

Contents

1	Introduction and Basic Sampling Strategies	1
1.1	Aim and Outline of This Book	1
1.2	Population and Parameters	2
1.3	Sampling Design and Sampling Scheme	4
1.4	Estimation	5
	References	12
2	Sampling Designs Dependent on Sample Moments of Auxiliary Variables	15
2.1	Sampling Design Proportional to Sample Mean	15
2.2	Sampford's Sampling Design	17
2.3	Sampling Design Proportional to Sample Variance	17
2.4	Sampling Designs Proportional to the Generalized Variance	19
	References	28
3	Sampling Designs Based on Order Statistics of Auxiliary Variable	31
3.1	Basic Properties of Order Statistics	31
3.2	Sampling Design Proportional to Function of One-Order Statistic	33
3.3	Sampling Design Proportional to Function of Two-Order Statistics	38
3.4	Sampling Design Proportional to Function of Three-Order Statistics	45
	References	49
4	Simulation Analysis of the Efficiency of the Strategies	51
4.1	Description of the Simulation Experiments	51
4.2	Efficiency of Estimation Strategies Dependent on Sample Moments or Order Statistics	52

4.3	Efficiency of Estimation Strategies Dependent on the Sum of Order Statistics	56
4.4	Efficiency Estimation of Domain Mean.	66
4.5	Estimation of Quantiles.	70
4.6	Conclusions.	76
	References	78