CHAPTER 3

DISPERSION MEASUREMENT

Today is the age of information. The advancement of technology today has progressed rapidly, resulting in communication and information search being done quickly. Information technology is a branch of technology that is related to statistical data. And statistics is a scientific method involving measurement, collection, and organization of data for use in explaining social phenomena, relationships between elements or factors, and leading to final conclusions.

1 THE MEANING OF STATISTICS

Statistics refers to numbers that are obtained from collecting data to find a definite meaning from the thing that needs to be studied. Generally, statistics based on this meaning are called statistical data.

Statistics refers to the principles and regulations regarding the collection of numerical data that represent various facts leading to rational decision making. We call statistics in this sense as statistical science.

The meaning of the word statistics has become broader than before, such as information related to business, medical information, etc., along with the current advancements in which computers have come to play a role, making it possible to retrieve information and use it quickly. In the present time, the meaning of the word statistics can be considered into meanings in various areas as follows.

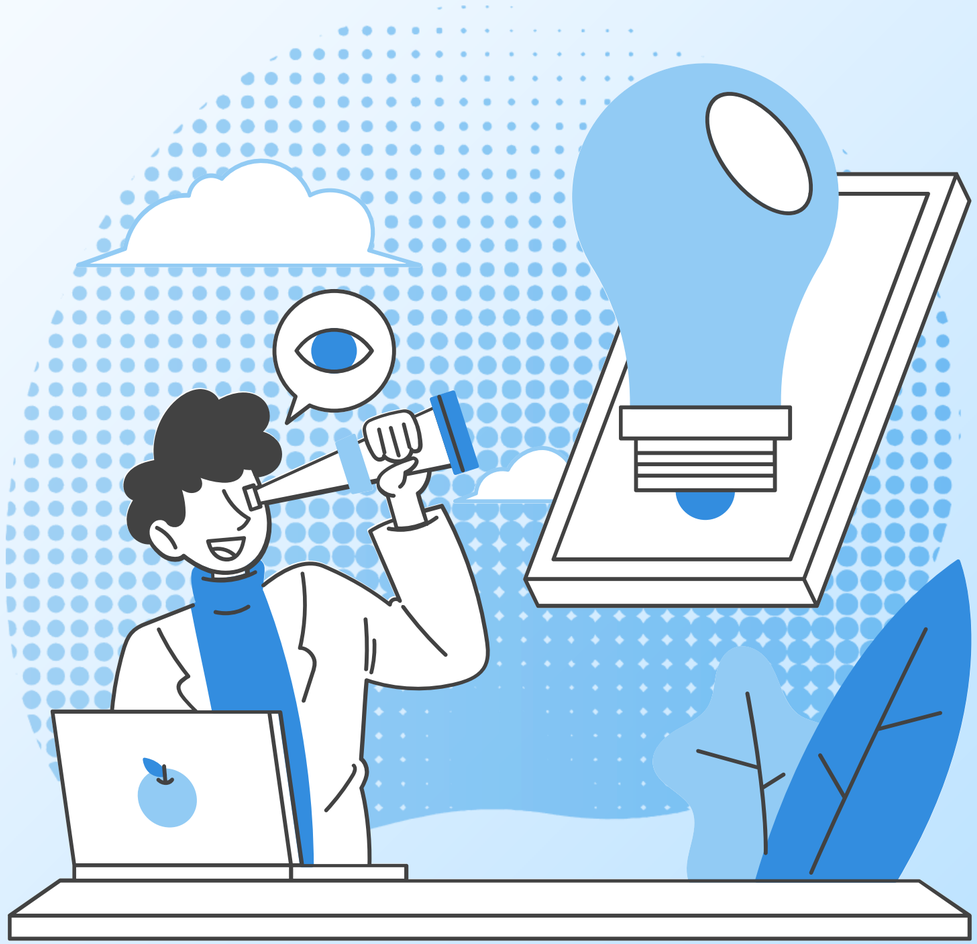
1 THE MEANING OF STATISTICS

1 Statistical data

refers to numbers that represent facts that have been recorded, such as statistics on foreign tourists who have visited Chiang Mai in the past 10 years.

3. Statistics

refers to a branch of science. Its roots and content are based on mathematics and logic. Based on probability theory and principles of reason



2 Statistical science

a branch of science that involves various techniques for working with data to be studied, which consists of 4 steps: data collection, data presentation, data analysis, data interpretation.

4. Statistical values

mean numerical values that can be calculated or processed from sample data using statistical methods. Statistical values that are frequently used, such as maximum value, minimum value, and mode.

2. SCOPE OF STATISTICS

Descriptive statistics is the principle of statistical methods used to collect data. Organizing information Presentation of information which shows the nature of the data By cutting out unimportant details and presenting only the essential characteristics of those data.

Inferential statistics It is an analysis of data from collected samples. and infer or link the results to the population By using statistical methods This inference may be made in the form of an estimate. to show the characteristics of the population or hypothesis testing

3. BENEFITS OF STATISTICS

1. Benefits at the individual level

2. Household benefits

3. Benefits at the private business agency level

4. Benefits at the national level

4. NATURE OF DATA

1.Characteristics of data

1. Quantitative data is data that represents size or quantity. which can be directly measured as numerical values such as age, height, weight, price, area, volume, width, length, income, test scores, speed, distance, etc.

2. Qualitative data is information that cannot be directly measured in numerical values. But it will be information that describes the qualities or characteristics of the thing you are interested in, such as gender, status, popularity of political parties, opinions, race, religion, education level, skin color, etc.

4. NATURE OF DATA

2. Measurement of data

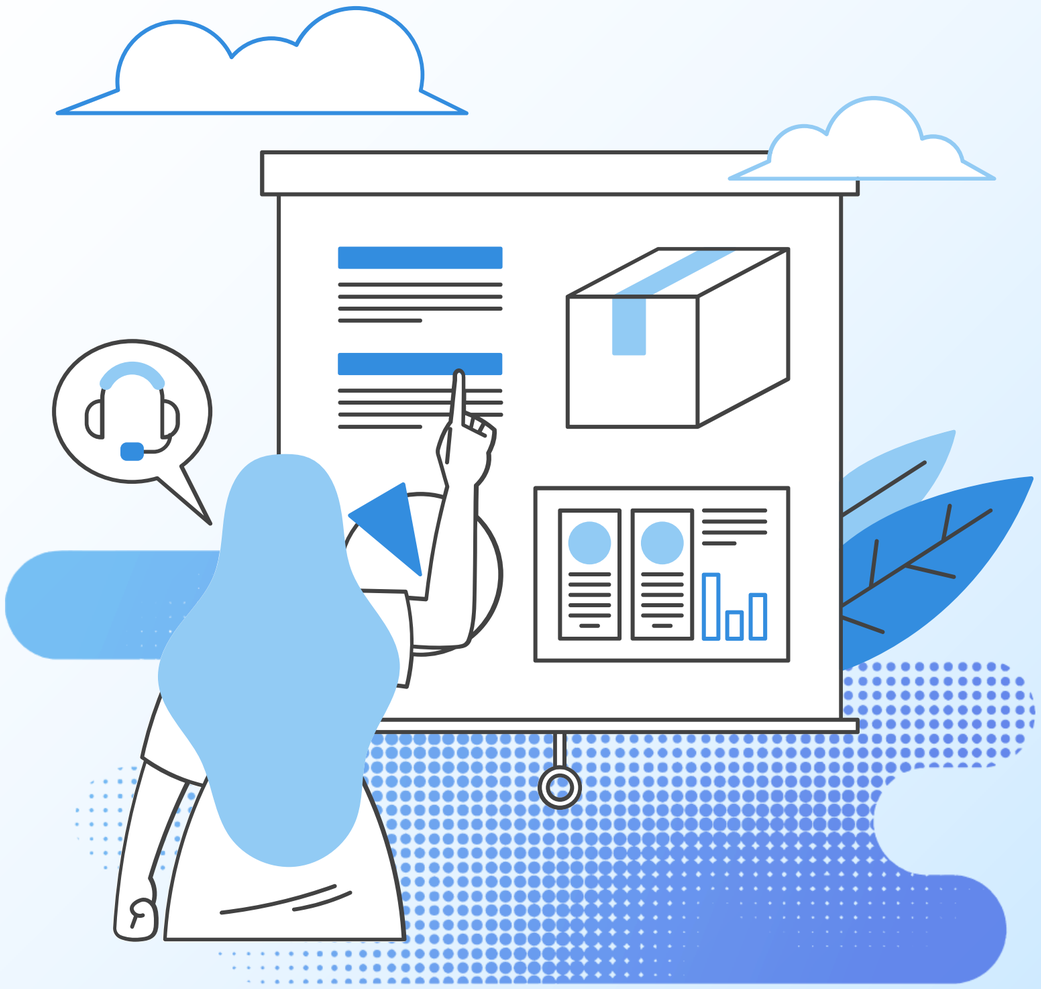
1. Standard nomenclature It is a basic measurement. By dividing information into groups that are simply classified. There is no ranking yet. Therefore, names are assigned to various objects or events. which are different in quality But there is still no meaning regarding the quantitative order.
2. Sorting gauge It is a measure used with data that can be arranged in descending order according to quantity and quality. But still can't tell. How far apart are each step, and are all steps the same?

3. Intersection meter is a measurement measure that has basic properties like an ordinal meter. But this type of measurement can tell the difference in data over a period of time, such as measuring the temperature as 100 degrees, which is 100 equal intervals, but the number 0 in this meter is not the true 0.
4. Ratio scale It is the most complete measure. It has the same basic properties as the reciprocal scale, but the number 0 in this scale is true zero. For example, a weight of 0 kilograms indicates that it has no weight at all.

4. NATURE OF DATA

3. Statistical information

Statistical data or observational values refer to facts about the subject of interest to study. This may be in the form of numbers such as weight, distance, etc., or it may be non-numeric facts such as occupation, gender, etc. The information or facts must be in large numbers. To show the nature of the group or participation. used in comparison or can be interpreted For this reason, single facts are not statistics.



5. STATISTICAL METHODS

1.Collect information

1. Primary data It is information that those who wish to study have collected themselves, information that determines current events, but it is information that is obtained directly from information recovery sources.
2.Secondary data To obtain this type of information, those who want to study it do not collect it themselves, but may collect it from any unit within the agency that has already been recorded. However, sometimes this information may be out of date or incomplete.

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SUMMARIZE

-THE SCOPE OF STATISTICS IS DIVIDED INTO DESCRIPTIVE STATISTICS AND INFERENTIAL STATISTICS.
-The benefits of statistics are at the individual level, household level, private business agency level, and national level.
-Data refers to facts about the subject that is of interest to study, divided according to the nature of the data into 2 types: quantitative data and qualitative data. Considered according to the measurement measures of data, divided into 4 levels, namely standard nouns Ordinal meter, reciprocal meter, and ratio meter.