

Contents

Chapter	Pages
1. Business Statistics—What and Why	1–15
Introduction	1
Statistics Defined	2
Statistical Data	2
Statistical Methods	3
Statistics : Science or Art	4
Functions of Statistics	5
Scope of Statistics	6
(i) Statistics and State	6
(ii) Statistics in Business and Management	7
(iii) Statistics and Economics	9
(iv) Statistics and Physical Sciences	10
(v) Statistics and Natural Sciences .	11
(vi) Statistics and Research	11
(vii) Statistics and Other Uses	11
Statistics and the Computer	12
Limitations of Statistics	12
Distrust of Statistics	13
Problems	13
2. Collection of Data	16–36
Introduction	16
(a) Secondary Data	16
(b) Internal Data	17
(c) Primary Data	17
Designing a Questionnaire	18
Structured and Unstructured Questionnaires	19
Pre-Testing the Questionnaire	23
Specimen Questionnaire	24
Questionnaire 1	24
Questionnaire 2	27
Editing Primary Data	31
Problems	32
3. Presentation of Data	37–81
Introduction	37
Classification of Data	37
Types of Classification	37

CALCULATION OF REGRESSION EQUATION

Salesmen	Test Score X	$(X - \bar{X})$ x	x^2	Sales Y	$(Y - \bar{Y})$ y	y^2	
1	40	-20	400	2.5	-1.5	2.25	-30
2	70	+10	100	6.0	+2.0	4.00	-20
3	50	-10	100	4.0	0	0	0
4	60	0	0	5.0	1.0	1.00	0
5	80	+20	400	4.0	0	0	0
6	50	-10	100	2.5	-1.5	2.25	+15
7	90	+30	900	5.5	+1.5	2.25	+45
8	40	-20	400	3.0	-1.0	1.00	+20
9	60	0	0	4.5	+0.5	0.25	0
10	60	0	0	3.0	-1.0	1.00	0
$N = 10$	$\Sigma X = 600$	$\Sigma x = 0$	$\Sigma x^2 = 2,400$	$\Sigma Y = 40$	$\Sigma y = 0$	$\Sigma y^2 = 14$	$\Sigma xy = 0$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{600}{10} = 60; \bar{Y} = \frac{\Sigma Y}{N} = \frac{40}{10} = 4$$

$$b_{yx} = \frac{\Sigma xy}{\Sigma x^2} = \frac{130}{2,400} = 0.054$$

The regression equation of sales and test scores is given as :

$$Y - 4 = 0.054 (X - 60)$$

$$Y = 0.76 + 0.054 X$$

When X is 100, Y would be

$$Y = 0.76 + 0.054 (100) = 6.16.$$

Thus the most probable weekly sales volume if salesman makes a score of 100 is 6.16 thousand rupees.

Deviations taken from Assumed Means

When actual means of X and Y variables are in fractions, the calculations can be simplified by taking the deviations from the assumed mean. The value of b , i.e., the regression coefficient, will be calculated as follows :

$$\text{Regression equation of } X \text{ on } Y: (X - \bar{X}) = b_{xy} (Y - \bar{Y})$$

$$\text{where } b_{xy} = \frac{N \Sigma d_x d_y - \Sigma d_x \Sigma d_y}{N \Sigma d_y^2 - (\Sigma d_y)^2}$$

$$\text{Regression equation of } Y \text{ on } X: (Y - \bar{Y}) = b_{yx} (X - \bar{X})$$

$$\text{where } b_{yx} = \frac{N \Sigma d_x d_y - \Sigma d_x \Sigma d_y}{N \Sigma d_x^2 - (\Sigma d_x)^2}$$

Once the values of b_{xy} and b_{yx} are determined in the above manner, the regression equations can be obtained very easily.

Illustration. 4. A company wants to assess the impact of R & D expenditure on its annual profit. The following table presents the information for the last eight years :

Years	2010	2009	2008	2007	2006	2005	2004	2003
R & D expenditure (Rs. '000)	9	7	5	10	4	5	3	2
Annual Profit (Rs. '000)	45	42	41	60	30	34	25	20

Estimate the regression equation and predict the annual profit for 2009 for an allocated sum of Rs. 100,000 as R & D expenditure.

Solution. Let R & D expenditure be denoted by X and annual profit by Y .

B. Median	89
Calculation of Median—Ungrouped Data	90
Calculation of Median—Grouped Data	90
Merits and Limitations of Median	92
Related Positional Measures or Quantities	92
Computation of Quartiles, Deciles, Percentiles, etc.	93
Determination of Median, Quartiles, etc., Graphically	94
C. Mode	95
Calculation of Mode	96
Calculation of Mode—Ungrouped Data	96
Calculation of Mode—Grouped Data	97
Locating Mode Graphically	98
Merits and Limitations of Mode	99
Relationship among Mean, Median and Mode	99
D. Deometric Mean	99
Calculation of Geometric Mean	100
Compound Interest Formula	100
Applications of Geometric Mean	101
Combined Geometric Mean	102
Merits and Limitations of Geometric Mean	102
E. Harmonic Mean	103
Applications of Harmonic Mean	104
Merit and Limitations of Harmonic Mean	105
Relationship among the Averages	105
Progressive Average	106
Which Average to use ?	106
Arithmetic Mean	107
General Limitations of an Average	107
Problems	118
5. Measures of Variations	125–171
Significance of Measuring Variation	126
Properties of a Good Measure of Variation	127
Methods of Studying Variation	127
Absolute and Relative Measures of Variation	127
I. Range	128
Merits and Limitations of Range	128
Uses of Range	129
II. The Interquartile Range or Quartile Deviation	129
Computation of Quartile Deviation	130
Merits and Limitations of Quartile Deviation	131

III. The Average Deviation	131
Computation of Average Deviation—Ungrouped Data	132
Calculation of Average Deviation—Grouped Data	133
Merits and Limitations of Average Deviation	133
IV. The standard Deviation	134
Calculation of Standard Deviation – Ungrouped Data	134
Calculation of Standard Deviation—Grouped Data	136
Mathematical Properties of Standard Deviation	138
Relation between Measures of Variation	140
Merits and Limitations of Standard Deviation	142
Correcting Incorrect Value of Standard Deviation	142
Coefficient of Variation	143
V. Lorenz Curve	146
Which Measure of Variation to use ?	147
Problems	164
6. Skewness, Moments and Kurtosis	172–198
Introduction	172
Difference between Variation and Skewness	173
Measures of Skewness	173
Moments	177
For Ungrouped Data	177
For Grouped Data	177
Moments about Mean*	177
Moments about Arbitrary Point	178
Finding Central Moments from Moments about Arbitrary Point	178
Kurtosis	180
Measures of Kurtosis	181
Problems	194
7. Correlation Analysis	199–237B
Introduction	199
Significance of the Study of Correlation	199
Correlation and Causation	200
Types of Correlation	201
I. Scatter Diagram Method	203
Merits and Limitations of the Method	205
II. Karl Pearson's Coefficient of Correlation	205
When Deviations are taken from an Assumed Mean	207
Correlation of Bivariate Grouped Data	209
Assumptions of the Pearsonians Coefficient	210
Properties of the Coefficient of Correlation	211
Interpreting the Coefficient of Correlation	212
Coefficient of Correlation and Probable Error	212

Conditions for the Use of Probable Error	213
Merits and Limitations of the Pearsonian Coefficient	213
Coefficient of Determination*	214
III. Rank Correlation Coefficient	215
A. Where Actual Ranks are Given.	215
B. Where Ranks are not Given.	217
Equal Ranks or Tie in Ranks	217
Merits and Limitations of the Rank Method	219
When to Use Rank Correlation Coefficient	219
IV. Method of Least Squares	220
Lag and Lead in Correlation	220
Problems	233
8. Regression Analysis	238-271
Introduction	238
Difference between Correlation and Regression	239
Regression Analysis	239
The Linear Bivariate Regression Model	239
Regression Lines	240
Regression Equations	240
Regression Equations of Y on X	240
Regression Equation of X on Y	241
Deviations taken from Arithmetic Means of X and Y	243
Deviations taken from Assumed Means	244
Regression Coefficients	245
Regression Equations in Bivariate	248
Grouped Frequency Distributions	248
Standard Error of Estimate	250
Coefficient of Determination	251
Miscellaneous Illustrations	251
Problems	264
9. Index Numbers : Concepts and Applications	272-320
Introduction	272
Uses of Index Numbers	273
Classification of Index Numbers	274
Problems in the Construction of Index Numbers	274
Methods of Constructing Index Numbers	277
A. Unweighted Index Numbers	278
I. Simple Aggregative Method	278
Limitations of the Method	278
II. Simple Average of Relatives Method	279
Merits and Limitations of this Method	280

B. Weighted Index Numbers	280
I. Weighted Aggregative Index Numbers	280
II. Weighted Average of Relative Index Numbers	284
Merits of Weighted Average of Price Relatives Method	286
Quantity Index Numbers	286
Volume Index Numbers	287
Tests for Perfection	287
1. Time Reversal Test	287
2. Factor Reversal Test	288
3. Circular Test	289
The Chain Index Numbers	291
Steps in Constructing Chain Index	291
Conversion of Chain Index to Fixed Base Index	294
Merits and Demerits of the Chain Base Method	294
Base Shifting, Splicing and Deflating the Index Numbers	294
Base Shifting	294
Splicing	296
Use of Index Numbers in Deflating	297
Consumer Price Index Numbers	298
Meaning and Need	298
Utility of the Consumer Price Indices	299
Construction of a Consumer Price Index	299
Methods of Constructing the Index	300
Precautions while Using Consumer Price Index	302
Index Number of Industrial Production	303
Limitations of Index Numbers	304
Miscellaneous Illustrations	305
Problems	316
10. Business Forecasting and Time Series Analysis	321-386
Introduction	321
Steps in Forecasting	322
Requirements of a Good Forecasting System	322
Methods of Forecasting	323
Business Forecasting and Time Series Analysis	328
Components of Time Series	330
1. Secular Trend	331
Factors Affecting Trend	332
2. Seasonal Variations	333
3. Cyclical Variations	334
4. Irregular Variations*	335

Problems of Classification	336
Preliminary Adjustments before Analysing Time Series	336
Straight-line Trend-Methods of Measurement	337
Freehand or Graphic Method	337
Merits and Limitations of the Freehand Method	338
Method of Semi-Averages	339
Method of Least Squares	340
Merits and Limitations	344
Non-Linear Trend	345
1. Freehand or Graphic Method	345
Method of Moving Averages	345
Second Degree Parabola	348
Measuring Trends by Logarithms	350
Exponential Trends	350
Second Degree Curves Fitted to Logarithms	352
Growth Curves	352
Conversion of Annual Trend Values to Monthly Trend Values	353
Shifting the Trend Origin	353
Selecting Type of Trend	354
Choice of the Trend Period	354
Trend Extrapolation	354
Measurement of Seasonal Variations	355
Method of Simple Averages	356
Ratio-to-Trend Method	357
Merits and Limitations of the Ratio-to-Trend Method	359
Ratio-to-Moving Average Method	359
Average Method	363
Link Relatives Method	363
Which Method to use	365
Average in Computing Seasonals	365
Eliminating Seasonal Influences	366
Uses and Limitations of Seasonal Index	366
Measurement of Cyclical Variations	367
Residual Method	368
Reference Cycle Analysis or the National Bureau Method	368
Measurement of Irregular Variations	369
Selecting the Appropriate Forecasting Technique	370
Cautions while using Forecasting Techniques	371
Miscellaneous illustrations	372
Problems	380

II. Probability**What is Probability**

1. The Classical Approach
2. Relative Frequency Approach
3. The Axiomatic Approach*
4. The Personalistic Approach†

Elements of Set Theory**Roster or Tabulation Method****Rule or Defining Property Method****Universal set****Null Set****Subset****Equal Sets****Set Operations****Intersection of Sets****Disjoint sets****Union of sets****Difference of Two Sets****Counting Techniques****Factorials****Permutations****Combinations****Random Experiment****Events****Elementary Events****Compound Events****Mutually Exclusive Events****Collectively Exhaustive Events****Complementary Events****Equally likely Events****Probability Laws****Addition Law****Conditional Probability****Multiplication Law****Dependent Events****Independent Events****Bayes' Theorem****Miscellaneous Illustrations****Problems****12. Probability Distributions****Random Variable****387-414**

387

388

388

389

390

390

391

391

391

391

391

391

391

391

392

392

393

394

394

394

395

395

395

395

395

395

396

396

396

396

396

398

398

398

399

399

400

408

415-457

415

Probability Function	415
Discrete Probability Function	415
Probability Mass Function	416
Cumulative Mass Function	416
Continuous Probability Function	416
Probability Density Function	416
Cumulative Density Function	416
Expected Value and Variance	416
Properties of Expected Value and Variance	417
Binomial Distribution	417
Mean and Variance of Binomial Distribution	420
Poisson Distribution	423
Mean and Variance of the Poisson Distribution	424
Form of the Poisson Distribution	425
Negative Binomial Distribution	427
Multinomial Distribution	429
Hypergeometric Distribution	430
Normal Distribution	431
Relation between Binomial, Poisson and Normal Distribution	432
The Standard Deviation and the Normal Curve	433
Moments of the Normal Distribution	433
Properties of the Normal Distribution	434
Importance of Normal Distribution	435
Area under the Normal Curve	435
Applications of the Normal Distribution	437
Fitting of Normal Distribution	438
Uniform Distribution	439
Exponential Distribution	440
Miscellaneous Illustrations	440
Problems	451
13. Sampling and Sampling Distributions	458-486
Introduction	458
Purpose of Sampling	459
Principles of Sampling	459
Principle of Statistical Regularity	459
Principle of Inertia of Large Numbers	459
Methods of Sampling	460
Random Sampling Methods	460
I. Simple Random Sampling*	460
Methods of Obtaining a Simple Random Sample	461
II. Stratified Sampling	462

III. Systematic Sampling	463
IV. Multi-stage Sampling	464
Non-random Sampling Methods	465
I. Judgment Sampling	465
II. Quota Sampling	465
III. Convenience Sampling	466
Size of Sample	466
Merits of Sampling Method	466
Limitations of Sampling	467
Sampling and Non-sampling Errors	468
I. Sampling Errors	468
Causes of Bias	468
Avoidance of Bias	469
Method of Reducing Sampling Errors	469
II. Non-sampling Errors	470
Control of Non-sampling Errors	470
Sampling Distributions	471
The Population (Universe) Distribution	442
The Sample Distribution	472
The Sampling Distribution	473
Relationship between Population, Sample and Sampling Distributions	474
Sampling Distribution of the Mean	474
Distribution of Sample Medians	476
Distribution of Sample Standard Deviations	477
Sampling Distribution of the Difference of the Two Means	477
Sampling Distribution of the Number of Successes	478
Sampling Distribution of Proportions	479
Sampling Distribution of the Difference of Two Proportions	480
Miscellaneous Illustrations	481
Problems	484
14. Estimation of Parameters	487-499
Introduction	487
Properties of a Good Estimator	487
Method of Maximum Likelihood	489
Confidence Limits for Population Mean	491
Confidence Limits for Population Proportion	492
Confidence Limits for Difference of Two Means	493
Confidence Limits for Difference of Two Proportions	493
Determination of a Proper Sample Size	494
Miscellaneous Illustrations	495
Problems	496

15. Tests of Hypothesis	500–517
Introduction	500
Procedure of Hypothesis Testing	500
Type I and Type II Errors	502
One-Tailed and Two-Tailed Tests	503
Tests of Hypothesis Concerning Large Samples	504
Testing Hypothesis about Population Mean	504
Testing Hypothesis about the Difference between Two Means	505
Test of Hypothesis Concerning Attributes	506
Testing Hypothesis about a Population Proportion	507
Testing Hypothesis about the Difference Between Two Proportions	507
Miscellaneous Illustrations	509
Problems	514
16. Small Sampling Theory	518–542
Introduction	518
Properties of t -Distribution	519
Confidence Interval for the Difference between the Two Means	523
The F -Distribution	528
Testing of Hypothesis for Equality of two Variances	529
Miscellaneous Illustrations	530
Problems	537
17. Chi-Square Test	543–575
Introduction	543
The Chi-square Distribution	543
Important Properties of Chi-square Distribution	543
Chi-square Test	544
Conditions for the Application of χ^2 Test	545
Use of the Chi-square Table	545
Yates's Correction for Continuity	545
Grouping when Frequencies are Small	546
Cautions while Applying χ^2 Test	553
Miscellaneous Illustrations	554
Problems	569
18. Analysis of Variance	576–602
Introduction	576
Assumptions in Analysis of Variance	576
Computation of Analysis of Variance	576
One-Way Classification	577
(1) Calculate the variance between the samples	577
(2) Calculate the variance within the samples	577

(3) Calculate the F -ratio	578
(4) Compare the calculated value of F	578
The Analysis of Variance Table	579
Coding of data	581
Two-Way Classification	585
Miscellaneous Illustrations	588
Problems	595
19. Statistical Quality Control	603–638
Introduction	603
Control Charts	605
Types of Control Charts	607
Setting up a Control Procedure	607
R -Chart	611
C -Chart	613
p -Chart	615
Benefits and Limitations of Statistical Quality Control	618
Limitations	619
Acceptance Sampling	619
Role of Acceptance Sampling	620
Types of Acceptance Sampling Plans	620
Advantages of Double Sampling Plan	621
Selection of a Sampling Plan	622
Construction of an OC Curve	622
The Operating Characteristic (OC) Curve	622
AQL and LTPD	622
Shape of an Ideal OC Curve	623
Shape of a Typical OC Curve	623
Evaluating an acceptance sampling plan	625
Miscellaneous Illustrations	625
Problems	634
20. Partial and Multiple Correlation and Regression	639–658
Introduction	639
Partial Correlation	639
Partial Correlation Coefficients	640
Partial Correlation Coefficients in more than three variables	642
Second-order Partial Correlation Coefficients	642
Multiple Correlation	643
Coefficient of Multiple Correlation	644
Coefficient of Multiple Determination	645
Multiple Regression	646
Normal Equations for the Least Square Regression Plane	647

Other Equations of Multiple linear Regression	648
Generalization for More Than Three Variables	648
Relationship between Partial and Multiple Correlation Coefficients	649
Reliability of Estimates	651
Miscellaneous Illustrations	651
Problems	657
21. Statistical Decision Theory	659-685
Introduction	659
(a) Decision-making under Certainty	660
(b) Decision-making under Risk	660
(c) Decision-making under Uncertainty	663
(d) Decision-making under Conflict (Theory of Games)	665
Two-Person Zero-Sum Game	666
A Game with a Pure Strategy	666
A Game with a Mixed Strategy	667
Method 1 (Algebraic)	668
Method 2 (Calculus Method)	668
Method 3 (Graphical Method)	670
Dominance Principle	671
Miscellaneous Illustrations	672
Problems	676
Questions Paper	686
APPENDIX	687-702
Statistical Tables	687
Important Properties of Chi-square Distribution	693
Chi-square Test	693
Conditions for the Application of χ^2 Test	693
Use of the Chi-square Table	693
Yates's Correction for Continuity	694
Grouping when Frequencies are Small	694
Caution while Applying χ^2 Test	694
Miscellaneous Illustrations	699
Problems	699
Introduction	700
Partial Correlation	700
Partial Correlation Coefficients	700
Partial Correlation Coefficients in more than three variables	700
Second-order Partial Correlation Coefficients	700
Multiple Correlation	700
Coefficient of Multiple Correlation	700
Coefficient of Multiple Determination	700
Multiple Regression	700
Normal Equations for the Least Square Regression Plane	700

Operations Research

Techniques for Management

V.K. KAPOOR

*Co-author of Business Mathematics, Statistics,
Fundamentals of Mathematical Statistics, etc.*

7th Revised Edn Pages xviii + 1077 Chapters 20 ISBN 81-7014-828-6

The book completely covers the syllabi of M.B.A., M.M.S. and M.Com., C.A. Engineering, Computer Science & Services Exams of all Indian Universities. This well-organised and profusely illustrated book presents updated account of the Operations Research Techniques.

Special Features

It is lucid and practical in approach. Wide variety of carefully selected, adapted and specially designed problems with complete solutions and detailed workings. 221 Worked examples are expertly woven into the text. Useful sets of 740 problems as exercises are given.

Contents

Introduction to Operations Research • Linear Programming : Graphic Method • Linear Programming : Simplex Method • Linear Programming : Duality • Transportation Problems • Assignment Problems • Sequencing Problems • Replacement Decisions • Queuing Theory • Decision Theory and Decision Analysis • Game Theory • Inventory Management • Statistical Quality Control • Investment Project Management • PERT & CPM • Simulation • Work Study • Value Analysis • Markov Analysis • Goal Integer and Dynamic Programming • Appendix : Hints and Answers to Selected Questions.

Problems and Solutions in Operations Research

V.K. KAPOOR

Fourth Rev. Edn. 800 Solved Problems Pp. xii + 835 ISBN 81-7014-605-4

Salient Features

- The book fully meets the course requirements of Management and Commerce students.
- Working rules, aid to memory, short-cuts, alternative methods are special attractions of the book.
- Ideal book for the students involved in independent study.

Linear Programming and Decision Making

Dr. A.S. NARAG

Ex Dean, Faculty of Management Studies, University of Delhi, Delhi

Fourth & Revised reprint Edn. 2005 Pp. x + 242 Chapters 8 ISBN 81-7014-851-0

It has been written for use primarily in Management, Commerce, Economics, Engineering and other professional disciplines.

This book deals with Linear Programming and its extensions like transportation model, assignment models, etc. which are very well explained with illustrative examples which closely resemble real world problems.

Strategic Planning and Management

Dr. P.K. GHOSH, M.A., Ph.D.

*Formerly Professor of Commerce, University of Delhi
Delhi School of Economics, Delhi*

10th Revised Edn. Reprint

Pp. xxiv + 728

ISBN 81-8054-069-3

It is addressed primarily to the post-graduate students of Indian universities and Institutes of Management. However, the text has been put across in such a manner that Indian executives will also find it stimulating.

Special Features

- The book provides an analytical framework for understanding a total organisation in the complex dynamic environment of today. The analysis is in terms of the multiple decision variables concerning strategic management.
- Updating of environmental configuration like SEBI Guidelines for Book-building, Safety-net or Buy-back arrangement and Government Policy on foreign technology agreement.
- Relevant environment factors of significance to corporate houses in the present-day context.
- Turnaround of Sick Industrial Companies, Corporate Governance, and Universal Inner Structure of Effective Leaders.
- Suggestions on 'Four Routes' to securing strategic advantage and 'Generic Strategies' for sustainable competitive advantage.
- Case studies of corporate response to competitiveness.
- Nine new cases reflecting the current reality and 38 others.

Contents

Process of Strategic Management : An Overview • Strategic Vision, Corporate Missions, Objectives and Goals • Social Aspect of Strategic Management • Environmental Analysis : Dynamic Setting of Business • Analysis of Internal Resources : Strengths and Weaknesses • Strategic Options : Formulation of Strategy • External Growth Strategy : Merger, Acquisition, Joint Venture • Choice of Strategy • Implementation of Strategy : Some Major Aspects • Functional Policies—Production and Purchasing • Marketing Policy • Financial Policy • Human Resource Management Fusion of Personnel and Industrial Relations Policy • Review and Evaluation of Strategy • Customer Relationship Management • Strategic Management Process : The Case Method • Test Questions and Cases • Index.

Entrepreneurial Development in India

Dr. C. B. GUPTA
M.Com., Ph.D.

Reader,

*Shri Ram College of Commerce,
University of Delhi, Delhi.*

Dr. N.P. SRINIVASAN
M.Com., Ph.D.

*IFCI Professor of Commerce,
University of Madras, Madras*

5th Edn. Reprint

Pp. xii + 618

ISBN 81-7014-801-4

Contents

Entrepreneurial Culture and Structure • Competing Theories of Entrepreneurship • Entrepreneurial Traits and Types • Entrepreneurial Motivation • Establishing Entrepreneurial System • Project Identification and Classification • Project Formulation • Project Design and Network Analysis • Project Appraisal • Factory Design and Layout • Steps for Starting a small industry • Selection of Types of organisation • Incentives and Subsidies • Exports and Imports • Women Entrepreneurs • Rural Entrepreneurship • Growth of Entrepreneurs • Entrepreneurial Development Programmes in India • Financial Analysis • Social Cost Benefit Analysis • Sources of Project Finance • Institutions Assisting Entrepreneurs • Case Studies of Entrepreneurs • Model Feasibility Reports • Bibliography • Index • Supplement • Suggested Answers to Questions Papers.

Feedback Prize Contest

NO ENTRY FEE

We propose to mail our readers a 'Supplement' relevant to the subject-matter of this book or 'A Word about Your Career' or 'Pearls of Wisdom' or 'Secrets of Success' on receipt of your 'Feedback'. Further, you can win a prize too !! For this purpose, please fill this coupon and send it along with your 'Feedback' to us at **M/s Sultan Chand & Sons, 23, Daryaganj, New Delhi-110002**, at an early date. To avoid duplication, please inform what you had received earlier. This is without obligation.

How did you come to know of this book : Recommended by your Teacher/
Friend/Bookseller/Advertisement

Date of Purchase

Year/Edition of the book purchased by you

Month and Year of your next examination

Name & Address of the Supplier

Name of the Teacher who recommended you this book

Name and Address of your School/Institution

Your Name
(IN BLOCK LETTERS)

Your Residential Address
(IN BLOCK LETTERS)

Course for which you are studying

Please enclose latest Syllabus/Question paper

I bought this book because

Feedback

Now You can win a prize too !!

Dear Reader

Reg. **Business Statistics** by S.P. Gupta & M.P. Gupta.

Has it occurred to you that you can do the students/the future readers a favour by sending your suggestions/comments to improve the book ? In addition, a surprise gift awaits you if you are kind enough to let us have your frank assessment, helpful comments/ specific suggestions in detail about the book on a separate sheet as regards the following :

1. Which topics of your syllabus are inadequately or not discussed in the book from the point of view of your examination ?

.....
.....
.....

2. Is there any factual inaccuracy in the book ? Please specify.

.....
.....
.....

3. What is your assessment of this book as regards the presentation of the subject-matter, expression, precision and price in relation to the other books available on this subject ?

.....
.....
.....

4. Which competing books you regard as better than this ? Please specify their authors and publishers.

1.
2.
3.

5. Any other suggestion/comment you would like to make for the improvement of the book ?

.....
.....
.....

Further, you can win a prize for the best criticism on presentation, contents or quality aspect of this book with useful suggestions for improvement. The prize will be awarded each month and will be in the form of our publications as decided by the Editorial Board.

Please feel free to write to us if you have any problem, complaint or grievance regarding our publications or a bright idea to share. We work for you and your success and your Feedback are valuable to us.

Thanking you,

Yours faithfully
Sultan Chand & Sons