	0	0	1	70	66	4	0
Humanities	0	0	0	0	2	2	0	0
Region Južne i Istočne Srbije	**57**	**4**	**14**	**39**	**1094**	**927**	**87**	**80**
Natural sciences	0	0	0	0	275	250	25	0
Engineering and technology	57	4	14	39	170	35	59	76
Medical and health sciences	0	0	0	0	6	6	0	0
Agricultural sciences	0	0	0	0	2	0	2	0
Social sciences	0	0	0	0	613	611	0	2
Humanities	0	0	0	0	28	25	1	2
Business sector	**36**	**4**	**7**	**25**	**9**	**0**	**4**	**5**
Natural sciences	0	0	0	0	0	0	0	0
Engineering and technology	36	4	7	25	7	0	2	5
Agricultural sciences	0	0	0	0	2	0	2	0
Government sector	**0**	**0**	**0**	**0**	**18**	**1**	**0**	**17**
Engineering and technology	0	0	0	0	18	1	0	17
Tertiary education	**21**	**0**	**7**	**14**	**1067**	**926**	**83**	**58**
Natural sciences	0	0	0	0	275	250	25	0
Engineering and technology	21	0	7	14	145	34	57	54
Medical and health sciences	0	0	0	0	6	6	0	0
Social sciences	0	0	0	0	613	611	0	2
Humanities	0	0	0	0	28	25	1	2
Region Kosovo i Metohija	**722**	**115**	**396**	**211**	**5500**	**3174**	**1485**	**841**

and type of research, 2016 (continued)

Ordering parties								
Ministries				Other				
Total	Basic	Applied	Development	Total	Basic	Applied	Development	
125	**51**	**46**	**28**	**49**	**11**	**14**	**24**	**Region Šumadije i Zapadne Srbije**
6	0	1	5	0	0	0	0	Natural sciences
73	10	43	20	46	11	11	24	Engineering and technology
38	38	0	0	0	0	0	0	Medical and health sciences
0	0	0	0	0	0	0	0	Agricultural sciences
8	3	2	3	3	0	3	0	Social sciences
0	0	0	0	0	0	0	0	Humanities
40	**0**	**22**	**18**	**3**	**0**	**1**	**2**	**Business sector**
6	0	1	5	0	0	0	0	Natural sciences
34	0	21	13	3	0	1	2	Engineering and technology
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Government sector**
0	0	0	0	0	0	0	0	Agricultural sciences
85	**51**	**24**	**10**	**46**	**11**	**13**	**22**	**Tertiary education**
0	0	0	0	0	0	0	0	Natural sciences
39	10	22	7	43	11	10	22	Engineering and technology
38	38	0	0	0	0	0	0	Medical and health sciences
0	0	0	0	0	0	0	0	Agricultural sciences
8	3	2	3	3	0	3	0	Social sciences
0	0	0	0	0	0	0	0	Humanities
286	**273**	**7**	**6**	**142**	**81**	**28**	**33**	**Region Južne i Istočne Srbije**
2	0	2	0	0	0	0	0	Natural sciences
8	0	5	3	66	6	28	32	Engineering and technology
0	0	0	0	0	0	0	0	Medical and health sciences
0	0	0	0	0	0	0	0	Agricultural sciences
276	273	0	3	76	75	0	1	Social sciences
0	0	0	0	0	0	0	0	Humanities
10	**0**	**7**	**3**	**48**	**2**	**19**	**27**	**Business sector**
2	0	2	0	0	0	0	0	Natural sciences
8	0	5	3	48	2	19	27	Engineering and technology
0	0	0	0	0	0	0	0	Agricultural sciences
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Government sector**
0	0	0	0	0	0	0	0	Engineering and technology
276	**273**	**0**	**3**	**94**	**79**	**9**	**6**	**Tertiary education**
0	0	0	0	0	0	0	0	Natural sciences
0	0	0	0	18	4	9	5	Engineering and technology
0	0	0	0	0	0	0	0	Medical and health sciences
276	273	0	3	76	75	0	1	Social sciences
0	0	0	0	0	0	0	0	Humanities
...	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**Region Kosovo i Metohija**

9.1. Published R&D works, inventions and patents, by fields of science, 2016

	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	**23812**	**5569**	**7904**	**10634**	**56**	**34**	**29**	**28**	**10**	**14**
Natural sciences	4480	688	786	3030	10	15	11	5	-	-
Engineering and technology	5646	935	2149	2833	42	16	17	4	7	13
Medical and health sciences	1172	52	264	856	1	-	-	-	1	-
Agricultural sciences	2744	219	978	1547	2	2	-	18	2	-
Social sciences	7065	2691	2746	1628	1	1	1	1	-	1
Humanities	2705	984	981	740	-	-	-	-	-	-
Business sector	**859**	**127**	**286**	**446**	**16**	**10**	**14**	**2**	**-**	**4**
Natural sciences	140	23	41	76	8	8	8	-	-	-
Engineering and technology	567	40	201	326	7	1	5	1	-	3
Agricultural sciences	56	27	15	14	-	-	-	-	-	-
Social sciences	96	37	29	30	1	1	1	1	-	1
Government sector	**6413**	**1532**	**1964**	**2917**	**12**	**15**	**9**	**23**	**2**	**-**
Natural sciences	2015	225	360	1430	2	6	2	5	-	-
Engineering and technology	1085	215	406	464	8	7	7	-	-	-
Medical and health sciences	140	3	12	125	-	-	-	-	-	-
Agricultural sciences	939	123	431	385	2	2	-	18	2	-
Social sciences	949	484	227	238	-	-	-	-	-	-
Humanities	1285	482	528	275	-	-	-	-	-	-
Tertiary education	**16531**	**3901**	**5654**	**7271**	**28**	**9**	**6**	**3**	**8**	**10**
Natural sciences	2325	440	385	1524	-	1	1	-	-	-
Engineering and technology	3994	680	1542	2043	27	8	5	3	7	10
Medical and health sciences	1032	49	252	731	1	-	-	-	1	-
Agricultural sciences	1749	69	532	1148	-	-	-	-	-	-
Social sciences	6011	2161	2490	1360	-	-	-	-	-	-
Humanities	1420	502	453	465	-	-	-	-	-	-
Non-profit sector	**9**	**9**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Social sciences	9	9	-	-	-	-	-	-	-	-
SRBIJA – SEVER	19151	4451	6318	8507	54	31	23	28	10	10
Natural sciences	4072	676	783	2612	10	15	11	5	-	-
Engineering and technology	3657	721	1401	1661	40	13	11	4	7	9
Medical and health sciences	930	4	190	736	1	-	-	-	1	-
Agricultural sciences	2523	197	871	1455	2	2	-	18	2	-
Social sciences	5553	2037	2164	1352	1	1	1	1	-	1
Humanities	2416	816	909	691	-	-	-	-	-	-
Business sector	**687**	**118**	**258**	**311**	**15**	**10**	**11**	**2**	**-**	**1**
Natural sciences	140	23	41	76	8	8	8	-	-	-
Engineering and technology	405	33	181	191	6	1	2	1	-	-
Agricultural sciences	46	25	7	14	-	-	-	-	-	-
Social sciences	96	37	29	30	1	1	1	1	-	1
Government sector	**6222**	**1502**	**1874**	**2846**	**12**	**15**	**9**	**23**	**2**	**-**
Natural sciences	2015	225	360	1430	2	6	2	5	-	-
Engineering and technology	1005	185	386	434	8	7	7	-	-	-
Medical and health sciences	140	3	12	125	-	-	-	-	-	-
Agricultural sciences	828	123	361	344	2	2	-	18	2	-
Social sciences	949	484	227	238	-	-	-	-	-	-
Humanities	1285	482	528	275	-	-	-	-	-	-
Tertiary education	**12233**	**2822**	**4186**	**5350**	**27**	**6**	**3**	**3**	**8**	**9**
Natural sciences	1917	428	382	1106	-	1	1	-	-	-
Engineering and technology	2247	503	834	1036	26	5	2	3	7	9
Medical and health sciences	790	1	178	611	1	-	-	-	1	-
Agricultural sciences	1649	49	503	1097	-	-	-	-	-	-
Social sciences	4499	1507	1908	1084	-	-	-	-	-	-
Humanities	1131	334	381	416	-	-	-	-	-	-
Non-profit sector	**9**	**9**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Social sciences	9	9	-	-	-	-	-	-	-	-
Beogradski region	**14000**	**3334**	**4266**	**6399**	**20**	**15**	**11**	**25**	**3**	**1**
Natural sciences	3357	553	623	2180	2	7	3	5	-	-
Engineering and technology	2144	398	823	923	14	5	7	1	-	-
Medical and health sciences	902	3	184	715	1	-	-	-	1	-
Agricultural sciences	1706	169	544	993	2	2	-	18	2	-
Social sciences	3620	1397	1294	929	1	1	1	1	-	1
Humanities	2271	814	798	659	-	-	-	-	-	-
Business sector	**649**	**118**	**251**	**280**	**7**	**2**	**3**	**2**	**-**	**1**
Natural sciences	134	23	40	71	-	-	-	-	-	-
Engineering and technology	390	33	178	179	6	1	2	1	-	-
Agricultural sciences	29	25	4	-	-	-	-	-	-	-
Social sciences	96	37	29	30	1	1	1	1	-	1

9.1. Published R&D works, inventions and patents, by fields of science, 2016 (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	**5551**	**1428**	**1585**	**2538**	**12**	**12**	**7**	**23**	**2**	**-**
Natural sciences	2015	225	360	1430	2	6	2	5	-	-
Engineering and technology	644	139	277	228	8	4	5	-	-	-
Medical and health sciences	140	3	12	125	-	-	-	-	-	-
Agricultural sciences	518	95	181	242	2	2	-	18	2	-
Social sciences	949	484	227	238	-	-	-	-	-	-
Humanities	1285	482	528	275	-	-	-	-	-	-
Tertiary education	**7791**	**1779**	**2430**	**3581**	**1**	**1**	**1**	**-**	**1**	**-**
Natural sciences	1208	305	223	679	-	1	1	-	-	-
Engineering and technology	1110	226	368	516	-	-	-	-	-	-
Medical and health sciences	762	-	172	590	1	-	-	-	1	-
Agricultural sciences	1159	49	359	751	-	-	-	-	-	-
Social sciences	2566	867	1038	661	-	-	-	-	-	-
Humanities	986	332	270	384	-	-	-	-	-	-
Non-profit sector	**9**	**9**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Social sciences	9	9	-	-	-	-	-	-	-	-
Region Vojvodine	**5151**	**1117**	**2052**	**2108**	**34**	**16**	**12**	**3**	**7**	**9**
Natural sciences	715	123	160	432	8	8	8	-	-	-
Engineering and technology	1513	323	578	738	26	8	4	3	7	9
Medical and health sciences	28	1	6	21	-	-	-	-	-	-
Agricultural sciences	817	28	327	462	-	-	-	-	-	-
Social sciences	1933	640	870	423	-	-	-	-	-	-
Humanities	145	2	111	32	-	-	-	-	-	-
Business sector	**38**	**-**	**7**	**31**	**8**	**8**	**8**	**-**	**-**	**-**
Natural sciences	6	-	1	5	8	8	8	-	-	-
Engineering and technology	15	-	3	12	-	-	-	-	-	-
Agricultural sciences	17	-	3	14	-	-	-	-	-	-
Government sector	**671**	**74**	**289**	**308**	**-**	**3**	**2**	**-**	**-**	**-**
Engineering and technology	361	46	109	206	-	3	2	-	-	-
Agricultural sciences	310	28	180	102	-	-	-	-	-	-
Tertiary education	**4442**	**1043**	**1756**	**1769**	**26**	**5**	**2**	**3**	**7**	**9**
Natural sciences	709	123	159	427	-	-	-	-	-	-
Engineering and technology	1137	277	466	520	26	5	2	3	7	9
Medical and health sciences	28	1	6	21	-	-	-	-	-	-
Agricultural sciences	490	-	144	346	-	-	-	-	-	-
Social sciences	1933	640	870	423	-	-	-	-	-	-
Humanities	145	2	111	32	-	-	-	-	-	-
SRBIJA – JUG	4661	1118	1586	2127	2	3	6	-	-	4
Natural sciences	408	12	3	418	-	-	-	-	-	-
Engineering and technology	1989	214	748	1172	2	3	6	-	-	4
Medical and health sciences	242	48	74	120	-	-	-	-	-	-
Agricultural sciences	221	22	107	92	-	-	-	-	-	-
Social sciences	1512	654	582	276	-	-	-	-	-	-
Humanities	289	168	72	49	-	-	-	-	-	-
Business sector	**172**	**9**	**28**	**135**	**1**	**-**	**3**	**-**	**-**	**3**
Engineering and technology	162	7	20	135	1	-	3	-	-	3
Agricultural sciences	10	2	8	-	-	-	-	-	-	-
Government sector	**191**	**30**	**90**	**71**	**-**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	80	30	20	30	-	-	-	-	-	-
Agricultural sciences	111	-	70	41	-	-	-	-	-	-
Tertiary education	**4298**	**1079**	**1468**	**1921**	**1**	**3**	**3**	**-**	**-**	**1**
Natural sciences	408	12	3	418	-	-	-	-	-	-
Engineering and technology	1747	177	708	1007	1	3	3	-	-	1
Medical and health sciences	242	48	74	120	-	-	-	-	-	-
Agricultural sciences	100	20	29	51	-	-	-	-	-	-
Social sciences	1512	654	582	276	-	-	-	-	-	-
Humanities	289	168	72	49	-	-	-	-	-	-
Region Šumadije i Zapadne Srbije	**1951**	**378**	**775**	**798**	**1**	**-**	**1**	**-**	**-**	**1**
Natural sciences	158	-	-	158	-	-	-	-	-	-
Engineering and technology	708	28	368	312	1	-	1	-	-	1
Medical and health sciences	242	48	74	120	-	-	-	-	-	-
Agricultural sciences	211	20	99	92	-	-	-	-	-	-
Social sciences	403	172	164	67	-	-	-	-	-	-
Humanities	229	110	70	49	-	-	-	-	-	-
Business sector	**124**	**-**	**4**	**120**	**-**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	124	-	4	120	-	-	-	-	-	-

9.1. Published R&D works, inventions and patents, by fields of science, 2016 (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	**111**	**-**	**70**	**41**	**-**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	111	-	70	41	-	-	-	-	-	-
Tertiary education	**1716**	**378**	**701**	**637**	**1**	**-**	**1**	**-**	**-**	**1**
Natural sciences	158	-	-	158	-	-	-	-	-	-
Engineering and technology	584	28	364	192	1	-	1	-	-	1
Medical and health sciences	242	48	74	120	-	-	-	-	-	-
Agricultural sciences	100	20	29	51	-	-	-	-	-	-
Social sciences	403	172	164	67	-	-	-	-	-	-
Humanities	229	110	70	49	-	-	-	-	-	-
Region Južne i Istočne Srbije	**2710**	**740**	**811**	**1329**	**1**	**3**	**5**	**-**	**-**	**3**
Social sciences	250	12	3	260	-	-	-	-	-	-
Engineering and technology	1281	186	380	860	1	3	5	-	-	3
Agricultural sciences	10	2	8	-	-	-	-	-	-	-
Social sciences	1109	482	418	209	-	-	-	-	-	-
Humanities	60	58	2	-	-	-	-	-	-	-
Business sector	**48**	**9**	**24**	**15**	**1**	**-**	**3**	**-**	**-**	**3**
Engineering and technology	38	7	16	15	1	-	3	-	-	3
Agricultural sciences	10	2	8	-	-	-	-	-	-	-
Government sector	**80**	**30**	**20**	**30**	**-**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	80	30	20	30	-	-	-	-	-	-
Tertiary education	**2582**	**701**	**767**	**1284**	**-**	**3**	**2**	**-**	**-**	**-**
Natural sciences	250	12	3	260	-	-	-	-	-	-
Engineering and technology	1163	149	344	815	-	3	2	-	-	-
Social sciences	1109	482	418	209	-	-	-	-	-	-
Humanities	60	58	2	-	-	-	-	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**..**				

10.1. Inventions and patent by R&D intensity, 2016

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	**56**	**34**	**29**	**28**	**10**	**14**
Natural sciences	10	15	11	5	-	-
Engineering and technology	42	16	17	4	7	13
Medical and health sciences	1	-	-	-	1	-
Agricultural sciences	2	2	-	18	2	-
Social sciences	1	1	1	1	-	1
Business sector	**16**	**10**	**14**	**2**	**-**	**4**
Natural sciences	8	8	8	-	-	-
Engineering and technology	7	1	5	1	-	3
Social sciences	1	1	1	1	-	1
Government sector	**12**	**15**	**9**	**23**	**2**	**-**
Natural sciences	2	6	2	5	-	-
Engineering and technology	8	7	7	-	-	-
Agricultural sciences	2	2	-	18	2	-
Tertiary education	**28**	**9**	**6**	**3**	**8**	**10**
Natural sciences	-	1	1	-	-	-
Engineering and technology	27	8	5	3	7	10
Medical and health sciences	1	-	-	-	1	-
SRBIJA – SEVER	54	31	23	28	10	10
Natural sciences	10	15	11	5	-	-
Engineering and technology	40	13	11	4	7	9
Medical and health sciences	1	-	-	-	1	-
Agricultural sciences	2	2	-	18	2	-
Social sciences	1	1	1	1	-	1
Business sector	**15**	**10**	**11**	**2**	**-**	**1**
Natural sciences	8	8	8	-	-	-
Engineering and technology	6	1	2	1	-	-
Social sciences	1	1	1	1	-	1

10.1. Inventions and patent by R&D intensity, 2016 (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	
Government sector	**12**	**15**	**9**	**23**	**2**	**-**
Natural sciences	2	6	2	5	-	-
Engineering and technology	8	7	7	-	-	-
Agricultural sciences	2	2	-	18	2	-
Tertiary education	**27**	**6**	**3**	**3**	**8**	**9**
Natural sciences	-	1	1	-	-	-
Engineering and technology	26	5	2	3	7	9
Medical and health sciences	1	-	-	-	1	-
Beogradski region	**20**	**15**	**11**	**25**	**3**	**1**
Natural sciences	2	7	3	5	-	-
Engineering and technology	14	5	7	1	-	-
Medical and health sciences	1	-	-	-	1	-
Agricultural sciences	2	2	-	18	2	-
Social sciences	1	1	1	1	-	1
Business sector	**7**	**2**	**3**	**2**	**-**	**1**
Engineering and technology	6	1	2	1	-	-
Social sciences	1	1	1	1	-	1
Government sector	**12**	**12**	**7**	**23**	**2**	**-**
Natural sciences	2	6	2	5	-	-
Engineering and technology	8	4	5	-	-	-
Agricultural sciences	2	2	-	18	2	-
Tertiary education	**1**	**1**	**1**	**-**	**1**	**-**
Natural sciences	-	1	1	-	-	-
Medical and health sciences	1	-	-	-	1	-
Region Vojvodine	**34**	**16**	**12**	**3**	**7**	**9**
Natural sciences	8	8	8	-	-	-
Engineering and technology	26	8	4	3	7	9
Business sector	**8**	**8**	**8**	**-**	**-**	**-**
Natural sciences	8	8	8	-	-	-
Government sector	**-**	**3**	**2**	**-**	**-**	**-**
Engineering and technology	-	3	2	-	-	-
Tertiary education	**26**	**5**	**2**	**3**	**7**	**9**
Engineering and technology	26	5	2	3	7	9
SRBIJA – JUG	2	3	6	-	-	4
Engineering and technology	2	3	6	-	-	4
Business sector	**1**	**-**	**3**	**-**	**-**	**3**
Engineering and technology	1	-	3	-	-	3
Tertiary education	**1**	**3**	**3**	**-**	**-**	**1**
Engineering and technology	1	3	3	-	-	1
Region Šumadije i Zapadne Srbije	**1**	**-**	**1**	**-**	**-**	**1**
Engineering and technology	1	-	1	-	-	1
Tertiary education	**1**	**-**	**1**	**-**	**-**	**1**
Engineering and technology	1	-	1	-	-	1
Region Južne i Istočne Srbije	**1**	**3**	**5**	**-**	**-**	**3**
Engineering and technology	1	3	5	-	-	3
Business sector	**1**	**-**	**3**	**-**	**-**	**3**
Engineering and technology	1	-	3	-	-	3
Tertiary education	**-**	**3**	**2**	**-**	**-**	**-**
Engineering and technology	-	3	2	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**

11.1. Gross domestic expenditure for R&D, by sectors and fields of science, 2016

Thous. RSD

	Gross domestic expenditure	Gross investments	Current costs		
			Total	Gross salaries and wages	Material costs
REPUBLIC OF SERBIA	**37956275**	**2389057**	**35567218**	**21679169**	**13888049**
Natural sciences	10669474	391056	10278418	6432506	3845912
Engineering and technology	14953591	1574126	13379465	6962393	6417072
Medical and health sciences	1925537	25291	1900246	1207199	693047
Agricultural sciences	3697566	159658	3537908	2655247	882661
Social sciences	5047154	180054	4867100	3422471	1444629
Humanities	1662953	58872	1604081	999353	604728
Business sector	**14239377**	**1455554**	**12783823**	**6341048**	**6442775**
Natural sciences	3822242	130336	3691906	1726419	1965487
Engineering and technology	9066504	1232158	7834346	3963196	3871150
Medical and health sciences	966231	6777	959454	485413	474041
Agricultural sciences	316778	78220	238558	131893	106665
Social sciences	67622	8063	59559	34127	25432
Government sector	**9897012**	**495743**	**9401269**	**6636733**	**2764536**
Natural sciences	3487808	163273	3324535	2492418	832117
Engineering and technology	2345003	232274	2112729	1134747	977982
Medical and health sciences	234213	8461	225752	144870	80882
Agricultural sciences	2451955	64306	2387649	1932173	455476
Social sciences	518539	6504	512035	374390	137645
Humanities	859494	20925	838569	558135	280434
Tertiary education	**13779088**	**437660**	**13341428**	**8665220**	**4676208**
Natural sciences	3358870	97447	3261423	2213669	1047754
Engineering and technology	3518723	109694	3409029	1842802	1566227
Medical and health sciences	725093	10053	715040	576916	138124
Agricultural sciences	928779	17132	911647	591181	320466
Social sciences	4444164	165387	4278777	2999434	1279343
Humanities	803459	37947	765512	441218	324294
Non-profit sector	**40798**	**100**	**40698**	**36168**	**4530**
Natural sciences	554	-	554	-	554
Engineering and technology	23361	-	23361	21648	1713
Agricultural sciences	54	-	54	-	54
Social sciences	16829	100	16729	14520	2209
SRBIJA – SEVER	35332198	2278480	33053718	20071435	12982283
Natural sciences	10076395	373930	9702465	6041996	3660469
Engineering and technology	13617190	1492216	12124974	6208588	5916386
Medical and health sciences	1793480	21920	1771560	1108252	663308
Agricultural sciences	3529665	158393	3371272	2561259	810013
Social sciences	4704218	174534	4529684	3198499	1331185
Humanities	1611250	57487	1553763	952841	600922
Business sector	**13624449**	**1389891**	**12234558**	**6033580**	**6200978**
Natural sciences	3776149	123478	3652671	1688314	1964357
Engineering and technology	8601130	1173353	7427777	3743043	3684734
Medical and health sciences	966231	6777	959454	485413	474041
Agricultural sciences	213317	78220	135097	82683	52414
Social sciences	67622	8063	59559	34127	25432
Government sector	**9780248**	**494863**	**9285385**	**6541564**	**2743821**
Natural sciences	3487808	163273	3324535	2492418	832117
Engineering and technology	2272949	232274	2040675	1066257	974418
Medical and health sciences	234213	8461	225752	144870	80882
Agricultural sciences	2407245	63426	2343819	1905494	438325
Social sciences	518539	6504	512035	374390	137645
Humanities	859494	20925	838569	558135	280434
Tertiary education	**11886703**	**393626**	**11493077**	**7460123**	**4032954**
Natural sciences	2811884	87179	2724705	1861264	863441
Engineering and technology	2719750	86589	2633161	1377640	1255521
Medical and health sciences	593036	6682	586354	477969	108385
Agricultural sciences	909049	16747	892302	573082	319220
Social sciences	4101228	159867	3941361	2775462	1165899
Humanities	751756	36562	715194	394706	320488
Non-profit sector	**40798**	**100**	**40698**	**36168**	**4530**
Natural sciences	554	-	554	-	554
Engineering and technology	23361	-	23361	21648	1713
Agricultural sciences	54	-	54	-	54
Social sciences	16829	100	16729	14520	2209
Beogradski region	**24397360**	**2017629**	**22379731**	**12584638**	**9795093**
Natural sciences	6564373	270110	6294263	4138366	2155897
Engineering and technology	9599918	1401306	8198612	3178767	5019845
Medical and health sciences	1674956	15238	1659718	1003793	655925
Agricultural sciences	2100378	123834	1976544	1378888	597656
Social sciences	2982737	158336	2824401	2035353	789048
Humanities	1474998	48805	1426193	849471	576722

11.1. Gross domestic expenditure for R&D, by sectors and fields of science, 2016 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current costs		
			Total	Gross salaries and wages	Material costs
Business sector	**8680440**	**1291103**	**7389337**	**2661539**	**4727798**
Natural sciences	1485266	53556	1431710	681275	750435
Engineering and technology	5978043	1145343	4832700	1398989	3433711
Medical and health sciences	966231	6777	959454	485413	474041
Agricultural sciences	183278	77364	105914	61735	44179
Social sciences	67622	8063	59559	34127	25432
Government sector	**8012100**	**411665**	**7600435**	**5183200**	**2417235**
Natural sciences	3487808	163273	3324535	2492418	832117
Engineering and technology	1778083	182779	1595304	812643	782661
Medical and health sciences	234213	8461	225752	144870	80882
Agricultural sciences	1133963	29723	1104240	800744	303496
Social sciences	518539	6504	512035	374390	137645
Humanities	859494	20925	838569	558135	280434
Tertiary education	**7665830**	**314761**	**7351069**	**4703731**	**2647338**
Natural sciences	1591299	53281	1538018	964673	573345
Engineering and technology	1820431	73184	1747247	945487	801760
Medical and health sciences	474512	-	474512	373510	101002
Agricultural sciences	783137	16747	766390	516409	249981
Social sciences	2380947	143669	2237278	1612316	624962
Humanities	615504	27880	587624	291336	296288
Non-profit sector	**38990**	**100**	**38890**	**36168**	**2722**
Engineering and technology	23361	-	23361	21648	1713
Social sciences	15629	100	15529	14520	1009
Region Vojvodine	**10934838**	**260851**	**10673987**	**7486797**	**3187190**
Natural sciences	3512022	103820	3408202	1903630	1504572
Engineering and technology	4017272	90910	3926362	3029821	896541
Medical and health sciences	118524	6682	111842	104459	7383
Agricultural sciences	1429287	34559	1394728	1182371	212357
Social sciences	1721481	16198	1705283	1163146	542137
Humanities	136252	8682	127570	103370	24200
Business sector	**4944009**	**98788**	**4845221**	**3372041**	**1473180**
Natural sciences	2290883	69922	2220961	1007039	1213922
Engineering and technology	2623087	28010	2595077	2344054	251023
Agricultural sciences	30039	856	29183	20948	8235
Government sector	**1768148**	**83198**	**1684950**	**1358364**	**326586**
Engineering and technology	494866	49495	445371	253614	191757
Agricultural sciences	1273282	33703	1239579	1104750	134829
Tertiary education	**4220873**	**78865**	**4142008**	**2756392**	**1385616**
Natural sciences	1220585	33898	1186687	896591	290096
Engineering and technology	899319	13405	885914	432153	453761
Medical and health sciences	118524	6682	111842	104459	7383
Agricultural sciences	125912	-	125912	56673	69239
Social sciences	1720281	16198	1704083	1163146	540937
Humanities	136252	8682	127570	103370	24200
Non-profit sector	**1808**	**-**	**1808**	**-**	**1808**
Natural sciences	554	-	554	-	554
Agricultural sciences	54	-	54	-	54
Social sciences	1200	-	1200	-	1200
SRBIJA – JUG	2624077	110577	2513500	1607734	905766
Natural sciences	593079	17126	575953	390510	185443
Engineering and technology	1336401	81910	1254491	753805	500686
Medical and health sciences	132057	3371	128686	98947	29739
Agricultural sciences	167901	1265	166636	93988	72648
Social sciences	342936	5520	337416	223972	113444
Humanities	51703	1385	50318	46512	3806
Business sector	**614928**	**65663**	**549265**	**307468**	**241797**
Natural sciences	46093	6858	39235	38105	1130
Engineering and technology	465374	58805	406569	220153	186416
Agricultural sciences	103461	-	103461	49210	54251
Government sector	**116764**	**880**	**115884**	**95169**	**20715**
Engineering and technology	72054	-	72054	68490	3564
Agricultural sciences	44710	880	43830	26679	17151
Tertiary education	**1892385**	**44034**	**1848351**	**1205097**	**643254**
Natural sciences	546986	10268	536718	352405	184313
Engineering and technology	798973	23105	775868	465162	310706
Medical and health sciences	132057	3371	128686	98947	29739
Agricultural sciences	19730	385	19345	18099	1246
Social sciences	342936	5520	337416	223972	113444
Humanities	51703	1385	50318	46512	3806

11.1. Gross domestic expenditure for R&D, by sectors and fields of science, 2016 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current costs		
			Total	Gross salaries and wages	Material costs
Region Šumadija i Zapadne Srbije	**1140112**	**61238**	**1078874**	**799746**	**279128**
Natural sciences	477387	13883	463504	350602	112902
Engineering and technology	345909	42190	303719	207130	96589
Medical and health sciences	60353	1477	58876	35279	23597
Agricultural sciences	64440	1265	63175	44778	18397
Social sciences	174274	2423	171851	145618	26233
Humanities	17749	-	17749	16339	1410
Business sector	**227325**	**42832**	**184493**	**145870**	**38623**
Natural sciences	45363	6858	38505	38105	400
Engineering and technology	181962	35974	145988	107765	38223
Government sector	**44710**	**880**	**43830**	**26679**	**17151**
Agricultural sciences	44710	880	43830	26679	17151
Tertiary education	**868077**	**17526**	**850551**	**627197**	**223354**
Natural sciences	432024	7025	424999	312497	112502
Engineering and technology	163947	6216	157731	99365	58366
Medical and health sciences	60353	1477	58876	35279	23597
Agricultural sciences	19730	385	19345	18099	1246
Social sciences	174274	2423	171851	145618	26233
Humanities	17749	-	17749	16339	1410
Region Južne i Istočne Srbije	**1483965**	**49339**	**1434626**	**807988**	**626638**
Natural sciences	115692	3243	112449	39908	72541
Engineering and technology	990492	39720	950772	546675	404097
Medical and health sciences	71704	1894	69810	63668	6142
Agricultural sciences	103461	-	103461	49210	54251
Social sciences	168662	3097	165565	78354	87211
Humanities	33954	1385	32569	30173	2396
Business sector	**387603**	**22831**	**364772**	**161598**	**203174**
Natural sciences	730	-	730	-	730
Engineering and technology	283412	22831	260581	112388	148193
Agricultural sciences	103461	-	103461	49210	54251
Government sector	**72054**	**-**	**72054**	**68490**	**3564**
Engineering and technology	72054	-	72054	68490	3564
Tertiary education	**1024308**	**26508**	**997800**	**577900**	**419900**
Natural sciences	114962	3243	111719	39908	71811
Engineering and technology	635026	16889	618137	365797	252340
Medical and health sciences	71704	1894	69810	63668	6142
Social sciences	168662	3097	165565	78354	87211
Humanities	33954	1385	32569	30173	2396
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**

12.1. Sources of funds spent on R&D activities, 2016

Thous. RSD

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
REPUBLIC OF SERBIA	**37956275**	**12241940**	**17289962**	**3498048**	**2853**	**4923472**
Natural sciences	10669474	1317275	5770674	951256	1243	2629026
Engineering ant technology	14953591	5973790	5391758	2347555	1156	1239332
Medical and health sciences	1925537	135819	889135	8997	-	891586
Agricultural sciences	3697566	2066987	1414795	161967	54	53763
Social sciences	5047154	2452288	2508858	28273	400	57335
Humanities	1662953	295781	1314742	-	-	52430
Business sector	**14239377**	**5934631**	**1036444**	**3190222**	**-**	**4078080**
Natural sciences	3822242	315621	266792	923037	-	2316792
Engineering ant technology	9066504	5264061	679621	2245530	-	877292
Medical and health sciences	966231	75204	-	8997	-	882030
Agricultural sciences	316778	262592	39562	12658	-	1966
Social sciences	67622	17153	50469	-	-	-
Government sector	**9897012**	**2152341**	**7222246**	**99889**	**1634**	**420902**
Natural sciences	3487808	72577	3144322	22527	478	247904
Engineering ant technology	2345003	263740	1929276	32979	1156	117852
Medical and health sciences	234213	1588	226494	-	-	6131
Agricultural sciences	2451955	1644168	739950	34547	-	33290
Social sciences	518539	11102	486734	9836	-	10867
Humanities	859494	159166	695470	-	-	4858
Tertiary education	**13779088**	**4123053**	**9029823**	**207751**	**596**	**417865**
Natural sciences	3358870	929077	2359175	5692	596	64330
Engineering ant technology	3518723	423138	2782537	68860	-	244188
Medical and health sciences	725093	59027	662641	-	-	3425
Agricultural sciences	928779	160227	635283	114762	-	18507
Social sciences	4444164	2414969	1970915	18437	-	39843
Humanities	803459	136615	619272	-	-	47572

12.1. Sources of funds spent on R&D activities, 2016 (continued)

Thous. RSD

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Non-profit sector	**40798**	**31915**	**1449**	**186**	**623**	**6625**
Natural sciences	554	-	385	-	169	-
Engineering ant technology	23361	22851	324	186	-	-
Agricultural sciences	54	-	-	-	54	-
Social sciences	16829	9064	740	-	400	6625
SRBIJA – SEVER	35332198	11637833	15696287	3301350	2853	4693875
Natural sciences	10076395	1217446	5286567	946220	1243	2624919
Engineering ant technology	13617190	5732622	4708957	2156088	1156	1018367
Medical and health sciences	1793480	123369	772953	8997	-	888161
Agricultural sciences	3529665	1979268	1334613	161967	54	53763
Social sciences	4704218	2289921	2329584	28078	400	56235
Humanities	1611250	295207	1263613	-	-	52430
Business sector	**13624449**	**5606750**	**968317**	**3061677**	**-**	**3987705**
Natural sciences	3776149	274564	266792	918001	-	2316792
Engineering ant technology	8601130	5061587	630605	2122021	-	786917
Medical and health sciences	966231	75204	-	8997	-	882030
Agricultural sciences	213317	178242	20451	12658	-	1966
Social sciences	67622	17153	50469	-	-	-
Government sector	**9780248**	**2148972**	**7108851**	**99889**	**1634**	**420902**
Natural sciences	3487808	72577	3144322	22527	478	247904
Engineering ant technology	2272949	263740	1857222	32979	1156	117852
Medical and health sciences	234213	1588	226494	-	-	6131
Agricultural sciences	2407245	1640799	698609	34547	-	33290
Social sciences	518539	11102	486734	9836	-	10867
Humanities	859494	159166	695470	-	-	4858
Tertiary education	**11886703**	**3850196**	**7617670**	**139598**	**596**	**278643**
Natural sciences	2811884	870305	1875068	5692	596	60223
Engineering ant technology	2719750	384444	2220806	902	-	113598
Medical and health sciences	593036	46577	546459	-	-	-
Agricultural sciences	909049	160227	615553	114762	-	18507
Social sciences	4101228	2252602	1791641	18242	-	38743
Humanities	751756	136041	568143	-	-	47572
Non-profit sector	**40798**	**31915**	**1449**	**186**	**623**	**6625**
Natural sciences	554	-	385	-	169	-
Engineering ant technology	23361	22851	324	186	-	-
Agricultural sciences	54	-	-	-	54	-
Social sciences	16829	9064	740	-	400	6625
Beogradski region	**24397360**	**7961839**	**11973377**	**2286605**	**2630**	**2172909**
Natural sciences	6564373	936805	4327306	918882	1074	380306
Engineering ant technology	9599918	3973099	3653101	1181269	1156	791293
Medical and health sciences	1674956	76792	701006	8997	-	888161
Agricultural sciences	2100378	1033197	897329	149379	-	20473
Social sciences	2982737	1687615	1226398	28078	400	40246
Humanities	1474998	254331	1168237	-	-	52430
Business sector	**8680440**	**4048850**	**890234**	**2069464**	**-**	**1671892**
Natural sciences	1485266	274564	208160	890663	-	111879
Engineering ant technology	5978043	3503687	628605	1169734	-	676017
Medical and health sciences	966231	75204	-	8997	-	882030
Agricultural sciences	183278	178242	3000	70	-	1966
Social sciences	67622	17153	50469	-	-	-
Government sector	**8012100**	**1141700**	**6519323**	**78005**	**1634**	**271438**
Natural sciences	3487808	72577	3144322	22527	478	247904
Engineering ant technology	1778083	202539	1561615	11095	1156	1678
Medical and health sciences	234213	1588	226494	-	-	6131
Agricultural sciences	1133963	694728	404688	34547	-	-
Social sciences	518539	11102	486734	9836	-	10867
Humanities	859494	159166	695470	-	-	4858
Tertiary education	**7665830**	**2739974**	**4563356**	**138950**	**596**	**222954**
Natural sciences	1591299	589664	974824	5692	596	20523
Engineering ant technology	1820431	244022	1462557	254	-	113598
Medical and health sciences	474512	-	474512	-	-	-
Agricultural sciences	783137	160227	489641	114762	-	18507
Social sciences	2380947	1650896	689055	18242	-	22754
Humanities	615504	95165	472767	-	-	47572
Non-profit sector	**38990**	**31315**	**464**	**186**	**400**	**6625**
Engineering and technology	23361	22851	324	186	-	-
Social sciences	15629	8464	140	-	400	6625
Region Vojvodine	**10934838**	**3675994**	**3722910**	**1014745**	**223**	**2520966**
Natural sciences	3512022	280641	959261	27338	169	2244613
Engineering ant technology	4017272	1759523	1055856	974819	-	227074
Medical and health sciences	118524	46577	71947	-	-	-
Agricultural sciences	1429287	946071	437284	12588	54	33290
Social sciences	1721481	602306	1103186	-	-	15989
Humanities	136252	40876	95376	-	-	-
Business sector	**4944009**	**1557900**	**78083**	**992213**	**-**	**2315813**
Natural sciences	2290883	-	58632	27338	-	2204913
Engineering ant technology	2623087	1557900	2000	952287	-	110900
Agricultural sciences	30039	-	17451	12588	-	-

12.1. Sources of funds spent on R&D activities, 2016 (continued)

Thous. RSD

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Government sector	**1768148**	**1007272**	**589528**	**21884**	**-**	**149464**
Engineering and technology	494866	61201	295607	21884	-	116174
Agricultural sciences	1273282	946071	293921	-	-	33290
Tertiary education	**4220873**	**1110222**	**3054314**	**648**	**-**	**55689**
Natural sciences	1220585	280641	900244	-	-	39700
Engineering ant technology	899319	140422	758249	648	-	-
Medical and health sciences	118524	46577	71947	-	-	-
Agricultural sciences	125912	-	125912	-	-	-
Social sciences	1720281	601706	1102586	-	-	15989
Humanities	136252	40876	95376	-	-	-
Non-profit sector	**1808**	**600**	**985**	**-**	**223**	**-**
Natural sciences	554	-	385	-	169	-
Agricultural sciences	54	-	-	-	54	-
Social sciences	1200	600	600	-	-	-
SRBIJA – JUG	2624077	604107	1593675	196698	-	229597
Natural sciences	593079	99829	484107	5036	-	4107
Engineering ant technology	1336401	241168	682801	191467	-	220965
Medical and health sciences	132057	12450	116182	-	-	3425
Agricultural sciences	167901	87719	80182	-	-	-
Social sciences	342936	162367	179274	195	-	1100
Humanities	51703	574	51129	-	-	-
Business sector	**614928**	**327881**	**68127**	**128545**	**-**	**90375**
Natural sciences	46093	41057	-	5036	-	-
Engineering and technology	465374	202474	49016	123509	-	90375
Agricultural sciences	103461	84350	19111	-	-	-
Government sector	**116764**	**3369**	**113395**	**-**	**-**	**-**
Engineering and technology	72054	-	72054	-	-	-
Agricultural sciences	44710	3369	41341	-	-	-
Tertiary education	**1892385**	**272857**	**1412153**	**68153**	**-**	**139222**
Natural sciences	546986	58772	484107	-	-	4107
Engineering ant technology	798973	38694	561731	67958	-	130590
Medical and health sciences	132057	12450	116182	-	-	3425
Agricultural sciences	19730	-	19730	-	-	-
Social sciences	342936	162367	179274	195	-	1100
Humanities	51703	574	51129	-	-	-
Region Šumadije i Zapadne Srbije	**1140112**	**280490**	**770276**	**66033**	**-**	**23313**
Natural sciences	477387	99099	371767	5036	-	1485
Engineering ant technology	345909	111068	156736	60802	-	17303
Medical and health sciences	60353	12450	44478	-	-	3425
Agricultural sciences	64440	3369	61071	-	-	-
Social sciences	174274	54504	118475	195	-	1100
Humanities	17749	-	17749	-	-	-
Business sector	**227325**	**133589**	**16216**	**60905**	**-**	**16615**
Natural sciences	45363	40327	-	5036	-	-
Engineering ant technology	181962	93262	16216	55869	-	16615
Government sector	**44710**	**3369**	**41341**	**-**	**-**	**-**
Agricultural sciences	44710	3369	41341	-	-	-
Tertiary education	**868077**	**143532**	**712719**	**5128**	**-**	**6698**
Natural sciences	432024	58772	371767	-	-	1485
Engineering ant technology	163947	17806	140520	4933	-	688
Medical and health sciences	60353	12450	44478	-	-	3425
Agricultural sciences	19730	-	19730	-	-	-
Social sciences	174274	54504	118475	195	-	1100
Humanities	17749	-	17749	-	-	-
Region Južne i Istočne Srbije	**1483965**	**323617**	**823399**	**130665**	**-**	**206284**
Natural sciences	115692	730	112340	-	-	2622
Engineering ant technology	990492	130100	526065	130665	-	203662
Medical and health sciences	71704	-	71704	-	-	-
Agricultural sciences	103461	84350	19111	-	-	-
Social sciences	168662	107863	60799	-	-	-
Humanities	33954	574	33380	-	-	-
Business sector	**387603**	**194292**	**51911**	**67640**	**-**	**73760**
Natural sciences	730	730	-	-	-	-
Engineering ant technology	283412	109212	32800	67640	-	73760
Agricultural sciences	103461	84350	19111	-	-	-
Government sector	**72054**	**-**	**72054**	**-**	**-**	**-**
Engineering and technology	72054	-	72054	-	-	-
Tertiary education	**1024308**	**129325**	**699434**	**63025**	**-**	**132524**
Natural sciences	114962	-	112340	-	-	2622
Engineering ant technology	635026	20888	421211	63025	-	129902
Medical and health sciences	71704	-	71704	-	-	-
Social sciences	168662	107863	60799	-	-	-
Humanities	33954	574	33380	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**

12.2. Sources of funds for R&D, 2016

%

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
REPUBLIC OF SERBIA	**100,0**	**32,3**	**45,6**	**9,2**	**0,0**	**13,0**
Natural sciences	100,0	12,3	54,1	8,9	0,0	24,6
Engineering and technology	100,0	39,9	36,1	15,7	0,0	8,3
Medical and health sciences	100,0	7,1	46,2	0,5	-	46,3
Agricultural sciences	100,0	55,9	38,3	4,4	0,0	1,5
Social sciences	100,0	48,6	49,7	0,6	0,0	1,1
Humanities	100,0	17,8	79,1	-	-	3,2
Business sector	**100,0**	**41,7**	**7,3**	**22,4**	**-**	**28,6**
Natural sciences	100,0	8,3	7,0	24,1	-	60,6
Engineering and technology	100,0	58,1	7,5	24,8	-	9,7
Medical and health sciences	100,0	7,8	-	0,9	-	91,3
Agricultural sciences	100,0	82,9	12,5	4,0	-	0,6
Social sciences	100,0	25,4	74,6	-	-	-
Government sector	**100,0**	**21,7**	**73,0**	**1,0**	**0,0**	**4,3**
Natural sciences	100,0	2,1	90,2	0,6	0,0	7,1
Engineering and technology	100,0	11,2	82,3	1,4	0,0	5,0
Medical and health sciences	100,0	0,7	96,7	-	-	2,6
Agricultural sciences	100,0	67,1	30,2	1,4	-	1,4
Social sciences	100,0	2,1	93,9	1,9	-	2,1
Humanities	100,0	18,5	80,9	-	-	0,6
Tertiary education	**100,0**	**29,9**	**65,5**	**1,5**	**0,0**	**3,0**
Natural sciences	100,0	27,7	70,2	0,2	0,0	1,9
Engineering and technology	100,0	12,0	79,1	2,0	-	6,9
Medical and health sciences	100,0	8,1	91,4	-	-	0,5
Agricultural sciences	100,0	17,3	68,4	12,4	-	2,0
Social sciences	100,0	54,3	44,3	0,4	-	0,9
Humanities	100,0	17,0	77,1	-	-	5,9
Non-profit sector	**100,0**	**78,2**	**3,6**	**0,5**	**1,5**	**16,2**
Natural sciences	100,0	-	69,5	-	30,5	-
Engineering and technology	100,0	97,8	1,4	0,8	-	-
Agricultural sciences	100,0	-	-	-	100,0	-
Social sciences	100,0	53,9	4,4	-	2,4	39,4
SRBIJA – SEVER	100,0	32,9	44,4	9,3	0,0	13,3
Natural sciences	100,0	12,1	52,5	9,4	0,0	26,1
Engineering and technology	100,0	42,1	34,6	15,8	0,0	7,5
Medical and health sciences	100,0	6,9	43,1	0,5	-	49,5
Agricultural sciences	100,0	56,1	37,8	4,6	0,0	1,5
Social sciences	100,0	48,7	49,5	0,6	0,0	1,2
Humanities	100,0	18,3	78,4	-	-	3,3
Business sector	**100,0**	**41,2**	**7,1**	**22,5**	**-**	**29,3**
Natural sciences	100,0	7,3	7,1	24,3	-	61,4
Engineering and technology	100,0	58,8	7,3	24,7	-	9,1
Medical and health sciences	100,0	7,8	-	0,9	-	91,3
Agricultural sciences	100,0	83,6	9,6	5,9	-	0,9
Social sciences	100,0	25,4	74,6	-	-	-
Government sector	**100,0**	**22,0**	**72,7**	**1,0**	**0,0**	**4,3**
Natural sciences	100,0	2,1	90,2	0,6	0,0	7,1
Engineering and technology	100,0	11,6	81,7	1,5	0,1	5,2
Medical and health sciences	100,0	0,7	96,7	-	-	2,6
Agricultural sciences	100,0	68,2	29,0	1,4	-	1,4
Social sciences	100,0	2,1	93,9	1,9	-	2,1
Humanities	100,0	18,5	80,9	-	-	0,6
Tertiary education	**100,0**	**32,4**	**64,1**	**1,2**	**0,0**	**2,3**
Natural sciences	100,0	31,0	66,7	0,2	0,0	2,1
Engineering and technology	100,0	14,1	81,7	0,0	-	4,2
Medical and health sciences	100,0	7,9	92,1	-	-	-
Agricultural sciences	100,0	17,6	67,7	12,6	-	2,0
Social sciences	100,0	54,9	43,7	0,4	-	0,9
Humanities	100,0	18,1	75,6	-	-	6,3
Non-profit sector	**100,0**	**78,2**	**3,6**	**0,5**	**1,5**	**16,2**
Natural sciences	100,0	-	69,5	-	30,5	-
Engineering and technology	100,0	97,8	1,4	0,8	-	-
Agricultural sciences	100,0	-	-	-	100,0	-
Social sciences	100,0	53,9	4,4	-	2,4	39,4
Beogradski region	**100,0**	**32,6**	**49,1**	**9,4**	**0,0**	**8,9**
Natural sciences	100,0	14,3	65,9	14,0	0,0	5,8
Engineering and technology	100,0	41,4	38,1	12,3	0,0	8,2
Medical and health sciences	100,0	4,6	41,9	0,5	-	53,0
Agricultural sciences	100,0	49,2	42,7	7,1	-	1,0
Social sciences	100,0	56,6	41,1	0,9	0,0	1,3
Humanities	100,0	17,2	79,2	-	-	3,6

12.2. Sources of funds for R&D, 2016 (continued)

%

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Business sector	**100,0**	**46,6**	**10,3**	**23,8**	**-**	**19,3**
Natural sciences	100,0	18,5	14,0	60,0	-	7,5
Engineering and technology	100,0	58,6	10,5	19,6	-	11,3
Medical and health sciences	100,0	7,8	-	0,9	-	91,3
Agricultural sciences	100,0	97,3	1,6	0,0	-	1,1
Social sciences	100,0	25,4	74,6	-	-	-
Government sector	**100,0**	**14,2**	**81,4**	**1,0**	**0,0**	**3,4**
Natural sciences	100,0	2,1	90,2	0,6	0,0	7,1
Engineering and technology	100,0	11,4	87,8	0,6	0,1	0,1
Medical and health sciences	100,0	0,7	96,7	-	-	2,6
Agricultural sciences	100,0	61,3	35,7	3,0	-	-
Social sciences	100,0	2,1	93,9	1,9	-	2,1
Humanities	100,0	18,5	80,9	-	-	0,6
Tertiary education	**100,0**	**35,7**	**59,5**	**1,8**	**0,0**	**2,9**
Natural sciences	100,0	37,1	61,3	0,4	0,0	1,3
Engineering and technology	100,0	13,4	80,3	0,0	-	6,2
Medical and health sciences	100,0	-	100,0	-	-	-
Agricultural sciences	100,0	20,5	62,5	14,7	-	2,4
Social sciences	100,0	69,3	28,9	0,8	-	1,0
Humanities	100,0	15,5	76,8	-	-	7,7
Non-profit sector	**100,0**	**80,3**	**1,2**	**0,5**	**1,0**	**17,0**
Engineering and technology	100,0	97,8	1,4	0,8	-	-
Social sciences	100,0	54,2	0,9	-	2,6	42,4
Region Vojvodine	**100,0**	**33,6**	**34,0**	**9,3**	**0,0**	**23,1**
Natural sciences	100,0	8,0	27,3	0,8	0,0	63,9
Engineering and technology	100,0	43,8	26,3	24,3	-	5,7
Medical and health sciences	100,0	39,3	60,7	-	-	-
Agricultural sciences	100,0	66,2	30,6	0,9	0,0	2,3
Social sciences	100,0	35,0	64,1	-	-	0,9
Humanities	100,0	30,0	70,0	-	-	-
Business sector	**100,0**	**31,5**	**1,6**	**20,1**	**-**	**46,8**
Natural sciences	100,0	-	2,6	1,2	-	96,2
Engineering and technology	100,0	59,4	0,1	36,3	-	4,2
Agricultural sciences	100,0	-	58,1	41,9	-	-
Government sector	**100,0**	**57,0**	**33,3**	**1,2**	**-**	**8,5**
Engineering and technology	100,0	12,4	59,7	4,4	-	23,5
Agricultural sciences	100,0	74,3	23,1	-	-	2,6
Tertiary education	**100,0**	**26,3**	**72,4**	**0,0**	**-**	**1,3**
Natural sciences	100,0	23,0	73,8	-	-	3,3
Engineering and technology	100,0	15,6	84,3	0,1	-	-
Medical and health sciences	100,0	39,3	60,7	-	-	-
Agricultural sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	35,0	64,1	-	-	0,9
Humanities	100,0	30,0	70,0	-	-	-
Non-profit sector	**100,0**	**33,2**	**54,5**	**-**	**12,3**	**-**
Natural sciences	100,0	-	69,5	-	30,5	-
Agricultural sciences	100,0	-	-	-	100,0	-
Social sciences	100,0	50,0	50,0	-	-	-
SRBIJA – JUG	100,0	23,0	60,7	7,5	-	8,7
Natural sciences	100,0	16,8	81,6	0,8	-	0,7
Engineering and technology	100,0	18,0	51,1	14,3	-	16,5
Medical and health sciences	100,0	9,4	88,0	-	-	2,6
Agricultural sciences	100,0	52,2	47,8	-	-	-
Social sciences	100,0	47,3	52,3	0,1	-	0,3
Humanities	100,0	1,1	98,9	-	-	-
Business sector	**100,0**	**53,3**	**11,1**	**20,9**	**-**	**14,7**
Natural sciences	100,0	89,1	-	10,9	-	-
Engineering and technology	100,0	43,5	10,5	26,5	-	19,4
Agricultural sciences	100,0	81,5	18,5	-	-	-
Government sector	**100,0**	**2,9**	**97,1**	**-**	**-**	**-**
Engineering and technology	100,0	-	100,0	-	-	-
Agricultural sciences	100,0	7,5	92,5	-	-	-
Tertiary education	**100,0**	**14,4**	**74,6**	**3,6**	**-**	**7,4**
Natural sciences	100,0	10,7	88,5	-	-	0,8
Engineering and technology	100,0	4,8	70,3	8,5	-	16,3
Medical and health sciences	100,0	9,4	88,0	-	-	2,6
Agricultural sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	47,3	52,3	0,1	-	0,3
Humanities	100,0	1,1	98,9	-	-	-

12.2. Sources of funds for R&D, 2016 (continued)

%

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Region Šumadije i Zapadne Srbije	**100,0**	**24,6**	**67,6**	**5,8**	**-**	**2,0**
Natural sciences	100,0	20,8	77,9	1,1	-	0,3
Engineering and technology	100,0	32,1	45,3	17,6	-	5,0
Medical and health sciences	100,0	20,6	73,7	-	-	5,7
Agricultural sciences	100,0	5,2	94,8	-	-	-
Social sciences	100,0	31,3	68,0	0,1	-	0,6
Humanities	100,0	-	100,0	-	-	-
Business sector	**100,0**	**58,8**	**7,1**	**26,8**	**-**	**7,3**
Natural sciences	100,0	88,9	-	11,1	-	-
Engineering and technology	100,0	51,3	8,9	30,7	-	9,1
Government sector	**100,0**	**7,5**	**92,5**	**-**	**-**	**-**
Agricultural sciences	100,0	7,5	92,5	-	-	-
Tertiary education	**100,0**	**16,5**	**82,1**	**0,6**	**-**	**0,8**
Natural sciences	100,0	13,6	86,1	-	-	0,3
Engineering and technology	100,0	10,9	85,7	3,0	-	0,4
Medical and health sciences	100,0	20,6	73,7	-	-	5,7
Agricultural sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	31,3	68,0	0,1	-	0,6
Humanities	100,0	-	100,0	-	-	-
Region Južne i Istočne Srbije	**100,0**	**21,8**	**55,5**	**8,8**	**-**	**13,9**
Natural sciences	100,0	0,6	97,1	-	-	2,3
Engineering and technology	100,0	13,1	53,1	13,2	-	20,6
Medical and health sciences	100,0	-	100,0	-	-	-
Agricultural sciences	100,0	81,5	18,5	-	-	-
Social sciences	100,0	64,0	36,0	-	-	-
Humanities	100,0	1,7	98,3	-	-	-
Business sector	**100,0**	**50,1**	**13,4**	**17,5**	**-**	**19,0**
Engineering and technology	100,0	100,0	-	-	-	-
Agricultural sciences	100,0	38,5	11,6	23,9	-	26,0
Social sciences	100,0	81,5	18,5	-	-	-
Government sector	**100,0**	**-**	**100,0**	**-**	**-**	**-**
Engineering and technology	100,0	-	100,0	-	-	-
Tertiary education	**100,0**	**12,6**	**68,3**	**6,2**	**-**	**12,9**
Natural sciences	100,0	-	97,7	-	-	2,3
Engineering and technology	100,0	3,3	66,3	9,9	-	20,5
Medical and health sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	64,0	36,0	-	-	-
Humanities	100,0	1,7	98,3	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**

13.1. Gross domestic expenditure on R&D by groupings of activities, 2016

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
REPUBLIC OF SERBIA	**37956275**	**2389057**	**35567218**	**21679169**	**13888049**
Crop and animal production, hunting and related activities	95310	106	95204	75963	19241
Mining of metal ores	62008	1173	60835	40928	19907
Other mining and quarrying	1416974	5493	1411481	119697	1291784
Mining support service activities	883810	-	883810	874302	9508
Manufacture of food products	87870	69304	18566	7412	11154
Printing and reproduction of recorded media	1292	-	1292	911	381
Manufacture of chemicals and chemical products	52097	19558	32539	32326	213
Manufacture of rubber and plastic products	187395	35765	151630	135061	16569
Manufacture of other non-metallic mineral products	24909	-	24909	23919	990
Manufacture of basic metals	1949	-	1949	1552	397
Manufacture of fabricated metal products, except machinery and equipment	12448	537	11911	9518	2393
Manufacture of computer, electronic and optical products	157385	1966	155419	57579	97840
Manufacture of electrical equipment	10559	1278	9281	8181	1100
Manufacture of machinery and equipment, n.e.c.	332994	23092	309902	61252	248650
Manufacture of furniture	44734	574	44160	38546	5614
Other manufacturing	5200	1500	3700	2500	1200
Repair and installation of machinery and equipment	185	-	185	185	-
Electricity, gas, steam and air conditioning supply	1083630	1070127	13503	2176	11327
Water collection, treatment and supply	6509	-	6509	6509	-
Remediation activities and other waste management services	6300	583	5717	4126	1591
Specialised construction activities	110823	199	110624	10252	100372
Wholesale trade, except of motor vehicles and motorcycles	81452	4994	76458	24219	52239
Wharehousinig and supporting activities for transportation	2081	-	2081	2016	65
Telecommunications	93161	13026	80135	25288	54847
Computer programming, consultancy and related activities	1632024	28546	1603478	1406527	196951
Activities auxiliary to financial services and insurance activities	1320	-	1320	1320	-
Legal and accounting activities	2238	677	1561	1326	235
Activities of head offices; management consultancy activities	154008	5664	148344	137041	11303
Architectural and engineering activities; technical testing and analysis	1971	-	1971	1971	-
Scientific and research development	16317867	586808	15731059	8871991	6859068
Advertising and market research	75264	1279	73985	49267	24718
Veterinary activities	1156740	79048	1077692	922027	155665
Rental and leasing activities	1017	-	1017	-	1017
Education	13774013	437660	13336353	8660431	4675922
Human health activities	37210	-	37210	26682	10528
Libraries, archives, museums and other cultural activities	730	-	730	-	730
Activities of memebership organisations	40798	100	40698	36168	4530
Business sector - total	**14239377**	**1455554**	**12783823**	**6341048**	**6442775**
Crop and animal production, hunting and related activities	8738	-	8738	8525	213
Mining of metal ores	62008	1173	60835	40928	19907
Other mining and quarrying	1416974	5493	1411481	119697	1291784
Mining support service activities	883810	-	883810	874302	9508
Manufacture of food products	87870	69304	18566	7412	11154
Printing and reproduction of recorded media	1292	-	1292	911	381
Manufacture of chemicals and chemical products	52097	19558	32539	32326	213
Manufacture of rubber and plastic products	187395	35765	151630	135061	16569
Manufacture of other non-metallic mineral products	24909	-	24909	23919	990
Manufacture of basic metals	1949	-	1949	1552	397
Manufacture of fabricated metal products, except machinery and equipment	12448	537	11911	9518	2393
Manufacture of computer, electronic and optical products	157385	1966	155419	57579	97840
Manufacture of electrical equipment	10559	1278	9281	8181	1100
Manufacture of machinery and equipment, n.e.c.	332994	23092	309902	61252	248650
Manufacture of furniture	44734	574	44160	38546	5614
Other manufacturing	5200	1500	3700	2500	1200
Repair and installation of machinery and equipment	185	-	185	185	-
Electricity, gas, steam and air conditioning supply	1083630	1070127	13503	2176	11327
Water collection, treatment and supply	6509	-	6509	6509	-
Remediation activities and other waste management services	6300	583	5717	4126	1591
Specialised construction activities	110823	199	110624	10252	100372
Wholesale trade, except of motor vehicles and motorcycles	81452	4994	76458	24219	52239
Wharehousinig and supporting activities for transportation	2081	-	2081	2016	65
Telecommunications	93161	13026	80135	25288	54847
Computer programming, consultancy and related activities	1632024	28546	1603478	1406527	196951
Activities auxiliary to financial services and insurance activities	1320	-	1320	1320	-
Legal and accounting activities	2238	677	1561	1326	235
Activities of head offices; management consultancy activities	154008	5664	148344	137041	11303
Architectural and engineering activities; technical testing and analysis	1971	-	1971	1971	-
Scientific and research development	7758754	171498	7587256	3292519	4294737
Advertising and market research	12812	-	12812	3364	9448
Rental and leasing activities	1017	-	1017	-	1017
Libraries, archives, museums and other cultural activities	730	-	730	-	730

13.1. Gross domestic expenditure on R&D by groupings of activities, 2016 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
Government sector - total	**9897012**	**495743**	**9401269**	**6636733**	**2764536**
Crop and animal production, hunting and related service activities	81497	106	81391	62649	18742
Scientific research and development	8559113	415310	8143803	5579472	2564331
Advertising and market research	62452	1279	61173	45903	15270
Veterinary activities	1156740	79048	1077692	922027	155665
Human health activities	37210	-	37210	26682	10528
Tertiary education - total	**13779088**	**437660**	**13341428**	**8665220**	**4676208**
Crop and animal production, hunting and related service activities	5075	-	5075	4789	286
Education	13774013	437660	13336353	8660431	4675922
Non-profit sector - total	**40798**	**100**	**40698**	**36168**	**4530**
Activities of memebership organisations	40798	100	40698	36168	4530
SRBIJA – SEVER	35332198	2278480	33053718	20071435	12982283
Business sector - total	**13624449**	**1389891**	**12234558**	**6033580**	**6200978**
Crop and animal production, hunting and related activities	8738	-	8738	8525	213
Other mining and quarrying	1416974	5493	1411481	119697	1291784
Mining support service activities	883810	-	883810	874302	9508
Manufacture of food products	87870	69304	18566	7412	11154
Products of chemicals and chemical products	52097	19558	32539	32326	213
Manufacture of rubber and plastic products	109489	2757	106732	103108	3624
Manufacture of computer, electronic and optical products	153934	1966	151968	54262	97706
Manufacture of electrical equipment	10559	1278	9281	8181	1100
Manufacture of machinery and equipment, n.e.c.	332994	23092	309902	61252	248650
Electricity, gas, steam and air conditioning supply	1079791	1069707	10084	-	10084
Remediation activities and other waste management	6300	583	5717	4126	1591
Specialised construction activities	110823	199	110624	10252	100372
Wholesale trade, except of motor vehicles and motorcycles	78771	3499	75272	23033	52239
Wharehousinig and supporting activities for transportation	2081	-	2081	2016	65
Telecommunications	15440	-	15440	13187	2253
Computer programming, consultancy and related activities	1610492	20869	1589623	1399171	190452
Activities auxiliary to financial services and insurance activities	1320	-	1320	1320	-
Activities of head offices; management consultancy activities	154008	5664	148344	137041	11303
Architectural and engineering activities; technical testing and analysis	1971	-	1971	1971	-
Scientific and research development	7493158	165922	7327236	3169034	4158202
Advertising and market research	12812	-	12812	3364	9448
Rental and leasing activities	1017	-	1017	-	1017
Government sector - total	**9780248**	**494863**	**9285385**	**6541564**	**2743821**
Crop and animal production, hunting, hunting and related activities	81497	106	81391	62649	18742
Scientific research and development	8442349	414430	8027919	5484303	2543616
Advertising and market research	62452	1279	61173	45903	15270
Veterinary activities	1156740	79048	1077692	922027	155665
Human health activities	37210	-	37210	26682	10528
Tertiary education - total	**11886703**	**393626**	**11493077**	**7460123**	**4032954**
Crop and animal production, hunting, hunting and related activities	5075	-	5075	4789	286
Education	11881628	393626	11488002	7455334	4032668
Non-profit sector - total	**40798**	**100**	**40698**	**36168**	**4530**
Publishing activities	40798	100	40698	36168	4530
Beogradski region	**24397360**	**2017629**	**22379731**	**12584638**	**9795093**
Business sector - total	**8680440**	**1291103**	**7389337**	**2661539**	**4727798**
Crop and animal production, hunting, hunting and related activities	8738	-	8738	8525	213
Other mining and quarrying	1416974	5493	1411481	119697	1291784
Manufacture of food products	65867	62084	3783	3369	414
Manufacture of chemicals and chemical products	52097	19558	32539	32326	213
Manufacture of computer, electronic and optical products	42077	1488	40589	30964	9625
Manufacture of electrical equipment	10559	1278	9281	8181	1100
Manufacture of machinery and equipment, n.e.c.	332994	23092	309902	61252	248650
Electricity, gas, steam and air conditioning supply	1079791	1069707	10084	-	10084
Remediation activities and other waste management	6300	583	5717	4126	1591
Specialised construction activities	110823	199	110624	10252	100372
Wholesale trade, except of motor vehicles and motorcycles	78771	3499	75272	23033	52239
Wharehousinig and supporting activities for transportation	2081	-	2081	2016	65
Telecommunications	15440	-	15440	13187	2253
Computer programming, consultancy and related activities	175955	10946	165009	118920	46089
Activities auxiliary to financial services and insurance activities	1320	-	1320	1320	-
Activities of head offices; management consultancy activities	154008	5664	148344	137041	11303
Architectural and engineering activities; technical testing and analysis	1971	-	1971	1971	-
Scientific and research development	5110845	87512	5023333	2081995	2941338
Advertising and market research	12812	-	12812	3364	9448
Rental and leasing activities	1017	-	1017	-	1017

13.1. Gross domestic expenditure on R&D by groupings of activities, 2016 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
Government sector - total	**8012100**	**411665**	**7600435**	**5183200**	**2417235**
Crop and animal production, hunting, hunting and related activities	81497	106	81391	62649	18742
Scientific research and development	6750978	334469	6416509	4186501	2230008
Advertising and market research	62452	1279	61173	45903	15270
Veterinary activities	1079963	75811	1004152	861465	142687
Human health activities	37210	-	37210	26682	10528
Tertiary education - total	**7665830**	**314761**	**7351069**	**4703731**	**2647338**
Crop and animal production, hunting, hunting and related activities	5075	-	5075	4789	286
Education	7660755	314761	7345994	4698942	2647052
Non-profit sector - total	**38990**	**100**	**38890**	**36168**	**2722**
Activities of membership organisations	38990	100	38890	36168	2722
Region Vojvodine	**10934838**	**260851**	**10673987**	**7486797**	**3187190**
Business sector - total	**4944009**	**98788**	**4845221**	**3372041**	**1473180**
Mining support service activities	883810	-	883810	874302	9508
Manufacture of food products	22003	7220	14783	4043	10740
Manufacture of rubber and plastic products	109489	2757	106732	103108	3624
Manufacture of computer, electronic and optical products	111857	478	111379	23298	88081
Computer programming, consultancy and related activities	1434537	9923	1424614	1280251	144363
Scientific research and development	2382313	78410	2303903	1087039	1216864
Government sector - total	**1768148**	**83198**	**1684950**	**1358364**	**326586**
Scientific research and development	1691371	79961	1611410	1297802	313608
Veterinary activities	76777	3237	73540	60562	12978
Tertiary education - total	**4220873**	**78865**	**4142008**	**2756392**	**1385616**
Education	4220873	78865	4142008	2756392	1385616
Non-profit sector - total	**1808**	**-**	**1808**	**-**	**1808**
Activities of membership organisations	1808	-	1808	-	1808
SRBIJA – JUG	2624077	110577	2513500	1607734	905766
Business sector - total	**614928**	**65663**	**549265**	**307468**	**241797**
Mining of metal ores	62008	1173	60835	40928	19907
Printing and reproduction of recorded media	1292	-	1292	911	381
Manufacture of rubber and plastic products	77906	33008	44898	31953	12945
Manufacture of other non-metallic mineral products	24909	-	24909	23919	990
Manufacture of basic metals	1949	-	1949	1552	397
Manufacture of fabricated metal products, except machinery and equipment	12448	537	11911	9518	2393
Manufacture of computer, electronic and optical products	3451	-	3451	3317	134
Manufacture of furniture	44734	574	44160	38546	5614
Other manufacturing	5200	1500	3700	2500	1200
Repair and installation of machinery and equipment	185	-	185	185	-
Electricity, gas, steam and air conditioning supply	3839	420	3419	2176	1243
Water collection, treatment and supply	6509	-	6509	6509	-
Wholesale trade, except of motor vehicles and motorcycles	2681	1495	1186	1186	-
Telecommunications	77721	13026	64695	12101	52594
Computer programming, consultancy and related activities	21532	7677	13855	7356	6499
Legal and accounting activities	2238	677	1561	1326	235
Scientific research and development	265596	5576	260020	123485	136535
Libraries, archives, museums and other cultural activities	730	-	730	-	730
Government sector - total	**116764**	**880**	**115884**	**95169**	**20715**
Scientific research and development	116764	880	115884	95169	20715
Tertiary education - total	**1892385**	**44034**	**1848351**	**1205097**	**643254**
Education	1892385	44034	1848351	1205097	643254
Region Šumadije i Zapadne Srbije	**1140112**	**61238**	**1078874**	**799746**	**279128**
Business sector - total	**227325**	**42832**	**184493**	**145870**	**38623**
Mining of metal ores	9834	-	9834	9834	-
Printing and reproduction of recorded media	1292	-	1292	911	381
Manufacture of rubber and plastic products	77906	33008	44898	31953	12945
Manufacture of other non-metallic mineral products	24909	-	24909	23919	990
Manufacture of basic metals	1949	-	1949	1552	397
Manufacture of fabricated metal products, except machinery and equipment	12448	537	11911	9518	2393
Manufacture of computer, electronic and optical products	3451	-	3451	3317	134
Manufacture of furniture	44734	574	44160	38546	5614
Electricity, gas, steam and air conditioning supply	3839	420	3419	2176	1243
Computer programming, consultancy and related activities	6858	6858	-	-	-
Legal and accounting activities	2238	677	1561	1326	235
Scientific research and development	37867	758	37109	22818	14291

13.1. Gross domestic expenditure on R&D by groupings of activities, 2016 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
Government sector - total	**44710**	**880**	**43830**	**26679**	**17151**
Scientific research and development	44710	880	43830	26679	17151
Tertiary education - total	**868077**	**17526**	**850551**	**627197**	**223354**
Education	868077	17526	850551	627197	223354
Region Južne i Istočne Srbije	**1483965**	**49339**	**1434626**	**807988**	**626638**
Business sector - total	**387603**	**22831**	**364772**	**161598**	**203174**
Mining of metal ores	52174	1173	51001	31094	19907
Other manufacturing	5200	1500	3700	2500	1200
Repair and installation of machinery and equipment	185	-	185	185	-
Water collection, treatment and supply	6509	-	6509	6509	-
Wholesale trade, except of motor vehicles and motorcycles	2681	1495	1186	1186	-
Telecommunications	77721	13026	64695	12101	52594
Computer programming, consultancy and related activities	14674	819	13855	7356	6499
Scientific research and development	227729	4818	222911	100667	122244
Libraries, archives, museums and other cultural activities	730	-	730	-	730
Government sector - total	**72054**	**-**	**72054**	**68490**	**3564**
Scientific research and development	72054	-	72054	68490	3564
Tertiary education - total	**1024308**	**26508**	**997800**	**577900**	**419900**
Education	1024308	26508	997800	577900	419900
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 2016

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 2016 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 March 2017.** 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, in 2016

		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 2016

		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, in 2016

		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 2016

		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, in 2016

		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, in 2016

		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, in 2016

		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 2016		Researchers who **came** in Serbia in 2016		Researchers who **went** abroad in 2016		Planned number of researchers for 2017
		Total	Women	Total	Women	Total	Women	
a		1	2	3	4	5	6	7
01	**Total (02 to 05)**							
02	Serbia							
03	EU member countries							
04	Other European countries							
05	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 01/01/2016 and 31/12/2016 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/ 2016 and 31/12/ 2016.

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 2016 (in thousands RSD)

	Expenditures for R&D			Spent in 2016	Planned for 2017
	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 2016 for R&D activities, as well as planned funds for 2017.

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 2016

	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), 2016

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 2016.
Use the annexed classification to determine the scientific field of R&D works.

12. FUNDS FOR R&D BY PRIMARY SOCIO-ECONOMIC OBJECTIVES, 2016 (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	Development of agriculture, forestry and fishing		
03	Promotion of industrial development technology		
04	Production and rational use of energy		
05	Transport and telecommunications		
06	Urban and rural planning		
07	Combating pollution		
08	Pollution identification and control		
09	Health		
10	Social development and services		
11	Exploitation and exploration of Earth and atmosphere		
12	General advancement of knowledge		
13	Civil space exploration		
14	Defence		

13. NUMBER OF R&D WORKS (PROJECTS AND STUDIES, BY SCIENTIFIC FIELDS AND TYPES OF RESEARCH (include also projects funded from own resources), 2016

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, 2016

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, 2016

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

In column 1 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, 2016

	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, 2016

	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 _____ 2017

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 2016.
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. programmes 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 2017

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	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)**	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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