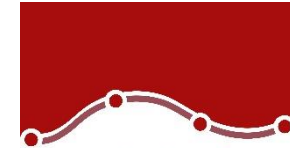




SPSS



**Statistics for
Data Analysis**

WHO WE ARE

SPS is an Italian center of statistical data analysis with more than 20 years of experience.

SPS was born in 1994 as SPSS Italia and it was the only reseller in Italy for SPSS software suite, authorised by SPSS inc.

Today SPS is an IBM Gold Business Partner, Software Support Provider and Expert Level in Data Science & Business Analytics.

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DATASHEET

Statistics Bootstrapping



Statistics for Data Analysis

Organizations can solve a wide array of business and research problems with the solution Statistics for Data Analysis.

Compared to other statistical software, the solution is easier to use, has a lower total cost of ownership and more comprehensively addresses the entire analytical process, from planning to data collection to analysis, reporting and deployment.

Organizations of all types rely on Statistics for Data Analysis to help increase revenue, outmaneuver competitors, conduct research and make better decisions. With decades of built-in expertise and innovation, it's a leading choice for reliable statistical analysis.

Statistics Base is part of the solution Statistics for Data Analysis, which consists of:

- Software license
- Add-On
- SPS Service Program

This comprehensive, easy-to-use solution includes many different procedures and tests to help users solve complex business and research challenges.

Highlights Statistics for Data Analysis

- Get support through every step of the analytical process.
- Carry out essential analyses from an intuitive graphical interface.
- Select from more than a dozen integrated products to make specialized analyses faster and easier.



Statistics for Data Analysis

The solution analytical capabilities to meet the analysis requirements of any type of organization, from basic tools for solving common problems to advanced analytical techniques that enable all type of organization to address complex challenges.

Statistics for Data Analysis can help you:

- Analyze your data with new and advanced statistics, including a variety of new features within UNIANOVA methods
- Integrate better with third-party applications, including stronger integration with Microsoft Office
- Save time and effort with productivity enhancements:
 - More attractive and modern-looking charts in Chartbuilder
 - New groundbreaking features in Statistics Amos 25
 - Data and syntax editor enhancements
 - Accessibility improvements for the visually impaired
 - Updated merge user interface
 - Simplified toolbars

Statistics for Data Analysis can access quickly, manage and analyze any kind of dataset, including survey data, corporate databases or data downloaded from the web.

In addition, the software can process Unicode data. This eliminates variability in data due to language-specific encoding and enables your organization to view, analyze and share data written in multiple languages.

Business Benefit Statistics for Data Analysis

- Support business decisions with data-based analytics for improved outcomes.
- Be more confident in your results by incorporating data from many different sources, including geospatial information, in your analysis and using proven, tested techniques to perform your analysis.
- Save time and effort with capabilities that enable experienced analysts to develop procedures or dialogs that others can use to speed through repetitive tasks.
- Give results greater impact by using visualization capabilities that clearly show others the significance of your findings.



Statistics Bootstrapping

Datasheet

Ensure the stability of your models

Statistics Bootstrapping helps you create more reliable models that generate the most accurate results for your important projects. The models your organization creates drive important decisions. They may be used to shape public policy, to prevent the spread of disease, or to determine a multi-million dollars investment. It's important that your models are stable, so that they will produce accurate, reliable results. Bootstrapping is a useful technique for testing model stability, and Statistics Bootstrapping makes it simple and easy to do.

This module of Statistics for Data Analysis provides an efficient way to ensure that your models are stable and reliable. It estimates the sampling distribution of an estimator by re-sampling with replacement from the original sample. With Statistics Bootstrapping, you can reliably estimate the standard errors and confidence intervals of a population parameter like a mean, median, proportion, odds ratio, correlation coefficient, regression coefficient, and numerous others.

Highlights:

- Bootstrap a number of Statistics for Data Analysis procedures.
- Reliably estimate standard errors and confidence intervals.
- Determine the variability of a statistic using resampling with replacement.
- Eliminate outliers and anomalies



Statistics Bootstrapping

Datasheet

Reliable models for critical projects

When you require the most reliable model be created to predict an outcome or map a sample to a population, simply running the model once on the sample data may not be the best approach because results are dependent on your sample data. Resampling with replacement will provide you with more accurate estimates of the reliability of your data.

A more complete view of your data

Computing a statistic on a large number of alternate datasets helps you determine the variability of that statistic. Through re-sampling, Statistics Bootstrapping can create thousands of alternate versions of your dataset, providing a more accurate view of what is likely to exist in the population. (Its default setting is 1.000 samples, but this setting can be modified upward or downward.) Statistics Bootstrapping also helps you eliminate the outliers and anomalies that can degrade the accuracy or applicability of your analysis. As a result, you have a clearer view of your data for creating the model you are working with.



Statistics Bootstrapping

Datasheet

Statistics Bootstrapping provides the ability to bootstrap a number of analytical procedures found throughout the Statistics for Data Analysis solution, including:

Descriptive Procedures	Product
Descriptive	Statistics Base
Frequencies	Statistics Base
Examine	Statistics Base
Means	Statistics Base
Crosstabs	Statistics Base
T-Test	Statistics Base
Correlations/ Nonparametric Correlations	Statistics Base
Partial Correlations	Statistics Base

Table 1. Descriptive Procedures



Statistics Bootstrapping

Datasheet

Statistics Bootstrapping provides the ability to bootstrap a number of analytical procedures found throughout the Statistics for Data Analysis solution, including:

Descriptive Procedures	Product
One-Way	Statistics Base
UniAnova	Statistics Base
GLM	Statistics Advanced
Regression	Statistics Regression
Nominal Regression	Statistics Regression
Discriminant	Statistics Base
Logistic Regression	Statistics Regression
Bynary Multi-nominal Logistic Ordinal Regression	Statistics Base
GENLIN	Statistics Advanced
Linear Mixed Models	Statistics Advanced
Cox Regression	Statistics Advanced

Table 2. Modelling Procedures



Statistics for Data Analysis solution

Add more analytical power, as you need it, with optional modules and stand-alone software from the Statistics for Data Analysis family.

Statistics Base

Statistics Base includes the core capabilities to take the analytical process from start to finish. It is easy to use and includes a broad range of procedures and techniques to increase revenue, outperform competitors, conduct research and make better decisions.

Statistics Advanced

Statistics Advanced includes these powerful multivariate techniques: generalized linear models (GENLIN), generalized estimating equations (GEE), mixed level models, general linear mixed models (GLMM), variance component estimation, MANOVA, Kaplan-Meier estimation, Cox regression, hiloglinear, loglinear and survival analysis.

Statistics Bootstrapping

Statistics Bootstrapping enables researchers and analysts to use bootstrapping techniques on a number of tests contained in Statistics for Data Analysis modules. This provides an efficient way to ensure that your models are stable and reliable. With Statistics Bootstrapping, you can reliably estimate the standard errors and confidence intervals of a population parameter like a mean, median, proportion, odds ratio, correlation coefficient, regression coefficient and numerous.

Statistics Categories

Unleash the full potential of your categorical data through perceptual maps with optimal scaling and dimension reduction techniques. This add-on module provides you with everything you need to analyze and interpret multivariate data and their relationships more completely.

Statistics Complex Samples

Incorporate complex sample designs into data analysis for more accurate analysis of complex sample data. Statistics Complex Samples, with specialized planning tools and statistics, reduces the risk of reaching incorrect or misleading inferences for stratified, clustered or multistage sampling.

Statistics Conjoint

Statistics Conjoint helps market researchers develop successful products. By performing conjoint analysis, you learn what product attributes are important in the consumer's mind and what the most preferred attribute levels are, and can perform pricing studies and brand equity studies.

Statistics Tables

Use Statistics Tables to present survey, customer satisfaction, polling and compliance reporting results. Features such as a table builder preview, included inferential statistics and data management capabilities make it easy to clearly communicate your results.



Statistics Preparation

With Statistics Preparation, you gain several procedures that facilitate the data preparation process. This add-on module enables you to easily identify suspicious and invalid cases, variables and data values; view patterns of missing data; summarize variable distributions to get your data ready for analysis; and more accurately work with algorithms designed for nominal attributes.

Statistics Decision Trees

Create highly visual classification and decision trees directly within Statistics for Data Analysis for segmentation, stratification, prediction, data reduction and variable screening, interaction identification, category merging and discretizing continuous variables. Highly visual trees enable you to present results in an intuitive manner.

Statistics Direct Marketing

Statistics Direct Marketing helps marketers perform various kinds of analyses easily and confidently, without requiring a detailed understanding of statistics. They can conduct recency, frequency and monetary value (RFM) analysis, cluster analysis, and prospect profiling. They can also improve marketing campaigns through postal code analysis, propensity scoring, and control package testing. And they can easily score new customer data and access pre-built models.

Statistics Exact Tests

Statistics Exact Tests always provides you with correct p values, regardless of your data structure, even if you have a

small number of cases, have subset your data into fine breakdowns or have variables where 80 percent or more of the responses are in one category.

Statistics Forecasting

Improve forecasting with complete time-series analyses, including multiple curve-fitting, smoothing models, methods for estimating autoregressive functions and temporal causal modeling. Use the Expert Modeler to automatically determine

which ARIMA (autoregressive integrated moving average) process or exponential smoothing model best fits your time-series and independent variables, eliminating selection through trial and error.

Statistics Missing Values

If values are missing from your data, this module may find some relationships between the missing values and other variables. In addition, the missing values module can estimate what the value would be if data weren't missing.

Statistics Neural Networks

Use the Statistics Neural Networks module to model complex relationships between inputs and outputs or to discover patterns in your data. Choose from algorithms that can be used for classification (categorical outcomes) and prediction (numerical outcomes). The two available algorithms are Multilayer Perceptron and Radial Basis Function.



Statistics Regression

Predict behavior or events when your data go beyond the assumptions of linear regression techniques. Perform multinomial or binary logistic regression and nonlinear regression, weighted least squares, two-stage least squares and probit analysis.

Complementary product

Use these products with Statistics for Data Analysis to enhance your analytical results.

Statistics Amos

Support your research and theories by extending standard multivariate analysis methods when using this stand-alone software package for structural equation modeling (SEM). Build attitudinal and behavioral models that more realistically reflect complex relationships, because any numeric variable, whether observed or latent, can be used to predict any other numeric variable. The latest release includes a new nongraphical method of model specification that improves accessibility for users who need scripting capabilities and enables large, complicated models to be run more quickly.