

Analysis of Scientific Productivity in Croatia According to the *Science Citation Index*, *Social Science Citation Index*, and *Arts & Humanities Citation Index* for the 1980-1995 Period

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Aim. A total of 8,825 articles, notes, and letters published by the scientists affiliated with the research institutions within the Republic of Croatia, in journals covered by the *Science Citation Index (SCI)*, *Social Science Citation Index (SSCI)*, or *Arts & Humanities Citation Index (A&HCI)*, in the period from 1980-1995, was analyzed for the number of publications and cumulative partial authorship per individual scientist and research institution.

Method. To account for the differences in size of the readership for a particular journal, its impact factor was "standardized" by multiplying it with the ratio of the average numbers of quotations per article for the respective scientific subfield and all the journals covered by the *SCI*.

Results. The productivity of 792 out of 8,994 Croatian scientists was at or above the world average, considering the number of papers and/or cumulative partial authorship. Based on the average productivity and standardized impact factors for their scientific subfields, the most successful 2.5% (228 individuals) of the scientists affiliated with the Croatian institutions were identified. Almost half of the 792 world class scientists were active in the main fields of *Chemistry* and *Physics*, even though chemists and physicists comprised only 10% of all the scientists in the country. Of those 792 scientists, 34% were affiliated with Ruder Boskovic Institute and about 10% each with the Faculty of Natural Sciences & Mathematics and the School of Medicine of the University of Zagreb.

Conclusion. There are several centers of scientific excellence in the Republic of Croatia: Institute of Physics, Ruder Boskovic Institute, Faculty of Pharmacy and Biochemistry, and Institute of Medical Research and Occupational Medicine, all with a scientific productivity above the world average. Chemists and physicists published more than 45% of the Croatian scientific output, and have a scientific productivity about 50% above the world average. Almost half of the Croatian scientists did not publish any paper in the world-relevant scientific literature during the 1980-1995 period. The situation in Croatian science could be improved by better funding, currently below the level of funding in underdeveloped countries.

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