

Tentative Programme Schedule of One Week Workshop on RESEARCH METHODOLOGY AND DATA ANALYSIS FOR COMMERCE & MANAGEMENT IN COLLABORATION WITH SPSS SOUTH ASIA BANGALORE organised by the Department of Commerce, Saurashtra University, Rajkot from 05/06/2017 to 11/06/2017

Day 1 – 05/06/2017, Monday

10:30 am to 11:25 am Inaugural Function

11:25 am to 12:25 pm -Session 1

12:30 pm to 01:30 pm -Session 2

1:30pm to 2:30pm LUNCH BREAK

2:30 pm to 3:30 pm- Session 3

3:35 pm to 4:35 pm- Session 4

Types of Data and Scale of Measurements

- Primary and Secondary Data
- Cross Section, Time Series, Panel Data
- Cardinal and Ordinal Data which includes Ratio, Interval, Nominal and Ordinal Scale

Questionnaire as part of primary data collection

- General guidelines for questionnaire preparation
- Types and structure of Questions
- Pilot testing

Day 2- 06/06/2017, Tuesday

11:25 am to 12:25 pm -Session 1

12:30 pm to 01:30 pm -Session 2

1:30pm to 2:30pm LUNCH BREAK

2:30 pm to 3:30 pm- Session 3

3:35 pm to 4:35 pm- Session 4

Population and Sampling Technique

Probabilistic Sample

- Simple Random Sample
- Systematic Random Sample
- Stratified Sample
- Cluster Sample
- Multistage Cluster Sample

Non probabilistic Sample

- Convenience Sample
- Quota Sample
- Judgmental Sample [Expert opinion sample]
- Snow ball sample [Referred sample]

Calculating ideal sample size

Introduction of SPSS / IBM SPSS Statistics

- Coding
- Decoding

- Editing
- Data entry, Data file etc

Day 3- 07/06/2017- Wednesday

11:25 am to 12:25 pm -Session 1

12:30 pm to 01:30 pm -Session 2

1:30pm to 2:30pm LUNCH BREAK

2:30 pm to 3:30 pm- Session 3

3:35 pm to 4:35 pm- Session 4

Frequency Distribution along with Graphs

Descriptive Statistics

- Mean (Arithmetic Mean, Geometric Mean, Harmonic Mean, Combined Mean/ Group Mean, Weighted Mean, Trimmed Mean), Median, Mode,

Measures of dispersions

- Maximum, Minimum, Range, Mean Deviation, Standard Deviation, Coefficient of Variation, Skewness, Kurtosis etc

Reliability Test

- Internal consistency of instrument
- Cronbach's Alpha

Day 4- 08/06/2017- Thursday

11:25 am to 12:25 pm -Session 1

12:30 pm to 01:30 pm -Session 2

1:30pm to 2:30pm LUNCH BREAK

2:30 pm to 3:30 pm- Session 3

3:35 pm to 4:35 pm- Session 4

Cross tabulation with Chi-square test

- Two by Two cross tabulation
- K by k cross tabulation
- Phi coefficient
- Cramer's V

Multiple Response Analysis

- Frequency distribution for multiple response
- Cross tabulation for multiple response

Day 5- 09/06/2017- Friday

11:25 am to 12:25 pm -Session 1

12:30 pm to 01:30 pm -Session 2

1:30pm to 2:30pm LUNCH BREAK

2:30 pm to 3:30 pm- Session 3

3:35 pm to 4:35 pm- Session 4

Testing of Normality

- Normality and its features with importance
- Nine different ways to test for normality including graphical methods and scientific tests
- Kolmogorov-Smirnov
- Shapiro-Wilk tests
- Stem-and-Leaf Plot
- Normal Q-Q Plot
- Detrended Normal Q-Q Plot
- Box plot

Hypothesis testing

Parametric Hypothesis testing and Non Parametric Hypothesis testing

t-test for comparing mean

- One sample t test
- Independent sample t test
- Paired sample t test
- One Way ANOVA

Non-Parametric Hypothesis testing

- Mann-Whitney U
- Wilcoxon Rank Sum Test
- Kruskal Wallis test
- Friedman test

Day 6- 10/06/2017- Saturday

11:25 am to 12:25 pm -Session 1

12:30 pm to 01:30 pm -Session 2

1:30pm to 2:30pm LUNCH BREAK

2:30 pm to 3:30 pm- Session 3

3:35 pm to 4:35 pm- Session 4

Bivariate and Multivariate Correlation

- Scatter diagramme [Checking for linearity]
- Bivariate correlation
- Pearson method
- Spearman method
- Kendall's tau-b
- Multiple correlation
- Partial Correlation

Regression Analysis - I

Bivariate Regression

- Difference between correlation and regression
- Estimation of Regression line
- Interpretation of R-square, F-test, Beta coefficient, t-test and its associate significance value

Day 7- 11/06/2017- Sunday

11:25 am to 12:25 pm -Session 1

12:30 pm to 01:30 pm -Session 2

1:30pm to 2:30pm LUNCH BREAK

2:30 pm to 3:30 pm- Session 3

3:35 pm to 4:35 pm- Session 4

Regression Analysis – II

- Multiple regression Analysis
- Multiple Regression with quantitative and qualitative exploratory variables
- Interpretation of R bar-square, F-test, Beta coefficient, t-test and its associate significance value

Multivariate Analysis

Factor Analysis

- Exploratory factor analysis

Cluster Analysis

Discriminant Analysis

4:40pm to 5:30pm- Valedictory Function

Total Days: Seven

Resource Person / Course Instructor

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