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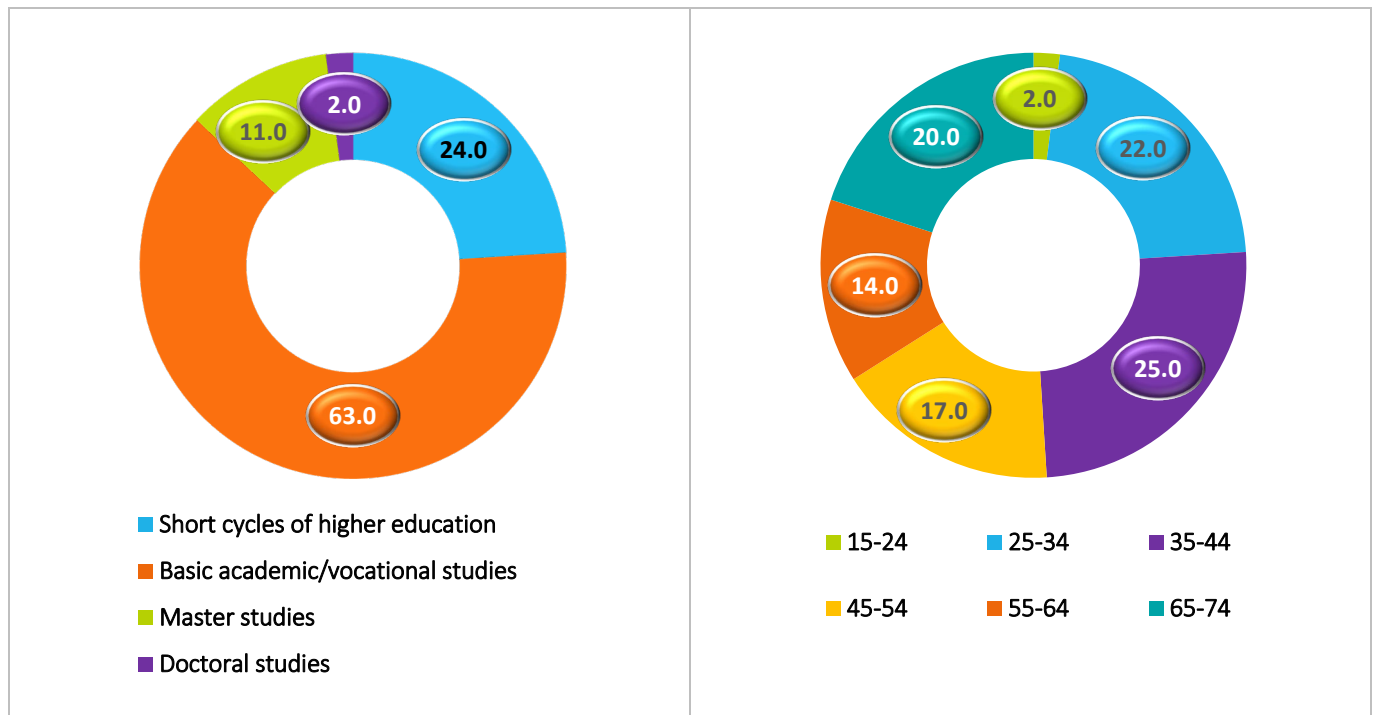
Human resources in science and technology in 2022

- Research and development -

Human resources in science and technology are people aged 15-74 who have either completed higher education or are employed in the fields of science and technology as researchers, engineers, professional associates or technicians. According to the results of the Labor Force Survey (LFS), in 2022 in the Republic of Serbia there were 1 063 500 people who meet some of the above conditions, of which 55% are women.

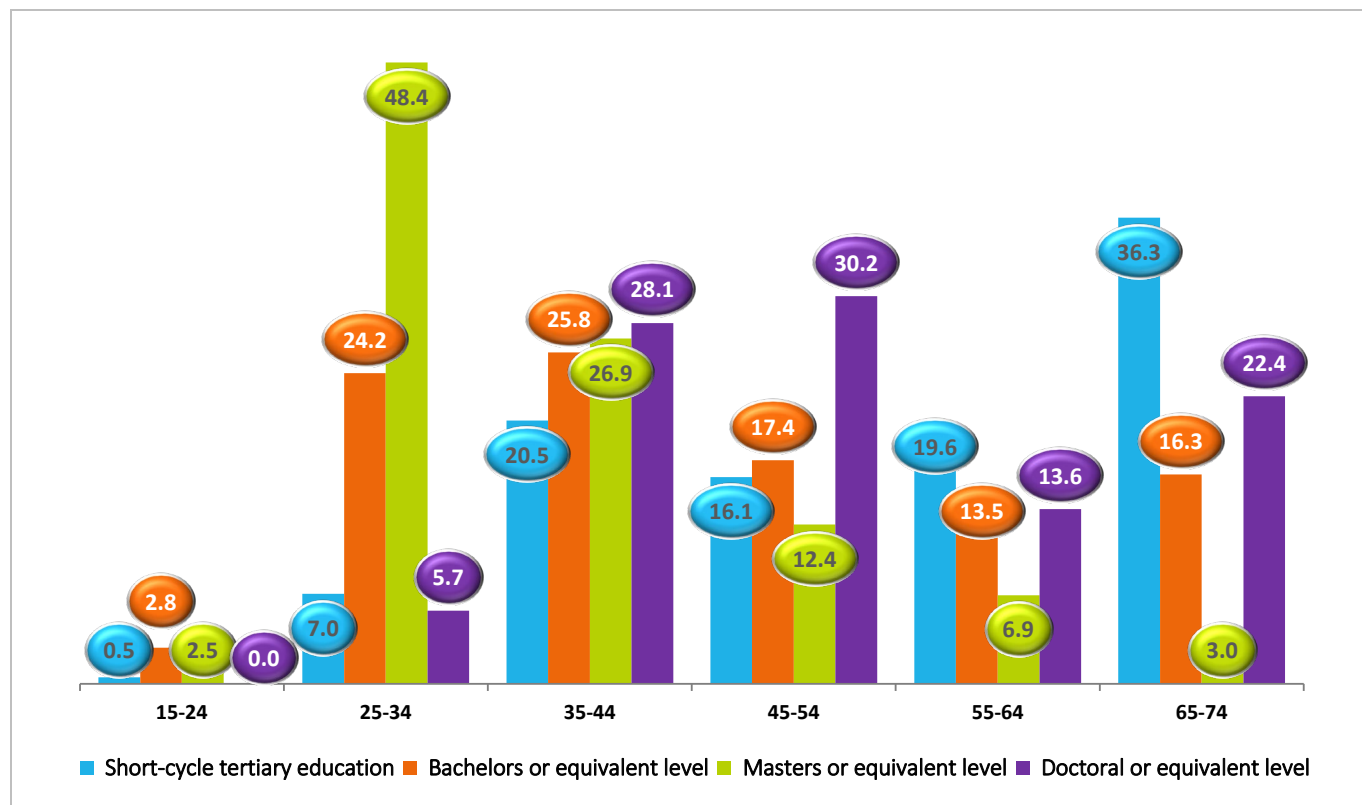
The core of human resources in science and technology consists of persons who meet both requirements, have acquired higher education and work in the fields of science and technology in these occupations. In 2022, 546 700 people made up the core, of which 56% were women.

Chart 1 Persons aged 15-74, who have completed higher education, according to levels of higher education and age groups, %



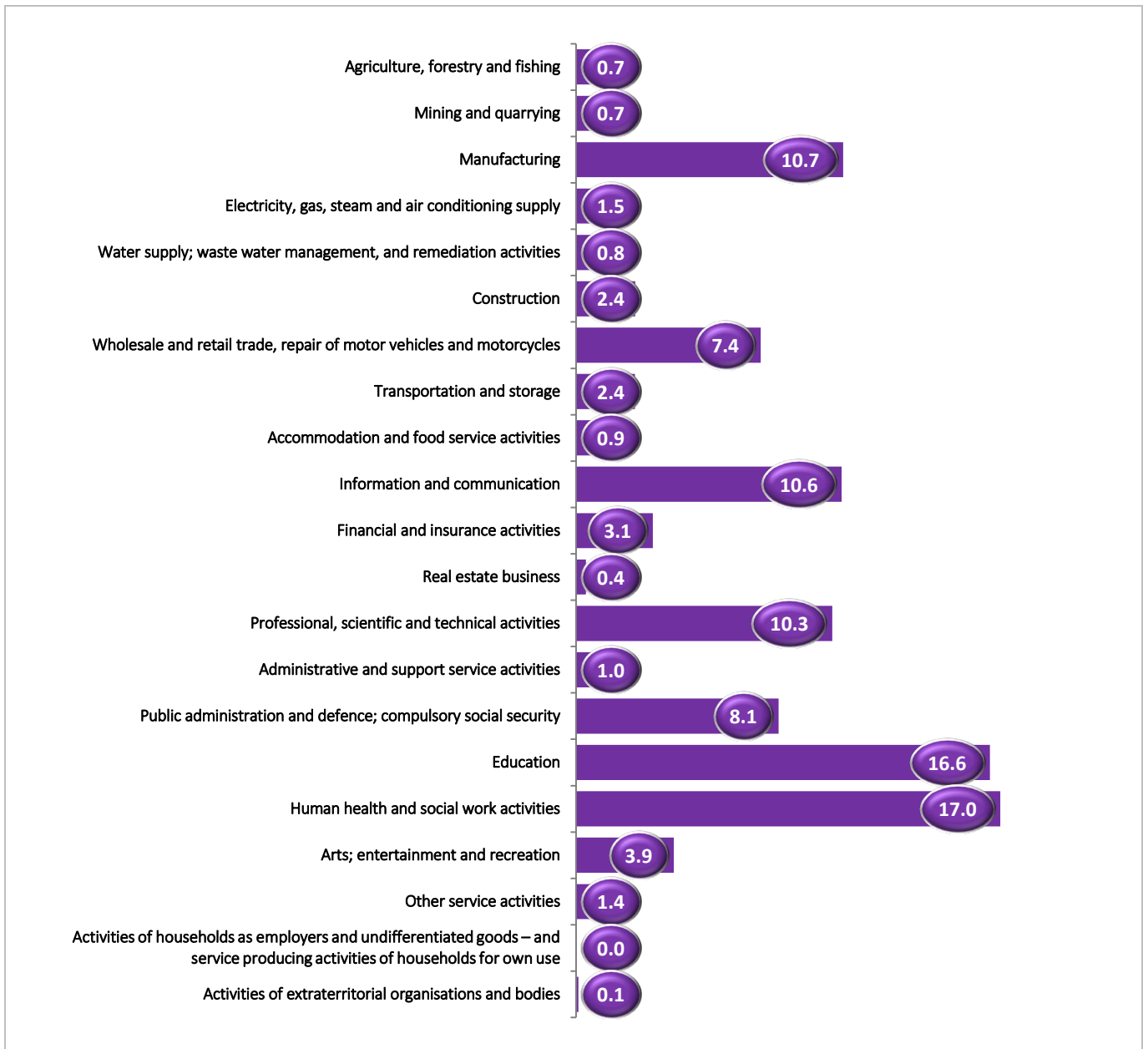
In the contingent of persons aged 15-74 who have completed higher education (1 192 300 persons), persons with completed first degree of higher education - completed basic academic or vocational studies were the most numerous - 63%, and the participation of doctors of science was the lowest - only 2%. Observed by age, the age group 35-44 years was the most represented with 25%, the the age group 25-34 with 22%.

Chart ② Persons over the age of 15-74, who have completed higher education, by age groups and levels of higher education, %



Persons with completed master level of higher education has the largest share in the age group 25-34 - 48.4%, while the age group 35-44 has the most even ration as far as the completed level of higher education is concerned. Most of doctorants are in the age group 45-54.

Chart ③ Persons aged 15-74 employed in science and technology by sections of activity in which they work,%



The largest share is noted among persons working as: researchers, experts, engineers, professional associates or technicians in the section of Human health and social work activities (17%), followed by Education (16.6%), Manufacturing (10.7%) and Information and communication (10.6%).

METHODOLOGICAL EXPLANATIONS AND DEFINITIONS

DATA SOURCE

The data source for this statistical release is the Labour Force Survey, which data for 2022 have been revised according to the revisions performed in 2023 and 2024. More details are available on the following link (within the card 17.2): https://data.stat.gov.rs/Metadata/24_Zarade/Html/240003_ESMS_G0_2023_1.html

Consequently, the data presented in this statistical release are not comparable with those previously published in HRST statistical releases.

The methodology of the Labour Force Survey is fully harmonized with Eurostat standards and makes possible comparison with the results of other countries. For the purpose of analyzing the data on human potentials in science and technology, persons aged 15-74 are included. The aim of the survey is to defined the basic person's characteristics, i.e. part of the labour force with the most developed skills and largest potential, which contribute to the development of society based on knowledge.

DEFINITIONS OF THE MAIN CHARACTERISTICS

Two approaches are used to define human resources in science and technology (HRST):

- according to education (HRSTE) – persons who have completed tertiary education (ISCED 5, 6, 7 or 8),
- according to occupation (HRSTO) – persons who are employed in the fields of science and technology as professionals, engineers, associate professionals, technicians and managers (ISCO-08, groups 2 and 3).

Those who meet both mentioned requirements are called core of HRSTC.

The difference between the persons who belong to HRST according to education and occupation is in that those who are currently working in the fields of education and technology and do not have adequate formal qualifications lose HRSTO status when leaving their working post, getting retired or becoming some other way economically active, but persons who completed tertiary education hold permanently HRSTE status.

Active population (labour force) includes all employed and unemployed persons aged 15 and over.

Employed are persons who performed a paid job (paid in cash or in kind) for at least one hour in the reference week, as well as persons who had an employment, but were absent from work in that week. Employees includes also, besides persons who have an employment in an enterprise, institution or any other organization, or work as entrepreneurs, farmers, contributing family members as well as persons who performed a job that they had found on their own and established an agreement (oral or written) without entering in employment and to whom this job was the only source of subsistence means. Therefore, the Survey does not take into account the respondent's formal status, but the respondent's employment status is determined on the basis of the actual activity she/he performed in the reference week.

Unemployed persons are persons who did not perform any paid job in the reference week nor held a job from which they were absent and to which they could return to after the absence, provided that they met the following criteria: they took active steps in the past four weeks in finding a job and they were ready to begin working within two weeks in case of a job offer, they did not actively seek a job in the past four weeks because they had found a job they were to start after the reference week, and not later than three months.

Economically inactive population is all persons aged 15 and more who are not classified in employed or unemployed population. Economically inactive persons include students, retired persons, housewives or –men, as well as other persons who, in the reference week, did perform any paid job, did not seek work or were not ready to start working within two weeks after the end of the reference week.

CLASSIFICATIONS

The following classifications are used for the survey:

- CA 2010 – Classification of Activities (NACE)
- Classification of Activities of the European Union (NACE rev. 2), which is comparable with the classification of activities of the United Nations (ISIC – rev.4)
- International Standard Classification of Education (ISCED 2011)
- Classification of Occupations (ISCO-08)

Starting from 1999 the Statistical Office of the Republic of Serbia has not available data for AP Kosovo and Metohija therefore these data are not included in the coverage for the Republic of Serbia (total).

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