

I. ELEMENTARY DESCRIPTIVE STATISTICS

CONTENTS

Statistics is a group of methods for collecting, summarizing, presenting, and analyzing data. Statistics is also part of analysis of some statistic characteristics derived from the data. A population is defined by the collection of all objects of interest, whereas a sample is a portion of the population available for analysis.

Foreword	4
1. Elementary descriptive statistics	5
2. Probability	13
3. Discrete probability distributions	19
4. Continuous probability distributions	25
5. Elements of sampling and statistical inference	31
6. Hypotheses testing	39
7. Analysis of variance	49
8. Simple linear regression	55
9. Multiple linear regression	63
10. Time series analysis	69
11. Index numbers	79
12. Nonparametric methods	87
13. Elements of statistical decision theory	95
Czech-English dictionary	103
Literature	121

- clearly, the following eight situations may occur:
 - OOG: one variable is observed at one object at fixed time (a single observation).
 - OOV: one variable is observed at one object at different times (univariate analysis of time series)
 - EVO: many variables are observed at one object at fixed time (categorical analysis)
 - VOV: one variable is observed at many objects at fixed times (univariate statistical analysis)
 - CVV: many variables are observed at one objects at different times (multivariate analysis of time series)