

**Sultan Chand & Sons** 

# Fundamentals of BUSINESS STATISTICS

For B.Com., B.Com.(H), BBA and Other Undergraduate Courses of all Indian Universities

> Dr. S.P. Gupta *Ex. Head & Dean* Faculty of Management Studies University of Delhi



SULTAN CHAND & SONS®

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Phones : 011-23281876, 23266105, 41625022 (Showroom & Shop) 011-23247051, 40234454 (Office)

E-Mail : sultanchand74@yahoo.com; info@sultanchandandsons.com

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# Preface

Statistical Methods are playing an ever-increasing role in framing suitable policies in a large number of diversified fields covering natural, physical and social sciences. Statistical techniques are also being used extensively by various Government Departments and Institutions in planning, organizing and controlling the present and future operations.

It gives me great pleasure to present the First Edition of this book entitled '*Fundamentals of Business Statistics*' for undergraduate students of Commerce, Economics & Management of Delhi University and other Universities having similar syllabus. The book would provide the readers an understanding of basic statistical techniques in data analysis and decision-making. It would also develop the necessary skills to apply the statistical tools of analysis and interpretation in practical life situations.

I am grateful to my most respected Guru Prof. Abad Ahmad who has always been a great source of inspiration, guidance and encouragement.

I would also like to thank the publishers M/s Sultan Chand & Sons, New Delhi who have taken lot of pains in bringing out this edition of the book. Last but not the least my special thanks to Mr. Sandeep Negi for helping me in preparing the manuscript and providing all-round help.

I strongly believe that the road to improvement is never ending. I will look forward and gratefully acknowledge all suggestions received to make it more useful.

I am indebted to the Almighty, the supreme Architect of the Universe, for infusing in me life and blood for the work I have been doing.

DR. S.P. GUPTA

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## STATISTICAL METHODS

#### Dr. S.P. Gupta

#### **Salient Features**

- The book has been written in a very simple and lucid style. The text material is self-explanatory and even the students learning statistics through distance education can follow it without much stress and strain.
- The treatment is non-mathematical in character and the readers can easily understand the text material without much taxing their minds.
- Besides good theory the book contains a large number of solved illustrations (to be exact, 885). These illustrations have been very carefully selected mainly from the latest examination question papers of various Universities all over India and neighbouring countries.
- This book is primarily meant to cater to the needs of under-graduate and post-graduate students of Commerce, Economics, Management and Professional Courses.

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- Collection of Data
- Sampling and Sample Designs
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- Diagrammatic and Graphic Presentation
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#### Volume II:

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- Partial and Multiple Correlation
- Statistical Decision Theory
- Non-Parametric Tests
- Revisionary Exercises
- Appendices.



### BUSINESS STATISTICS AND **OPERATIONS RESEARCH**

#### Dr. S.P. Gupta • Dr. P.K. Gupta • Dr. Man Mohan

#### About the Book

The text book on "Business Statistics and Operations Research" provides a conceptual understanding of basic techniques of Statistics and Operations Research for solving managerial and business problems. The book discusses comprehensively the essential topics of quantitative decision-making by using various illustrations and examples. The book covers complete syllabus of B.Com. & BBA prescribed by most Indian Universities.

#### **Salient Features**

- · Book is divided into two parts: Part I gives basic concepts of Statistics and Part II provides various Operations Research Techniques.
- There are detailed self contained chapters covering the syllabus completely.
- The language used in the text is simple and subject-matter has been presented in a lucid style.
- Special care has been taken to develop the concepts in an easy to understand manner.
- Chapter on Network Analysis is discussed in detail due to its importance in solving complex business problems.

#### Contents

**Business Statistics** 

- Introduction
- Classification and Tabulation
- Diagrammatic and Graphic Presentation
- Measures of Central Tendency
- Measures of Variation
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#### Appendix

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- Operations Research An Overview
- Linear Programming
- Linear Programming Problem Solution Methods
- Duality in Linear Programming
- Transportation Problem
- Assignment Problem
- Network Analysis PERT/CPM



#### **About the Book**

The First Edition of the book '*Fundamentals of Business Statistics*' provides a unique and innovative opportunity to develop the required skills and apply statistical techniques to decision-making problems. The book has been carefully designed to align with the syllabus for B.Com., B.Com.(H), BBA, and other undergraduate courses across all Indian Universities.

#### **Salient Features**

- O The matter has been presented in a very simple and lucid style and is self-explanatory.
- There are more than 400 solved illustrations carefully selected mainly from the question papers of various universities to enable the readers to acquire different types of skills.
- There are a variety of exercise questions (with Hints and Answers) at the end of each chapter. This
  would help the students to acquire proficiency and develop confidence that they can handle any
  type of problem.
- Latest examination questions up to 2024, have been covered either as Illustrations or 'Try Yourself' questions.

#### About the Author

**Dr. S.P. Gupta** (born 1942) has a brilliant academic record of teaching for more than 4 decades in Indian and Foreign Universities. He was a student of Shri Ram College of Commerce, University of Delhi. He obtained B.Com. (H) and M.Com. Degree with "Advanced Statistics" as specialization and taught for more than a decade in SRCC.

He was invited by the Tribhuvan University, Kathmandu, Nepal as visiting professor for a period of 2 years. He was also appointed visiting Professor in University of Milan, Italy for a period of 1 year. He attended prestigious International Teachers Program in Stockholm (Sweden) and Budapest, Hungary.

Dr. Gupta joined Faculty of Management Studies (FMS), University of Delhi from where he obtained Ph.D degree in Management and taught for about 3 decades. He has authored more than a dozen books in the field of Statistics for B.Com., M.Com., MBA, CA, ICWA courses, etc. He was also Head & Dean, Faculty of Management Studies, University of Delhi for a period of 3 years.

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: sultanchand74@yahoo.com

info@sultanchandandsons.com









