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2.7. Rotation of Quadratic Forms2.8. Elements of Multivariate Normal Theory; 2.8.1. The Multivariate Normal Distribution; 2.8.2. Sampling from the Multivariatc Normal; 2.9. Thc Kronecker Product; 2.10. Simultaneous Decomposition of Two Grammian Matrices; 2.11. The Complex Muitivariate Normal Distribution; 2.11.1. Complex Matrices, Hermitian Forms; 2.11.2. The Complex Multivariate Normat; Exercises; 3. The Ordinary Principal Components Model; 3.1. Introduction; 3.2. Principal Components in the Population; 3.3. Isotropic Variation; 3.4. Principal Components in the Sample; 3.4.1. Introduction
3.4.2. The General Model3.4.3. The Effect of Mean and Variances on PCs; 3.5. Principal Components and Projections; 3.6. Principal Components by Least Squares; 3.7. Nonlinearity in the Variables; 3.8. Alternative Scaling Criteria; 3.8.1. Introduction; 3.8.2. Standardized Regression Loadings; 3.8.3. Ratio Index Loadings; 3.8.4. Probability Index Loadings; Exercises; 4. Statistical Testing of the Ordinary Principal Components Model; 4.1. Introduction; 4.2. Testing Covariance and Correlation Matrices; 4.2.1. Testing for Complete Independence; 4.2.2. Testing Sphericity
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4.6.1. Assessing for Univariate Normality

Sommario/riassunto

Statistical Factor Analysis and Related Methods Theory and Applications In bridging the gap between the mathematical and statistical theory of factor analysis, this new work represents the first unified treatment of the theory and practice of factor analysis and latent variable models. It focuses on such areas as:* The classical principal components model and sample-population inference* Several extensions and modifications of principal components, including Q and three-mode analysis and principal components in the complex domain* Maximum likelihood and weighted factor models, fact