



STRUCTURAL EQUATION MODELLING APPROACH using SMART PLS Software (Basic Level)

1. Introduction to Structural Equation Modelling (SEM) Approach
2. Key Structural Equation Modelling (SEM) Terms
3. SEM Practical with Smart PLS Software
4. Measurement Model and Model Fit Calculations (Smart PLS)
5. Path Analysis/ Structural Model Assessment
6. Discussion of Results, & Implications of the Research Findings
7. SEM Practical with Smart PLS Software – Testing Mediating Effects
8. SEM Practical with Smart PLS – Group Assignment Presentations



Day 1

Session 1: Introduction to Structural Equation Modelling (SEM) Approach

1.What is SEM?
2.Why use SEM?
3.Common SEM Software used in Business Research
4.Advantages & Disadvantages of the SEM software
5.Common SEM Software used in Business Survey Research
6.SEM Approaches (SEM - Covariance-Based Approach & Component-Based Approach)
7.SEM Approach Steps Approach &
8.SEM Limitations

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Session 2: Key Structural Equation Modelling (SEM) Terms

1.Measurement Model
- Latent Variables
- Manifest Variables

2.Measurement Instruments Reliability
- Cronbach Alpha Coefficient
- Composite Reliability Coefficient

3.Measurement Instruments Validity
- Convergent Validity
- Discriminant Validity

4.Model Fit Indicators
- Chi-Square,
- GFI, CFI, IFI, TLI, NFI
- RMSEA

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Session 3: SEM Practical with Smart PLS Software

1.Working in Smart PLS Environment
2.Converting data to CVS – Comma delineated or SPSS file
3.Importing data into Smart PLS
4.Creating a SEM project in Smart PLS
5.Running a SEM project in Smart PLS
6.Smart PLS Results
- Reliability of Measurements
- Validity of Measurements
- Model Fit Indicators

7.Interpreting Smart PLS Results

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Day 2

Session 4: Measurement Model and Model Fit Calculations (Smart PLS)

1.Reflection on SEM in Smart PLS Environment
2.Measures for Reliability (Consistency)
3.Measures for Convergence Validity (Factor Loading and AVE)
4.Measures for Discriminant Validity (Correlation Matrix and AVE vs Highest Shared Variance
5.Factor loadings and Calculation of Composite Reliability (CR) Coefficient.
6.Factor Loadings and Calculation of Average Variance Extracted (AVE)
7.Correlation Matrix and Calculation of Highest Share Variance (HSV)
8.Calculation of Goodness of Fit (GoF) for SEM model
9.Smart PLS Model Fit Indicators

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Session 5: Path Analysis/ Structural Model Assessment

1.Reflections in Smart PLS Environment
2.Path Analysis/ Structural Modelling in Smart PLS Environment
3.Structural Model Specifications
4.Structural Model Path Coefficients
- Positivity or Negativity of Path Coefficients

5.Bootstrapping in Smart PLS Environment
- P-Values
- T-Statistics

6.Structural Model Fit Assessment Indicators
- Chi-Square
- Normed Fit Index (NFI)

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Session 6: Discussion of Results, & Implications of the Research Findings

1.Reflections in Smart PLS Environment
2.Smart PLS Practical
3.Measurement Model Assessment
4.Structural Model Assessment (Path Analysis, Path Coefficients & R-Squared)
5.Bootstrapping/Assessing the Significance Levels of Hypotheses)
6.Interpretation and Discussion of Results - A Comparative Analysis & Empirical Literature Evaluation
7.Implications of the Study (Academic, Managerial, Policy, Individual & Societal Implications)

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Day 3

Session 7: SEM Practical with Smart PLS Software – Testing Mediating and Moderating Effects

1.Reflections in Smart PLS Environment
2.Smart PLS Practical
3.Bootstrapping Results and Indirect Effects Results
4.Testing the Mediating Effects in Smart PLS Environment
5.Interpretation and Discussion of the Mediating Effects Results
6.Testing the Moderating Effects in Smart PLS Environment
7.Interpretation and Discussion of the Moderating Effects Results

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Session 8: SEM Practical with Smart PLS – Group Assignment Presentations

1.Measurement Model Assessment – Group Assignment Presentation
2.Structural Model Assessment – Group Assignment Presentation
3.Testing the Mediating and Moderating Effects – Group Assignment Presentation
4.Conclusion on SEM with Smart PLS
5.Question and Answer Time!

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