What's New in SPSS Statistics 25

Analytics plays a vital role in helping your organization achieve its objectives. The SPSS Statistics family delivers the core capabilities needed for end-to-end analytics. To ensure that the most advanced techniques are available to a broader group of analysts, researchers and business users, enhancements have been made to the features and capabilities of the IBM SPSS Statistics portfolio and its many specialized modules.

IBM SPSS Statistics 25 continues to increase accessibility to advanced analytics through improved tools, integration, output and ease-of-use features. This release focuses on increasing the analytic capabilities of the software through:

- New and advanced statistics
- Stronger integration with third-party applications
- Enhanced productivity

Analyze your data with new and advanced statistics

SPSS Statistics 25 includes groundbreaking features within advanced statistics, so you can apply even richer analysis to your data:

- Mixed Linear Models (MIXED) and Generalized Linear Mixed Models (GENLINMIXED) procedures now provide:
  - Random effects solution results (EBLUPs)
  - Continuous time spatial covariance structures
- The General Linear Model (GLM) and UNIANOVA procedures have been enhanced with new features including:
  - Profile plots with error bars, bar and line charts, and an option to include grand mean
  - Option to force charts to include 0 on the y-axis
  - New tests for heteroskedasticity and model specification
  - Robust standard errors
  - Modified versions of Levene's test

Add probabilities to your analysis with Bayesian statistics

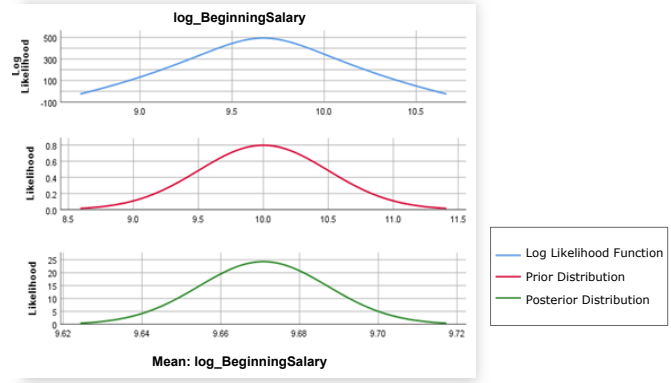
SPSS Statistics 25 now offers the capability to use Bayesian statistics, with both new syntax and GUI elements that are as easy to run as traditional p-value statistics. Some of the features available within Bayesian statistics include:

- One sample and pair sample t-tests
- Binomial proportion tests
- Poisson distribution analysis
- Independent samples t-tests
- Pairwise correlation
- Simple and multiple linear regression
- Analysis of variance (ANOVA)

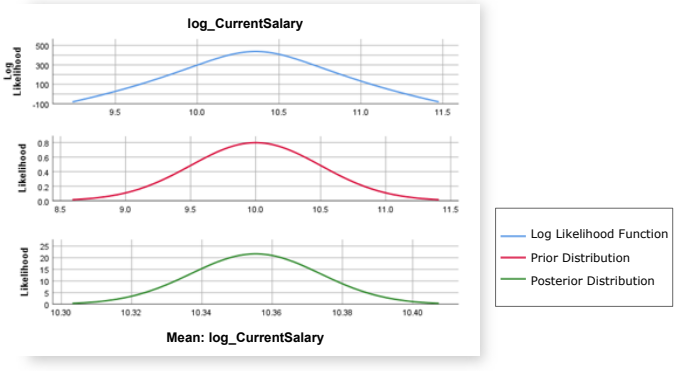
Execute new Bayesian statistics functions including regression, ANOVA, and t-tests.

Bayesian statistics is becoming very popular, because it circumvents a lot of the misunderstandings brought by standard statistics. Instead of using a p-value to reject or fail to reject a null hypothesis, Bayesian places an uncertainty on parameters and captures all relevant information from observed data. Our approach to Bayesian statistics is unique because our Bayesian procedures are as easy to run as our standard statistical tests. In just a few clicks you can run Linear Regression, ANOVA, One-Sample, Pair-Sample, Independent-Sample T-tests, Binomial Proportion Inference, Poisson Distribution Analysis, Pairwise Pearson Correlation, and Loglinear models to test the independence of two categorical variables. Bayesian Statistics are found in the Advanced Statistics module for Stats 25 and to Subscribers of the Custom Tables & Advanced Statistics add-on.

Posterior distribution plots for Log Beginning Salary



Posterior distribution plots for Log Current Salary



Quickly create attractive, modern charts and edit them in Microsoft Office.

Building modern, attractive, and detailed charts has never been easier. Our chart builder has been updated with the ability to create publication quality charts in just a few clicks.

Now you can specify chart colors, titles, and templates as you're building the chart. And, our new default template ensures a great looking chart even without modifications. In addition, now if you wish, you can copy most charts as a Microsoft Graphic Object so you can edit titles, colors, styling, and even chart type right in Microsoft Word, PowerPoint, or Excel. Charting in SPSS has never been this easy. All these charting features are found in the Base editions.

Chartbuilder features new modern default graphics

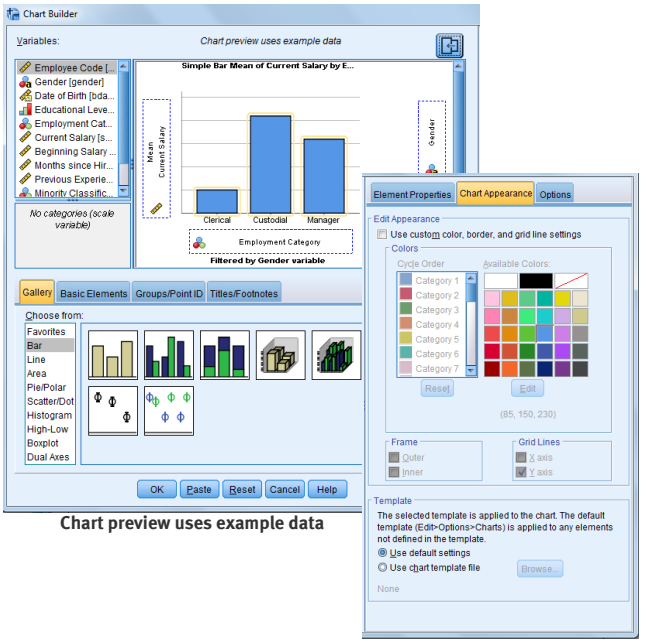
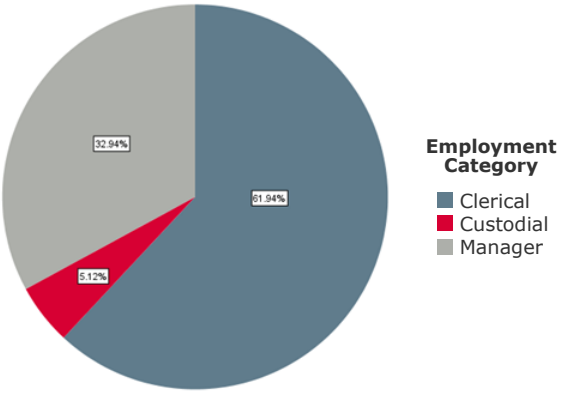


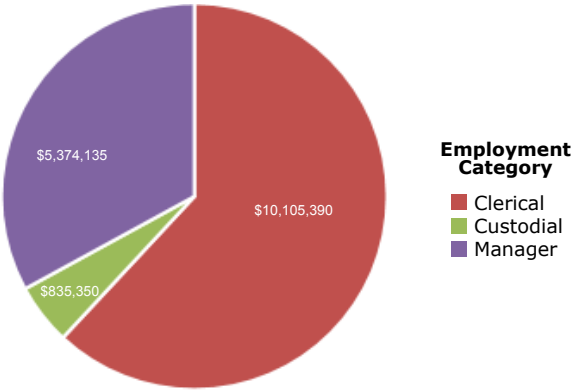
Chart preview uses example data

Copy SPSS charts as Microsoft graphics and edit them later



Filtered by Gender Variable

Manipulate charts as if created in Microsoft Graphic Objects

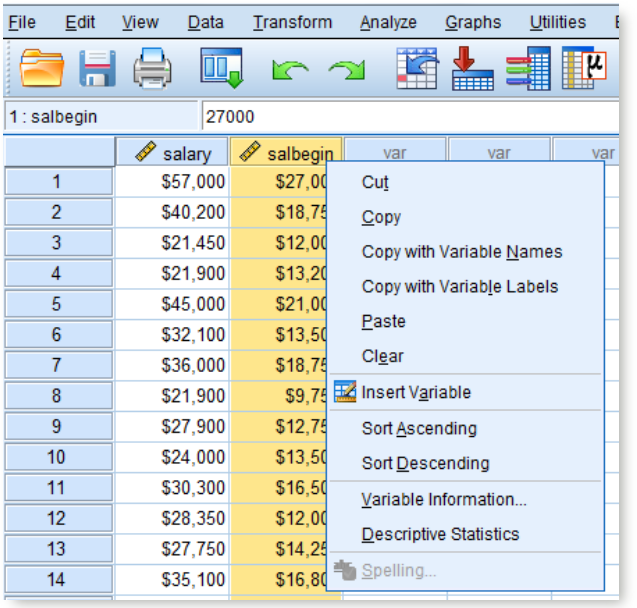


Pie Chart Sum of Current Salary by Employment Category

Write, edit, and format syntax faster with Syntax Editor shortcuts.

Here are a set of features for those users that are primarily syntax writers. We've added a bunch of features (and associated keyboard shortcuts) to make writing, formatting, and editing syntax easier. Now with a simple keyboard shortcut you can join lines, duplicate lines, delete lines, remove empty lines, move lines up or down, and trim leading or trailing spaces.

In addition, we're introducing a new column editing mode which allows you to edit multiple lines at once. A killer feature here is the ability to copy data from the data editor (or Microsoft Excel) and paste "down" across multiple lines. It's a great feature – once you try it, you will no longer be able to go back to the earlier syntax editor. These syntax features are found in the Base editions.

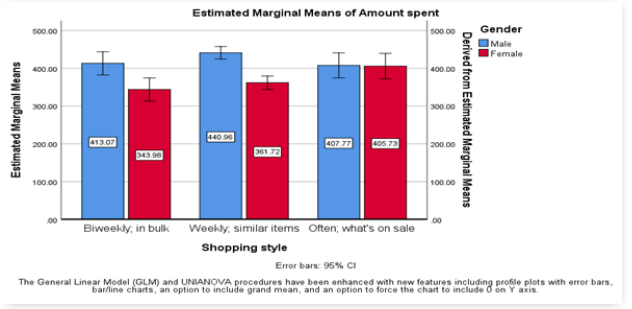


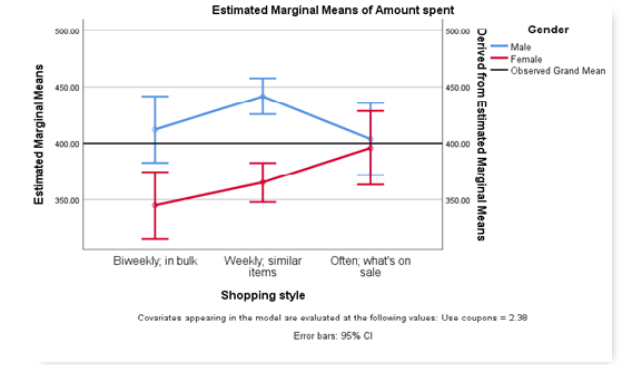
Extend your advanced statistical analysis with updates to MIXED, GENLINMIXED, GLM, and UNIANOVA.

We've responded to customer feedback by adding the most requested enhancements to a few of our most popular advanced statistics functions. The Mixed Linear Models (MIXED) & Generalized Linear Mixed Models (GENLINMIXED) procedures now provide random effects solution results (EBLUPs) and continuous time spatial covariance structures. Also, the General Linear Model (GLM) and UNIANOVA procedures have been enhanced with new features including profile plots with error bars, bar/line charts, an option to include grand mean, and an option to force the chart to include o on Y axis.

GLM and UNIANOVA also now include new tests for heteroskedasticity and model specification, robust standard errors, and modified versions of Levene's test. Most of these functions are found in the Advanced Statistics module for Stats 25 and to Subscribers of the Custom Tables & Advanced Statistics add-on, although UNIANOVA is found in the Base editions.

Pie Chart Sum of Current Salary by Employment Category





Enhanced productivity

Improved Chartbuilder

SPSS Statistics 25 enables you to build more attractive, modern-looking charts. With the enhanced Chartbuilder, you will be able to:

- Display a more accurate preview and make modifications faster, without leaving the Chartbuilder
- Automatically generate chart titles
- Specify custom titles without editing
- Generate a scatter plot with a regression line using new templates
- Easily specify custom colors and apply templates right in the Chartbuilder
- Copy charts as either pictures or Microsoft Object Graphic format

Data and syntax editor enhancements

Syntax editor improvements can help power users write syntax faster, with greater flexibility for editing, cleaning and formatting syntax files. New features include:

- New shortcut keys to speed writing and editing syntax
- Column mode editing
- One-click trim of leading, trailing and empty spaces
- Large file mode

Data editor copy/paste enhancements include:

- Added ability to copy data with variable names or labels
- Added ability to paste data with variable labels

Additional productivity enhancements

- Accessibility advancements for the visually impaired
- Updated Merge user interface
  - New simplified Add Variables dialog
- Simplified toolbars
  - Removed toolbar buttons by default that were infrequently used
  - Added buttons to go to active syntax window and go to active output viewer window
  - Added toolbar button to customize the toolbar
- Ability to open Stata 14 files
- Incremental Safenet Sentinel License Manager improvements

Reasons to upgrade your SPSS

If you're using an earlier version of IBM SPSS Statistics, you'll gain all of these time saving features, and many more, when you upgrade to the newest version

Features added in SPSS Statistics 24

- IBM SPSS Statistics Extensions for R, Python, and SPSS Syntax. Extensions provide powerful features for you, the end user, by being a constant stream of new content without requiring a separate purchase or requiring a new product installation. This year we've made extensions both easy and fun to try. I encourage everyone to try downloading and building an extension today by navigating to the new Extensions menu.
- Smarter dataset importing and exporting – Getting data into and out of IBM SPSS Statistics is now easier than ever. We know our users primarily use Excel and CSV files to import and export data, so we've prioritized ease of use for these channels. The simplified importing will save you hours of time with our new smarter importing algorithms. Simply try importing a text or Excel file to see how fast you'll go from raw data to statistical insight.

- Custom Tables refresh – Custom Tables is one of our most popular modules. Its drag and drop interface is easy to use while providing the ability to generate everything from simple summaries to deep statistical output. We've now made this procedure even more powerful by adding new statistical functionality and customer requested features. Navigate to Analyze -› Custom Tables menu to try it for yourself.
- Other enhancements include a new modern look for table output, Python 3 programmability, revert to saved functionality, support for additional date/time formats, and more.

Features added in SPSS Statistics 23

Newer algorithms

- Uncover hidden causal relationships among a large number of time series using temporal causal modeling (TCM)

Geospatial analytics

- Find trends over time and space using spatio-temporal prediction (STP)
- Create association rules that incorporate geospatial attributes using the generalized spatial association rule (GSAR)

Improved productivity

- Improved categorical principal component analysis with non-parametric bootstrapping, clustering of case and new rotation options for better convergence.
- Programmability enhancements for R with the ability to test programs using features of the R integrated development environment for easy debugging.
- Next generation of web output with more interactivity and functionality with web server support
- Improved accessibility with the ability to import, read and write new version of Stata files
- Faster performance with bulk export/insert to database
- Support to authenticate with a badge reader

System Requirements

IBM SPSS Statistics 25 for Windows

Operating System:
Windows 10 Education, Windows 8.1 Enterprise, Windows 10 Home, Windows 10 Pro, Windows 8.1 Professional, Windows 8.1 Standard, Windows 7 Enterprise, Windows 7 Home Premium, Windows 7 Professional, Windows 7 Starter, Windows 7 Ultimate, Windows 8 Enterprise, Windows 8 Professional, Windows 8 Standard.
Hardware:
– Memory: 4 gigabyte (GB) of RAM or more is required, 8 gigabyte(GB) of RAM or more is recommended for 64-bit Client platforms.
– 2 gigabytes (GB) of available hard-disk space.

IBM SPSS Statistics 25 for Mac

Operating System:
Mac OS Sierra 10.12, OS X El Capitan 10.11, OS X Yosemite 10.10. The product runs natively as a 64-bit application in a 64-bit operating environment.
Hardware:
– Memory: 4 gigabyte (GB) of RAM or more is required, 8 gigabyte(GB) of RAM or more is recommended for 64-bit Client platforms.
– 2 gigabytes (GB) of available hard-disk space.

IBM SPSS Statistics 25 for Linux

Operating System:
Red Hat Enterprise Linux (RHEL) Client 6, Red Hat Enterprise Linux (RHEL) Client 7, Ubuntu 14.04 LTS, Ubuntu 16.04 LTS. The product runs natively as a 64-bit application in a 64-bit operating environment.
Hardware:
– Memory: 4 gigabyte (GB) of RAM or more is required, 8 gigabyte (GB) of RAM or more is recommended for 64-bit Client platforms.
– 2 gigabytes (GB) of available hard-disk space.

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