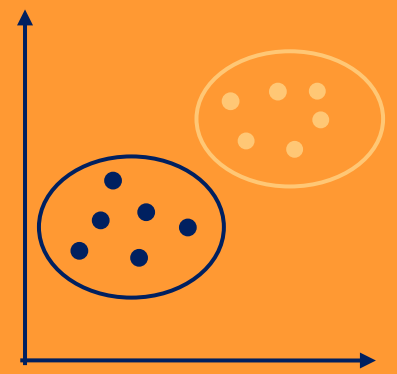
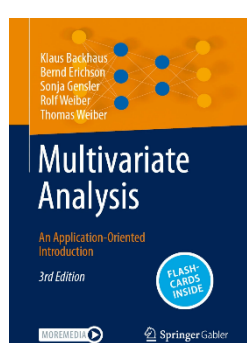


CLUSTER ANALYSIS



MAIN RESEARCH QUESTION	CAN DIFFERENT OBJECTS BE GROUPED INTO HOMOGENEOUS GROUPS (CLUSTERS)?
EXAMPLE	FORMATION OF PERSONALITY TYPES BASED ON PSYCHOGRAPHIC CHARACTERISTICS.
TYPE OF ANALYSIS	STRUCTURE-DISCOVERING METHOD
MEASUREMENT LEVEL OF THE VARIABLES	ALL TYPES OF SCALE LEVELS (NOMINAL, ORDINAL, METRIC) (NO DISTINCTION BETWEEN DEPENDENT AND INDEPENDENT VARIABLES)
RECOMMENDATIONS	<ul style="list-style-type: none">▪ IN A FIRST STEP, APPLY THE SINGLE-LINKAGE METHOD (NEAREST NEIGHBOR) TO IDENTIFY OUTLIERS.▪ ELIMINATE OUTLIERS AND SUBSEQUENTLY APPLY ANOTHER AGGLOMERATIVE PROCEDURE (E.G. WARD'S METHOD) TO THE REDUCED DATA SET.▪ OPTIMIZE THE CLUSTERING SOLUTION BY USING THE K-MEANS METHOD.▪ ASSESS THE ROBUSTNESS OF THE CLUSTERING SOLUTION.▪ POSSIBLY APPLY DISCRIMINANT ANALYSIS TO THE CLUSTER SOLUTION TO ANALYZE DISTINGUISHING FEATURES OF THE CLUSTERS.
KEYWORDS	AGGLOMERATION SCHEDULE, AVERAGE LINKAGE, CALINSKI & HARABASZ RULE, CENTROID CLUSTERING, CITY BLOCK METRIC (L1-NORM), COMPLETE LINKAGE, DENDROGRAM, DISTANCE MEASURES, ELBOW CRITERION, EUCLIDEAN DISTANCE (L2-NORM), JACCARD COEFFICIENT, K-MEANS, MEDIAN CLUSTERING, MINKOWSKI METRIC (L-NORMS), SINGLE LINKAGE, OUTLIERS, PHI-SQUARE STATISTIC, PROXIMITY MEASURES, RUSSEL AND RAO COEFFICIENT, SCREE PLOT, SIMILARITY MEASURES, SIMPLE MATCHING COEFFICIENT, TEST OF MOJENA, TWO-STEP CLUSTERING, VARIANCE CRITERION, WARD'S METHOD



BACKHAUS, KLAUS; ERICHSON, BERND; GENSLER, SONJA; WEIBER, ROLF; WEIBER, THOMAS (2025)
MULTIVARIATE ANALYSIS – AN APPLICATION-ORIENTED INTRODUCTION, SPRINGER: BERLIN

WWW.MULTIVARIATE-METHODS.INFO