# Research Methods and Techniques

Dr. Preeti Pachori

# RESEARCH METHODS AND TECHNIQUES

@ Author

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# RESEARCH METHODS AND TECHNIQUES

#### Dr. Preeti Pachori

Professor of Economics
Government Sarojini Naidu Girl's PG (Autonomous) College,
Bhopal (M.P.)



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#### ABOUT THE BOOK

Initially this book is devised as an introductory text for research students in social sciences, humanities, commerce and management streams at different Indian universities and institutes of higher learning. Supported by the facts, this book consists of the following chapters: Introduction to Research; Topic Selection; Analysis and Statement of the Problem in Research; Literature Review; Objectives; Research Methodologies; Work Plan; Research Techniques; Computer Applications; Glossary; and Bibliography etc.

Definitely, this will serve the purpose of one and all concerned.



#### ABOUT THE AUTHOR

Dr. Preeti Pachori is a professor of Economics at government Sarojini Naidu girls P.G. (autonomous) College Bhopal M.P. She has 35 years of teaching experience on PG and UG classes and 5 years of teaching experience on MPhil classes. Many students have completed their dissertation work on MA and MPhil under her guidance. She is also member of Board of Studies in Universities and autonomous

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Dr. Preeti Pachori



Advance Agriculture Economics

C Author

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- 6. Agricultural Growth in India
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  Cropping Pattern Shifts; Supply of Inputs, Pricing of inputs
  and Role of subsidies

#### ABOUT THE BOOK

The objective of this book is to provide thorough knowledge, understanding and formularise the basic concepts, theories and approaches of advance agriculture economics to students, researchers and scholars.

Based on prescribed syllabus this book consists of the following chapters: Agriculture and Economic Development: Nature and Scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Independence between agriculture and industry; agricultural development, and source of rural credit in India; Agricultural Production and Productivity: Agricultural production-resource use and efficiency; production function analysis in agriculture; factor combination and resource substitution; Agricultural Farm Size and Productivity: Relationship Laws of Returns, Supply Response of Individual Crops; Technical Change and Labour Absorption in Agriculture; Agricultural Marketing and Prices: Marketing and State Policy; Agricultural Markets; Regulated Markets; Marketed and Marketable Surplus; Marketing Channels, Price Spread, Behaviour of Agricultural Prices; Internal Terms of Trade: Terms of Trade between Agricultural and Non-Agricultural Prices; Need for State Intervention, Objectives of Agricultural Price Policy; Agricultural Growth in India: Recent trends in Agricultural Growth in India; Inter-regional Variation in Growth of Output and Productivity Cropping Pattern Shifts; Supply of Inputs, Pricing of inputs and Role of subsidies; NAS-Its Impact: Distribution of Gains from Technological Change; Role of Public Investment and Capital Formation in Indian Agriculture; Strategy of Agricultural Development; Sustainable agriculture and Food Security; Agriculture and External Sector: International Trade in Agricultural Commodities; Commodity Agreements; Globalisation of Indian Economy and Problems and Prospects of Indian Agriculture; Impact of World Trade Organization on Indian Agriculture; Glossary and Bibliography.

#### ABOUT THE AUTHOR



Dr. Preeti Pachori is a professor of Economics at government Sarojini Naidu girls P.G. (autonomous) College Bhopal, M.P. She has 35 years of teaching experience on PG and UG classes and 5 years of teaching experience on M.Phil classes. Many students have completed their dissertation work on MA and M.Phil under her guidance. She is also member of Board of Studies in Universities and autonomous colleges. Many of her papers have been published on research journals. She has also actively participated on many seminar, workshop and training programs. She is an office bearer of M.P. Government Collegiate Education Professor's Association. She actively participate in social work and NGO's as well.



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# METHODS OF DATA ANALYSIS

Dr. Preeti Pachori Meemansa Vyas



# METHODS OF DATA ANALYSIS

# Dr. Preeti Pachori

Professor of Economics,
Sarojini Naidu Govt. Girls PG Autonomous College, Bhopal
and

# Meemansa Vyas

Graduate in Engineering, Computer Science and Technology



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# Methods of Data Analysis

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#### 1. Introduction to Statistics

Definition, characteristics, objectives, scope and

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limitation of statistics; Meaning, definition and difference of descriptive and inferential statistics; characteristics, concept of statistical population and sample data: quantitative and qualitative; scale of measurement:nominal, ordinal, interval and ratio; presentation of data: Tabular and Graphical, Commutative frequency distribution and their graphical representation.

#### Methods of Data Analysis 2.

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Mean:- (the Arithmetic mean or "the average") meaning, assumption of "the averages", Methods, Limitations; Standard Deviation: meaning, definition, concept methods, limitations; Correction and Regression:meaning, assumptions and limitation of simple correlation and regression analysis; Pearson's product moment and Spearman's rank correlation Coefficient and their properties : partial and multiple correlation, lines of regression and properties of regression coefficients, multiple linear regression equation and coefficient of multiple determination. Sample Size Determination: - Sampling: - concept and uses of Sampling, difference between random and non-random sampling, simple random sampling, stratified random sampling and probability.

Probability Proportional to Size Sampling: meaning and construction of confidence interval for simple mean. Elementary applications based upon the distribution of Z, t, x2 and F (including ANOVA) Statistics

ABOUT THE BOOK

Statistics is a form of mathematical analysis that uses committed models, representations and synopses for a given set of experimental data or real-life studies. Statistics studies methodologies to gamer review, analyse and draw conclusions from data. Some matistical measures include the following: Mean, Regression analysis, Skewness, Kurtosis, Variance, Analysis of variance. It is the science of collecting, analysing, presenting, and interpreting data. Governmental needs for census data as well as information about a variety of economic activities provided much of the early impetus for the field of statistics. Currently the need to turn the large amounts of data available in many applied fields into useful information has standard both theoretical and practical developments in statistics.

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her papers have been published on research journals. She has also actively participated on many seminar, workshop and training programs. She is an office bearer of M.P. Government Collegiate Education Professor's Association. She actively participate in social work and NGO's as well.



Meemansa Vyas is graduated in Bachelor of Engineering. Computer Science and Technology and is pursuing PGDM in marketing. She has done her internship at Netlink Private Limited in Java technology. She is a member of Lions Club International (Fiza). She also has a life membership of International Red Cross Society. She is a youth member of Family Planning Association of India.



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