



**Indian Institute of Science Education and Research Bhopal
Department of Humanities and Social Sciences
Bhopal By-pass Road, Bhauri, Bhopal 462066**

Advertisement for Project Postdoctoral Fellow in Economics

Date: 30/08/2017.

Applications are invited for a Project Postdoctoral Fellow position in Economics in the following research topic: **Economic analysis using big data from India**

Qualification: Ph.D. in Economics (completed).

Age: Preferably below 35 years. However, it can be relaxed for candidates with adequate work experience.

Salary: Pay Rs. 17,000 + DR@108 % Rs. 18,360 + HRA@20% Rs. 3,400 + TA@10% Rs. 1,700. The Gross salary is Rs. 40,460.

Tenure: 1 year

Apply to: Interested applicants should e-mail their CV, a cover letter (describing their past accomplishments, research interests, and career goals) and a research proposal; along with names and contact information of three references to akschand@iiserb.ac.in. Please send soft copies of research papers (published / manuscripts) if available. This position will remain open until filled. Shortlisted candidates will be called for interview by e-mail. No TA/DA will be paid to the candidate for appearing in the interview. The selected candidate will be notified by e-mail and expected to join immediately.

Description of research project:

The increasing digitalization is helping to collect rapidly large data for economic transactions. The Government of India is gradually mandating Aadhar verification for the beneficiaries of subsidies and welfare programs. Currently, 88% of the population in India possesses Aadhar cards (i.e. 112 crore people with Aadhar cards); therefore gradually there will be large data sets available in India about the population and the impact of government policies. With big data, we can estimate the economic effects more accurately, and the big data sets allow for more general relations than simple linear relations. Big data help to test economic theories that were

previously difficult to test with limited data, and big data analysis would lead to novel insights into business, and the economic agents can take faster and better decisions.

The sheer size of the data requires powerful tools to manipulate and analyze the data. Machine learning techniques such as decision trees, support vector machines, neural nets, deep learning, etc. can be used for prediction, data mining techniques can be used for summarizing the big data, standard econometrics/statistics techniques can be modified for estimating and hypothesis testing with the big data. Economists are increasingly using big publicly available administrative data or privately collected proprietary data for economic research. Economists are also collaborating with private companies that specialize in data aggregation for collecting big data. Companies like Software AG, Oracle Corporation, IBM, Microsoft, SAP, EMC, HP, Dell, etc. are expanding their businesses by providing various cloud-based big data analytics products.

In India, there has been little research to analyze issues related to Indian economy and Indian government policies using big data. The aim of this project is to collaborate with government agencies and private companies to collect large data sets about the Indian economy and analyze them using data analytics tools to find novel insights.

References:

Big Data: New Tricks for Econometrics, Hal R. Varian, Journal of Economic Perspectives, Vol 28, No. 2, 2014, pages 3-28.

Economics in the Age of Big Data, Liran Einav and Jonathan Levin, Science, 346, 1243089, 2014.

Contact Details:

Dr. Arya Kumar Srustidhar Chand,

Assistant Professor (Economics)

Main Building, Room # 105,

Department of Humanities and Social Sciences

Indian Institute of Science Education and Research (IISER) Bhopal

Bhopal Bypass Road, Bhauri, Bhopal- 462 066, Madhya Pradesh, INDIA,

E-mail: akschand@iiserb.ac.in

Phone: 0755-269-1291

Department website:

<https://www.iiserb.ac.in/old/department.php?page=Humanities%20and%20Social%20Sciences>