NOTE: The following information was provided by SPSS (IBM)

Summary

The main advantages of SPSS and Stata are that both are statistical analysis software tools which are used to manage or operate the data sets. SPSS can be chosen in the area of complex data analysis including research areas or in the research industry and is strong in terms of large and complex data analysis sets.

Key Comparisons

1. The key features of SPSS include forecasting and decision trees on data, base edition, advanced statistics and custom tables add-on package, statistics and charting capabilities, complex sampling and testing add-on whereas Stata has different add-on packages such as latent class analysis, endogeneity, Spatial AR models, markdown, nonlinear multi-level models, finite mixture models, threshold regression etc.

2. SPSS enables the data to be summarized, displayed and gives production ready analysis that can be exported to different types of document such as Excel, PDF etc., whereas Stata combines endogenous covariates, sample selection and endogenous treatment models for continuous and positive outcomes.

3. SPSS has advanced features such as random effects with solution results, robust and standard error handling, profile plots with error bars whereas Stata discovers and understands the unobserved data groups on the basis of Latent Class Analysis (LCA) which is a feature of Stata.

4. SPSS compute statistics and standard data errors from complex data sample designs and analyses data on multi-stage designs too whereas Stata allows creating web pages, texts, regressions, results, reports, and graphs etc. which automatically reflects on a web page created.

5. SPSS latest version executes new Bayesian Statistics functions containing regression, t-tests and ANOVA which is becoming more popular that circumvents a lot of misunderstanding created by standard statistical analysis whereas Stata has mixed logit models that provide advanced choice modelling which makes dozens of choices every day to introduce random effects into choice modelling which results in relaxation of assumption and increase in flexibility.

6.SPSS can quickly create modern charts attractively and their editing in Microsoft Office tools, which are not easier normally in the native methods, the chart builder in SPSS can make these things more easier by creating publication standard charts whereas Stata has Finite mixture models that provide continuously, count, binary, categorical, censored, ordinal and truncated outcomes which are customized with estimators .

7. SPSS provides edit, write and format syntaxes with editor shortcut tools with a simple keyboard shortcut to join duplicate lines, delete lines and new lines, to remove empty lines, to move lines up and down and to trim trailing or leading spaces effectively whereas Stata has Spatial auto regressive models that have observational units called spatial units in the areas of geographical research.

8. SPSS has SPSS Analytic Server, SPSS Modeler, SPSS Statistics and different variable types such as String and Numeric and has different variable formats whereas Stata has different word documents to be created to automate the reports and generate results and graphs in tabular and text formats.
9. SPSS can perform Simple Statistical comparison tests and the appropriate test has to be chosen as per the requirement in order get the desired outcome where as Stata has a regression for interval measured outcomes.

10. SPSS provides measurement levels in a classical approach using the parameters such as Nominal variable, Ordinal variable and internal variable and ratio variable which are called Metric variables whereas Stata has linear regression models to find effective size & sample size.

SPSS vs Stata Comparison Table

BASIS FOR COMPARISON	SPSS	Stata
Complexity	SPSS can be used to model very complex data	Stata cannot be suitable for complex analysis
Analysis	SPSS can be used to perform multi-variant analysis procedures for large amounts of data	Stata provides normal analysis procedures.
Applications	SPSS is used in medical and social sciences areas	Stata is mostly used in econometrics
Benefits	SPSS can directly generate the outputs into reports.	Stata has command line and documentation feature.
Utility	SPSS is mainly used for complex data management like familiar excel spreadsheet	Stata is useful in research and ideal for developers.
Statistical Analysis	SPSS is a bit stronger in this area	Stata is relatively weak in this area.
Development	SPSS is used to improve the agile development life cycle.	Stata is used for large-scale applications development.