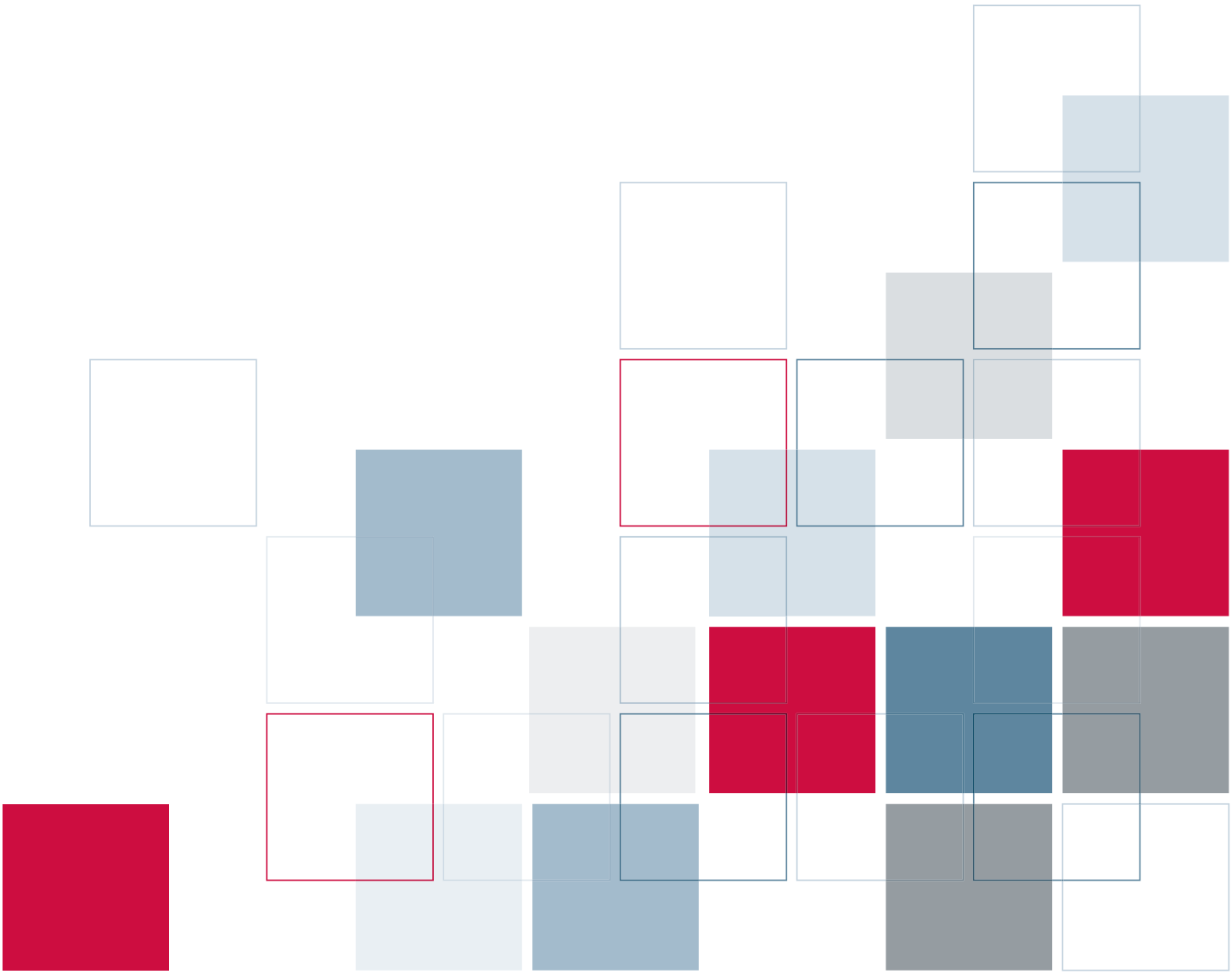
SPSS Statistics Base 17.0 User's Guide



Preface

SPSS Statistics 17.0

SPSS Statistics 17.0 is a comprehensive system for analyzing data. SPSS Statistics can take data from almost any type of file and use them to generate tabulated reports, charts and plots of distributions and trends, descriptive statistics, and complex statistical analyses.

This manual, the *SPSS Statistics Base 17.0 User's Guide*, documents the graphical user interface of SPSS Statistics. Examples using the statistical procedures found in SPSS Statistics Base 17.0 are provided in the Help system, installed with the software.

In addition, beneath the menus and dialog boxes, SPSS Statistics uses a command language. Some extended features of the system can be accessed only via command syntax. (Those features are not available in the Student Version.) Detailed command syntax reference information is available in two forms: integrated into the overall Help system and as a separate document in PDF form in the *Command Syntax Reference*, also available from the Help menu.

SPSS Statistics Options

The following options are available as add-on enhancements to the full (not Student Version) SPSS Statistics Base system:

Regression provides techniques for analyzing data that do not fit traditional linear statistical models. It includes procedures for probit analysis, logistic regression, weight estimation, two-stage least-squares regression, and general nonlinear regression.

Advanced Statistics focuses on techniques often used in sophisticated experimental and biomedical research. It includes procedures for general linear models (GLM), linear mixed models, variance components analysis, loglinear analysis, ordinal regression, actuarial life tables, Kaplan-Meier survival analysis, and basic and extended Cox regression.

Custom Tables creates a variety of presentation-quality tabular reports, including complex stub-and-banner tables and displays of multiple response data.

Forecasting performs comprehensive forecasting and time series analyses with multiple curve-fitting models, smoothing models, and methods for estimating autoregressive functions.

Categories performs optimal scaling procedures, including correspondence analysis.

Conjoint provides a realistic way to measure how individual product attributes affect consumer and citizen preferences. With Conjoint, you can easily measure the trade-off effect of each product attribute in the context of a set of product attributes—as consumers do when making purchasing decisions.

Exact Tests calculates exact *p* values for statistical tests when small or very unevenly distributed samples could make the usual tests inaccurate. This option is available only on Windows operating systems.

Missing Values describes patterns of missing data, estimates means and other statistics, and imputes values for missing observations.

Complex Samples allows survey, market, health, and public opinion researchers, as well as social scientists who use sample survey methodology, to incorporate their complex sample designs into data analysis.

Decision Trees creates a tree-based classification model. It classifies cases into groups or predicts values of a dependent (target) variable based on values of independent (predictor) variables. The procedure provides validation tools for exploratory and confirmatory classification analysis.

Data Preparation provides a quick visual snapshot of your data. It provides the ability to apply validation rules that identify invalid data values. You can create rules that flag out-of-range values, missing values, or blank values. You can also save variables that record individual rule violations and the total number of rule violations per case. A limited set of predefined rules that you can copy or modify is provided.

Neural Networks can be used to make business decisions by forecasting demand for a product as a function of price and other variables, or by categorizing customers based on buying habits and demographic characteristics. Neural networks are non-linear data modeling tools. They can be used to model complex relationships between inputs and outputs or to find patterns in data.

EZ RFM performs RFM (receny, frequency, monetary) analysis on transaction data files and customer data files.

Amos™ (**a**nalysis of **mo**ment **s**tructures) uses structural equation modeling to confirm and explain conceptual models that involve attitudes, perceptions, and other factors that drive behavior.

Installation

To install the Base system, run the License Authorization Wizard using the authorization code that you received from SPSS Inc. For more information, see the installation instructions supplied with the Base system.

Compatibility

SPSS Statistics is designed to run on many computer systems. See the installation instructions that came with your system for specific information on minimum and recommended requirements.

Serial Numbers

Your serial number is your identification number with SPSS Inc. You will need this serial number when you contact SPSS Inc. for information regarding support, payment, or an upgraded system. The serial number was provided with your Base system.

Customer Service

If you have any questions concerning your shipment or account, contact your local office, listed on the Web site at *http://www.spss.com/worldwide*. Please have your serial number ready for identification.

Training Seminars

SPSS Inc. provides both public and onsite training seminars. All seminars feature hands-on workshops. Seminars will be offered in major cities on a regular basis. For more information on these seminars, contact your local office, listed on the Web site at *http://www.spss.com/worldwide*.

Technical Support

Technical Support services are available to maintenance customers. Customers may contact Technical Support for assistance in using SPSS Statistics or for installation help for one of the supported hardware environments. To reach Technical Support, see the Web site at *http://www.spss.com*, or contact your local office, listed on the Web site at *http://www.spss.com/worldwide*. Be prepared to identify yourself, your organization, and the serial number of your system.

Additional Publications

The *SPSS Statistical Procedures Companion*, by Marija Norušis, has been published by Prentice Hall. A new version of this book, updated for SPSS Statistics 17.0, is planned. The *SPSS Advanced Statistical Procedures Companion*, also based on SPSS Statistics 17.0, is forthcoming. The *SPSS Guide to Data Analysis* for SPSS Statistics 17.0 is also in development. Announcements of publications available exclusively through Prentice Hall will be available on the Web site at *http://www.spss.com/estore* (select your home country, and then click Books).

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