

PILAF SKILL DEVELOPMENT IN STATA TRAINING

TRAINING MODULES

Module 1: General Introduction to STATA Environment

1. STATA Menu
 2. STATA windows
 3. Graphical User Interface (GUI) versus Commands
 4. STATA basics (creating a log file, setting a working directory, allocating memory and opening a STATA file)
 5. STATA commands (varlist, expressions, observation indices and ranges)
 6. Creating, saving and using a Do-file
 7. Entering and saving data
 8. Importing data from Excel to STATA (using copy-and-paste or insheet method)
 9. Closing STATA
 10. Getting help and information
- Duration: 4 hours
 - Contact Session: 2 hours per/week
 - Prerequisite: No prior skill or qualification is required. But sustained interest and commitment to rigorous practice are needed. Access to a computer with pre-installed version of STATA software is essential.

Module 2: Data Manipulation in STATA

1. STATA as a calculator
2. Data reshaping (long to wide, and wide to long)
3. Combining datasets (merge, append, relink)
4. Adding value labels
5. Adding variable names
6. Renaming variables

7. Replacing values
 8. Generating a new variable
 9. Deleting a variable or an observation
 10. Data conversion (converting numeric variables with a string format into numeric)
 11. Dealing with string variables (text to numbers, dropping observations using a string variable, extracting from numeric, string combination, deconstructing a numeric variable)
 12. Converting to/from missing values
 13. Collapsing data
 14. Converting text to date
- Duration: 4 hours
 - Contact Session: 2 hours per/week
 - Prerequisite: Adequate participation in Module 1 training and mastery of its content. Sustained interest and commitment to rigorous practice. Access to a computer with pre-installed version of STATA software.

Module 3: Describing and Summarizing Data in STATA

1. Exploring data (frequencies and cross tabulations)
 2. Multiple frequencies (tab1)
 3. Producing summary statistics using tabstat
 4. Creating a pivot table using tab/sum
 5. Visualising univariate data (histogram, box plots, quantile-quantile plots, Dot plots, bar graphs)
 6. Visualising bivariate data (scatter plots)
 7. Fitting regression lines
 8. Customizing plot appearance
- Duration: 4 hours
 - Contact Session: 2 hours per/week

- Prerequisite: Adequate participation in Module 1&2 training and mastery of their contents. Sustained interest and commitment to rigorous practice. Access to a computer with pre-installed version of STATA software.

Module 4: Hypothesis Testing Using STATA

1. Checking for outliers
 2. Checking for normality
 3. T-tests
 - ❖ whether a sample mean is different from a hypothesized value
 - ❖ comparing two sample means
 4. Comparing two sample means by groups
 5. One-way ANOVA test
 6. Two-way ANOVA test
- Duration: 4 hours
 - Contact Session: 2 hours per/week
 - Prerequisite: A prior knowledge of the use of STATA at whatever level. But sustained interest and commitment to rigorous practice. Access to a computer with pre-installed version of STATA software.

Module 5: Linear Regression Using STATA

1. Simple linear regression
2. Multiple linear regression
3. Dealing with binary, categorical and quadratic independent variables
4. Checking model fit and assumptions
5. Application: fitting the model
6. Application: checking model fit and assumptions
7. Application: visualising the model

- Duration: 4 hours
- Contact Session: 2 hours per/week
- Prerequisite: A prior knowledge of the use of STATA at whatever level. But sustained interest and commitment to rigorous practice. Access to a computer with pre-installed version of STATA software.

Module 6: Logistic Regression Using STATA

1. Contingency tables
2. Logistic regression
3. Prediction and model fit
4. Application: fitting the model
5. Application: checking the model fit
6. Application: visualising the model

- Duration: 4 hours
- Contact Session: 2 hours per/week
- Prerequisite: A prior knowledge of the use of STATA at whatever level. But sustained interest and commitment to rigorous practice. Access to a computer with pre-installed version of STATA software.