Quantitative Analysis

Quantitative Analysis

Two Purposes:

(1) Describe a data set

(2) Draw inferences from the data

Quantitative Analysis

Univariate Analysis

- Shows characteristics of one variable

Bivariate Analysis

- Shows relationship between two variables

Multivariate Analysis

- Shows relationship between three or more variables

Univariate Analysis

(1) Frequency Distribution

(2) Measure of Central Tendency
- Mean
- Median
- Mode

(3) Measure of Variation
- Range
- Percentile Classes
- Standard Deviation

Bivariate Analysis

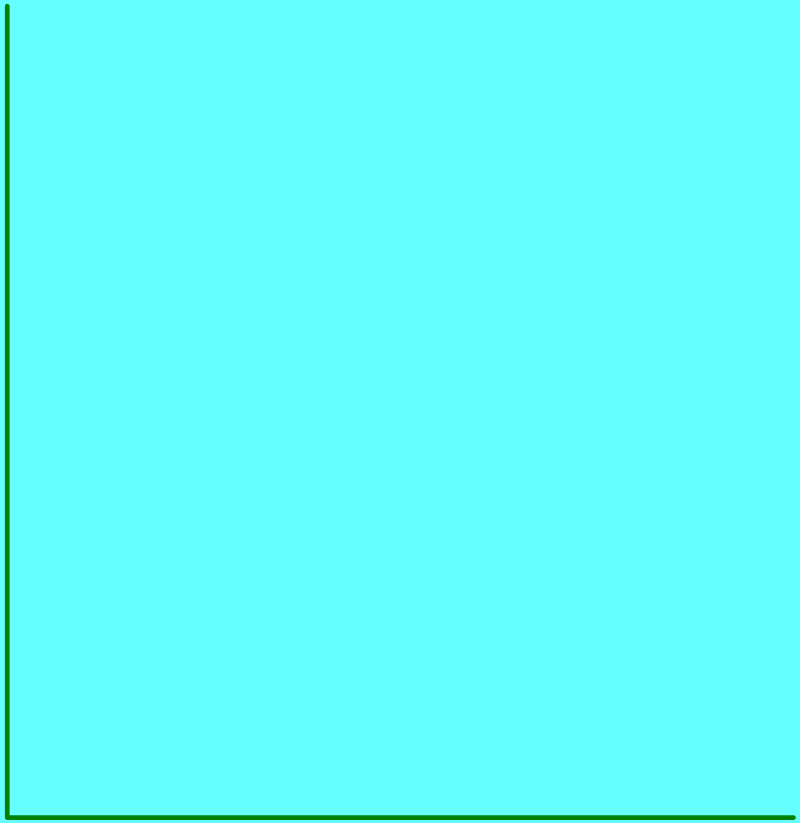
(1) Scatterplot

(2) Cross-Tabulation

(3) Measures of Association

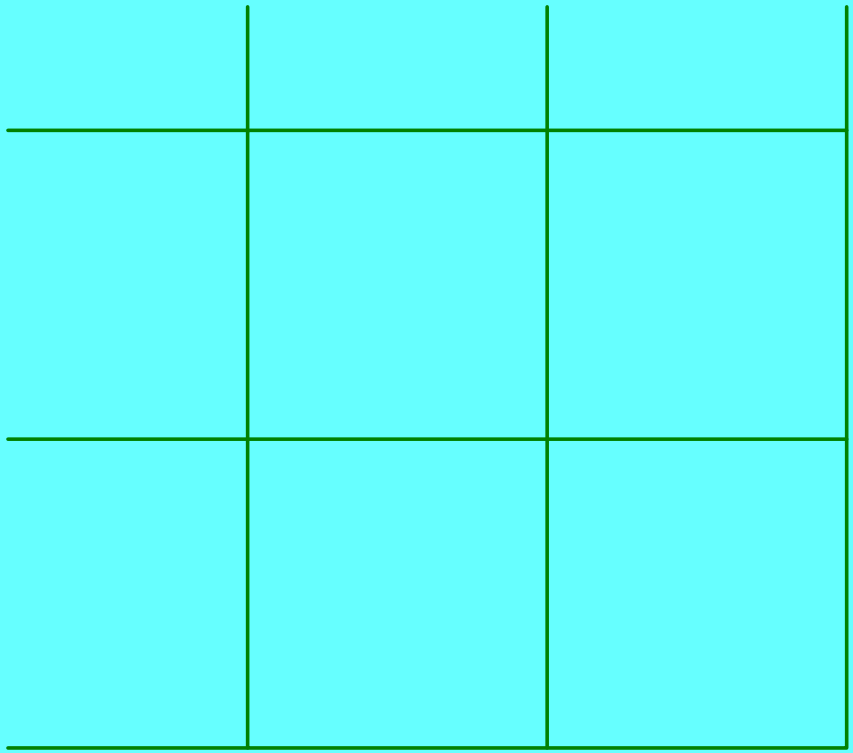
Scatterplot

Compares continuous variables



Cross-Tabulation

Compares discrete variables



Measures of Association

A single number that shows the strength of a relationship between variables

Various measures; the appropriate measure depends on the level of measurement

(nominal, ordinal, interval, ratio)

Measures of Association

Example: r (aka rho, ρ, Pearson's product moment correlation)

Used with ratio level data

Expressed as -1.0 to 1.0

0 = No Association, Independence

1 = Absolute Direct Relationship

-1.0 = Absolute Inverse Relationship

Multivariate Analysis

	Dependent Variable		
Independent Variable		**Discrete**	**Continuous**
	Discrete	Contingency Table (X^2)	ANOVA
	Continuous	Logistic Regression	Regression