INDICATORS OF RESEARCH OUTPUT IN THE SCIENCES FROM 5 CENTRAL EUROPEAN COUNTRIES, 1990–1994*

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Introduction

The geopolitical region presently occupied by Austria, the Czech Republic, Hungary, Slovakia and Slovenia formed, until the first decades of the 20th century, the core of the Habsburg Empire (Austro-Hungarian Monarchy). The arrangement of the five present countries within the area of the monarchy is illustrated on the following map.

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At the turn of the century, more than 2/3 of the population of the monarchy lived in this region. An even higher percentage of the cultural, educational activities was concentrated in the region: about 80% of the university professors of the Monarchy worked at the Universities of Vienna, Graz, Innsbruck, Prague, Budapest and Bratislava.

The World Wars and Peace Treaties, the ups and downs of superpowers reshaped the political geography of the region again and again; for the last time, the landslide events of the late 80s lead to the present situation. The political, economical and administrative change obviously had their effect on the scientific research activities going on in the countries concerned.

The present study makes an attempt to summarize the trends and patterns of research activities in the five countries during the 1990–1994 period as reflected in the primary journal literature covered by the Science Citation Index (SCI) database of the Institute for Scientific Information (ISI, Philadelphia, PA, USA).

Methodology

The main data source of this study, ISSRU's Scientometric Indicator Datafiles, is derived from data extracted from the SCI database. The structure and contents of the Datafiles, as well as some illustrative examples of its use are presented in details in several publications (e.g. Refs 1–3). For the purposes of the present study, the following basic principles were adopted.

Unlike otherwise stated, publications categorized in the SCI database into the types "Articles", "Letters", "Notes" and "Reviews" were considered. Country assignment was based on all authors, i.e., a full publication was counted for each country if any of the authors had an institutional affiliation from that country. City assignments were made on exactly the same basis. Assignment of publications to countries not yet recorded in the SCI database as such in the early 90's was made on the basis of the cities of origin. Time trends were taken on "volume year" basis, i.e., publications were assigned to the year they appeared in the SCI database. (The pros and cons of this choice as compared with the alternative, "calendar year" option is discussed in details in the literature cited above.)