



University of Asia Pacific

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Submitted To:

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Introduction:

If we look through any business university catalog, we will find that statistics is required for many college programs, especially for College of Business. In the College of Business we are interested in such things as profits, hours worked, and wages. Statistics courses in colleges of business and education usually teach the course at a more applied level. So, definitely statistics has great applicability in business decision making, otherwise it would not be taught in business programs.

If it is assumed that I am a business leader or going to become a business manager or potential entrepreneur, then I will think of following usage of statistics in my decision making process and my organization.

Uses of Statistics in Business Decision Making:

- **To Understand Business and Market**

Statistics is an important branch of mathematics. It is the analysis, interpretation, preservation, and presentation of data. The role of statistics in business management is pivotal. It comes in handy, especially for rating organization, financial markets, financial organizations, etc. The uses of statistics in business and management are limitless, with the proper skill to implement statistical methods, the managers can increase the production capacity of any plant or find out the optimum production capacity, efficient management of work and employee performance, limit the wastage of resources, etc.

- **Basic of Statistics in Decision Making**

Even the most basic of statistics that I can learn in statistics courses like the mean, mode, and median can go a long way in the world of business. Finding the mean or the average of a group of numbers is quite significant in business.

- **To Analyse Performance of Employees**

As a business leader I can analyse the performance or the productivity of employees like the units produced or the task completed. I can use the data in sync with statistical techniques to improve the productivity of the workforce and multiply the production.

- **Research And Development**

The scope of statistics in business also extends to market research and product development. This is one of the most important functions of statistics, as a sample group is observed and their response to a product is tested and data collected. This data is essential in the determination of the launch of new products and the development of it.

- **To Make Predictions of Future**

As a business leader I should have the ability to look at data and make predictions regarding the future of the business or a specific department. It is done with the help of statistics and statistical concepts. Nowadays, every decision needs to be backed by concrete empirical data.

- **To Reduce the Cost of Market Research**

Statistics helps a business in getting the big picture with the help of the analysis of the sample population. It can significantly reduce the cost of market research with relatively accurate information about the market. Statistics do not require a lot of time and it is very cost effective.

- **To Establish Relationship between Different Parameters**

With the analysis of data, the relationship between variables can be established. Like the effect on sale due to seasonal change, the effect on sale in comparison with the discount offered. A more detailed analysis of statistical data can reveal several things like the behaviour and the preference of the consumer.

- **Use of Statistical Software and Tools in Business**

Today, there is hardly any business that functions without the use of statistics and statistical tools. Every business small or big uses statistics for its daily function. The use of tools like Microsoft Excel to store, organise, and present data is a typical example of the use of statistics in business. Also Six Sigma and Lean Manufacturing -

these statistical tools are extremely useful in business. And this is only going to grow with new tools coming into the market. In the future, most business activity will be under the scanner of statistics. Therefore, it is high time that business and to be managers accustom themselves to statistics and its tools.

Now I want to focus on some statistical concepts taught in our Business Statistics course to describe how different statistical methods help in business decision making.

- **Line Graph**

If we are given the values of a variable at different points of time, the set of values is known as a time-series. The line diagram is used to best represent time series data. Line diagrams are particularly effective for business because we can show the change in a variable over time. In line diagram time is represented along the horizontal axis (x-axis) and the variable such as number of units sold or the total value of sales is scaled along the vertical axis (y-axis).

- **Geometric Mean**

It has a wide application in business because we are often interested in finding the percentage change in sales, salaries, or economic figures like Gross National Product. Geometric Mean is good for measuring these.

- **Probability Concepts**

Using a scenario analysis based on a probability distribution can help a company frame its possible future values in terms of a likely sales level and a worst-case and best-case scenario. By doing so, the company can base its business plans on the likely scenario but still be aware of the alternative possibilities.

- **Confidence Interval**

The interpretation of a confidence interval can be very useful in decision making and play a very important role in business events.

- **Sampling**

In business decision making, sampling plays an important role as the target population is too large to study. As an efficient method to obtain information about a population, one frequently needs to sample from a population. For example, auditors at a credit card

company have to sample among a large number of financial transactions. Market researchers have to resort to sampling to study all potential customers.

Conclusion:

The knowledge of statistical methods will help me understand how decisions are made and give me a better understanding of how they affect our business. No matter what line of work I select, I will find myself faced with decisions where an understanding of data analysis is helpful. Nowadays data are everywhere, and statistical techniques are used to make many decisions that affect our lives, and no matter what our career, we will make professional decisions that involve data. An understanding of statistical methods will help me make these decisions more effectively. So, the roles of Statistics in business decision making can't be denied.

References:

[1] Statistical Techniques in Business and Statistics by Douglas A. Lind, William G. Marchal, Samuel A. Wathen.

[2] Importance of Statistics in Business Organization by Emily Scott.

Link to the article: <https://blog.essaycorp.com/importance-of-statistics-in-business/>

[3] Sampling notes - sampling in business decision making process

Link:

<https://www.coursehero.com/file/12342050/Sampling-notes/#:~:text=SAMPLING%20In%20business%20decision%20making%2C%20sampling%20plays%20an%20important%20role,is%20too%20large%20to%20study.&text=Once%20sample%20data%20are%20collected,value%20of%20the%20population%20parameter.>