

Statistics — Marcelo Fernandes

Data analysis

Graphical analysis: time series plots and histograms

Descriptive statistics: moments, quantiles and frequency tables

Central tendency measures: sample mean, median and mode

Dispersion measures: sample variance, standard deviation and range

Association measures: linear and rank correlation

Sampling issues: Chebishev's theorem

Probability theory

Overview of set theory: sample space and events

Relative frequency and event likelihood

Conditional probability: Bayes rule and independence

Random variables: discrete and continuous distributions

Statistical inference

Inference: sample \times population moments

Estimation: maximum likelihood \times method of moments

Asymptotic results: law of large numbers and central limit theorem

Hypothesis testing and confidence intervals

Main reference

Hildebrand & Ott, *Statistical Thinking for Managers*, 1998.

Additional references

Becker & Harnett, *Business and Economics Statistics with Computer Applications*, 1987.

Meyer, *Probabilidade: Aplicações à Estatística*, 1983.