

Understand a range
of techniques to
analyse data
effectively for
business purpose...

[Business](#)



Techniques to analyse data effectively for business purposes Number

Department 2 And 2. 2 Calculate the mean, median, mode and standard deviation of the employees' salaries.

Salaries (X)

X-U

(X-U)²

1200

-48

2304

1100

-148

21904

1120

-168

28224

2160

912

831744

1200

-48

2304

1580

332

110224

400

-848

719104

1100

-148

21904

1560

312

97344

1200

-48

2304

1140

-108

11664

700

-548

300304

1560

312

97344

1100

-148

21904

1600

352

123904

2000

752

565504

600

-648

419904

800

-448

200704

1100

-148

21904

1740

492

242064

$24960 / 20 = 1248$ $3842560 / 20 = 192128$

Mean is the average in a list of numbers. It is got by adding all numbers then dividing the result by the number of numbers (Oakshott, 2012). Mean =

$24960 / 20 = 1248$ Median is the middle number in a list of numbers. To find median the numbers have to be arranged in numerical order.

400, 600, 700, 800, 1100, 1100, 1100, 1100, 1120, 1140, 1200, 1200, 1200, 1560, 1560, 1580, 1600, 1740, 2000, 2160

The median in this case is the mean of the two numbers appearing in the middle of a list in numerical order $(1140 + 1200) / 2 = 1170$

The mode is the number that has been repeated most in a list of numbers.

The mode = 1100

Standard deviation= $\sqrt{192128}$ = 438. 75

2. 3 Explain the relevance of the results that you calculated in above both for the business and for employees.

Mode is important when one wants to find out what happens regularly.

Businesses can apply mode when analyzing which is the common salary scale. While there may be other salary scales, there are not many workers who will be paid average or mean salaries. Those values are thus not important when setting the salaries of employees in terms of what most will be paid (Oakshott, 2012). Mode can be applied by employees in knowing their salary scale.

Mean can be applied by businesses to know the average cost of the employees' salaries and it can be used to estimate the future costs. Mean can be used by employees to calculate the expected salary. Employees get an average salary of £1248

The business can apply the median salary figure to get the average salary that the employees are paid with no consideration of the extreme values.

The employees are paid an average salary of £1100.

Standard deviation is the measure of how numbers are spread out. In this case it shows how the salaries of employees are spread out. It shows how the salaries are different from the mean (Lind, Marchal & Wathen, 2010).

2. 4 Discuss how a business may use quartiles, percentiles and correlation coefficient to draw useful conclusions for a business.

A business may use quartile and percentile to make decisions. For instance,

to set the prices of goods and services, they may also be applied in the setting of employees' salaries. Correlation can also be applied in business decision making. Correlation is used to measure the linear relationship that is between two variables (Lind, Marchal & Wathen, 2010). If a relationship between the two variables is strong then altering one of the variables will affect the other variable. Thus a business is able to determine if it should change the variable and to what extent.

References

Lind, D. A., Marchal, W. G., & Wathen, S. A. (2010). *Statistical techniques in business & economics*. Boston, McGraw-Hill Irwin.

Oakshott, L. (2012). *Essential quantitative methods for business, management and finance*. Houndmills, Basingstoke, Hampshire, Palgrave Macmillan.