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Department of Statistics and Business Analytics

Statistical Consulting Unit

Workshops/Training courses

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Title: Stata for Economic Data Analysis: From Basics to Advanced Econometric Techniques

Statistical Software: Stata

Requirements: A basic understanding of econometric concepts

Instructor: Dr. Usman Khalid

Target Group: Any participant with a basic understanding of econometric concepts

Date: 18– 24 Nov., 2024

Period: 3 days, 4 hours/session, 12 hours total

Platform: Face-to-face Meeting

Inclusive of Scientific Materials: PowerPoint Slide Presentation and E-Certificate**.**

Description: This 3-day workshop is designed to equip participants with essential skills in using Stata for economic research. The workshop covers key topics, including data management, descriptive statistics, and visualization, as well as using Stata to estimate various econometric techniques such as multivariate regression model, and fixed effects models. Participants will gain hands-on experience through practical exercises, making it ideal for economists, researchers, and students looking to enhance their data analysis capabilities in Stata.

Topics Covered:

Day 1: Introduction to Stata & Basic Data Management

1. **Introduction to Stata (30 minutes)**
   o Overview of Stata's interface and commands
   o Understanding file types (.dta, .do, .log)
   o Navigating Stata help files and documentation
2. **Data Import and Export (45 minutes)**
   o Importing data (Excel, CSV, text files)
   o Saving data and exporting results
   o Dealing with large datasets
3. **Data Cleaning and Preparation (1 hour)**
   o Handling missing data

- o Creating, modifying, and dropping variables
- o Renaming and labeling variables
- o Generating summary statistics
4. **Hands-on Practice (45 minutes)**
   - o Practice tasks on importing and cleaning data using real-world economic datasets

Day 2: Descriptive Statistics and Visualization

1. **Descriptive Statistics (1 hour)**
   - o Summary statistics (mean, median, percentiles, etc.)
   - o Cross-tabulations
   - o Generating frequency tables
2. **Introduction to Data Visualization (1 hour)**
   - o Creating simple graphs (histograms, scatter plots, bar graphs)
   - o Customizing graphs (labels, titles, colors)
   - o Exporting graphs for reports
3. **Advanced Graphing Techniques (45 minutes)**
   - o Time-series plotting
   - o Multiple graph panels and overlays
   - o Plotting regression lines on scatterplots
4. **Hands-on Practice (45 minutes)**
   - o Practice tasks on generating descriptive statistics and creating visualizations

Day 3: Econometric Analysis and Output Interpretation

1. **Introduction to Regression Analysis (1 hour)**
   - o Simple linear regression
   - o Multivariate regression
   - o Interpreting coefficients, R-squared, p-values
2. **Advanced Regression Techniques (1 hour)**
   - o Fixed effects models
   - o Instrumental variables
   - o Logit and probit models
3. **Working with Large Datasets and Loops (45 minutes)**
   - o Efficient coding techniques
   - o Running loops for multiple regressions
   - o Working with panel data
4. **Hands-on Practice (45 minutes)**
   - o Running regression models on sample datasets
   - o Interpreting output and diagnosing model issues
5. **Q&A, Recap, and Workshop Wrap-Up (30 minutes)**
   - o Final Q&A
   - o Recap of key takeaways
   - o Feedback and further resources for learning Stata

Workshop Fee: 1500 AED

Contact US: statconsult@uaeu.ac.ae

*20% off for UAEU students