

Commemorating India's data power: national statistics day

Abstract

The commemoration of Professor P. C. Mahalanobis' birthday as the national statistics day in India served as the inspiration for this piece of work. Professor Mahalanobis was a renowned educator, visionary scientist, and economist who created a statistical system in India. The article discusses some of Professor Mahalanobis' contributions, the value of statistics, the need for data literacy, and Indian statistics-related achievements and honours.

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Introduction

India marks National Statistics Day every year to highlight the role statistics has played in the development and decision-making of the nation. Every year on June 29th, this particular day is marked in honour of Professor Prasanta Chandra Mahalanobis, a renowned statistician and visionary who was born on that date in 1893. On this day, it is essential to recall Professor Mahalanobis' attempts to create a base to the present statistical system in India.

The inaugural National Statistics Day was observed in 2007, and on June 5 of that year, a notice to that effect was published in the Indian Gazette. This day is commemorated annually with a distinctive theme of current national significance. "Alignment of State Indicator Framework with National Indicator Framework for Monitoring Sustainable Development Goals" is the theme for 2023. Since 2019, the theme for celebrating Statistics Day has been based on the "Sustainable Development Goals" of the United Nations. Additionally, this particular day recognises the vital role that statistical data play in planning, governance, and policymaking.

The goal of National Statistics Day is to inform the public and raise awareness about the value of statistics in everyday life. To that end, the central and state governments, along with universities, colleges, and allied institutions, celebrate the day with a variety of activities, such as holding conferences, seminars, discussions, paper presentations, national and state level competitions, etc.

Honouring Professor Prasanta Chandra Mahalanobis

On National Statistics Day, Professor Prasanta Chandra Mahalanobis, who is frequently referred to as the "father of Indian statistics," is honoured for his lifetime contributions and achievements in statistics. He made significant contributions to methodology, applications, the progress of statistics in India, and government policy. Professor Mahalanobis founded the Indian Statistical Institute (ISI) in 1931 with the intention of transforming statistics into a technology that enables transdisciplinary education and enhances the use of scientific knowledge in solving both practical and scientific problems. "A scientist may have a wide or a very narrow range of interest or specialisation. A technologist must have knowledge and experience of a wide range of scientific subjects".¹ His works were crucial in developing new statistical models that contributed to the development of the nation's economic planning and hence responsible for building the present statistical system in India.²

The distance function created by Professor Mahalanobis, known as the Mahalanobis' D square statistic, found application in a number of multivariate investigation methods, particularly in taxonomy, economics, and geology. Also, he created India's second five-year plan while serving as a member of the Planning Commission of India. The goal of five-year plans is to plan the country's economic growth using the resources at hand. Sankhya, The Indian Journal of Statistics, which was founded and edited by Professor Mahalanobis in 1933, publishes research articles in the fields of theoretical statistics, probability, and applied statistics. He made significant contributions to the field of large-scale sample surveys which eventually led to the establishment of the National Sample Survey Office and Central Statistical Organisation. He developed a statistical technique called fractile graphical analysis which provides a graphical way of testing difference between groups. Additionally, he urged the industrial sector to employ statistical quality control to raise the calibre of its output. He served on the United Nations Statistics Commission as a member, Vice Chairman, and Chairman. Professor Mahalanobis received the Padma Vibhushan, one of India's highest distinctions, for his groundbreaking achievements, in 1968.²

Significance of statistics

Statistics are the backbone of evidence-based decision making, providing valuable insights into various aspects of society and the economy. They enable policymakers, researchers, and analysts to assess the performance of government programs, monitor social indicators, and measure economic progress. Statistics-based recommendations and conclusions are valued in all experimental settings. National Statistics Day emphasizes the need for accurate, reliable, and up-to-date data to drive informed policies and ensure the welfare of the Indian population. This could improve the quality of both theoretical and practical investigations in a variety of scientific subjects. Honouring this day draws attention from the public, particularly the younger generation, and aids in their understanding of the importance of statistics as well as the methods employed to assess the validity and scope of the statistical information all around them.

Promoting data literacy

National Statistics Day aims to promote data literacy and create awareness about the importance of statistical knowledge among the general public. Also, it spreads the awareness about the need of carefully observing and effectively utilising data in the fields of population studies, budgeting and finance, education, sports, medicine,

epidemiology, meteorology, life time analysis, agriculture, rainfall, soil conditions, natural disasters, pandemics, and so on. It seeks to encourage citizens to critically evaluate data, understand statistical concepts, and utilize data-driven insights in their daily lives. This will also enable people to understand the availability of data and the need of sharing information for the well-being of the society. By fostering a culture of data literacy, the day aims to empower individuals to make informed decisions, engage in evidence-based discussions, and contribute to the development of the nation.

Highlighting statistical achievements

On National Statistics Day, various government organizations, academic institutions, and research bodies showcase their statistical achievements and advancements. They present research papers, organize seminars, workshops, and conferences to discuss the latest trends and innovations in the field of statistics. This platform enables experts to exchange ideas, collaborate on statistical methodologies, and find innovative solutions to emerging challenges. This will encourage the younger generation to understand emerging concepts and methodologies and helps them identify the gaps so that they can develop their statistical skills in establishing new results.

Recognition and awards

The celebration of National Statistics Day offers a chance to honour and value the great contributions made by statisticians, researchers, and organisations. For exceptional and meritorious research activities in statistics, the Government of India bestows awards and scholarships. On this day, those who have made outstanding contributions to the research fields of statistics and data analysis are recognised.

An honour given annually on National Statistics Day is the 'Prof. P. C. Mahalanobis National Award in Official Statistics' for exceptional contributions to statistics. The Government of India's 'Mahalanobis International Award' honours a person for their lifetime contributions to statistics in a developing nation or region. Dr Arup Bose, Professor at Indian Statistical Institute, Kolkata has been selected to receive this honour in 2023.³ Professor C. R. Rao, a renowned Indian-American statistician, has been awarded 'The International Prize in Statistics,'⁴

the scientific equivalent of the Nobel Prize, for his outstanding contributions to statistics in 2023. These awards and honours serve as a testament to the importance of statistical research and its impact on society.

Conclusion

Commemorating India's Data Power on National Statistics Day showcases the crucial role of statistics in shaping the nation's development. It promotes data literacy and highlights statistical accomplishments while paying tribute to Professor Prasanta Chandra Mahalanobis and his contributions to the field. By recognizing the significance of statistics, the day emphasizes the need for reliable data, evidence-based decision-making, and a data-driven approach to ensure India's progress and prosperity. This day educates the public about current statistical trends and motivates aspiring statisticians across the nation to advance the development of the Indian statistical system.

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Conflicts of interest

The authors declare that there are no conflicts of interest.

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