

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

Code of the survey: 021010

ANNUAL REPORT ON RESEARCH AND DEVELOPMENT FOR NON-PROFIT ORGANISATIONS - ASSOCIATIONS IN 2017

Response obligation is based on Article 26, and punitive provisions for response refusal or provision of incomplete or incorrect

data on Article 52 of the Law on Official Statistics ("Сл. гласник РС", бр. 104/2009). The data will be used exclusively for statistical purposes and will not be published as personal data. All the data are confidential.

This report is to be filled in by non-profit organizations - associations that carried out in 2017 R&D activities according to the law on Research and Development Activity, "Official Journal of the RS", numbers 110/05 μ 18/2010.

The report is to be filled in and transmitted to the competent statistical office not later than 20 April 2018. Before completing the report, read carefully the general instructions on the last page of the questionnaire as well as the explanations with every table. All financial indicators are to be expressed in thousands dinars.

FULL NAME OF THE REPORTING UNIT				
Enter the name of the organization as indicated in the 0 application for the registration of non-profit organizations/a The research unit should enter the full name of the non-p is incorporated in, as well as its own name; in tables are	ssociations. Profit organization it			I
referring only to the unit, but not to the whole non-profit of the unit of of the			gistration number	
Street and number				
III ACTIVITY Enter the name and code according	to the Classification of Activ	rities, 2010	LL	
IV OWNERSHIP (circle the corresponding number)	state-owned private mixed			2
V SCIENTIFIC FIELD	a Classification of Scientific E	ields (anneved)	L	

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

		Total e	employees enga	aged on R&D act	ivities	Number o	of full-time	Part-tim	ie employees en	gaged on R&D a	activities
		Number of	employees	Full-time e	equivalent		engaged on ctivities	Number of	employees	Full-time e	equivalent
		Total (5+7)	Women (6+8)	Total (5+9)	Women (6+10)	Total	Women	Total	Women	Total	Women
	а	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 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.).

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.

Example: FTE

Employees in R&D, part-time (less than 90%, and more than	n 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 1 person works full-time	(2 x 0,2) (1 x 0,5)	2 1	= 0,4 = 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 EQUIVALEM, in

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

Remarks relative to Table 1 refer also to this table.

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

		_		Í					Educationa	attainmen	t				
		То	otal	Doctor's	s degree	Master's	s degree	Specia	alization		ersity ation		itional cation		dary and ducation
		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											Х	Х	Х	Х
03	Assistant researchers													Х	Х
04	Technicians														
05	Managers													Х	Х
06	Other employees (auxiliary)														

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

4. EMPLOYEES ENGAGED ON R&D ACTIVITIES, BASED ON SERVICE CONTRACT (SC) AND AUTHOR CONTRACT (AC), BY EDUCATIONAL ATTAINMENT EXPRESSED IN NUMBER OF PHYSICAL PERSONS in 2017

									Educational	attainmen	t				
		To	otal	Doctor's	s degree	Master's	s degree	Specia	llization	University educ	ersity ation		tional ation		lary and ducation
		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											Х	Х	Х	Х
03	Assistant researchers													Х	Х
04	Technicians														
05	Managers													Х	Х
06	Other employees (auxiliary)														

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

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

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

		_							Educational	attainmen	t				
		To	otal	Doctor's	s degree	Master's	s degree	Specia	alization	Univ educ	ersity ation		itional cation	Second other ed	dary and ducation
		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											Х	Х	Х	Х
03	Assistant researchers													Х	Х
04	Technicians														
05	Managers													Х	Х
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 ATTAINEMENT

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

	XI REGOLD IN I GEL-TIME EQUIVALENT,		•						Educationa	l attainmen	t				
		To	otal	Doctor's	s degree	Master'	s degree	Specia	llization		ersity ation		tional ation		dary and ducation
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
	а	1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	Total (02 to 06)														
02	Researchers											Х	Х	Х	Х
03	Assistant researchers													Х	Х
04	Technicians														
05	Managers													Х	Х
06	Other personnel (auxiliary)														

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

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

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

			Resea	archers			Assistant ı	researcher	s		Techr	nicians			Man	agers	
		Full-	-time	Par	t-time	Full-	-time	Part	-time	Full-	-time	Par	t-time	Full	-time	Part	t-time
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
	а	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 1 from 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		esearchers in 2017 /12/ 2017)	Researchers who cal	me in Serbia in 2017	Researchers who w	vent abroad in 2017	Planned number of
country)	Total	Women	Total	Women	Total	Women	researchers for 2018
а	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 01/01/2017 and 21/12/2017 and worked in R&D activities more than 3 months.

In columns 5 and 6 are to be shown all the researchers who left Serbia between 01/01/2017 and 31/12/2017.

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

Women - total

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

9. EX	PENDI	TURES FOR R&D AC	TIVITIES IN 2017 (in thousands RSD)		
			Expenditures for R&D	Spent in 2017	Planned for 2018
			а	1	2
01	Total	expenditure for R&D	(02+07+12)		
02			Total (03+05+06)		
03			Gross salaries and wages for all R&D employees		
04		Labor costs and employees'	Of which gross salaries and wages of researchers		
05		remunerations	Other personal income of R&D employees (scholarships, prizes, etc.)]
06	costs		Other		
07	ant c		Total (08 to 11)		
08	Current		For material costs for R&D work (raw materials, equipment, energy)]
09		Other current costs	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			Total (13+14+16+17+18)		
13			For land and buildings		
14			For machinery and equipment		
15	ı	nvestment costs	Of which for imported machinery and equipment		
16			For patent, licenses, studies and projects		
17			For software and hardware 1)		
18			Other		

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

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

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

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

1000	0011020	So	urces of funds	Amount in thousands RSD
			a	1
01	Funds	spent for R&D by sources - to	otal (02 to 21)	
02		DI 11 1 1 1 1 1	From the Ministry of Science	
03	oia)	Planned budgetary funds dedicated R&D	From the Ministry of Education	
04	Serbia)	dedicated Nab	From other ministries	
05	E	Funds for R&D from other go	vernment funds, agencies and foundations	
06	(from	Funds for R&D from local aut	horities' bodies	
07	ing	Funds for R&D from	from "small" (0 - 49 employees)	
80	pun	enterprises	from "medium" (50 - 249 employees)	
09	iic f	omerpineee	from "large" (250 and more employees)	
10	ıest	Funds for R&D from non-prof	it organizations	
11	Domestic funding	Funds from patents, licenses,	etc. (from inward sale)	
12		Other funds for R&D from ow		
13		Funds from agreements on te	chnological licenses	
14	70	Funds from services for foreig	gn ordering parties	
15	abroad	Funds from joint investment in	n R&D	
16		Funds for R&D from other cou		
17	то́		ersity and other tertiary education institutions	
18	ds fi	Funds for R&D from non-prof	_	
19	Funds from	Funds for R&D from the Euro	pean Commission	
20	ш	Funds for R&D from internation		
21		Other		

In table 10 are to be shown funds **obtained** for R&D activities by sources.

Remark: The data in row 01 should equal the data in table 9, row 01, column 1 (total expenditures for R&D).

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

Scientific field			Type of research			
		Total	Basic	Applied	Experimental (development)	
	а	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					
80	Multidisciplinary sciences					

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

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

<u> </u>	UNDS FOR R&D BY PRIMARY SOCIO-ECONOMIC OBJECTIVES, 2017 (in thousands	KOD)	Of which budget
	Primary socio-economic objectives	Total	Of which budgetary funds
	a	1	2
01	Total (02+03+04+05+06+07+08+09+10+11+12+13+20+27)		
02	Exploration and exploitation of the earth exploitation		
03	Environment		
04	Exploration and exploitation of space		
05	Transport, Telecommunication and other infrastructures		
06	Energy		
07	Industrial production and technology		
08	Health		
09	Agriculture		
10	Education		
11	Culture, recreation, religion and mass media		
12	Political and social systems, structures and processes		
13	General advancement of knowledge: R&D financed from GUF		
14	R&D related to Natural Sciences - financed from GUF		
15	R&D related to Engineering Sciences - financed from GUF		
16	R&D related to Medical Sciences - financed from GUF		
17	R&D related to Agricultural Sciences - financed from GUF		
18	R&D related to Social Sciences - financed from GUF		
19	R&D related to Humanities - financed from GUF		
20	General advancement of knowledge: R&D financed other sources than GUF		
21	R&D related to Natural Sciences - financed from other sources than GUF		
22	R&D related to Engineering Sciences - financed from other sources than GUF		
23	R&D related to Medical Sciences - financed from other sources than GUF		
24	R&D related to Agricultural Sciences - financed from other sources than GUF		
25	R&D related to Social Sciences - financed from other sources than GUF		
26	R&D related to Humanities Sciences - financed from other sources		
27	Defense		

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

			Type of research			
	Scientific field		Basic	Applied	Experimental (development)	
	а	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					
80	Multidisciplinary sciences	_				

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

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

14.1	14. NUMBER OF R&D WORKS BY ORDERING PARTIES AND T Ordering party		AND THE SOF RESEAR	R&D works					
			Total (2 to 4)	Basic	Applied	Experimental (development)			
		а	1	2	3	4			
01	Total ((02+09)							
02		Inward – total (03 to 08)							
03	erbia	For own account							
04	Ordering parties from Serbia	Enterprises in Serbia							
05	rties fi	Ministry of Science							
06	ng pa	Ministry of Education							
07	Orderi	Other ministries							
08		Other							
09		Outward – total (10 to 16)							
10	ad	enterprises							
11	abro ו	Other countries' governments							
12	s from	Non-profit organizations							
13	Ordering parties from abroad	Tertiary education institutions							
14		European Commission							
15	Oro	International organizations							
16		Other							

15. PUBLISHED R&D ARTICLES AND MONOGRAPHIES, 2017

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

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

16. INVENTIONS AND PATENTS, 2017

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

16a. SMALL INVENTIONS AND PATENTS, 2017

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

on	2018		
	Filled in by:		Manager:
		(Seal)	
(first na	ame and surname)		(first name and surname)
Contact telephone:	(area n	efix compulsory)	

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GENERAL DEFINITIONS AND EXPLANTIONS FOR FILLING IN THE FORM IR - 3

COVERAGE

This form serves to collect data on R&D activities which have been carried out in non-profit organizations / associations in Serbia in Serbia in 2017.

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 ecosystems and innovation projects carried out by small and medium enterprises);
- 3. program of development of R&D personnel.

METHODOLOGICAL BASIS

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

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