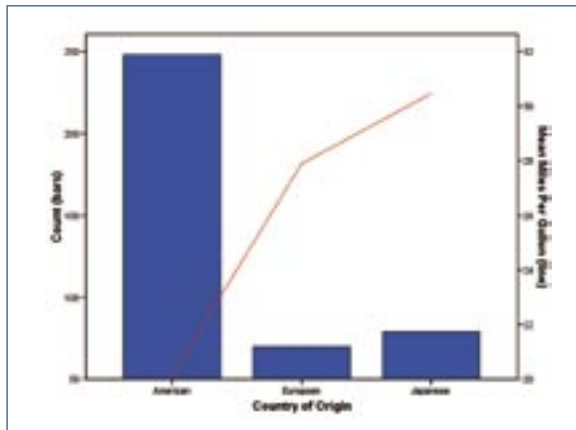


> What's New in SPSS 15.0 for Windows

SPSS 15.0 for Windows continues SPSS Inc.'s tradition of regularly adding significant, new features into the software. As always, we've listened to your suggestions, and incorporated many of them into this release. SPSS 15.0 includes new features for more powerful data management, statistics, and programmability. Additionally, SPSS 15.0 includes new graphics options and PDF output—one of the most frequently requested features. If you use Dimensions™ software for survey research, SPSS now enables you to import and export the Dimensions Data Model™. For enterprise users, SPSS Server has been enhanced and the SPSS Adapter for SPSS Predictive Enterprise Services™ provides new opportunities to use data more productively and consistently across your organization.



In SPSS 15.0, you can create an overlay chart with two independent Y axes based on different scales. This chart uses a different element on each Y axis: a bar showing count and a line showing mean miles per gallon, plotted against country of origin on the X axis—all in one frame.

SPSS Base 15.0 for Windows enhancements

Graphics and output

SPSS 15.0 further extends the Chart Builder, a highly visual chart creation interface that was added in SPSS 14.0. In addition, new chart types enable you to show complex information clearly. PDF export gives you another way to share reports with others.

- Create graph types and employ features previously available only through the chart creation menu and dialog boxes. By using the Chart Builder, you achieve improved chart creation performance and more robust reporting capabilities for popular chart types such as SPLOMs (scatterplot matrices), histograms, and population pyramids.
- Gain new capabilities, enhanced usability, and greater efficiency when editing charts in the Chart Builder. A number of enhancements enable you to more quickly produce polished reports. For example, when you select a text frame, pressing the Enter key will automatically start the edit mode. You can automatically create reference lines for common statistics, save current data element chart styles to a template, and much more.
- Choose from new chart types: Dual-Y axis and overlay charts. These charts will reveal complex information, enable more complex analysis, and allow for more sophisticated reporting.

- If you use quality control applications, you can manage your analyses and monitor changes more efficiently with enhanced process control charts
- Easily convert SPSS reports into PDF. When you do this, you can choose to:
 - Optimize the PDF for Web viewing
 - Control whether or not PDF-generated bookmarks correspond to Navigator Outline entries in the Output Viewer
 - Control whether or not fonts are embedded in the document; embedded fonts prevent font substitution

Data and access management

More powerful data management in SPSS Base 15.0 provides you with a number of new features that help you use SPSS with other applications and databases, customize the way information is displayed within SPSS, and save time and gain more flexibility when managing data. You can:

- Seamlessly work with data in SPSS and Dimensions products now that you can both import and export the Dimensions Data Model. For example, collect survey data in mrlInterview™, import data to SPSS to create multiple-item indices for scoring questions, and export the new variables and append them to your original data so that they can be analyzed in mTables™.
- Easily write back to databases from SPSS by using the Export to Database Wizard in the interface. You can create a new table and export it to your database, add new rows or columns to an existing table, and export data to existing columns in a table. Previously, these capabilities were available only through syntax.
- Export SPSS data into other applications, including spreadsheets and databases, by using the CSV (comma-separated value) data export feature
- Create your own dictionary information for variables with Custom Attributes. For example, create custom attributes describing transformations for a derived variable with information explaining how you transformed the variable.

- Work more easily with very wide data files by customizing variable sets. Instantly reduce the variable view to a subset of selected variables, while keeping the entire file loaded and available for analysis. This eliminates the need to scroll through hundreds of variables to visually check a few.
- Save time and gain more flexibility when managing data because you no longer need to convert strings to numeric strings before aggregation
- Access data in SPSS using the latest versions of popular operating systems and databases. SPSS 15.0 updates the Data Access Pack to Connect ODBC 5.2.

Analysis

SPSS Base 15.0 includes ordinal regression (PLUM), which was previously available only through the optional SPSS Advanced Models™ add-on module. With this statistical procedure, gain new analytical capabilities directly within the base product so that you can more accurately predict ordinal outcomes with more than two categories. For example, predict customer loyalty as it relates to customer satisfaction level (very dissatisfied, somewhat dissatisfied, somewhat satisfied, or very satisfied).

Programmability

The SPSS Programmability Extension™, which is included with SPSS Base 15.0, provides the ability to extend the SPSS command syntax language with the full capabilities of external programming languages. Program code written in an external language such as Python® can be used to control the flow of SPSS syntax jobs based on variable attributes, procedure output, and error codes. Additions to the SPSS Programmability Extension, along with other new capabilities and features for programming, help make SPSS for Windows one of the most powerful statistical development platforms. In SPSS 15.0, you can:

- Use the version of Python supported by SPSS Inc. This open-source programming language is now included on the same CD as SPSS Base.

- Create first-class user-defined procedures, provide an interface for user procedures, and send results from these procedures into an SPSS pivot table in the Output Viewer
- Use syntax to easily open/save and create new output files. For example, write syntax to route new reports to a designated file location.
- Save time by displaying command syntax in the log by default. This eliminates the need to set preferences in order to see certain items in the SPSS Output Viewer. Additionally, you can copy command syntax from the log and save it in a syntax file for use with the automated Production Facility.

Visit SPSS Developer Central at www.spss.com/devcentral to share code, tools, and programming ideas.

Licensing

Several updates to the licensing features in SPSS Base 15.0 provide your organization with greater flexibility. If you're a site license administrator, you can:

- Immediately request licenses
- Distribute a template to end users so that they can easily install SPSS software on their own
- Push multiple authorization codes for site installations. You can even push codes for add-on modules at the same time that you push SPSS Base codes.

SPSS Advanced Models 15.0 enhancements

Address a wide range of statistical modeling problems using the generalized linear models (GZLMs) and generalized estimating equations (GEEs) procedures. GZLMs and GEEs represent a unifying framework that includes classical linear models with normally distributed dependent variable, logistic, and probit models for binary data, and loglinear models for count data, as well as various other nonstandard regression-type models. Use GZLMs to cover widely used statistical models, such as linear regression for normally distributed responses,

logistic models for binary data, and loglinear models for count data, along with many useful statistical models, via its very general model formulation. GEEs extends generalized linear models to accommodate correlated longitudinal data and clustered data. These procedures provide a common framework for the following outcomes:

- Numerical: Linear regression, analysis of variance, analysis of covariance, repeated measures analysis, and Gamma regression
- Count data: Loglinear models, logistic regression, probit regression, Poisson regression, and negative binomial regression
- Event/trial data: Logistic regression
- Claim data: Inverse Gaussian regression
- Correlated responses within subjects: GEE or correlated response models

SPSS Regression Models™ 15.0 enhancements

Gain improved diagnostics in the classification table when you use the multinomial logistic regression (MLR) procedure. Improved diagnostics include percent concordance, percent discordance, percent ties, C-value for logistic mode, Sommer's D, Gamma, and Tau-a statistics.

SPSS Complex Samples™ 15.0 enhancements

This add-on module includes a new statistic and enhancements to an existing procedure. You can:

- Accurately predict ordinal outcomes from your complex sample design with complex samples ordinal regression
- Select from two simple random sampling (SRS) estimators in the Complex Samples Plan (CSPLAN) procedure

SPSS Data Preparation™ 15.0 enhancements

The SPSS Data Preparation* add-on module helps you streamline the data preparation process to get ready for analysis faster and reach more accurate conclusions. With the new Optimal Binning procedure, you can now more accurately use algorithms designed for nominal attributes (such as Naïve Bayes and logit models). Optimal Binning enables you to bin or set cutpoints for scale variables. Select from three types of optimal binning: unsupervised, supervised, and a hybrid approach.

Amos™ 7.0 enhancements

This powerful, easy-to-use structural equation modeling (SEM) software enables you to create more realistic models than if you used standard multivariate statistics or multiple regression models alone. You can easily incorporate Amos into your SPSS workflow. Amos 7.0 includes expanded statistical options based on Bayesian estimation. You can:

- Perform estimation with ordered-categorical and censored data. This enables you to:
 - Create a model based on non-numerical data without having to assign numerical scores to the data
 - Work with censored data without having to make assumptions other than the assumption of normality
- Impute numerical values for ordered-categorical data or censored data. The resulting dataset can be used as input to programs that require complete numerical data.
- Determine probable values for missing or partially missing data values in a latent variable model

Enterprise-level enhancements

For enterprise users, SPSS 15.0 includes powerful new capabilities that enable you to share your data enterprise-wide in ways you've only imagined. The SPSS Adapter for SPSS Predictive Enterprise Services integrates into a platform that provides you with a centralized, secure, auditable repository for your analytical assets and processes. Additionally, SPSS Server has been enhanced for greater performance on enterprise-level hardware.

SPSS Server 15.0 enhancements

With SPSS Server 15.0, you can continue to take advantage of system and hardware implementations that are not available on the desktop version. Several new features and enhancements help your enterprise increase its productivity. You can now:

- Stripe temporary files over multiple disks based on the administrator's settings. This provides much greater speed in reading and writing large temporary files, which are often associated with time-consuming tasks such as sorting and aggregation.
- Seamlessly utilize third-party multithreaded sorting applications to significantly speed up data preparation tasks
- If you're a network administrator, use a single Administrative Utility for working with SPSS for Windows, Clementine®, and SPSS Predictive Enterprise Services. With this utility, you can administer any combination of these three products installed at your site, eliminating the need for multiple administration tools.

SPSS Adapter for SPSS Predictive Enterprise Services

SPSS Predictive Enterprise Services, which interfaces with both SPSS for Windows and Clementine, provides numerous capabilities related to the management of analytical assets and processes. The SPSS Adapter enables SPSS 15.0 to integrate into the SPSS Predictive Enterprise Services platform. With it, your enterprise can:

- Safeguard the value of your analyses with version control, access control, and other security features
- Ensure compliance with regulatory requirements by using a centralized, auditable repository
- Improve the productivity of your analysts by providing them with consistent, current files
- Through centralization, minimize the IT costs of managing analysis

For example, your organization can use SPSS Predictive Enterprise Services to:

- Institutionalize analytics and models to schedule jobs
- Standardize the use of SPSS transformations and models throughout your organization
- Regularly refresh information for models and scoring databases
- Audit analysis conducted for regulatory compliance

With the SPSS Adapter for SPSS Predictive Enterprise Services, you can store and retrieve a variety of file types, including XML models and output; SPSS data, output, and syntax files; SPSS chart templates; and complex sample plan files.

Syntax support enables you to store/retrieve syntax and files. You can, for example, retrieve data transformations and models from the repository and insert them into your existing syntax jobs. The ability to store and retrieve files from a central, secure repository enables all analysts in your organization to draw upon consistent, current files.

PMML enhancements in SPSS Base

Streamline the process of including SPSS transformations in application development. You can now:

- Include transformations with the final statistical model and export it to Predictive Model Markup Language (PMML). This enables you to use the complete statistical model to score cases in applications and eliminate the “back-and-forth” between SPSS and your scoring engine.

Support for sequential data processing in SPSS Base

If you're using SPSS alongside Clementine or another application, sequential data processing enables you to analyze one case at a time in SPSS. This enables SPSS to immediately return updated results to the other application while continuing to analyze the remaining data.

System requirements

SPSS Base 15.0 for Windows

- Operating system: Microsoft Windows XP or 2000
- Hardware: Intel® Pentium®-compatible processor
- Memory: 256MB RAM minimum
- Minimum free drive space: 400MB
- SVGA Monitor
- Web browser: Internet Explorer 6

SPSS 15.0 add-on modules

- All SPSS 15.0 add-on modules require SPSS Base 15.0 for Windows. No other system requirements are necessary.

Amos 7.0

- Operating system: Windows XP or 2000
- Memory: 256MB RAM minimum
- Minimum free drive space: 125MB
- Web browser: Internet Explorer 6

SPSS Server 15.0

- Operating system: Windows 2000 Server, Windows Server 2003 (32-bit or 64-bit); Sun™ Solaris™ 9 and later (64-bit only); IBM® AIX® 5.2 and later; or Red Hat® Enterprise Linux® 4 and later
- Memory: 256MB RAM per expected concurrent user
- Minimum free drive space: 300MB (includes SPSS Server install, SPSS Server Administrator install, and the stand-alone SPSS Batch Facility [SPSSB] install)
- Minimum CPU: Two Pentium-class CPUs recommended
- Required temporary disk space: Calculate by multiplying 2.5 x number of users x expected size of dataset in megabytes

SPSS Adapter for SPSS Predictive Enterprise Services

- Requires SPSS Base 15.0 and SPSS Predictive Enterprise Services

Version comparison chart: new features added to SPSS by version number and by area

New feature	Version number	15.0	14.0	13.0	12.0	11.5	11.0	10.0
Predictive Enterprise								
SPSS Adapter for SPSS Predictive Enterprise Services (added in SPSS 14.0.1)		X						
Updated PMML to include transformations		X						
Single administration utility for SPSS Server, Clementine, and SPSS Predictive Enterprise Services platforms		X						
Stripe temporary files over multiple disks for increased performance (in SPSS Server)		X						
Conversion-free/copy-free data access in SQL DBMS (in SPSS Server)		X	X	X	X	X	X	X
Data-free client (in SPSS Server)		X	X					
Support for Open SSL (in SPSS Server)		X	X	X	X			
In-database data preparation (sort and aggregate) to improve performance (in SPSS Server)		X	X	X				
Score data using PMML models created with SPSS, Clementine, and AnswerTree® (in SPSS Server)		X	X	X				
User interface (UI) for scoring (in SPSS Server)		X	X					
Predictor Selection and Naïve Bayes algorithms (in SPSS Server)		X	X					
Data access and data management								
Define variable properties tool to prepare your data for analysis		X	X	X	X	X		
Database Wizard		X	X	X	X	X	X	X
Date and Time Wizard		X	X	X				
Export to Database Wizard		X						
Direct Microsoft Excel® interface		X	X	X	X	X	X	X
Identify Duplicate Cases tool		X	X	X	X			
Clone dataset command		X	X					
Ability to open multiple datasets within a single SPSS session		X	X					
Export data to recent versions of Excel and SAS®		X	X	X	X	X		
Large file capability		X	X	X	X	X	X	X
Long variable names (up to 64 bytes)		X	X	X	X			
Very long text strings (up to 32,767 bytes)		X	X	X				
Long value labels (up to 120 bytes)		X	X					
Flexible Data Editor		X	X	X	X	X	X	X
Custom Attributes for user-defined meta data in the SPSS Data Editor		X						
Read recent SAS files		X	X	X	X	X	X	X
Read/write Stata® files		X	X					
Export to Dimensions Data Model		X						
OLE DB data access		X	X					
Restructure Data Wizard		X	X	X	X	X	X	
Text Wizard		X	X	X	X	X	X	X
Visual Banders to easily create bands (for example, break income into income “bands” of \$10,000)		X	X	X	X			
Optimal Binning (in SPSS Data Preparation add-on module)		X						
Subset variable views		X						

Features subject to change based on final product release.

Version comparison chart: new features added to SPSS by version number and by area

New feature	Version number	15.0	14.0	13.0	12.0	11.5	11.0	10.0
Programmability								
Control the flow of your syntax jobs or create your own user-defined algorithms using external programming languages (through the SPSS Programmability Extension)		X	X					
Python programming language included on the SPSS CD		X						
Ability to create first-class, user-defined procedures		X						
Syntax control of output files		X						
Analysis								
Ability to run multiple SPSS sessions simultaneously and switch sessions		X	X	X	X	X	X	X
CATPCA and PROXSCAL (in SPSS Categories™ add-on module)		X	X	X	X	X	X	X
Multiple correspondence analysis (in SPSS Categories add-on module)		X	X	X				
Preference scaling (in SPSS Categories add-on module)		X	X					
TwoStep cluster analysis (in SPSS Base)		X	X	X	X	X		
Descriptive ratio statistics		X	X	X	X	X	X	
Discriminant analysis (in SPSS Base)		X	X	X	X	X	X	X
Linear mixed models (also known as hierarchical linear models) (in SPSS Advanced Models add-on module)		X	X	X	X	X	X	
Generalized linear models (in SPSS Advanced Models add-on module)		X						
Generalized estimating equations (in SPSS Advanced Models add-on module)		X						
Multinomial logistic regression (in SPSS Regression Models add-on module)		X	X	X	X	X	X	X
Stepwise multinomial logistic regression (in SPSS Regression Models add-on module)		X	X	X	X			
Ordinal regression to model ordinal outcomes (in SPSS Base)		X						
Receiver-operating characteristic (ROC) analysis (in SPSS Base)		X	X	X	X	X	X	X
SPSS Complex Samples add-on module		X	X	X	X			
Complex samples general linear model (in SPSS Complex Samples add-on module)		X	X	X				
Complex samples logistic regression (in SPSS Complex Samples add-on module)		X	X	X				
Complex samples ordinal regression (in SPSS Complex Samples add-on module)		X						
SPSS Classification Trees™ add-on module		X	X	X				
Validate Data procedure (in SPSS Data Preparation add-on module)		X	X					
Anomaly Detection for multivariate outliers (in SPSS Data Preparation add-on module)		X	X					
Enhanced SPSS Trends™ add-on module with Expert Modeler		X	X					
Bayesian estimation—MCMC algorithm (in Amos structural equation modeling software)		X	X					
Data imputation, including multiple imputation (in Amos structural equation modeling software)		X	X					
Estimation and imputation of ordered-categorical and censored data (in Amos structural equation modeling software)		X						
Run significance tests on multiple response variables (in SPSS Tables™ add-on module)		X	X					
Exclude categories used in subtotal calculations from significance tests (in SPSS Tables add-on module)		X	X					

Version comparison chart: new features added to SPSS by version number and by area

New feature	Version number	15.0	14.0	13.0	12.0	11.5	11.0	10.0
Graphs								
Presentation graphics system		X	X	X	X			
Chart Builder user interface for graphics		X	X					
Support for SPSS Inc.'s Graphics Production Language (GPL)		X	X					
Dual-Y axis and overlay charts		X						
Enhanced process control charts		X						
2-D line charts (both axes can be scale axes) and charts for multiple response sets		X	X					
Population pyramids (also called mirror charts or dual charts), 3-D bar charts, and dot charts (also called dot density charts)		X	X	X				
Additional chart display features/options, including paneled charts and error bars on categorical charts		X	X	X				
SPSS Maps™ add-on module for creating high-quality maps and performing demographic analysis		X	X	X	X	X	X	X
Output								
XML model export for model deployment with SmartScore®		X	X	X	X	X	X	X
Enhanced SPSS Tables module with table preview builder and inferential statistics		X	X	X	X	X		
Draft Viewer/text output and control		X	X	X	X	X	X	X
Export output to Microsoft Excel and Word		X	X	X	X	X		
Export output to Microsoft PowerPoint®		X	X	X				
HTML output		X	X	X	X	X	X	X
Export output to PDF		X						
Layered reports/OLAP cubes		X	X	X	X	X	X	X
Output Navigator/Viewer		X	X	X	X	X	X	X
Output scripting/programming in Basic		X	X	X	X	X	X	X
Output Management System (turn pivot table output, such as SPSS data files, XML, and HTML, into data/input)		X	X	X	X			
Interactive interface for the output management system		X	X	X				
Switch output language		X	X	X	X	X		
Table to graph		X	X	X	X	X	X	
Licensing improvements								
Network license reservations and priority settings		X	X					
Network commuter license		X	X					
License manager redundancy		X	X					
Help								
Interactive case studies		X	X	X	X	X	X	
“SPSS Manuals on CD,” featuring manuals in PDF format for SPSS Base and all add-on modules		X	X	X	X			
Results Coach™ and Statistical Coach™		X	X	X	X	X	X	X
Tutorial		X	X	X	X	X	X	X
Chart tutorial		X	X	X				
“What’s This?” (context-sensitive help)		X	X	X	X	X	X	X

Features subject to change based on final product release.



To learn more, please visit www.spss.com. For SPSS office locations and telephone numbers, go to www.spss.com/worldwide.

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