**WHAT IS BUSINESS STATISTICS?**

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 According to the Encyclopedia Britannica, statistics is defines as “the science of collecting, analyzing, presenting, and interpreting data.” Thus statistics requires that raw data be gathered, categorized and understood so that inferences can be made which would be beneficial to the user.

 As a result, statistics can be used in various sectors of business including, but not limited to – market research and customer analysis, economics, financial and auditing analysis, and the transformation process of operations management which includes every step from acquiring the raw materials for input to the packaging and distribution of output.

**What Benefits Would You Expect From Using Statistics?**

 When considering the vast use of statistics, it can be realized that many advantages can be derived from it being flexible, timely and easily presentable to confer information to the masses.

* Flexible – Statistics can be utilized for both numeric and nonnumeric data, thus quantitative data measure either how much or how many of something, while qualitative data provide labels, or names, for categories of like items. Also, it provides knowledge and skills to interpret and use statistical techniques in a variety of business applications
* Timely – Additionally, data is only valuable to those who utilize it if it summarizes and analyzes activities or industry advancements that are reasonably current. Therefore, statistics is beneficial to companies as it allows users to study recent trends, which gives further insight to a industry.
* Presentable – Thirdly, statistics allows for a large amount of data to be represented in tabular and graphical forms which makes information understandable for the masses. Moreover, its ease in presentation and transferability allows for data producers (those for compile the data - statisticians) and data users (those who utilize the information – upper level management) to co-exist in any industry.

**Is Statistics a Form of Applied Decision Science Under Uncertainty?**

 Yes, in my opinion, statistics is a form of applied decision making science as it allows data users to make better choices in circumstances that may be difficult to make had it not be utilized. With the use of the data that is gathered, decisions that will affect a company’s short-term and strategic outcome will be more defined and correct.

 Moreover, when making decisions, it is human tendency to base choices of personal opinions or past experiences. However, with the use of analyzed data, this process will be unbiased and accurate – two key components of continuous productivity.

**Does Statistics Make Decisions?**

No, statistics does not make decisions, however it is one of the more accurate guides that can be used during the decision-making process. Statistical data should be used to make decisions, however other factors must also be considered that cannot be completely analyzed by statistics such as inside information or knowledge of competitive products/services.

**Why has Statistics Become More Widely Used in the Past Few Decade?**

From its humble beginnings in a village to acquiring general information for the government and state, statistics has made many advances as time has passed. Statistical tools are at work in almost every facet of our lives, from government, legislation and commerce, to agriculture, engineering, sciences.

 Greater utilization may be due to the fact that people have realized that better decisions are made when there has been an analysis of numeric and nonnumeric factors associated with a subject. Moreover, its tools, methods, and forms of expertise that continues to improve in terms of accuracy, which motivates someone to trust the information derived from it.

 Finally, in this worldwide market that exist today, there is a lot of data to be gathered and the general public is holding those in upper level management positions more accountable for their actions with the use of finances contributed by investors, thus having proof of factors that aided in the decision making process makes one less liable if something goes awry.

Lecture Notes

Now, which of the following two examples is inferential statistics?
1. Is the following result an example of Descriptive Statistics or Inferential Statistics? "56% of the children in a Baltimore City Elementary School are eligible for free or reduced price lunch."

The above is an example of **Descriptive Statistics**

2. Is the following result an example of Descriptive Statistics or Inferential Statistics? "Our best description of the situation in Baltimore City is that we are 95% certain that between 31% and 38% of elementary school children are eligible for free or reduced-price lunch."

The above is an example of **Inferential Statistics**