

Business Statistics/Statistical Methods

Chapter 1 Highlights – Statistics Defined

- **Statistics** is the process of collecting, organizing, analyzing, presenting, and interpreting data.
- **Descriptive statistics** summarize and describe data so that it becomes information.
- **Inferential statistics** attempt to estimate, generalize, or predict something about a population.
- A **population** includes all the elements or individuals in the study group
- A **sample** is a subset of the population
- Why use samples?
 - Less costly and more practical than surveying every member of the population.
 - Some tests damage or destroy the item tested
- **Variable**: A characteristic of interest that is tested, measured, or collected
- A **qualitative variable** is nonnumeric variable such as, favorite color or gender.
 - A categorical variable is a qualitative variable that can be assigned a value,
- A **quantitative variable** is a numeric variable.
 - A **discrete variable** results from counting.
 - A **Continuous variable** is measured rather than counted and can assume any value for the item being measured.
- Quantitative variable **measurement scales**
 - **Nominal**: values do not equate to relative worth or order.
 - **Ordinal**: values ranked in a meaningful way but the differences between values cannot be determined with a numeric value.
 - **Interval**: meaningful and measurable differences between values but zero is not a null value.
 - **Ratio**: meaningful and measurable differences between values and zero is a null value.