



Careers of Doctorate Holders, 2011



Belgrade, 2013



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Preface

The Statistical Office of the Republic of Serbia publishes in this publication the results from the Careers of Doctorate Holders Survey, which was carried out for the first time in the Republic of Serbia during 2011 and 2012. The survey is a joint project of the UNESCO Institute for Statistics (UNESCO-UIS), Organisation for Economic Co-operation and Development (OECD) and European Statistics Institute (EUROSTAT). It was conducted under the multi-beneficiary IPA 2009 Project, pursuant to the Law on Official Statistics ("Official Journal of the RS" number 104/09).

The first Careers Doctorate Holders Survey was carried out in 2004/2005 pursuant to the Decision of the Council of Europe (Lisbon and Barcelona), which pointed out the need to strengthen the entire R&D field, as well as innovation capacities in the whole European Union. The most qualified labour force – holders of doctorate degrees employed in the research sector or some other important sector are crucial to the implementation of such a strategy.

The purpose of the survey was to gather data on the most educated population – doctorate holders, as key factors that contribute the most to economic growth, production, innovations, utilisation and diffusion of knowledge. The survey collected data on: educational attainment, professional experience, research career, mobility and scientific productivity of doctorate holders. The data obtained allow the monitoring of career development as well as international and intersectoral mobility of doctorate holders as the most qualified segment of the labour force.

The data obtained through this survey are internationally comparable indicators, based on a common methodology of the mentioned institutions (harmonised definitions, variables and indicators).

Belgrade, 2013

Director

Dragan Vukmirovic, PhD

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1. Introduction

The statistical survey „Careers of Doctorate Holders Survey“(CDH 2011) was carried out in the Republic of Serbia during 2011 and 2012, under the multi-beneficiary IPA Programme 2009. The survey was conducted by the Statistical Office of the Republic of Serbia, Section for Education, Science and Culture Statistics. The survey is a joint project of the Institute for Statistics of UNESCO, Organisation for Economic Co-operation and Development (OECD) and European Statistics (EUROSTAT).

The survey is aimed at collecting data on education, employment, early career research position, career development and international mobility of doctorate holders, thus securing internationally comparable indicators of doctorates holders' careers.

The survey covers persons holding a doctorate degree of science/arts awarded in the Republic of Serbia or another country who lived on 1 December 2011 in the Republic of Serbia and were less than 70 years old. In the Republic of Serbia, this population is made of persons with the academic title of doctors of science, which is equivalent to ISCED – 6.

The survey is based on the harmonised components of the project: methodological instructions, questionnaire, definitions, classifications, output tables and pattern for producing national data.

One of the goals of the project is CDH full implementation on national level, based on the cited components, and transmission of data (according to harmonised tabulation pattern) and metadata (according to the proposal for the elaboration of national methodologies) to Eurostat. The second goal is to obtain quality results that are comparable on international level.

2. Survey methodology

2.1. Survey objective

This survey collects statistical data on educational attainment, professional experience, mobility and scientific productivity of doctorate holders in order to monitor their career development and mobility. Being the most educated part of labour force, doctorate holders contribute the most to the utilisation and diffusion of knowledge, which indirectly affects competitiveness, innovation, production and economic growth.

The survey was carried out in the Statistical Office of the Republic of Serbia, in the scope of the multi-beneficiary IPA 2009 Programme. It is based on harmonised components of the programme. The concepts and definitions applied in the Career Doctorate Holders Survey are fully harmonised with UNESCO-OECD-EUROSTAT methodology (*Statistics on the Careers of Doctorate Holders – Methodological Guidelines*) in view of obtaining internationally comparable indicators on doctorate holders' careers.

To prepare this survey, a pilot survey was carried out in 2011 in view of testing the methodology, questionnaire and survey concept. The pilot survey was conducted on a sample of 300 doctorate holders. The results of the survey show a consistency of trends in relation to the results obtained through the pilot survey.

2.2. Units of observation

The units of observation are individuals holding a doctorate awarded in the Republic of Serbia or wherever in the rest of the world, who resided on 1 December 2011 in the Republic of Serbia and were less than 70 years old.

2.3. Sample, sampling design and frame

In order to have the best possible coverage of the target population, several sources were used for the sampling frame: Census of Population, Households and Dwellings 2011, Annual Survey on R&D Organisations carried out by the Office, the publication of the Foundation Andrejevic "Scientists of Serbia over 1905-2006" and the list of researchers of the Ministry of Education, Science and Technological Development. By merging the mentioned sources, the sampling frame, population of the target population of 17 203 doctorate holders, from which the sample was drawn, were built by merging the mentioned source. The population was stratified by sex, age class and scientific fields of doctorate theses.

The following age classes were used:

- under 35,
- 35–44,
- 45–54,
- 55–64, and
- 65–69.

The fields of science used in the survey are classified in six classes according to FOS classification (*Fields of Science and Technology*):

- natural sciences,
- engineering and technology,
- medical and health sciences,
- agricultural sciences,
- social sciences, and
- humanities.

Doctors of sciences who were awarded a doctorate in arts and interdisciplinary fields of science are included in the same stratum and selected in the sample. Sample allocation by strata is proportional to the number of units in the stratum. Strata in which the number of units was below the minimum sample size (20) are defined as enumeration strata. A stratified random sample was built with a known selection probability for all the units. The sampling volume is 4 816 doctors of sciences/arts. The size of the whole sample is 0.28.

2.4. Questionnaire

The questionnaire on careers of doctorate holders developed by Eurostat was used in the survey. The questionnaire was translated into Serbian and adapted to national needs. It contains all compulsory and most of optional questions, including related instructions, and the signs for the questions - skipping signs. The content of the questionnaire is slightly modified, and certain characteristics and explanations are formulated so to comply with the national practice.

The questionnaire has six modules:

1. Personal characteristics
2. Education
3. Employment in early career research positions
4. Employment:
 - principal job
 - second job
 - past employment
5. International mobility
6. Career related experience – researchers and non-researchers

2.5. Method of data collection

The data were collected by combined method, through an *on-line* questionnaire and paper questionnaire. Even though offered the possibility to complete the printed questionnaire, the majority of respondents opted for the *on-line* version, which was available on the website of the Statistical Office of the Republic of Serbia. Of the total number of respondents from the target population, 63% filled in the *on-line* questionnaire and 37% the hard copy.

2.6. Building of the application

IT experts of the Statistical Office of the Republic of Serbia have built a software application for the *on-line* questionnaire which was used in the CDH Survey 2011. The application comprises data editing. An application has been built in *blaise* programming language, which was used to enter data collected by means of the paper questionnaire. The data collected by the *on-line* questionnaire were automatically stored in the same database, which prevented any logical or numerical inconsistency.

2.7. Reference period

The reference year for the main variables was 2011, and the reference date 1 December 2011. Selected questions referred to the period of the last ten years or three-year period prior or after the reference date.

• The last 10 years	Migrations	2002–2011
• The last 3 years	Career related experience	2009–2011
• The last 10 years	Job mobility	2002–2011
• The last year	Gross annual earnings	2011
• The next year	Emigrations plans	2012
• The next 3 years	Career plans	2012–2014

2.8. Response rate

The response rate in the survey is 61%. The non-response rate is 39%, of which 5% were not resident of the Republic of Serbia on 1 December 2011. There were 8% of refusals, and 26% of individuals from the sample did not answer in any way, even after several interventions.

	Number of surveyed units from the sample	Total number of units in the sample	Unweighted response rate
Total	2937	4816	0.6098
By sex			
Men	1684	2889	0.5829
Women	1253	1927	0.6502
By age class			
Under 35	279	386	0.7228
35–44	731	1125	0.6497
45–54	826	1331	0.6205
55–64	872	1576	0.5532
65–69	229	398	0.5753

3. Activities on the project

During the realisation of the project from January 2011 to November 2012 the Statistical Office of the Republic of Serbia carried out the following activities:

- Creation of a base for the survey of doctorate holders,
- Preparation of the printed and *on-line* questionnaire,
- Elaboration of the methodological manual,
- Pilot testing of the prepared questionnaire and methodology,
- Building of the sample for the survey, definition of the units,
- Preparation of the organisation of the survey,
- Building of the software application for data editing,
- Preparation of output tables,
- Data collection, questionnaire,
- Interventions, telephone calls, as special measure to improve the response rate,
- Control of the questionnaire,
- Building of the application for data entry, data entry,
- Data processing preparation,
- Data control and correction,
- Data processing,
- Production of aggregated results,
- Preparation of data set and tables for transmission to Eurostat,
- Transmission of aggregated data – tables to Eurostat via EDAMIS,
- Preparation and description of the national methodology for the survey, transmission to Eurostat, and
- Preparation and transmission of the final and summary report for the project.

4. Definitions and explanations

Doctor of science is any person who passed the doctorate thesis in the country or abroad.

Researcher is any person with at least tertiary educational attainment, i.e. having at least completed basic academic studies and who is engaged in R&D work and holding the title pursuant to the Law on R&D Activity.

Recent doctorate recipients are persons who passed a doctorate thesis and received the doctorate degree from January 2010 to December 2011.

The employed comprise persons who performed in the reference period any kind of job for profit in cash or in kind. These are all employees, self-employed persons and working family members in an enterprise owned by a family member or in any other form of family undertaking, persons who worked for an agreed compensation and for direct cash or in-kind payment. Comprised are also all employed and unemployed persons who were temporarily not at work during the reference period, but will return to work with the same employer or in the same activity after the elapsed duration of absence.

Paid employed workers are persons who work with an employer in the government or private sector and receive for their work compensation in cash or in kind.

Self-employed workers are persons who manage a business entity and employ one or more persons, own-account persons not employing other persons.

The Unemployed are persons who, during the reference period, did not perform any work for cash or in-kind payment, and or currently available for work and are actively seeking work.

Inactive population comprises persons up to their 15 years of age and persons in the working-age population who are not employed or unemployed.

Business enterprise sector includes business entities which primary activity is the market production of goods or services at an economically significant price.

Government sector includes institution and other bodies which furnish to the society those services (other than higher education) which cannot otherwise be economically provided, and represent the economic and social policy. Public enterprises are included in the business enterprise sector.

Higher education sector includes higher education institutions, whatever their source of finance or legal status.

Other education sector includes all institutions which provide pre-school, primary or secondary education, whatever their source of finance or legal status.

Non-profit sector includes non-profit organisations which furnish non-market goods or services to households, i.e. the general public, except those supervised and mainly financed by the government. Their main characteristic is that they cannot be the source of income or profit to those which supervise them.

Time of doctorate completion is the time from the beginning of the doctoral studies, doctoral application, to the award of the doctorate degree.

5. Classifications used

To conduct the Survey on Doctorate Holders the following international classifications were used:

- Classification 1: Fields of science (*Fields of Science and Technology*),
- Classification 2: Occupations (*Classification of occupations – ISCO 08*),
- Classification 3: Countries (*ISO Country Code*).

6. Data

Selected results of the survey:

- among doctorate holders, men participate with 57.3% and women with 42.7%;
- the largest part of doctorate holders earned their degree in engineering and technology (21.8%) and the smallest part in agricultural sciences (6.1%);
- as regard the activity, the survey results indicate that 93% of doctorate holders are employed, 2.7% are unemployed and 4.3% are inactive;
- 88.6% of employed doctorate holders work as researchers;
- the average age at the time of doctorate completion, recent doctorate recipients are 36.3 years old, while the average time of doctorate completion is three years;
- the majority of doctorate holders (62.6%) are somewhat satisfied with their principal job. There are 61.5% of doctorate holders who are satisfied with the location is and 64% with intellectual challenges, while 20.5% are dissatisfied with their salary and 23.7% with their social status.
- 4.2% of doctorate holders plan to emigrate;
- the reasons which affect the most their decision to emigrate are: job-related factors (30.6%) and academic reasons (28.9%).

6.1 Personal characteristics

Table 1. Doctorate holders by sex and age class

	Men	Women	Total
Under 35	747	891	1,638
35–44	2,008	2,280	4,288
45–54	2,744	2,081	4,825
55–64	3,364	1,745	5,109
65–69	1,001	342	1,343
Total	9,864	7,339	17,203

Table 2. Doctorate holders by citizenship and resident status

	Citizens of the Republic of Serbia	Foreign citizens			TOTAL
		Permanent residents	Non-permanent residents	Total	
Doctorate holders, total	16,972	183	48	231	17,203
Of which: at faculty, university, higher education institution	9,003	116	17	133	9,136

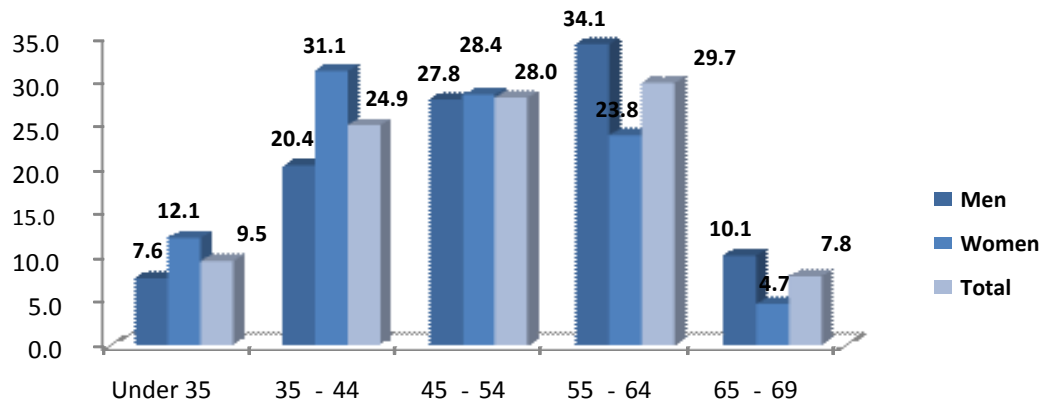
Table 3. Doctorate holders by citizenship, resident status and age class

	Citizens of the Republic of Serbia	Foreign citizens			TOTAL
		Permanent residents	Non-permanent residents	Total	
Under 35	1,620	18	-	18	1,638
35–44	4,237	24	27	51	4,288
45–54	4,751	53	21	74	4,825
55–64	5,053	56	-	56	5,109
65–69	1,311	32	-	32	1,343
Total	16,972	183	48	231	17,203

Table 4. Doctorate holders by citizenship and field of doctorate degree

OECD FOS classification	Citizens of the Republic of Serbia	Foreign citizens	Total
Natural sciences	3,235	-	3,235
Engineering and technology	3,718	33	3,751
Medical and health sciences	2,161	34	2,195
Agricultural sciences	1,033	19	1,052
Social sciences	3,607	99	3,706
Humanities	3,187	46	3,233
Total	16,972	231	17,203

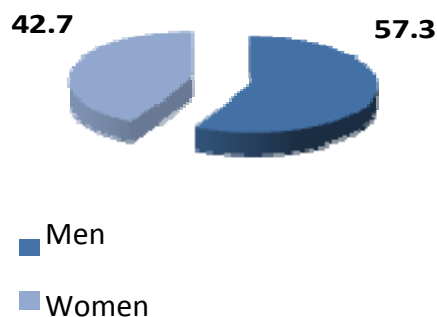
Graph 1. Composition of doctorate holders by age class and sex (%)



The survey indicates that more than a half of the population of doctorate holders is 45 to 64 years old. When observing the age classes, the largest share is that of doctorate holders aged 55 to 64.

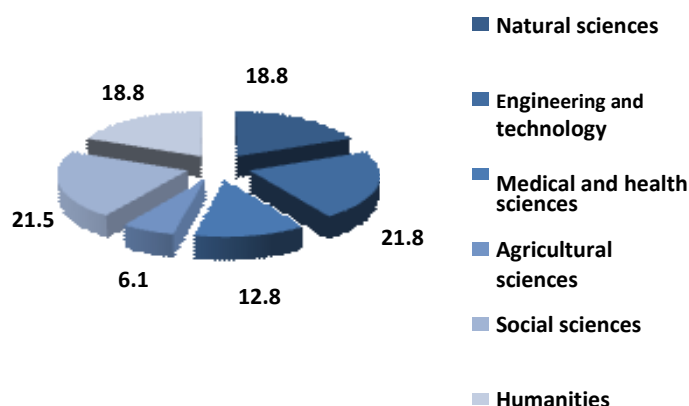
The distribution by sex and age class shows that the share of men in the age class 55 to 64 is higher by 10.3% than the share of women in the same age class. In the age class 65 to 69 the share of men is also higher, by 5.4%, when compared with women. The percentage of men and women is almost equal in the age class 45 to 54, while the largest difference is in the age class 35 to 54, by 10.7% on the women's side. The fact that the share of women in the age class up to 35 years old is by 1.5% higher than that of men indicate that the number of female doctorate holders in the younger population is growing.

Graph 2. Composition of doctorate holders by sex (%)



The results of the survey show that of the total number of doctorate holders in 2011 in the Republic of Serbia 57.3% are men and 42.7% are women.

Graph 3. Composition of doctorate holders by fields of science (%)



The share of doctorate holders from the field engineering and technology (21.8%) and social sciences (21.5%) is the largest, and the smallest is agricultural sciences (6.1%).

6.2. Education characteristics

Table 5. Doctorate holders by citizenship, resident status and doctoral award

	Citizens of the Republic of Serbia	Foreign citizens			TOTAL
		Permanent residents	Non-permanent residents	Total	
Total	16,972	183	48	231	17,203
Doctorate received in the Republic of Serbia	15,482	166	14	180	15,662
Doctorate received in a foreign country	1,490	17	34	51	1,541

The share of foreign citizens in the total population of doctorate holders is 1.3%, of which 1.1% is foreign citizens with permanent residence in the Republic of Serbia.

Table 6. Doctorate holders by country of doctoral award and of prior education

	Place of doctoral award		Total
	Republic of Serbia	Foreign country	
Total	15,662	1,541	17,203
Past education attained in the Republic of Serbia	15,118	1,046	16,164
Past education attained in a foreign country	544	495	1,039

The share of doctorate holders who have received the doctoral degree in the Republic of Serbia amounts to approximately 9%, while 6% of doctorate holders have attained prior education in another country. Only 2.9% of doctorate holders have attained prior education and have received the doctorate degree in a foreign country.

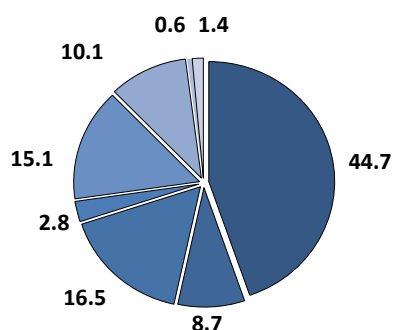
Table 7. Doctorate holders by field of science and source of funding during completion of doctorate

Primary source of funding	Field of Doctorate Degree							Total
	Natural sciences	Engineering and technology	Medical and health sciences	Agricultural sciences	Social sciences	Humanities	Other	
All sources	3,235	3,751	2,195	1,052	3,706	3,233	31	17,203
Fellowship or scholarship from an institution in the Republic of Serbia	1,115	1,151	1,245	471	1,638	2,078		7,698
Fellowship or scholarship, grant from a foreign country	399	282	67	-	316	425		1,489
Assistantship agreement during doctorate completion	791	740	456	185	380	290		2,842
Other occupation	98	175	14	47	114	31		479
Employer's reimbursement/assistance	528	890	286	237	510	148		2,599
Loan, personal savings or family support	224	376	110	98	708	227		1,743
Other	32	33	-	14	14	17		110
Unknown	48	104	17	0	26	17	31	243

The source of funding used the most during completion of doctorate is the fellowship or scholarship from an institution in the Republic of Serbia. The next most utilised source is the assistantship agreement during doctorate completion, then the employer's reimbursement/assistance, while another occupation is the least used source of funding.

Graph. 4. Share of sources of funding during doctorate completion (%)

- Fellowship or scholarship from an institution in the Republic of Serbia
- Fellowship or scholarship, grant from a foreign country
- Assistantship agreement during doctorate completion
- Other occupation
- Employer's reimbursement/assistance
- Loan, personal savings or family support
- Other, Unknown



6.3. Employment

Table 8. Doctorate holders by employment status and year of doctoral award

Year of doctoral award	Employed							TOTAL
	Situation in employment			Working time				
	Employees	Self-employed workers	Total	Full-time	Part-time	Unknown	Total	
Employed, total	15,254	745	15,999	14,958	1,005	36	15,999	17,203
Total, before 1991	4136	121	4,257	3927	330	-	4,257	4,995
Total from 1991 to 2011	11,118	624	11,742	11,031	675	36	11,742	12,208

The share of self-employed workers in the total number of employed doctorate holders is approximately 5%. There are about 93% of full-time employed doctorate holders.

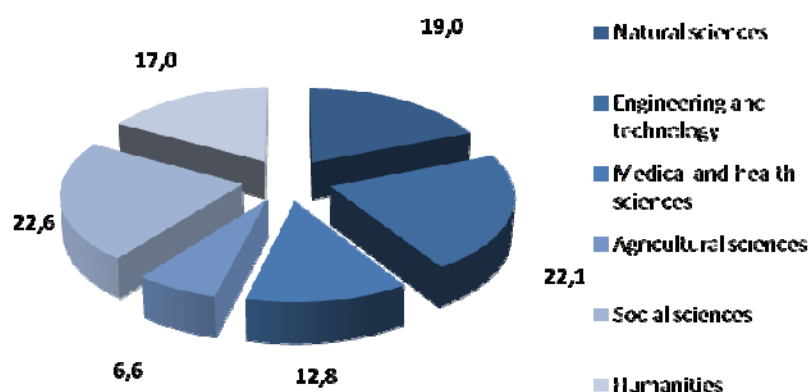
Table 9. Doctorate holders by employment status and year of doctoral award

Year of doctoral award	Employed	Unemployed	Inactive	Unknown	TOTAL
Employed, total	15,999	471	670	63	17,203
Total before 1991	4,257	142	533	63	4,995
Total from 1991 to 2011	11,742	329	137	-	12,208

Up to 1991, approximately 29% persons were awarded a doctoral degree, and 71% persons over the period 1991-2011. There were in total 93.3% employed doctorate holders, 2.7% of unemployed and about 4% of inactive doctorate holders.

Table 10. Doctorate holders by employment status and field of doctoral degree

Field of doctoral award	Employed			Unemployed	Inactive	TOTAL
	Full-time	Part-time	Total			
Employed, total	14,959	1,004	15,999	471	670	17,139
Natural sciences	2,791	209	3,036	96	85	3,218
Engineering and technology	3,218	317	3,535	98	116	3,748
Medical and health sciences	1,968	82	2,049	30	115	2,195
Agricultural sciences	1,038	15	1,052	-	-	1,052
Social sciences	3,484	129	3,613	51	30	3,693
Humanities	2,461	252	2,713	197	323	3,233

Graph 5. Employed doctorate holders by field of doctoral degree (%)

Table 11. Doctorate holders by employment status and age class

Age class	Employed	Unemployed	Inactive	Unknown	Total
Total	15,999	471	670	64	17,203
Under 35	1,408	195	35	-	1,638
35-44	4,153	51	34	50	4,288
45-54	4,679	72	74	-	4,825
55-64	4,940	56	99	14	5,109
65-69	819	97	427	-	1,343

Among the employed doctorate holders, only 5% belong to the age class 65-69, while approximately 9% are less than 35 years old. The other age classes participate with 26-30% in the total number of employed doctorate holders.

Table 12. Employed doctorate holders by employment sector and field of doctoral degree

Field of doctoral degree	Employment sector				
	Business enterprise sector	Government sector	Higher education sector	Other education sector	Non-profit sector
Employed, total	1,838	3,995	9,726	32	223
Natural sciences	364	775	1,815	15	-
Engineering and technology	560	329	2,529	-	-
Medical and health sciences	148	831	1,034	-	36
Agricultural sciences	91	511	451	-	14
Social sciences	395	1,060	2,049	17	78
Humanities	280	489	1,849	-	95

More than 61% of doctorate holders are employed in the higher education sector, and only 0.2% in other education sector. As regard the business enterprise sector, most of doctorate holders are in the field of engineering and technology; in the government sector dominant are those in the field of social sciences; in the higher education sector the highest percentage of doctorate holders is observed in the field of engineering/technology and social sciences; in the other education sector doctorate holders are predominant in social sciences, and in the non-profit sector they are most numerous in humanities. The share of researchers in the total number of employed doctorate holders amounts to 88.6%.

Graph 6. Employed doctorate holders by employment sector (%)

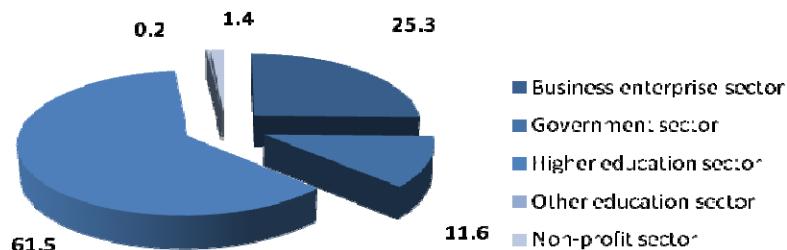


Table 13. Employed doctorate holders by employment sector and mobility in the last 10 years

	Employment sector				
	Business enterprise sector	Government sector	Higher education sector	Other education sector	Non-profit sector
Employed, total	1,838	3,995	9,726	229	209
Not having changed jobs in the last 10 years, total	1,351	2,807	7,565	134	173
Having changed jobs in the last 10 years, total	488	1,188	2,161	95	36
Previous employment sector					
Business enterprise sector	280	238	249	47	17
Government sector	111	657	478	17	19
Higher education sector	62	254	1,178	31	-
Other education sector	-	19	157	-	-
Non-profit sector	34	19	99	-	-

About 75% of employed doctorate holders have not changed jobs in the last 10 years, while 25% have changed jobs, but have stayed in the same sector.

Graph 7. Employed doctorate holders who have not changed jobs in the last 10 years, by sector (%)

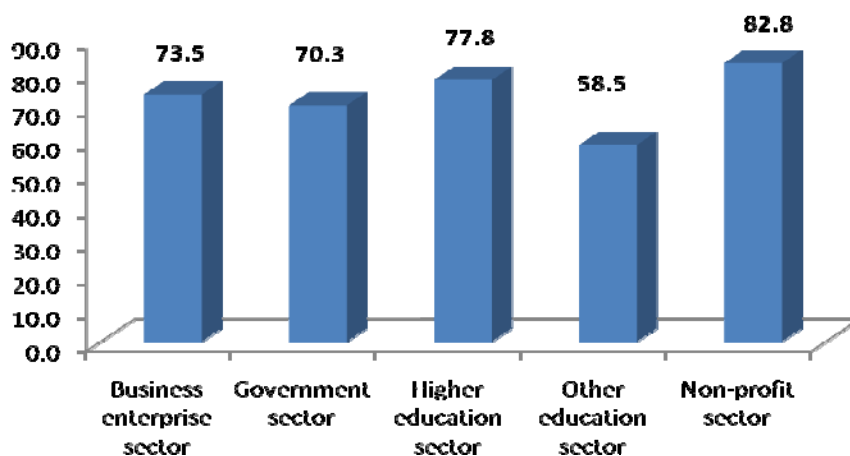
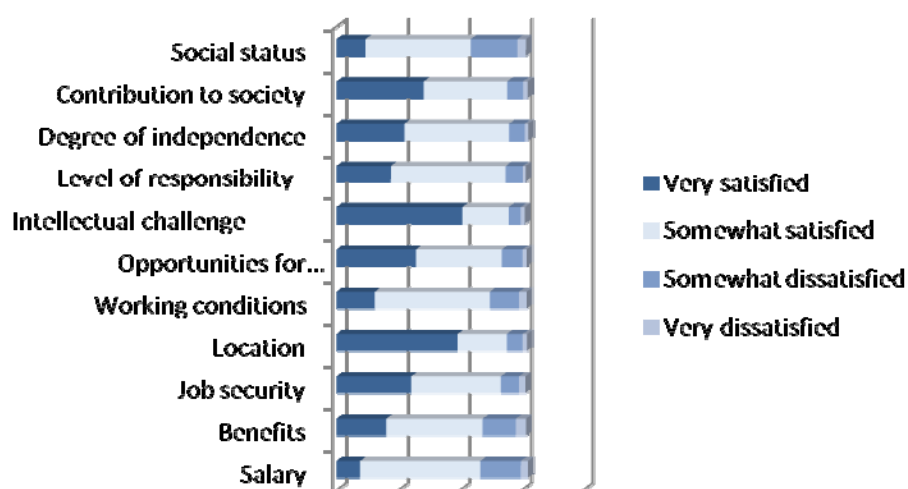


Table 14. Employed doctorate holders: degree of satisfaction with current employment situation

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied
Employed, total				
Salary	1941	9756	3287	583
Benefits	4073	7819	2699	827
Job security	6092	7278	1473	518
Location	9846	4001	1289	353
Working conditions	3134	9337	2373	620
Opportunities for advancement	6473	6978	1679	331
Intellectual challenge	10245	3753	980	338
Level of responsibility	4438	9321	1396	234
Degree of independence	5534	8511	1253	294
Contribution to society	7107	6771	1291	363
Social status	2381	8543	3790	686

Most of doctorate holders, 62.6%, are somewhat satisfied with their employment situations, 64% are very satisfied with the intellectual challenge, 61.5% are very satisfied with the location, 23.7% are very dissatisfied with their social status and 20.5% are very dissatisfied with their salary.

Graph 8. Degree of satisfaction with current employment situation



6.4. International mobility

Table 15. Doctorate holders by citizenship and international mobility in the last 10 years

	Mobile doctorate holders	Non-mobile doctorate holders	Total
Citizens of the Republic of Serbia and foreign citizens	3856	13269	17203
Citizens of the Republic of Serbia	3755	13139	16972
Foreign citizens	101	130	231

There are in total 22.4% of mobile doctorate holders, of which 22.1% are citizens of the Republic of Serbia and 43% of mobile doctorate holders who are foreign citizens.

Table 16. Reasons for returning to the Republic of Serbia in the last 10 years

Reasons for returning	Citizens of the Republic of Serbia	Foreign citizens	Total
Doctorate holders having returned to the country in the last 10 years	3,755	101	3,856
Completion of doctorate	428	17	445
End of job contract	218	0	218
Other job-related factors	1,324	33	1,357
Academic reasons	1,467	42	1,509
Family of personal reasons	294	9	303
Political or other reasons	24	0	24

Annex

CDH questionnaire



REPUBLIC OF SERBIA
Statistical Office of Republic of Serbia

IPA 2009 Multi-beneficiary
Statistical Cooperation Programme

CAREERS OF DOCTORATE HOLDERS - CDH

The data will be used only for statistical purposes and will not be published as individual. Your answers will be kept strictly confidential and used for statistical purposes only.

Respected,

You have got a questionnaire about careers of doctorate holders, a joint project carried out by the UNESCO Institute for Statistics (UIS), the Organization for Economic Development and Co-operation (OECD) and the Statistical Office of the European Union (Eurostat), conducted for the first time in the Republic of Serbia, by the Statistical Office of the Republic of Serbia, according to the Law on Official Statistics.

The aim of this Survey is collection of data on educational attainment, work experience and mobility of doctorate holders, in order to obtain internationally comparable indicators, based on a common methodology of these institutions. The Survey relates to persons with a doctorate, earned in the country or abroad, which on 1 December 2011 lived in Serbia and were younger than 70 years.

The Questionnaire includes 6 MODULES: PER – personal data; EDU – earned a doctorate; ECR – employment at the beginning of research careers; EMP – employment; MOB – international mobility; CAR – the experience gained during his/her career. Within each MODULE, there is a series of questions to which, where appropriate, brief instructions have been given, that should be monitored. In the course of completing the questionnaire you will sometimes be asked to skip certain questions, depending on your previous answers. If you want to change your answer, please erase wrong answer completely, or cross out clearly.

Your participation in the Survey is valuable, so we invite you to fill in this questionnaire completely, which will have an impact on the development of Serbian society as a whole.

All data will be used only for statistical purposes and will not be published as individual. Your answers will be kept strictly confidential and used for statistical purposes only.

The official data of this survey will be available on the website of the Statistical Office www.stat.gov.rs

In case you have doubts in completing the questionnaire, or need for further clarification, please contact us at the following phone numbers or e-mail address:

011 2412-922, ext. 357, Suncica Stefanovic - Sestic, suncica.stefanovic@stat.gov.rs

011 2412-922, ext 440, Paun Cukavac, paun.cukavac@stat.gov.rs

Thank you for taking the time to complete this questionnaire.

PERSONAL CHARACTERISTICS

MODULE PER

*PER.1. Are you 1 Male 2 Female

*PER.2. Your date of birth / /

*PER.3. Place of birth:

City

Country

*PER.4. Country of residence

1 Citizen by birth 2 Citizen by naturalization

4.1 What is your resident status in The Republic of Serbia?

1 Permanent resident 2 Non-permanent resident 3 Refugee

4.2 List the countries of your citizenship:

Country 1 Country 2 Country 3

PER.5. Your marital status?

1 Married/Living in a marriage-like relationship

2 Other (Separated, Divorced, Widowed, Never married)

PER.6. Do you have dependants?

Yes No

1 2

6.1 If yes, how many dependants do you have?

5 years or younger ; 6 to 18 years ; 19 years or older
(*number*) (*number*) (*number*)

Go to next MODULE

ADVANCED RESEARCH QUALIFICATION EDUCATION

MODULE EDU

***EDU.1. In which institution did you complete your advanced research qualification?**

1. Faculty/institution:	
2. University:	
3. City:	
4. Country:	

***EDU.2. Using the Fields of Science and Technology list (see *Classification 1*), choose the code that corresponds best to your advanced research qualification.**

1. Field code .

2. Other, please specify

EDU.3. In which category would you place your dissertation?

Mark (x) all that apply

- 1 Addressed a fundamental problem 2 Made improvement in process
 3 Made improvement in methodology 4 Other – Specify

EDU.4. Did your research qualification demand ... ?

Mark with (x) all that apply

- 1 Course work 2 Field work
 3 Laboratory work 4 Working with industry
 5 Other – Specify

***EDU.5. When did you start your advanced research qualification programme?**

Month Year

***EDU.6. When was your advanced research qualification granted?**

Month Year

***EDU.7. In which country did you receive your previous university degree?**

Country

***EDU.8. Mark financial sources during your research studies?**

Mark with (x) only one primary source of support and one secondary source.

	Primary source of support	Secondary source of support
a. Fellowship or scholarship from an institution in Serbia	1 <input type="checkbox"/>	2 <input type="checkbox"/>
b. Fellowship or scholarship from abroad	1 <input type="checkbox"/>	2 <input type="checkbox"/>
c. Teaching and/or research assistantship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
d. Other occupation	1 <input type="checkbox"/>	2 <input type="checkbox"/>
e. Employer reimbursement or assistance	1 <input type="checkbox"/>	2 <input type="checkbox"/>
f. Loan, personal saving, support from spouse, partner or family	1 <input type="checkbox"/>	2 <input type="checkbox"/>
g. Other	1 <input type="checkbox"/>	2 <input type="checkbox"/>
h. Unknown	1 <input type="checkbox"/>	2 <input type="checkbox"/>
i. There was no extra funding	1 <input type="checkbox"/>	2 <input type="checkbox"/>

Go to the next MODULE

EARLY CAREER RESEARCH POSITIONS

MODULE ECR

ECR.1. Were you on 1 December 2011 employed under a contract of temporary research position, which is usually the case immediately after obtaining a doctoral degree (this kind of job is often called a postdoc place)?

If you were in permanent employment, self-employed, unemployed or inactive on 1 December 2011, please mark „No“ and skip this MODULE.

1 Yes → go to question ECR.2

2 No → skip this MODULE and go to question EMP.1

ECR.2. Please indicate for each of these characteristics if it applies to the position you held on 1 December 2011.

Position...	Yes	No
1. Requires ISCED 6, PhD	1 <input type="checkbox"/>	2 <input type="checkbox"/>
2. Requires that advanced research qualification is recently awarded	1 <input type="checkbox"/>	2 <input type="checkbox"/>
3. Is temporary	1 <input type="checkbox"/>	2 <input type="checkbox"/>
4. Is intended to provide training in research	1 <input type="checkbox"/>	2 <input type="checkbox"/>
5. Is intended to advance professional skills	1 <input type="checkbox"/>	2 <input type="checkbox"/>
6. Requires a full-time commitment to research	1 <input type="checkbox"/>	2 <input type="checkbox"/>
7. Requires that you work under the direction of a senior scholar	1 <input type="checkbox"/>	2 <input type="checkbox"/>
8. Is for a defined period of time	1 <input type="checkbox"/>	2 <input type="checkbox"/>
9. Requires publication of research in scholarly journals	1 <input type="checkbox"/>	2 <input type="checkbox"/>
10. Requires mentorship for professional development	1 <input type="checkbox"/>	2 <input type="checkbox"/>
11. Is intended to prepare you for an independent career in research	1 <input type="checkbox"/>	2 <input type="checkbox"/>
12. Is the result of financial support by a public body or not-profit institution, acquired through competitive submission of proposals	1 <input type="checkbox"/>	2 <input type="checkbox"/>

ECR.3. What was the title of this position?

ECR.4. Using the Fields of Science and Technology list (see *Classification 1*), choose the code that corresponds best to the activities in your position.

1. Field code . 2. Other, please specify

ECR.5. What was the total duration of this contract?

months

ECR.6. Was it possible to extend this contract?

- 1 Yes → For how long? months 2 No

ECR.7. What were your reasons for taking this contract?

Mark with (x) Yes or No for each item).

	Yes	No
1. Additional training in advanced research qualification field	1 <input type="checkbox"/>	2 <input type="checkbox"/>
2. Training in an area outside of advanced research qualification field	1 <input type="checkbox"/>	2 <input type="checkbox"/>
3. Carry out research independently	1 <input type="checkbox"/>	2 <input type="checkbox"/>
4. Work with a specific person or in a specific place	1 <input type="checkbox"/>	2 <input type="checkbox"/>
5. Carry out and support teaching activities	1 <input type="checkbox"/>	2 <input type="checkbox"/>
6. Other employment not available	1 <input type="checkbox"/>	2 <input type="checkbox"/>
7. This type of position generally expected for career in this field	1 <input type="checkbox"/>	2 <input type="checkbox"/>
8. Other-Specify		

ECR.8. What percentage of your time in this position was dedicated to:

1. Research activities %
 2. Teaching activities %
 3. Other activities (such as administrative tasks) %
 (Total = 100%)

ECR.9. What was the main source of financial support for this position?

Mark only one with (x).

- 1 Government/Public sector agency
 2 Industry/Business
 3 College or university
 4 Private foundation
 5 Non-profit, other than private foundation
 6 Other-Specify

Go to the next MODULE

EMPLOYMENT SITUATION**MODULE EMP*****EMP.1. What was your labour force status on 1 December 2011?**1 Employed → go to question EMP.22 Unemployed → go to the question EMP.103 Inactive → go to the question EMP.10***EMP.2. Counting ALL jobs held, what were your gross annual earnings for the year 2011?**

Gross annual income includes all kinds of net payments in respect of employment and Statutory appropriations, contributions, taxes and fees.

 (express it in RSD)
PRINCIPAL JOB***EMP.3. Please provide the details on all jobs you held on 1 December 2011.**

Present position									
1. Employed since (year)									
2. Name of employer									
3. Location:	City <input type="text"/> Country <input type="text"/>								
4. Sector of employment <i>Mark only one with (X)</i>	1 <input type="checkbox"/> Business enterprise sector 2 <input type="checkbox"/> Government sector 3 <input type="checkbox"/> Higher education sector 4 <input type="checkbox"/> Other education sector 5 <input type="checkbox"/> Private non-profit sector								
5. Occupation Please, be as specific as possible									
6. Employment situation	1 <input type="checkbox"/> Employee worker 2 <input type="checkbox"/> Self-employed								
7. Type of position	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Mark only one with (X)</td> <td style="text-align: center;">Mark only one with (X)</td> </tr> <tr> <td>1 <input type="checkbox"/> Permanent</td> <td>1 <input type="checkbox"/> Full-time</td> </tr> <tr> <td>2 <input type="checkbox"/> Permanent</td> <td>2 <input type="checkbox"/> Part-time</td> </tr> <tr> <td>3 <input type="checkbox"/> Author's contract</td> <td></td> </tr> </table>	Mark only one with (X)	Mark only one with (X)	1 <input type="checkbox"/> Permanent	1 <input type="checkbox"/> Full-time	2 <input type="checkbox"/> Permanent	2 <input type="checkbox"/> Part-time	3 <input type="checkbox"/> Author's contract	
Mark only one with (X)	Mark only one with (X)								
1 <input type="checkbox"/> Permanent	1 <input type="checkbox"/> Full-time								
2 <input type="checkbox"/> Permanent	2 <input type="checkbox"/> Part-time								
3 <input type="checkbox"/> Author's contract									
8. Number of hours per week									
9. Does this job include teaching activities?	1 <input type="checkbox"/> No 2 <input type="checkbox"/> Yes, less than 25% 3 <input type="checkbox"/> Yes, 25%-49% 4 <input type="checkbox"/> Yes, 50%-74% 5 <input type="checkbox"/> Yes, 75%-100%								

EMP.4. What was the MINIMUM education level required for the principal job you held on 1 December 2011?

Mark (X) only one

- | | |
|--|---|
| 1 <input type="checkbox"/> Graduate (or lower) qualification | 2 <input type="checkbox"/> Post-graduate (non-research qualification) |
| 3 <input type="checkbox"/> Advanced research qualification | 4 <input type="checkbox"/> Postdoc |
| 5 <input type="checkbox"/> Other-Specify _____ | 6 <input type="checkbox"/> Unknown |

EMP.5. What was the DESIRABLE education level required for the PRINCIPAL JOB you held on 1 December 2011?

Mark (X) only one

- | | |
|--|---|
| 1 <input type="checkbox"/> Graduate (or lower) qualification | 2 <input type="checkbox"/> Post-graduate (non-research qualification) |
| 3 <input type="checkbox"/> Advanced research qualification | 4 <input type="checkbox"/> Postdoc |
| 5 <input type="checkbox"/> Other-Specify _____ | 6 <input type="checkbox"/> Unknown |

***EMP.6. To what extent was your work at your PRINCIPAL JOB held on 1 December 2011 related to your advanced research qualification degree?**

Mark with (X) only one

- 1 Closely related 2 Partly related Not related

EMP.7. If the PRINCIPAL JOB you held on 1 December 2011 was a part-time job, were you searching for a full-time job?

- 1 Yes 2 No Not applicable

***EMP.8. Please rate your satisfaction with your PRINCIPAL JOB/S...**

Mark with (X) only one for each item

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied
1. Salary	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
2. Benefits	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
3. Job security	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
4. Job location	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
5. Working conditions	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
6. Opportunities for advancement	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
7. Intellectual challenge	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
8. Level of responsibility	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
9. Degree of independence	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
10. Contribution to society	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
11. Social status	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
12. Overall level of satisfaction	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

SECOND JOB

***EMP.9. Did you have second job on 1 December 2011?**

1 Yes

2 No → go to the question EMP.10

Please provide the details on the second job you held on 1 December 2011.

Present position second job									
1. Employed since (year)									
2. Name of employer									
3. Location:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">City</td> <td style="width: 50%; border: none;">Country</td> </tr> </table>	City	Country						
City	Country								
4. Sector of employment <i>Mark with (X) only one</i>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">1 <input type="checkbox"/> Business enterprise sector</td> <td style="width: 50%; border: none;">2 <input type="checkbox"/> Government sector</td> </tr> <tr> <td style="border: none;">3 <input type="checkbox"/> Higher education sector</td> <td style="border: none;">4 <input type="checkbox"/> Other education sector</td> </tr> <tr> <td style="border: none;">5 <input type="checkbox"/> Private non-profit sector</td> <td style="border: none;"></td> </tr> </table>	1 <input type="checkbox"/> Business enterprise sector	2 <input type="checkbox"/> Government sector	3 <input type="checkbox"/> Higher education sector	4 <input type="checkbox"/> Other education sector	5 <input type="checkbox"/> Private non-profit sector			
1 <input type="checkbox"/> Business enterprise sector	2 <input type="checkbox"/> Government sector								
3 <input type="checkbox"/> Higher education sector	4 <input type="checkbox"/> Other education sector								
5 <input type="checkbox"/> Private non-profit sector									
5. Occupation Please, be as specific as possible									
6. Employment situation	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">1 <input type="checkbox"/> Employee worker</td> <td style="width: 50%; border: none;">2 <input type="checkbox"/> Self-employed</td> </tr> </table>	1 <input type="checkbox"/> Employee worker	2 <input type="checkbox"/> Self-employed						
1 <input type="checkbox"/> Employee worker	2 <input type="checkbox"/> Self-employed								
7. Type of position	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; text-align: center;">Mark only one with (X)</td> <td style="width: 50%; border: none; text-align: center;">Mark only one with (X)</td> </tr> <tr> <td style="border: none;">1 <input type="checkbox"/> Permanent</td> <td style="border: none;">1 <input type="checkbox"/> Full-time</td> </tr> <tr> <td style="border: none;">2 <input type="checkbox"/> Permanent</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">3 <input type="checkbox"/> Author's contract</td> <td style="border: none;">2 <input type="checkbox"/> Part-time</td> </tr> </table>	Mark only one with (X)	Mark only one with (X)	1 <input type="checkbox"/> Permanent	1 <input type="checkbox"/> Full-time	2 <input type="checkbox"/> Permanent		3 <input type="checkbox"/> Author's contract	2 <input type="checkbox"/> Part-time
Mark only one with (X)	Mark only one with (X)								
1 <input type="checkbox"/> Permanent	1 <input type="checkbox"/> Full-time								
2 <input type="checkbox"/> Permanent									
3 <input type="checkbox"/> Author's contract	2 <input type="checkbox"/> Part-time								
8. Number of hours per week									
9. Does this job include teaching activities?	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;">1 <input type="checkbox"/> No</td> <td style="width: 33%; border: none;">2 <input type="checkbox"/> Yes, less than 25%</td> <td style="width: 33%; border: none;">3 <input type="checkbox"/> Yes, 25%-49%</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">4 <input type="checkbox"/> Yes, 50%-74%</td> <td style="border: none;">5 <input type="checkbox"/> Yes, 75%-100%</td> </tr> </table>	1 <input type="checkbox"/> No	2 <input type="checkbox"/> Yes, less than 25%	3 <input type="checkbox"/> Yes, 25%-49%		4 <input type="checkbox"/> Yes, 50%-74%	5 <input type="checkbox"/> Yes, 75%-100%		
1 <input type="checkbox"/> No	2 <input type="checkbox"/> Yes, less than 25%	3 <input type="checkbox"/> Yes, 25%-49%							
	4 <input type="checkbox"/> Yes, 50%-74%	5 <input type="checkbox"/> Yes, 75%-100%							

If you have more jobs on 1 December 2011, please continue this list

PAST EMPLOYMENT

EMP.10. Have you changed job in the last 10 years?

1 Yes

2 No → go to the question MOB.1

***EMP.11. If you have changed job in the last 10 years, please list your most recent previous employer here.** (Note that this section excludes your current position)

Previous position									
1. Employed since (year)									
2. Name of employer									
3. Location:	City _____ Country _____								
4. Sector of employment <i>Mark with (X) only one</i>	1 <input type="checkbox"/> Business enterprise sector 2 <input type="checkbox"/> Government sector 3 <input type="checkbox"/> Higher education sector 4 <input type="checkbox"/> Other education sector 5 <input type="checkbox"/> Private non-profit sector								
5. Occupation Please, be as specific as possible									
6. Employment situation	1 <input type="checkbox"/> Employee worker 2 <input type="checkbox"/> Self-employed								
7. Type of position	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center; width: 50%;">Mark only one with (X)</td> <td style="text-align: center; width: 50%;">Mark only one with (X)</td> </tr> <tr> <td>1 <input type="checkbox"/> Permanent</td> <td>1 <input type="checkbox"/> Full-time</td> </tr> <tr> <td>2 <input type="checkbox"/> Permanent</td> <td></td> </tr> <tr> <td>3 <input type="checkbox"/> Author's contract</td> <td>2 <input type="checkbox"/> Part-time</td> </tr> </table>	Mark only one with (X)	Mark only one with (X)	1 <input type="checkbox"/> Permanent	1 <input type="checkbox"/> Full-time	2 <input type="checkbox"/> Permanent		3 <input type="checkbox"/> Author's contract	2 <input type="checkbox"/> Part-time
Mark only one with (X)	Mark only one with (X)								
1 <input type="checkbox"/> Permanent	1 <input type="checkbox"/> Full-time								
2 <input type="checkbox"/> Permanent									
3 <input type="checkbox"/> Author's contract	2 <input type="checkbox"/> Part-time								
8. Number of hours per week									

Go to the next MODULE

INTERNATIONAL MOBILITY

MODULE MOB

An internationally mobile advanced research qualification holder is a advanced research qualification holder who, since the award of his/her advanced research qualification, has moved to a country other than that of his or her usual residence for a period of at least 3 months, except in cases where the movement to that country was for purposes of recreation, holiday, visits to friends and relatives, medical treatment or religious pilgrimage.

MOB.1. Have you lived only in Serbia in the period between January 2011 and December 2011?

1 Yes → go to question MOB.5 2 No

***MOB.1.a. List the countries in which you have studied, worked or carried out research for more than three months between January 2011 and December 2011 and indicate the period of stay or residence (include Republic of Serbia).**

If you are staying in a country several times, write in each particular visit.

State	Period of stay or residence			
	From:		To:	
	Month	Year	Month	Year
1				
2				
3				
4				
5				
6				
7				
8				

If you need more lines, please continue this list.

***MOB.2. If you moved OUT**

of Serbia between January 2011 and December 2011, please indicate the reasons for this (or these) decisions. *Not applicable*

Mark with (X) Yes or No for each item

	Yes	No
1. Completion of advanced research qualification	1 <input type="checkbox"/>	2 <input type="checkbox"/>
2. End of job contract	1 <input type="checkbox"/>	2 <input type="checkbox"/>
3. Other job related or economic factors: E.g.: job search, sent by employer, guarantee or offer of a job, or postdoc	1 <input type="checkbox"/>	2 <input type="checkbox"/>
4. Academic factors: E.g.: better access to publishing, development or continuity of thesis work, work in a specific area not existent inside Serbia, possibility of creation of own research team or new research area	1 <input type="checkbox"/>	2 <input type="checkbox"/>
5. Family or personal reasons	1 <input type="checkbox"/>	2 <input type="checkbox"/>
6. Political or other reasons: E.g.: refugee or end of residence permit or visa	1 <input type="checkbox"/>	2 <input type="checkbox"/>

***MOB.3. If you have between January 2002 and December 2011 moved / come / returned to the Republic of Serbia for more than three months, please give reasons.** *Not applicable*

Mark with (X) Yes or No for each item

Yes No

- | | | |
|--|----------------------------|----------------------------|
| 1. Completion of advanced research qualification | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2. End of job contract | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3. Other job related or economic factors:
E.g.: job search, sent by employer, guarantee or offer of a job, or postdoc | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 4. Academic factors:

E.g.: better access to publishing, development or continuity of thesis work, work in a specific area not existent inside Serbia, possibility of creation of own research team or new research area | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 5. Family or personal reasons | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 6. Political or other reasons:
E.g.: refugee or end of residence permit or visa | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

***MOB.4. If you have moved into Serbia and plan to leave, indicate how long you plan to stay in Serbia.**

Not applicable

Planned total length of stay Months

***MOB.5. Do you intend to move out of Serbia within the next 12 months?**

- 1 Yes, permanently
 2 Yes, temporarily
 3 No → Skip the rest of this MODULE and go to the MODULE CAR

***MOB.6. To which country do you intend to move?**

State

***MOB.7. Indicate the reasons for this decision:**

Mark with (X) Yes or No for each item

Yes No

- | | | |
|---|----------------------------|----------------------------|
| 1. End of postdoc or job contract | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2. Returning to my home country:
E.g.: After resettlement in Serbia | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3. Other job related or economic factors:
E.g.: sent by employer, guarantee or offer of a job, or research grant | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 4. Academic factors:
E.g.: better access to publishing, development or continuity of thesis work, work in a specific area not existent inside Serbia possibility of creation of own research team or new research area | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 5. Family or personal reasons | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 6. Political or other reasons:
E.g.: End of residence permit or visa | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

MOB.8. If you moved OUT of Serbia, are you still connected with your country of origin?

Not applicable

Mark with (X) Yes or No for each item.

	Yes	No
1. You keep in touch with official "Diaspora" networks (i.e. networks of nationals from your country of origin living abroad)	1 <input type="checkbox"/>	2 <input type="checkbox"/>
2. You have a wide informal network formed by friends/ acquaintances/ colleagues from your country of origin	1 <input type="checkbox"/>	2 <input type="checkbox"/>
3. You are available for various possible linkage mechanisms (visits, training, joint projects, mentoring, fundraising)	1 <input type="checkbox"/>	2 <input type="checkbox"/>
4. You maintain business relationships with your country of origin	1 <input type="checkbox"/>	2 <input type="checkbox"/>
5. You collaborate with national professional associations in your country of origin	1 <input type="checkbox"/>	2 <input type="checkbox"/>
6. You collaborate with scientific journals in your country of origin	1 <input type="checkbox"/>	2 <input type="checkbox"/>

MOB.9. Are you working on research with researchers in another country?

Mark with (X) Yes or No for each item.

	Yes	No
1. Working on a joint publication with people in another country	1 <input type="checkbox"/>	2 <input type="checkbox"/>
2. Collaborating at a distance on a joint research project with researchers in another country	1 <input type="checkbox"/>	2 <input type="checkbox"/>
3. You are using web-based or virtual technology to conduct this work	1 <input type="checkbox"/>	2 <input type="checkbox"/>

Go to the next MODULE

CAREER RELATED EXPERIENCE

MODULE CAR

Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in the management of the projects concerned.

***CAR.1. In the job you held on 1 December 2011, were you engaged in research and/or experimental development work, i.e. were you engaged in the conception or creation of new knowledge, products, processes, methods and systems or in the management of such projects?**

1 Yes 2 No → go to the question CAR.3

CAR.2. Which percentage of your time did you on average devote to research and/or experimental development work?

% → go to the question CAR.6

NON-RESEARCHERS

CAR.3. Why were you not working as a researcher on 1 December 2011?

Mark with (X) all that apply

- 1 Not interested in research 2 Very limited job opportunities in research
 3 There is no clear career structure within research 4 Low remuneration
 5 Disadvantaged working conditions 6 Poor public recognition of career in research
 7 Unclear long term career prospects 8 Other - Specify

CAR.4. Are you considering changing your current career for a research career in the next three years?

- 1 Yes 2 No

***CAR.5. Were you performing research activities earlier in your career?**

- 1 Yes 2 No → go to the question PER.7

RESEARCHERS (CURRENT AND FORMER)

CAR.6. Why did you choose a research career?

Mark with (X) all that apply

- 1 Creativity and innovativeness of work 2 Well paid job 3 Benefits
 4 Opportunities for advancement 5 Job security 6 Working conditions
 7 Degree of independence 8 Contribution to society 9 Other employment not available
 10 Research generally expected for career 11 Specific interest for research work
 12 Other-Specify

***CAR.7. How long have you worked as a researcher?**

From: Year To: Year
 (leave blank if still working as a researcher on 1 December 2011)

CAR.8. How many months elapsed between the time you completed your advanced research qualification degree and the time you accepted your first CAREER PATH JOB (if applicable)?

A “career path” job is a job that will help to improve your career plans or is a job in a field where you want to make your career.

Number of months

1 Have not accepted my first career path job.

2 Accepted career path job either before or during my advanced research qualification

PER.7. In case we need to clarify some of the information you have provided, please list phone numbers and an e-mail address where you can be reached.

Phone number:

Cell phone:

E-mail:

Thank you for your time and attention you have devoted to this survey. Each of your comment, suggestion or critics is welcome, as we should carry out this survey better in the future.

Please, if you have such comments, write in the space below.

If some of your associates, friends, acquaintances, and so on have a person with a doctorate, earned in the country or abroad, which on 1 December 2011 lived in the Republic of Serbia under the age of 70, please enter their name and contact information (email address, or telephone), to enable us better coverage.

	Name	(e-mail)	Phone number
1.			
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Classification 1: Fields of Science and Technology

1. NATURAL SCIENCES

- 1.1. Mathematics
- 1.2. Computer and information sciences (excluding hardware development and social aspect)
- 1.3. Physical sciences
- 1.4. Chemical sciences
- 1.5. Earth and environmental sciences
- 1.6. Biological sciences (excluding medical and agricultural sciences)
- 1.7. Other natural sciences

2. ENGINEERING AND TECHNOLOGY

- 2.1. Civil engineering
- 2.2. Electrical engineering, electronic engineering, information engineering
- 2.3. Mechanical engineering
- 2.4. Chemical engineering
- 2.5. Materials engineering
- 2.6. Medical engineering
- 2.7. Environmental engineering
- 2.8. Environmental biotechnology
- 2.9. Industrial biotechnology
- 2.10. Nanotechnology
- 2.11. Other engineering and technologies (food, beverages and other)

3. MEDICAL AND HEALTH SCIENCES

- 3.1. Basic medicine
- 3.2. Clinical medicine
- 3.3. Health sciences
- 3.4. Medical biotechnology
- 3.5. Other medical sciences (forensic and other medical sciences)

4. AGRICULTURAL SCIENCES

- 4.1. Agriculture, forestry and fisheries
- 4.2. Animal and dairy science
- 4.3. Veterinary science
- 4.4. Agricultural biotechnology
- 4.5. Other agricultural sciences

5. SOCIAL SCIENCES

- 5.1. Psychology
- 5.2. Economics and business
- 5.3. Educational sciences
- 5.4. Sociology
- 5.5. Law
- 5.6. Political science
- 5.7. Social and economic geography
- 5.8. Media and communications
- 5.9. Other social sciences

6. HUMANITIES

- 6.1. History and Archaeology
- 6.2. Languages and literature
- 6.3. Philosophy, ethics and religion
- 6.4. Arts (arts, history of arts, performing arts, music)
- 6.5. Other humanities

Source: New Fields of Science Classification of the Frascati Manual (adopted by OECD NESTI in 2005)

Classification 2: Classification of occupations – ISCO 08

Code ISCO-08	Occupations
1	Managers, officials and legislators
11	Chief executives, senior officials and members of executive and legislative bodies
12	Administrative and commercial managers
13	Production and specialized services managers
14	Catering trades, retail and other service managers
2	Professionals and artists
21	Basic and applied sciences professionals
22	Health care professionals
23	Teaching professionals
24	Business and administrative services professionals
25	Information and communication technology professionals (IKT)
26	Legal, social and cultural professionals
3	Engineers, technicians and associate professionals
31	Science and engineering associate professionals
32	Nurses and health associate professionals
33	Business and administration associate professionals
34	Legal, social and sports, cultural and religious associate professionals
35	Information and communication technicians (IKT)
4	Clerical support workers
41	General and keyboard clerks
42	Customer services clerks
43	Numerical and material recording clerks
44	Other clerical support workers
5	Service and sales occupations
51	Personal services workers
52	Sales and related workers
53	Personal care workers
54	Protective services workers
6	Skilled agricultural, forestry and fishery workers
61	Market-oriented skilled agricultural workers
62	Market-oriented skilled forestry, fishery and hunting workers
63	Agricultural and fishery occupations for own needs
7	Craft and related trades workers
71	Building and related trades workers, excluding electricians
72	Metal, machinery and related trades workers
73	Handicraft and printing workers
74	Electric and electronic trades workers
75	Food processing, wood working, garment and other craft and related trades workers
8	Plant and machine operators, assemblers and drivers
81	Stationary plant and machine operators
82	Products' assemblers
83	Drivers and mobile plant operators
9	Elementary occupations
91	Cleaners and helpers
92	Agricultural, forestry and fishery laborers
3	Laborers in mining, construction, manufacturing and transport
94	Food preparations assistants
95	Street and related sales and service workers
96	Refuse workers and other elementary workers
0	Armed forces occupations
1	Commissioned armed forces officers
2	Non-commissioned armed forces officers
3	Armed forces occupations, other ranks

Source: International Standard Classification of Occupations (ISCO-08).

ANNEX 3: ISO Country Code	
Code	Country
AFG	Afghanistan
ALA	Åland Islands
ALB	Albania
DZA	Algeria
ASM	American Samoa
AND	Andorra
AGO	Angola
AIA	Anguilla
ATG	Antigua and Barbuda
ARG	Argentina
ARM	Armenia
ABW	Aruba
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BHS	Bahamas
BHR	Bahrain
BGD	Bangladesh
BRB	Barbados
BLR	Belarus
BEL	Belgium
BLZ	Belize
BEN	Benin
BMU	Bermuda
BTN	Bhutan
BOL	Bolivia (Plurinational State of)
BES	Bonaire, Saint Eustatius and Saba
BIH	Bosnia and Herzegovina
BWA	Botswana
BRA	Brazil
VGB	British Virgin Islands
BRN	Brunei Darussalam
BGR	Bulgaria
BFA	Burkina Faso
BDI	Burundi
KHM	Cambodia
CMR	Cameroon
CAN	Canada
CPV	Cape Verde
CYM	Cayman Islands
CAF	Central African Republic

TCD	Chad
CIS	Channel Islands
CHL	Chile
CHN	China
HKG	China, Hong Kong Special Administrative Region
MAC	China, Macao Special Administrative Region
TWN	Chinese Taipei
COL	Colombia
COM	Comoros
COG	Congo
COK	Cook Islands
CRI	Costa Rica
CIV	Côte d'Ivoire
HRV	Croatia
CUB	Cuba
CUW	Curaçao
CYP	Cyprus
CZE	Czech Republic
PRK	Democratic People's Republic of Korea
COD	Democratic Republic of the Congo
DNK	Denmark
DJI	Djibouti
DMA	Dominica
DOM	Dominican Republic
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
GNQ	Equatorial Guinea
ERI	Eritrea
EST	Estonia
ETH	Ethiopia
FRO	Faeroe Islands
FLK	Falkland Islands (Malvinas)
FJI	Fiji
FIN	Finland
FRA	France
GUF	French Guiana
PYF	French Polynesia
GAB	Gabon
GMB	Gambia
GEO	Georgia
DEU	Germany
GHA	Ghana
GIB	Gibraltar
GRC	Greece
GRL	Greenland
GRD	Grenada
GLP	Guadeloupe
GUM	Guam
GTM	Guatemala
GGY	Guernsey
GIN	Guinea
GNB	Guinea-Bissau
GUY	Guyana
HTI	Haiti

VAT	Holy See
HND	Honduras
HUN	Hungary
ISL	Iceland
IND	India
IDN	Indonesia
IRN	Iran (Islamic Republic of)
IRQ	Iraq
IRL	Ireland
IMN	Isle of Man
ISR	Israel
ITA	Italy
JAM	Jamaica
JPN	Japan
JEY	Jersey
JOR	Jordan
KAZ	Kazakhstan
KEN	Kenya
KIR	Kiribati
KWT	Kuwait
KGZ	Kyrgyzstan
LAO	Lao People's Democratic Republic
LVA	Latvia
LBN	Lebanon
LSO	Lesotho
LBR	Liberia
LBY	Libyan Arab Jamahiriya
LIE	Liechtenstein
LTU	Lithuania
LUX	Luxembourg
MDG	Madagascar
MWI	Malawi
MYS	Malaysia
MDV	Maldives
MLI	Mali
MLT	Malta
MHL	Marshall Islands
MTQ	Martinique
MRT	Mauritania
MUS	Mauritius
MYT	Mayotte
MEX	Mexico
FSM	Micronesia (Federated States of)
MCO	Monaco
MNG	Mongolia
MNE	Montenegro
MSR	Montserrat
MAR	Morocco
MOZ	Mozambique
MMR	Myanmar
NAM	Namibia
NRU	Nauru
NPL	Nepal
NLD	Netherlands

NCL	New Caledonia
NZL	New Zealand
NIC	Nicaragua
NER	Niger
NGA	Nigeria
NIU	Niue
NFK	Norfolk Island
MNP	Northern Mariana Islands
NOR	Norway
PSE	Occupied Palestinian Territory
OMN	Oman
PAK	Pakistan
PLW	Palau
PAN	Panama
PNG	Papua New Guinea
PRY	Paraguay
PER	Peru
PHL	Philippines
PCN	Pitcairn
POL	Poland
PRT	Portugal
PRI	Puerto Rico
QAT	Qatar
KOR	Republic of Korea
MDA	Republic of Moldova
REU	Réunion
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
BLM	Saint-Barthélemy
SHN	Saint Helena
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
MAF	Saint-Martin (French part)
SPM	Saint Pierre and Miquelon
VCT	Saint Vincent and the Grenadines
WSM	Samoa
SMR	San Marino
STP	Sao Tome and Principe
SAR	Sark
SAU	Saudi Arabia
SEN	Senegal
SRB	Serbia
SYC	Seychelles
SLE	Sierra Leone
SGP	Singapore
SXM	Sint Maarten (Dutch part)
SVK	Slovakia
SVN	Slovenia
SLB	Solomon Islands
SOM	Somalia
ZAF	South Africa
ESP	Spain
LKA	Sri Lanka
SDN	Sudan

SUR	Suriname
SJM	Svalbard and Jan Mayen Islands
SWZ	Swaziland
SWE	Sweden
CHE	Switzerland
SYR	Syrian Arab Republic
TJK	Tajikistan
THA	Thailand
MKD	The former Yugoslav Republic of Macedonia
TLS	Timor-Leste
TGO	Togo
TKL	Tokelau
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TKM	Turkmenistan
TCA	Turks and Caicos Islands
TUV	Tuvalu
UGA	Uganda
UKR	Ukraine
ARE	United Arab Emirates
GBR	United Kingdom
TZA	United Republic of Tanzania
USA	United States of America
VIR	United States Virgin Islands
URY	Uruguay
UZB	Uzbekistan
VUT	Vanuatu
VEN	Venezuela
VNM	Viet Nam
WLF	Wallis and Futuna Islands
ESH	Western Sahara
YEM	Yemen
ZMB	Zambia
ZWE	Zimbabwe
ZZZ	Foreign Country (only if country cannot be identified)

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