CHAPTER – 4
SOCIAL SCIENCE RESEARCH IN INDIA: SOME INDICATORS

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CHAPTER - 4
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4.1 Introduction

An analysis of data regarding social science research in India will be vital to understand the research trend and to identify areas which received maximum emphasis over a period of time. Such an analysis would also provide input to cover all the concepts while constructing the thesaurus to make it exhaustive and exclusive as far as possible. Social science is a field of erudition that contemplates society and its activities. The present chapter attempts to analyse the social science research in India to get insight into the major research work.

The present study, in this chapter, has attempted to analyse time series data for the years 1996-2014 on number of documents published by Indian researchers, number of cited documents, number of citations and percentage of international collaborations on various thematic subcategories released by *SCImago Journal & Country Rank Portal*. This portal provides visual representation of indicators based on data derived from *Scopus* database. These research indicators provided by *SCImago* vividly enunciate most of the subject categories pertaining to social sciences and this enunciation of categories has also been drawn from *Scopus* database.

In *Scopus* database, the whole knowledge world has been divided into 27 thematic categories and 313 specific subject categories. The *Scopus* database, under social sciences, has included 23 subject categories such as anthropology, archaeology, communication, cultural studies, demography, development, education, gender
studies, geography, planning and development, health (social science), human factors and ergonomics, law, library and information sciences, life-span and life-course studies, linguistics and language, political science and international relations, public administration, safety research, social sciences (miscellaneous), social work, sociology and political science, transportation and urban studies. Even though, the thematic category economics, econometrics and finance (miscellaneous) is a part of social sciences, it has been treated separately in Scopus and not as part of social sciences.

4.2 Selection of Database for Analysis

Certain commercial publishers provide data on research output and citations to measure research output for a specific subject domain from specific regions, which in turn enable quantitative and qualitative analysis. Scopus, Web of Science and Indian Citation Index are some the well known databases which provide research data for such an analysis. The scope of the data used in the present research work does not cover research output, quantitative and qualitative, from individual institutions of India. The SCImago Journal and Country Rank Portal covers almost all institution from various countries irrespective of type of institution. Therefore, SCImago Journal and Country Rank Portal is selected as a source of data.

4.3 Data Coverage

The time series data for the present study was collected from SCImago Journal & Country Rank Portal for a period of nineteen years, between 1996 and 2014.
This portal provides comprehensive statistics for journals articles, reviews and conference papers published during the above mentioned time period. The analysis of data, obtained from the above mentioned portal, has been done on various indicators such as growth of documents over a period of time (1996-2014 in this case), year wise average citation per document, international collaboration, uncited v/s cited documents, citations v/s self citations and year wise growth of literature under specific subject category. It is observed that, the thematic category Economics, Econometrics and Finance (EEF) is one of the most important subject categories in which maximum research has been carried out. However, *Scopus* has not treated EEF as part of social sciences.

Therefore, the data pertaining to EEF has been separately analysed to estimate the growth of literature. As there are two sets of data, provided by *SCImago*, one for EEF and another for 23 subcategories under social sciences, it is difficult to merge these two datasets as such merger distorts the final estimates in terms of percentage in certain cases. Thus, this happens to be a minor limitation of the present study.

4.4 Analysis of Data

To understand the research trends in a given subject domain, the results of analysis of time series data would provide crystal clear picture to draw a final conclusion. An attempt has been made to analyse the data derived from *SCImago Country and Journal Rank* for the years 1996-2014.
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(55)
Chart 1: Growth of Research Publications in Social Sciences, other than EEF, 1996-2014

Chart 2: Growth of Research Publications in EEF, 1996-2014
The time series data provided by SCImago reveals that the research in social science discipline in India steadily increased during the above mentioned time period. It may be observed that, a total of 3825 documents were published during the year 2014 against a total of 382 documents published during the year 1996, as shown in chart 1. From the above cited data, it may be inferred that research output went up by 10 times amounting to 901% growth during the study period of nineteen years.

It is also observed that the disciplines Economics, Econometrics and Finance have been treated as a separate major thematic category by Scopus. The data represented in chart 2 shows that the research output went up by 22.53 times, amounting to 2153% growth during the study period of nineteen years.

Chart 3: Average Citations, per research document, in Social Sciences (other than EEF), 1996-2014
Chart 4: Average Citations, per research document, for EEF, 1996-2014

The numbers of citations received by a research paper happen to be the widely accepted parameter for assessing the quality of a research paper. The citation indices derived from the SCImago reveals that the year wise average citation per document in social science and economics, econometrics and finance has drastically come down during the study period as shown in the chart 3 and 4. However, it is not fair to conclude that there is a decline in the research quality as the number of research papers have gone up substantially which affects the average.
Chart 5: Publications v/s Percentage of International Collaboration in Social Sciences (other than EEF), 1996-2014

The time series data reveals that the average collaboration of the Indian researchers with their foreign counterpart remains almost constant and variations during the study period is very negligible. It is also observed that during the year 2007, a maximum of 21.56% documents were published in association with the foreign researchers as shown in the chart 5. Similarly, international collaboration in EEF also remains constant and variations during the study period are very negligible. However, it is observed that during the year 2007, a maximum of 30.6% documents were published in association with the foreign researchers as shown in the chart 6.

Chart 7: Uncited Documents v/s Cited Documents in Social Sciences (other than EEF), 1996-2014

(60)
The quality of any research, in any specific subject domain, can be ascertained based on number of citations received by research publications. The data released by SCImago unveils that the research documents published in area of social science from India are constantly increasing during the years. On the contrary, it also reveals that the numbers of cited documents are constantly decreasing. In other words, the uncited research documents are steadily increasing. Therefore, looking at the chart, which depicts decline in citations, it would be unreasonable to conclude that the current research is irrelevant in the present context. The reasons for such a decline could be many. The possible reason may be that, the research on a specific problem might be confined to a particular geographical region and it might not be relevant for researchers in other geographical regions. Second reason might be, the citations from Indian journals might not have been covered in Scopus during the study period. From the charts 7 and 8, it may be observed that, the numbers of uncited documents are steadily increasing compared to the cited documents.
Chart 9: Citations v/s Self-citations in Social Sciences (other than EEF), 1996-2014
Chart 10: Citations v/s Self-Citations in EEF, 1996-2014
It is a general observation that the citation number goes up owing to self citations, as such authors use their own previous research work as base material to carry out further research. It is also quite possible that the number of citations going up in case of self-citation if there are multiple authors for a research work. On the contrary, it also quite possible for a single authored research paper to get fewer citations.

The data released by SCImago, as depicted in chart 9 and table 1, it may be observed that, the percentage of self citation has almost remained constant except during the years 1997, 2002 and 2010 in social sciences other than EEF. The lowest self citation in terms of percentage was received during the year 1997. On the contrary, as depicted in chart 10 and table 1, it may be observed that the average self citation in EEF has almost remained a constant at 25.37 percent.

According to Dewey et al. (2011) there are major 10 sub-disciplines of social sciences. On the contrary, the data released by SCImago has included some more sub-disciplines which are interdisciplinary in nature and these have been considered as part of social sciences. Based on their data, it is observed that the Geography, Planning and Development happens to be the major sub-discipline in which research has increased over a period of time, with 6654 research documents, compared to rest of the sub-disciplines.

It may also be observed that, SCImago has treated the three subcategories economics, econometrics and finance separately for quantifying number of research documents. When these three subcategories are combined as EFF, then the total number of document, which is 8598, stands highest among other social science categories as depicted in chart11.
Chart 11: Category Wise Number of Documents Published in Social Sciences (All Categories), 1996-2014
4.5 Conclusion

The *Scopus* data compiled and released by *SCImago Journal & Country Rank Portal* reveals that, during the period of observation, from 1996-2014; contribution by Indian social science researchers has grown manifold. The data provided by *Scopus* may be subject to criticism and may not be exact and actual depiction of facts as it does not cover all the Indian social science journals and other documents in its database.

There is no common consensus on the subject areas coming under social sciences and numbers of subjects in it are interdisciplinary. Therefore, while constructing the thesaurus in the present research work, an attempt has been made to give due emphasis to all the subjects and to those which are interdisciplinary. According to Seligman and Johnson (2006), economics is known as queen of all of social sciences. Therefore, the thesaurus has incorporated more descriptors from economics, econometrics and finance, compared to other disciplines. However, an effort has been made to cover most of the subject disciplines enlisted in the DDC schedule under social sciences.

References

