

Business decision making in different ways



**ASSIGN
BUSTER**

1. 0 Introduction

This project is not only done for the sake of submitting as we are asked to but also to gain knowledge by a lot of means in both practical and theoretical ways. Text books and study guides cannot give complete knowledge to any student. And I believe that the assignments are given for students to gain extra practical knowledge from the wide world around. In the study of business decision making us mainly focus on the knowledge of different methods of data analyses and how it is useful for business contest and then the presentation of data in an appropriate way to make decisions and predictions. Its purpose is to build better understanding of different business issues and the ways to tackle them. This project report is under the wide range of business decision making of an organization. We have discussed representative measures and measures of dispersions and the difference between them and how they are used to interpret information in a useful manner. After that we use graphs to present the data in order to make them easy then using the graphs I draw some conclusion for business purposes. Finally we have given some solutions for a company which is encountering problems in telecommunications and inventory control. I have discussed the usefulness of intranet in the process of inventory control to overcome from poor inventory management. Also I have provided some solutions by comparing two proposals using DCF and IRR techniques and clearly mention which proposal the company should adopt in order to enhance its inventory control capacity effectively. This report helped me to apply the theoretical knowledge into real world examples and evaluate the advantages and disadvantages and make business decisions.

2. 1Collecting and maintaining the medical data and Medical Records.

In modern clinics and hospitals, and in many public health departments, data in each of these categories can be found in the records of individuals who have received services there, but not all the data are in the same file.

Administrative and economic data are usually in separate files from clinical data; both are linked by personal identifying information. Behavioural information, such as the fact that an individual did not obtain prescribed medication or fails to keep appointments can be extracted by linking facts in a clinical record with the records of medications dispensed and/or appointments kept. Records in hospitals and clinics are mostly computer-processed and stored, so it is technically feasible to extract and analyze the relevant information, for instance, occupation, diagnosis, and method of payment for the service that was provided, or behavioural information. Such analyses are often conducted for routine or for research purposes, although there are some ethical constraints to protect the privacy and preserve the confidentiality of individuals.

Primary sources-

Primary data sources are where YOU yourself have collected the data and it is not someone else's. For example a questionnaire created by you and handed out to the specific people, is a primary source. You can then use them to prove a certain hypothesis and explain a situation.

Statistics,

Surveys,

Opinion polls,

Scientific data,

Transcripts

Records of organizations and government agencies

Secondary data-

Secondary data are indispensable for most organizational research.

Secondary data refer to information gathered by someone other than the researcher conducting the current study.

Books

Periodicals government publications of economic indicators,

Census data,

Statistical abstracts,

Data bases,

The media, annual reports of companies,

Case studies

Other archival records.

2. 2 Data collection methodology and Questionnaire

Records of Births and Deaths

Vital records (certifications of births and deaths) are similarly computer-stored and can be analyzed in many ways. Collection of data for birth and death certificates relies on the fact that recording of both births and deaths

is a legal obligation—and individuals have powerful reasons, including financial incentives such as collection of insurance benefits, for completing all the formal procedures for certification of these vital events. The paper records that individuals require for various purposes are collected and collated in regional and national offices, such as the U. S. National Center for Health Statistics, and published in monthly bulletins and annual reports. Birth certificates record details such as full name, birthdate, names and ages of parents, birthplace, and birthweight. These items of information can be used to construct a unique sequence of numbers and alphabet letters to identify each individual with a high degree of precision. Death certificates contain a great deal of valuable information: name at birth as well as at death, age, sex, place of birth as well as death, and cause of death. The personal identifying information can be used to link the death certificate to other health records. The reliability of death certificate data varies according to the cause and place: Deaths in hospitals have usually been preceded by a sufficient opportunity for investigations to yield a reliable diagnosis, but deaths at home may be associated with illnesses that have not been investigated, so they may have only patchy and incomplete old medical records or the family doctor's working diagnosis, which may be no more than an educated guess. Deaths in other places, such as on the street or at work, are usually investigated by a coroner or medical examiner, so the information is reasonably reliable. Other vital records, for example, marriages and divorces and dissolution of marriages, have less direct utility for health purposes but do shed some light on aspects of social health.

Health Surveys

Unlike births and deaths, health surveys are experienced by only a sample of the people; but if it is a statistically representative sample, inferences about findings can be generalized with some confidence. Survey data may be collected by asking questions either in an oral interview or over the telephone, or by giving the respondents a written questionnaire and collecting their answers. The survey data are collated, checked, edited for consistency, processed and analyzed generally by means of a package computer program. A very wide variety of data can be collected this way, covering details such as past medical events, personal habits, family history, occupation, income, social status, family and other support networks, and so on. In the U. S. National Health and Nutrition Surveys, physical examinations, such as blood pressure measurement, and laboratory tests, such as blood chemistry and counts, are carried out on a subsample.

Records of medical examinations on school children, military recruits, or applicants for employment in many industries are potentially another useful source of data, but these records tend to be scattered over many different sites and it is logistically difficult to collect and collate them centrally.

Health Research Data

The depth, range, and scope of data collected in health is diverse and complex, so it cannot be considered in detail here. Research on fields as diverse as biochemistry, psychology, genetics, and sports physiology have usefully illuminated aspects of population health, but the problem of central collection and collation and of making valid generalizations reduces the

usefulness of most data from health-related research for the purpose of delineating aspects of national health.

Unobtrusive Data Sources and Methods of Collection

Unobtrusive methods and indirect methods can be a rich source of information from which it is sometimes possible to make important inferences about the health of the population or samples thereof. Economic statistics such as sales of tobacco and alcohol reveal national consumption patterns; counting cigarette butts in school playgrounds under collected conditions is an unobtrusive way to get a very rough measure of cigarette consumption by school children. Calls to the police to settle domestic disturbances provide a rough measure of the prevalence of family violence. Traffic crashes involving police reports and/or insurance claims reveal much about aspects of risk-taking behavior, for example, the dangerous practice of using cell phones while driving. These are among many examples of unobtrusive data sources, offered merely to illustrate the potential value of this approach.

The questionnaire contains something in each of the following categories:

1. Personal identifying data: name, age (birth date), sex, and so on.
2. Socio-demographic data: sex, age, occupation, place of residence.
3. Clinical data: medical history, investigations, diagnoses, treatment regimens.
4. Administrative data: referrals, sites of care.
5. Economic data: insurance coverage, method of payment.

6. Behavioral data: adherence to the recommended regimen (or otherwise).

3.0 Data Analysis

Representative Values.

These are also called as measures of location or measures of central tendency. They indicate the center or most typical value of a data set lies.

This includes three important measures: mean, median and mode. Mean and median can be only applied for quantitative data, but mode can be used with either quantitative or qualitative data.

Mean

This is the most commonly used measure which is the average of a data set.

This is the sum of the observations divided by the number of observations.

Advantages of mean-objective:

- Easy to calculate
- Easy to understand
- Calculated from all the data.

Disadvantages-affected by-outlying values

May be some distance from most values.

Median

Median of a data set is the number that divides the bottom 50% of the data from the top 50%.

Advantages-

- Easy to understand
- Give a value that actually occurred
- Not being affected by outlying values.

Disadvantages-

- Does not consider all the data
- Can be used only with cardinal data.
- Not easy to use in other analyses.

Mode

Mode of a data set is the number that occur frequently (more than one)

Advantages-

- Being an actual value
- Not affected by outlying value

Disadvantages-

- Can be more than one mode or none
- Does not consider all the data
- Cannot be used in further analyses.

Comparison of mean, median and mode

For this garage, its representative values are as follows,

Mean- 335

Median- 323

Mode- 430

As we can see mean and median does not vary drastically, but mode on the other hand varies.

Here the owner has to select which price he has to charge among all these.

Mode is very high and it doesn't consider all the values, so if the owner charge £430 it will be expensive and the customers may switch to competitors. Therefore, owner should not choose mode.

Now the selection is between mean and median. Both of them look reasonable and close to most of the cost in October. Median is usually preferred when the data set have more extreme observations. Unless it is likely to select mean because it considers all the data.

From the overview of the cost in October it doesn't have extreme values at all. So the mean value wouldn't have affected much.

Therefore it is advisable that the owner chooses the mean value of £335

Measures of Dispersion

Representative measures only indicate the location of a set of data and two data sets can have same mean, median and mode. In that case we cannot make any decision using representative values. To describe the difference we use a descriptive measure that indicates the amount of variation which is known as measures of dispersion or measures of spread.

This includes the following measurements:

1. Range-Range is simply the difference between the highest value and the lowest value. It is easy to calculate and understand, but it only

consider the largest and smallest value and ignore all the other values and it is highly affected by extreme values.

2. Quartile range- Quartile range is the difference between 3rd quartile and 1st quartile. It is also easy to calculate, but it does not consider all the values in a data set so it is not a good indicator.
3. Variance and Standard Deviation- Variance measures how far the observations are from the mean. This is more important statistics because it considers all the observations and is used for further analysis. Standard deviation is the square root of variance. Both variance and standard deviation provide useful information for decision making and making comparisons.

From the calculation range is £284 and quartile range is £170, but because of the defects of them we cannot use them to derive further decisions.

Variance is 8426.9 and standard deviation is 91.79. From the figures we can see observations are highly deviated from the mean. Variance and Standard deviations are used to compare two data sets. So the owner of this garage can compare these two figures with a similar garage or the cost of November and make decisions such as select the price which has smaller variance and standard deviation.

Quartiles and percentiles also like representative measure. They indicate the percentage of value below a certain value i. e. 3rd quartile indicate 75% of the observations are below a certain amount and 25% of observations are above.

Quartiles and percentile values of the garage

Quartiles
- 1

24
8.
5

2

32
2.
5

3

41
8.
5

Percentil
es- 75%

41
8.
5

50%

32
2.
5

60%

34
9.
4

From the above figures we can see only 25% of the values are above £418 so we shouldn't charge a price above than that if we do so we will lose many of their customers. 25% of the observations are above £248. 5 so we have to

select a price between £248 and £ 418. Earlier we have found out the mean which is £335. This is between 2nd quartile and 60% of percentile. So from the use of quartile and percentile we can select £335 as the service price.

Thus quartile and percentile help us in decision making.

Correlation coefficient measures the strength of the linear relationship between two variables. It is denoted by “ r ”. Value of “ r ” always lie between -1 and +1. If “ r ” is closer to +1, two variables have strong positive relationship. Correlation and coefficient also helps to make business decisions.

4. 0 Presentation of Information

Tables are good at presenting a lot of information, but it can still be difficult to identify the underlying patterns. Therefore the uses of charts and graphs play an important part in data presentation in an effective way. Graphical method includes scatter graph, bar charts, line charts, pie charts and histograms.

Pie charts

They are simple diagrams that give a summary of categorical data. Each slice of a circle represents one category. Pie charts are very simple and can make an impact but they show only very small amounts of data. When there is more data it becomes complicated and confusing. But using pie charts we can make comparisons. Here we can see the amount of commission Trevor plc paid is increasing because year 2008 has big proportion in the circle then 2007, 2006 and 2005. so we can expect the amount will be higher than 2008 for the next year.

Bar Charts

Like pie charts, bar charts show the number of observations in different categories. Each category is represented by separate bar and the length of the bar is proportionate to the number of observations. Contrast to pie chart, more amounts of data can be plotted in bar charts. It is easy to make comparisons in different periods with different observations. Here sales of BMW and Mercedes are increasing continuously but sales of other cars fluctuating. Also we can see over all turn over also increasing year by year.

Line Chart

This is also another way of data presenting. Here we use line rather than using bar or circles. It is easy to draw line chart and easy to understand the underlying trend and make predictions. Area chart also like line chart but it shows the whole amount and shows each category as area. By using area chart we can understand the trend and also make comparisons. Line chart of Trevor plc indicates except Lexus, sales of other cars are increasing. But Mercedes show a dramatic increase from 2006 to 2008. During the period between 2005 and 2006 car sales tend to be steady. From the out come of this line chart Trevor plc mainly focus on BMW and Mercedes to increase its turn over in the forth coming years. Area chart also indicates the same result that line chart shows.

Scatter Diagram and the trend line

Scatter diagram drawn using two variables. Here we draw commission against year. Commission is plot in the “ y” axis and year in the “ x” axis. Scatter diagram explain the relationship between two variables whether they are positively or negatively correlated and whether they are strong or weak.

Commission has a positive relationship with year for Trevor plc and the relationship is strong because most of the observation lies closer to straight line. We have calculated the correlation coefficient between commission and year and it comes 0.9744 this indicates strong positive relationship.

Trend lines used to understand the underlying trend and make useful forecasting. The trend line of Trevor plc shows upward trend among commission and year. We can predict the commission would be approximately £18000 in 2009 and it would be £18500-£19000 in year 2009.

6.0 Intranet

To: The Board of Directors

From: Management Consultant

Date: 20. 12. 2009

Subject: Intranet and its evaluation

Intranet is a private network that is contained within an enterprise. It may consist of many interlinked local area networks. Typically, an intranet includes connections through one or more gateway computers to the outside Internet. The main purpose of an intranet is to share company information and computing resources among employees. And also to share information within the branches of the same organisation.

Advantages:

- Easy access to internal and external information
- Improves communication
- Increases collaboration and coordination

- Supports links with customers and partners
- Can capture and share knowledge
- Productivity can be increased
- Margins of errors will be reduced
- High flexibility
- It provides with timely and accurate information
- It allows communication within the branches of the organisation.

Disadvantages:

- Installation and maintenance can be expensive.
- This may reduce face to face meetings with clients or business partners.

7.0 Management Information System

Management information system (MIS) is a system that allows managers to make decisions for the successful operation of businesses. Management information systems consist of computer resources, people, and procedures used in the modern business enterprise. MIS also refers to the organization that develops and maintains most or all of the computer systems in the enterprise so that managers can make decisions. The goal of the MIS organization is to deliver information systems to the various levels of managers: Strategic, Tactical and Operational levels.

Types of Information vary according to the levels of management.

Strategic management will need information for long term planning and corporate strategy. This will be less structured.

Tactical Management needs to take short term decisions to focus on improving profitability and performance.

Operational management needs information on day to day operations of the organisation.

11. 0 Conclusion

Finally, I would like to conclude my report on Business Decision making.

Firstly, I started with various method of data collection the analysis of the data gathered and prepared a sample questionnaire based on the example used. Then the presentation of data through tables have been discussed and continued with the information for decision making. Afterwards, I moved to evaluate the advantages and disadvantages of Intranet and its usefulness in controlling inventory. I also discussed about various inventory control methods used by organisations. Finally, I drew a conclusion on the investment decision scenario given.

This report made me clearly understand all the subject areas I learnt in the lectures and I found it useful.