HR Analytics without Math or Statistics

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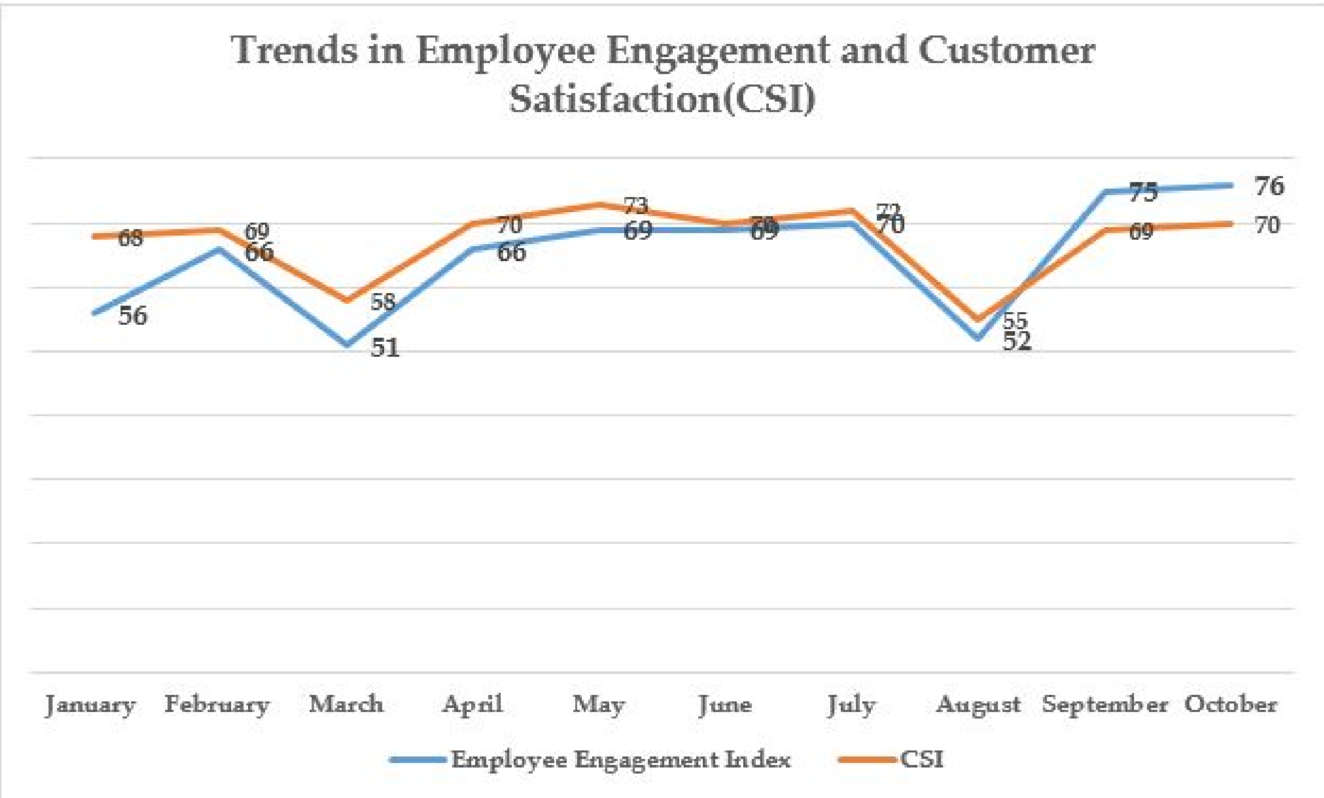
Most HR professionals are afraid of analytics because of the statistics and math used in most of the calculations. In my view, the starting point is that you can do analytics to some extend without the need for complicated statistics. I show a few examples below.

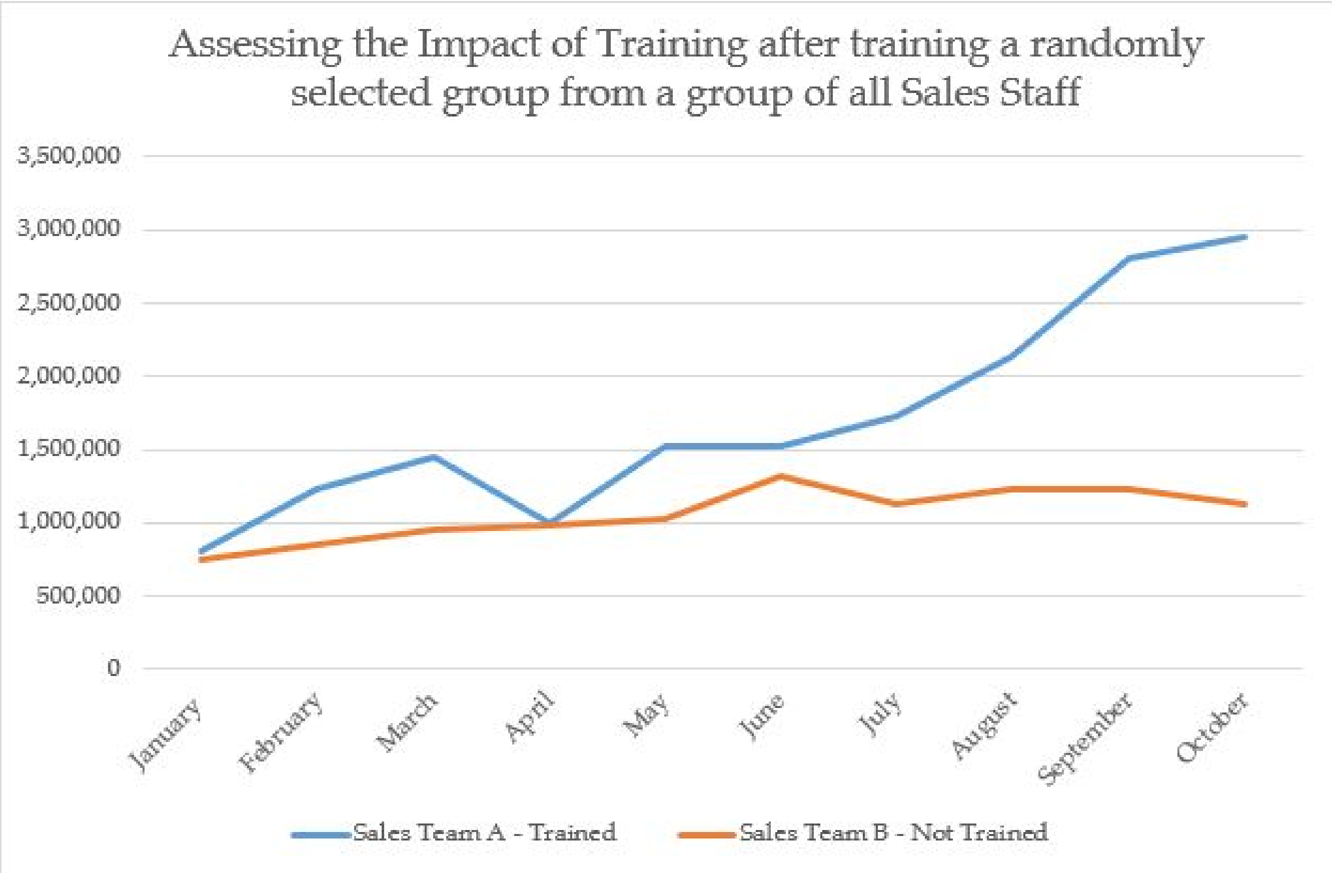
Graph 1: Trends in Employee Engagement and Customer Satisfaction

As can be seen in the graph below there seems to be a relationship between the Customer Satisfaction Index and Employee engagement index. This relationship has been well established in scientific research. On that basis, if you find a trend like this in your data you can be confident that there is a relationship between employee engagement and customer satisfaction. However further analysis would be needed to establish the direction of the relationship. Here you would want specifically to establish which index drives the other. More sophisticated analysis can be done to determine the direction of the effect.



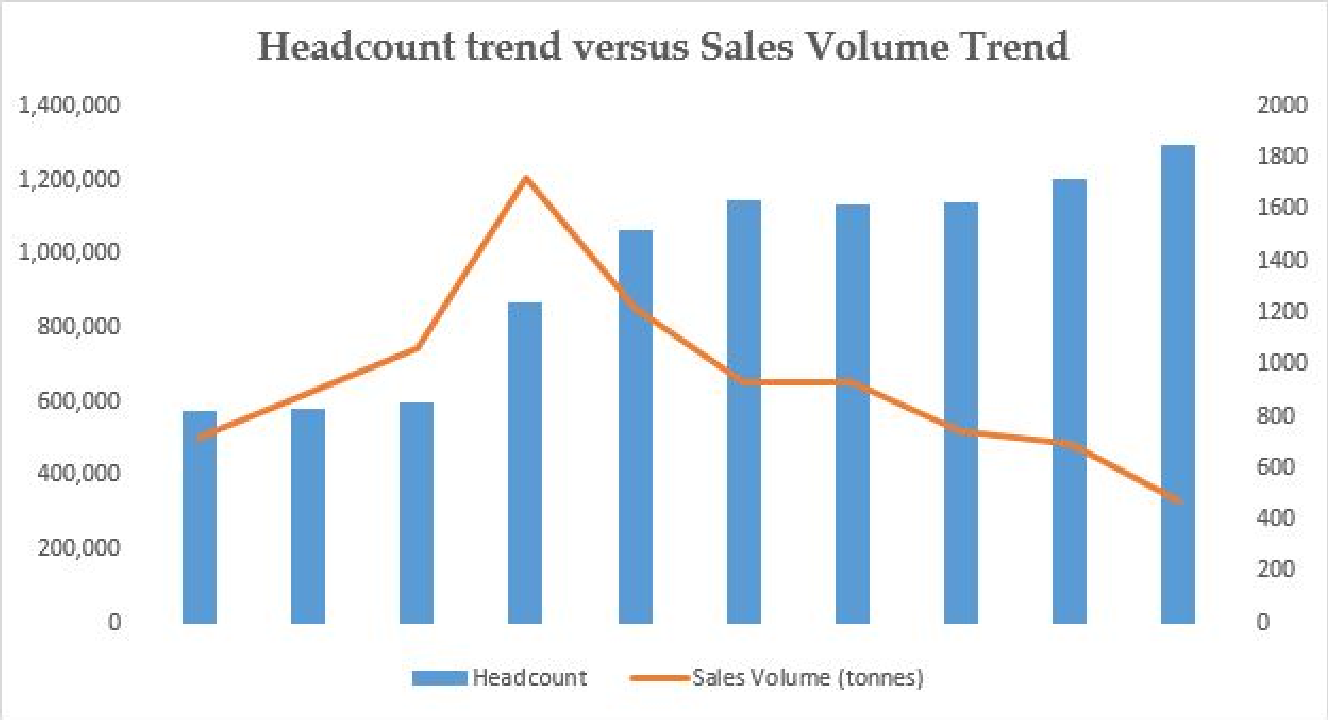
Graph 2: Assessing the impact of training

In this case, a team of the sales staff was randomly put into two groups. Team A, was trained in sales and Team B was not given the same treatment. Sales performance by each sales staff was tracked for 10 months after the training. Every month total sales from the two teams we recorded to enable comparisons. As can be seen from the graph below, team A seems to be performing better than team B. You can tentatively conclude that the training that was given to team A has some effect on sales performance. Further and more complicated analysis can be done to establish the statistical significance of the difference in the performance of the two groups. In this case, you could use the t-test.



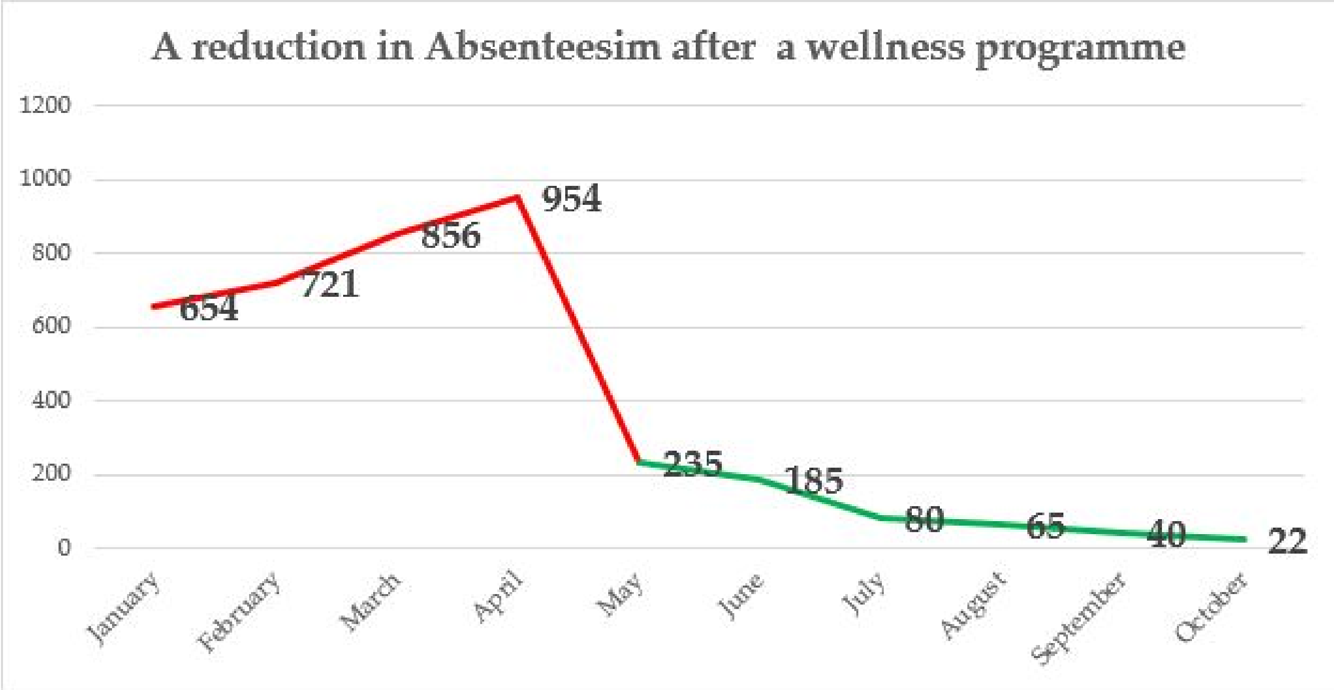
Graph 3: Is there a relationship between headcount and sales volume

In the graph, we are trying to see if there is a relationship in headcount changes and sales volume changes. As can be seen from the graph, there seems to be no significant relationship between the two variables. From the findings, you can see some insights that will help the business. Key questions to ask at this stage are; are we overstaffed overall? Could it be that we are overstaffed in certain roles or departments? It will be foolish for any leader to continue hiring staff without a deeper understanding of what is happening to headcount and sales. Several reasons could explain this discrepancy and it requires further investigation. You could relate headcount per department versus sales volume and see which departments have no relationship to sales. Normally, some departments would have no relationship with sales, but even for such departments headcount increases in the face of declining sales in not wise.



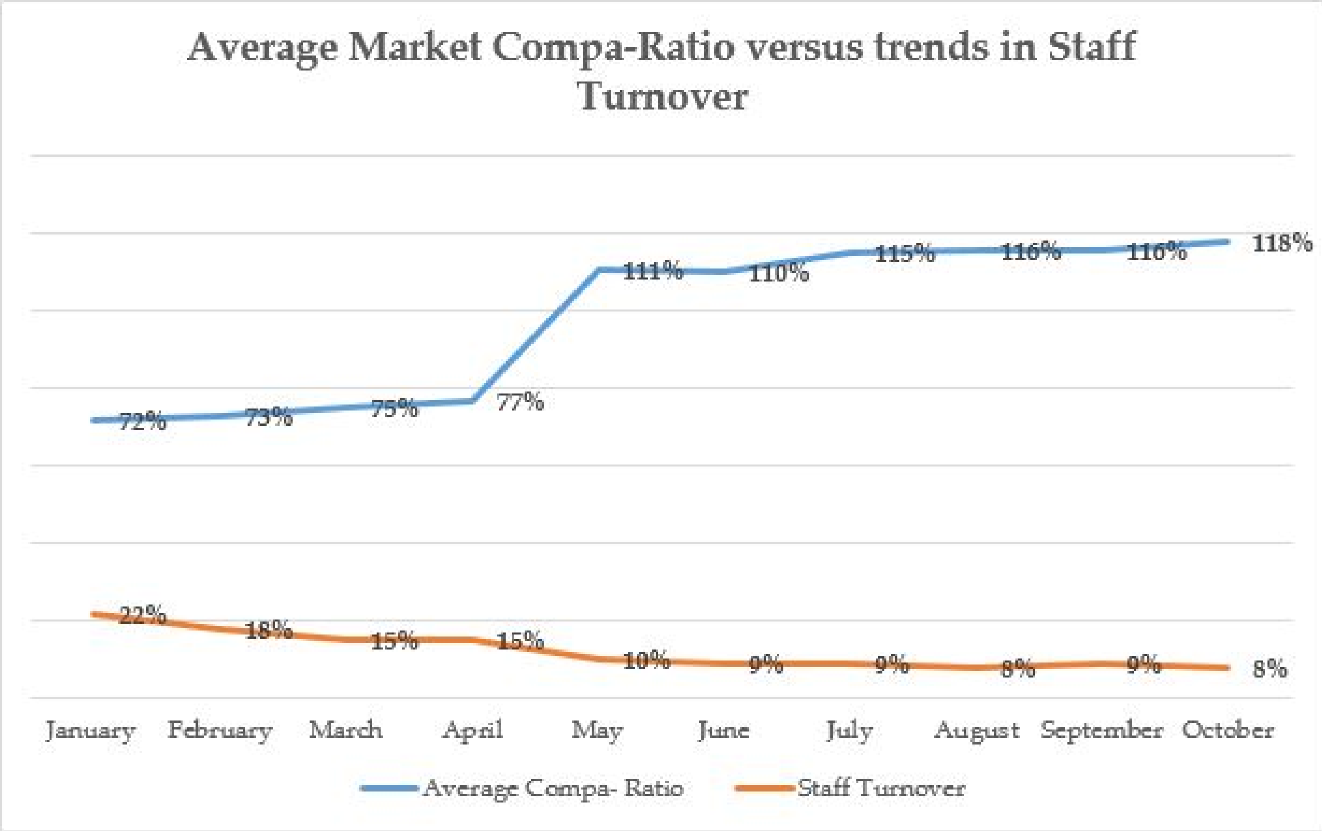
Graph 4: Impact of a wellness program on absenteeism rates

In this case, we want to see the impact of a wellness program on absenteeism. As can be seen from the graph below, the wellness program was running from January to April. During that period absenteeism was on an upward trend. From May absenteeism started going down. We can conclude therefore with a degree of confidence that the intervention brought by the wellness program has some effect on absenteeism. Further sophisticated analysis can be done to see if the intervention is statistically significant.



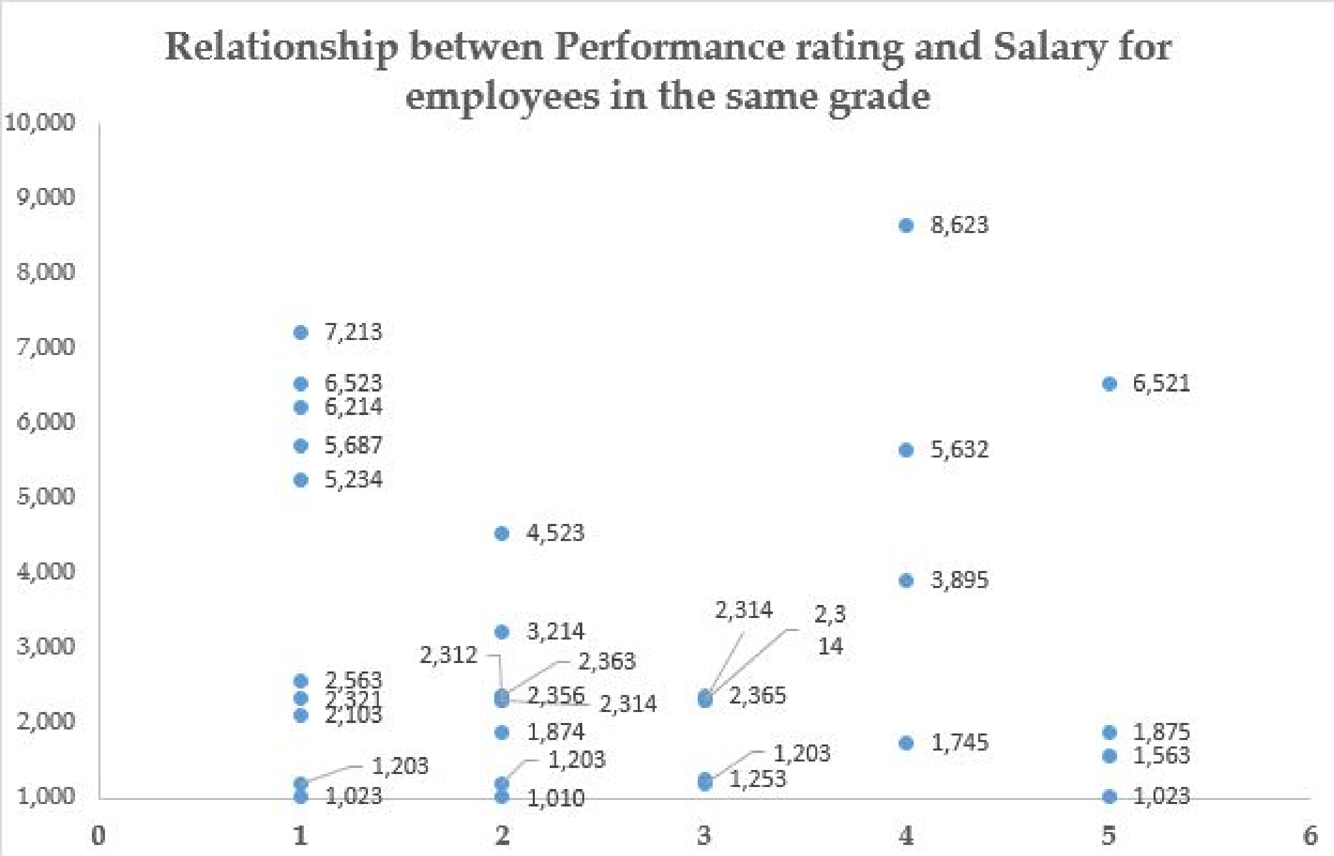
Graph 5: Does our salary market competitiveness affect staff turnover

The compa- ratio can be used to check the competitiveness of your remuneration. Look at the compa-ratio as a competitiveness index. The higher the index the more competitive you are. As you can see from the graph the higher the compa- ratio the lower the staff turnover. We can therefore conclude that the competitiveness of our remuneration has a relationship with staff turnover.



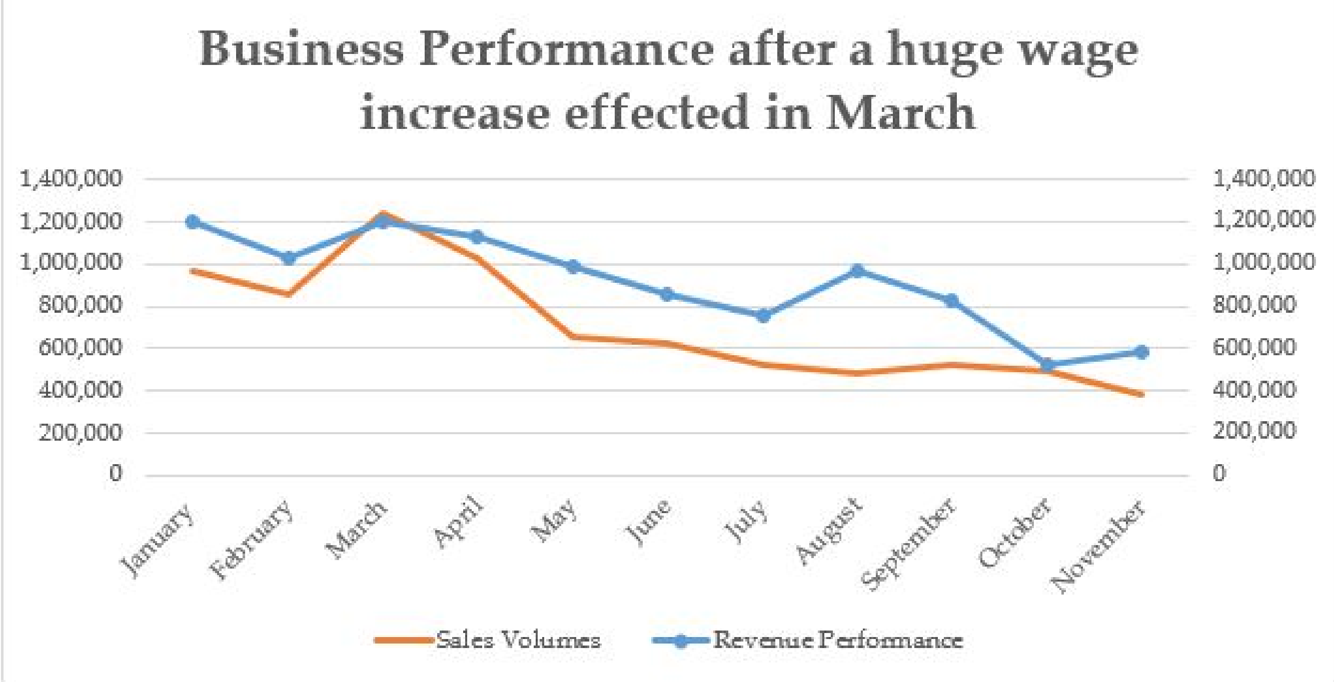
Graph 6: Relationship between individual salary and performance ratings

As can be seen from the graph below, there seems to be no pattern at all in the relationship. We could therefore conclude that there is no relation between employees' earnings and their performance rating. There may be a need to revisit our remuneration policy as it relates to performance.



Graph 7: Business Performance after a huge wage increase

The analysis was focused on checking if there was going to be a positive impact of wage increases on business performance. As can be seen from the graph below, the relationship seems to be going negatively. The increases were given in March and from April business performance both in terms of dollar sales and volumes started going down. In this case therefore we cannot be confident that an increase in wages would lead automatically to better performance.



Conclusion

My message to HR professionals who are currently uncomfortable with numbers is that do not despair. You can run basic analytics and still get some insights.

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