Analysis of sales and expenses

Name of Student

Name of institution

**Assignment 1**

 We will present crosstabs for all the attributes of customers which are used in 2014 customer survey. Regions are placed in columns whereas the attributes have been placed in the rows. Following tables will show cross tabulation, quartiles and frequency distributions.

|  |
| --- |
| **Quality \* Region Cross tabulation** |
| Count  |
|  | Region | Total |
| China | Eur | NA | Pac | SA |
| Quality | 1 | 0 | 0 | 1 | 0 | 1 | 2 |
| 2 | 1 | 1 | 0 | 0 | 0 | 2 |
| 3 | 2 | 6 | 3 | 1 | 4 | 16 |
| 4 | 5 | 12 | 30 | 4 | 24 | 75 |
| 5 | 2 | 11 | 66 | 5 | 21 | 105 |
| Total | 10 | 30 | 100 | 10 | 50 | 200 |

In the above table we see that people find quality as the most important factor across all geographical regions.

|  |
| --- |
| **Ease of Use \* Region Cross tabulation** |
| Count  |
|  | Region | Total |
| China | Eur | NA | Pac | SA |
| EaseofUse | 1 | 0 | 0 | 2 | 0 | 1 | 3 |
| 2 | 0 | 0 | 2 | 1 | 1 | 4 |
| 3 | 1 | 3 | 6 | 1 | 6 | 17 |
| 4 | 7 | 14 | 47 | 6 | 35 | 109 |
| 5 | 2 | 13 | 43 | 2 | 7 | 67 |
| Total | 10 | 30 | 100 | 10 | 50 | 200 |

|  |
| --- |
| **Price \* Region Cross tabulation** |
| Count  |
|  | Region | Total |
| China | Eur | NA | Pac | SA |
| Price | 1 | 0 | 2 | 5 | 0 | 2 | 9 |
| 2 | 2 | 1 | 10 | 0 | 8 | 21 |
| 3 | 6 | 4 | 19 | 1 | 10 | 40 |
| 4 | 2 | 14 | 41 | 7 | 23 | 87 |
| 5 | 0 | 9 | 25 | 2 | 7 | 43 |
| Total | 10 | 30 | 100 | 10 | 50 | 200 |

|  |
| --- |
| **Service \* Region Cross tabulation** |
| Count  |
|  | Region | Total |
| China | Eur | NA | Pac | SA |
| Service | 1 | 1 | 1 | 0 | 0 | 1 | 3 |
| 2 | 3 | 2 | 3 | 0 | 0 | 8 |
| 3 | 5 | 5 | 8 | 1 | 6 | 25 |
| 4 | 1 | 14 | 44 | 5 | 22 | 86 |
| 5 | 0 | 8 | 45 | 4 | 21 | 78 |
| Total | 10 | 30 | 100 | 10 | 50 | 200 |

|  |
| --- |
| **Statistics** |
| Quality  |
| N | Valid | 200 |
| Missing | 0 |
|  Percentiles | 25 | 4.00 |
| 50 | 5.00 |
| 75 | 5.00 |

|  |  |
| --- | --- |
|  | Frequency |
|  | 1 | 2 |
| 2 | 2 |
| 3 | 16 |
| 4 | 75 |
| 5 | 105 |
| Total | 200 |

The above table shows that lower quartile for variable quality is 4 whereas upper quartile is 5.

|  |
| --- |
| **Statistics** |
| Ease of Use  |
| N | Valid | 200 |
| Missing | 0 |
| Percentiles | 25 | 4.00 |
| 50 | 4.00 |
| 75 | 5.00 |

|  |  |
| --- | --- |
|  | Frequency |
| Valid | 1 | 3 |
| 2 | 4 |
| 3 | 17 |
| 4 | 109 |
| 5 | 67 |
| Total | 200 |

The above table shows that lower quartile for the ease of use is 4 and upper quartile is 5

|  |  |
| --- | --- |
|  | Frequency |
| Valid | 1 | 9 |
| 2 | 21 |
| 3 | 40 |
| 4 | 87 |
| 5 | 43 |
| Total | 200 |

|  |
| --- |
| **Statistics** |
| Price  |
| N | Valid | 200 |
| Missing | 0 |
| Percentiles | 25 | 3.00 |
| 50 | 4.00 |
| 75 | 4.00 |

Lower quartile for the variable price is 3 whereas upper quartile is 4.

|  |
| --- |
| **Statistics** |
| Service  |
| N | Valid | 200 |
| Missing | 0 |
| Percentiles | 25 | 4.00 |
| 50 | 4.00 |
| 75 | 5.00 |

|  |  |
| --- | --- |
|  | Frequency |
| Valid | 1 | 3 |
| 2 | 8 |
| 3 | 25 |
| 4 | 86 |
| 5 | 78 |
| Total | 200 |

Lower quartile for service variable is 4 whereas upper quartile is 5.

**Assignment 2**

 Ms. Burke will be interested in the analysis of those data which will help her in retaining old customers and making new ones. Although the most important aspect of any business is the sale that it makes, we will first take a look on the pattern of complaints that is followed by the company. The management may also be interested to see if there is a positive correlation between the number of complaints and number of units sold.

We see that total number of complaints have shown a set pattern of increase from January to June and then the variable has decreased from June to December 2014. Before analysing this pattern in detail, we will take a look on the recent sales pattern in the following graph for mowers and tractors.

From the above two sets of graphs, we have some important insights to draw upon. The sale of both products follows similar patterns as their industry sales and we observe some difference between the sales of mowers and tractors when sale of both products are taken for the most recent year. This also shows that the company is doing almost satisfactorily as compared to the relative industries. These figures also show a seasonal pattern in the sale of these products providing ample opportunities for our company to handle these seasonal sales for our company. The analysis of complaints with respect to sales is an important aspect for all levels of management. There are certain geographical areas which have very high percentage of complaints when compared to other areas. This is especially true when we compare South America with North America. There are lower sales in the South American region whereas the percentage of complaints is higher in this area. The management has to look into this matter. The situation of complaints is even worse in the European region when compared to North America which has the highest sales for company and has the lowest number of complaints. Europe and South America are the real problematic areas for the company.

 All businesses work for the sake of profits and our business is no exception to this rule. We will have to see the patterns in the costs of production for each product.

The above two tables show another interesting fact for the consideration of our top management, unit costs for the tractors have increased over the period under consideration whereas the unit costs for mowers have remained stable over most of this time period. This may have different implications for managers from both production units. Tractor unit managers will have to consider the reasons why their respective costs have risen over the period under consideration. There is a need for assessing the overall cost structure of the product so that we can assess which particular portion is creating problem for the company. After identifying the major cause of increase in costs, company must take appropriate steps to bring them down. As we saw earlier, there were very similar patterns shown by the sales of both these products, so the increased costs of production for tractors will hurt the company even more in the seasons where sales are lower for both products. Another consideration for company may be that the sales for mowers can be increased over a period of time so that the company can take benefit of cost stability. The company has to consider many other factors before deciding on increase in production of mowers and decrease in production of tractors. The cost of production for both the products comprises of administrative costs in particular. The following graph shows the trend in administrative costs over the most recent year.

We see from the above graph that there is no set pattern shown by the administrative costs for our company. This shows that these expenses are not given due importance by our company. If these expenses had shown a set pattern, we could have said that our company has controlled these expenses over time (Accounting Tools, 2019). Even if these expenses had shown an increasing pattern, our top management could make relatively accurate estimates for these expenses for the coming years. This action would have helped our company to make predictive financial statements before hand and then match our actual performance against those bench marks. From the above graph, it is not possible for the company to predict expenses for any upcoming years. As discussed earlier, sale for our company was at its highest in the month of June but we see above that the administrative expenses in March exceeded those in June. One consideration in this regard can be that the depreciation and interest expenses may be included in these administrative expenses and company may have purchased new machinery in march so depreciation is higher. These expenses are very low in the month of October so company must look at the practices which were followed in that month so that they can be repeated and administrative expenses can be controlled.

All the above discussion is related to profitability of our company. If sales have shown a definite pattern along with per unit cost of production, there will be a set pattern in the gross profit as well. The absence of pattern in administrative expenses will mean that company may not be able to predict its net profit for any future period.

One important operational aspect whose data has been provided is time to pay suppliers. Although this figure is important but this would have been much more meaningful if the data for receipt time of receivables was also given and we would have analyzed both these figures together. The following graph shows time taken to pay suppliers over the last one year.

 From the above graph, we see that there is a decrease in time taken to pay suppliers over the most recent year. This means that company suppliers will be very happy with our company. October shows the minimum time to pay off suppliers and then there is a gradual increase in this figure. This is closely related to the receipts from debtors because they combine to form the cash cycle of company (Wilkinson, 2013). The company will take cash from the debtors and pay its suppliers or creditors out of these. There is a small gap kept between receipts from debtors and payments to suppliers in terms of number of days so that there is no problem in payments to suppliers.

# **References**

Accounting Tools. (2019, June 26). *https://www.accountingtools.com/articles/what-is-general-and-administrative-expense.html.* Retrieved from https://www.accountingtools.com: https://www.accountingtools.com/articles/what-is-general-and-administrative-expense.html

Wilkinson, J. (2013, July 23). *https://strategiccfo.com/accounts-payable-turnover-analysis/.* Retrieved from https://strategiccfo.com/accounts-payable-turnover-analysis/: https://strategiccfo.com/accounts-payable-turnover-analysis/