Name

Professor’s Name

Course Number

Date

In a world of increased demand for goods and services, humans have come up with ways to satisfy the increased population needs either for-profit or non-profit purposes. In the process of providing the best services and quality goods, an individual or a firm is faced with the need to identify the target market. This is where the aspect of data analysis comes in. Collection, analysis, and interpretation of data are important for decision making to maximize the provision of goods and services. There are two major types of data mainly qualitative and quantitative. Depending on the data collection method, one can analyze data numerically using mathematically based methods. On the other hand, qualitative data are based on people's opinions and references. How well and accurate the data collected is analyzed determines the quality of decisions made and consequently the quality of actualizations of the outcome desired.

Data is the particular statistics and facts collected for analysis. It consists of numerical quantities or qualitative details that are used to form the basis of a reason or a mathematical calculation. There are various ways data is collected. For instance, there's an observation method whereby the data is collected by observing. Interview method the data is collected through conducting a questioning session with the target group about their knowledge and opinion about the specific subject at hand. Also, there is the sampling method that involves the selection of a specific member of the population with the assumption that each member of the population has an equal probability to be selected.

Information is the details or the particulars deduced or provided about someone or something. These are facts which have been derived from certain observation and analysis of raw data. Information can be in the form of visual presentation, sound or in written form.

Knowledge is the understanding of the information at hand. Knowledge is the final product of the data analysis process. After data has been transformed into information, the people involved get an understanding of the outcome and sometimes educate relevant stakeholders to use the knowledge for the right decisions to take. Knowledge is therefore used as the guidelines for decision making.

Meaningful and correct data analysis is very vital in decision making. Pure data in itself cannot be of any relevant without the right interpretation of useful information. For instance, in a market survey scenario, only the right conclusion would lead to identifying the target market and if the data collected is interpreted correctly that means finding prospect customers and consequently increased profits. Onto the other hands, if data analysis is wrong, there would be no prospect customers for your services or goods and hence decreased profits

Ratio data is what I would use for this data analysis. This because it involves different comparisons of the four areas of sales. With ratio data, one can show the differences in profitability, sales volume, marketing expenditures, and their changes. I would incorporate the use of bar charts because it presents individual data graphically which is vivid and easy to separate the four areas with distinctive bars each showing independent quantities

To quantify the average sales of each store of the grocery chain store I would use the means sales because the mean is the average value where you add up the sales from all the scores and divide by the number of the stores available. On the contrary, the median takes into consideration only one store and disregarding the rest.

 References

Introduction to Statistics(Jim Frost Ms,2013)