

Employee Attrition

Required Task (Question)

A company is looking into its employee attrition rates (i.e., it is trying to know when and why an employee decides to leave the company). This would help the company to improve its business environment accordingly so that it can hold on to its best employees.

In this project, you will need to evaluate each factor and its relationship with attrition, for example, the employee age, or the job role and its impact on attrition, etc. For the data set, use the attached excel file.

1.0 1. Scope and Objectives

Clarify the scope of the project. Limit one to two paragraphs.

2.0 Methodology

2.1 Tools/Analytics

- Mention the tools and techniques used to analyze the data
- Explain how the data used addresses the analysis or research

Initial analysis statement

- In brief explain how you set up your analysis method and validate your regression model
- Mention the ideas/ opportunities that your analysis can propose to the company

Project III: 800 words (excluding tables, graphs, and appendix)

Answer

1.0 Scope and Objectives

The term "attrition" is used to describe the natural ebb and flow of a workforce. Attrition occurs when a company loses workers over time. This indicates a greater rate of turnover than hiring is able to offset. Attrition occurs when workers leave a company due to retirement, resignation, or other reasons and aren't replaced (Srivastava, & Tiwari, 2020). Attrition rates in the workplace may be systemic across the organisation or localised to individual departments. This is a common result of replacing human labour with machines or cutting-edge technology.

Many factors contribute to employee turnover. Dissatisfaction with perks or compensation, a dearth of opportunity for professional growth, and shabby working conditions all come into this category. Because the kinds of expertise needed are always evolving, certain jobs inevitably die out as a result. Employee turnover and the development of a novel work future mean that not all positions can be filled in the same formulaic fashion. Thus, a fresh perspective on leadership is required in this modern workplace. A yearning for progress may be at play here. In other cases, it is because of a scarcity of qualified young workers in specific sectors and locations (Sriram, Joseph, Mathew & Rai, 2019). Attrition can also be used to

describe a reduction in the number of workers in an organisation. Attrition can be chosen or forced. Attrition is a major issue that many companies face since it drains valuable resources like skill and experience from the organisation and the workforce. This particular study performs an analysis of employee attrition of a selected organization by considering their historical data. The study uses statistical methods to assess the secondary data.

2.0 Methodology

As the study focuses on given dataset, it can be said that the study mainly applied secondary quantitative approach to assess the given dataset. Microsoft excel has been used for data analysis. In order to perform the data analysis, the researcher applied graphical analysis of categorical data. On the other hand, regression analysis has been used to assess the quantitative factors that influence the attrition decision.

3.0 Analysis

There are a relatively small number of persons who start their careers in the same company that they retire from. After some period of time, most people move on to other things, or the company pushes them to go on by firing them involuntarily. Attrition among employees may appear to be a simple issue on the surface, but there is actually a great deal that needs to be uncovered about this phenomenon. According to Haldorai et al. (2019), attrition is caused by a number of different circumstances, some of which you are able to influence and some of which you are not. In this particular instance, here are a handful of them:

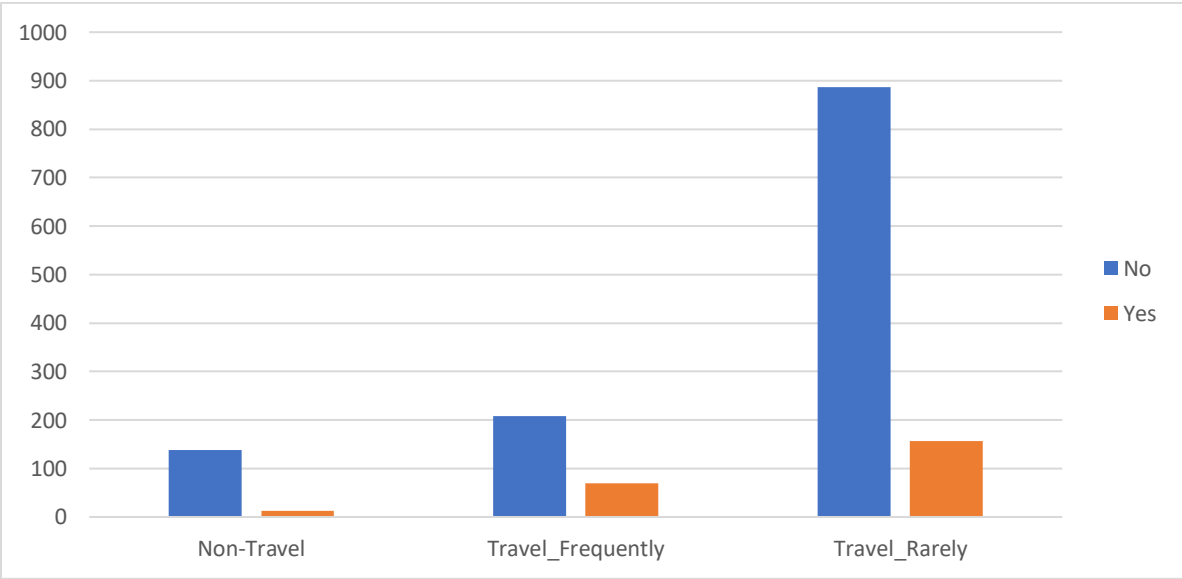


Figure 1: Business Travel

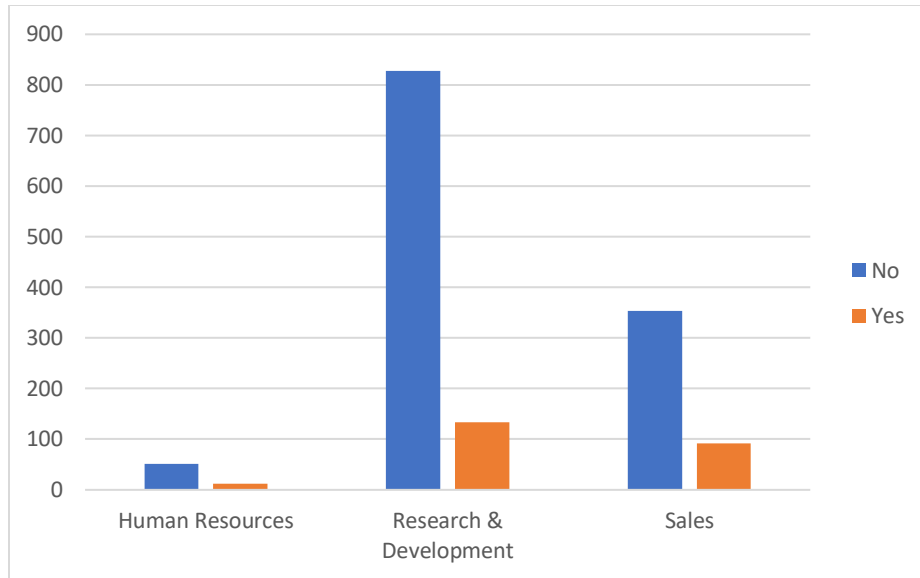


Figure 2: Department

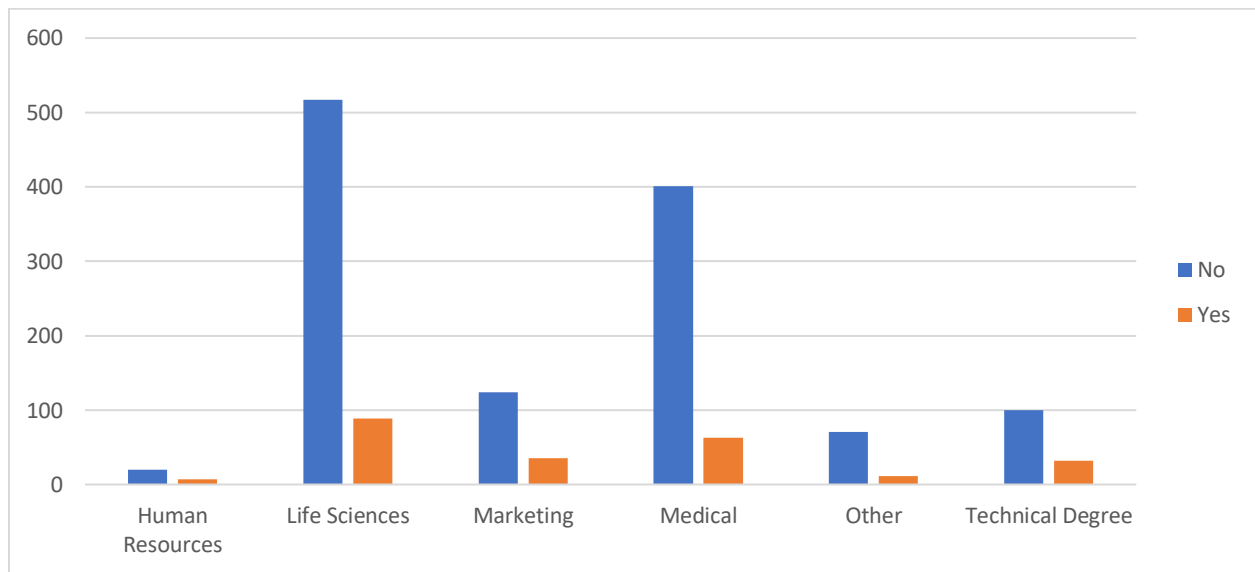


Figure 3: Education

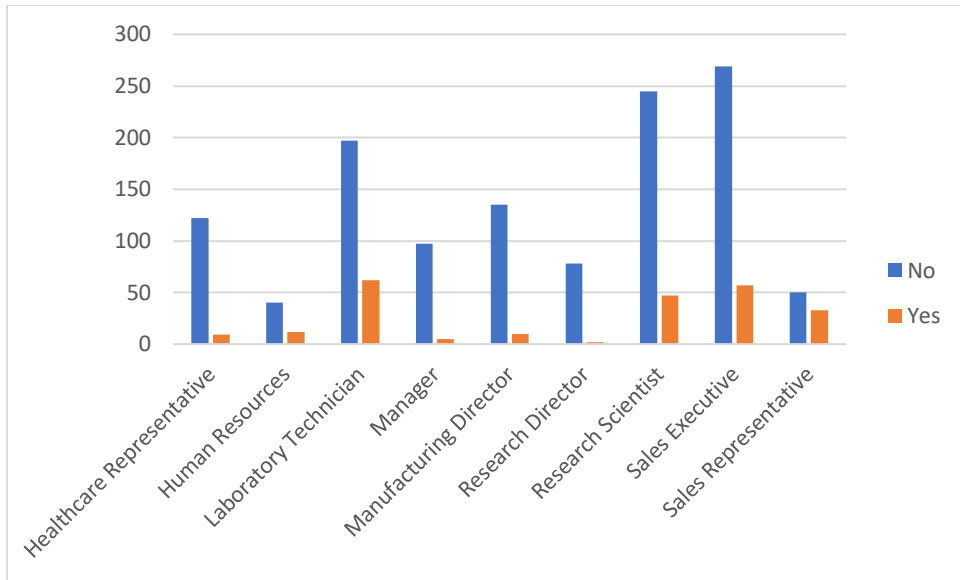


Figure 4: Job Role

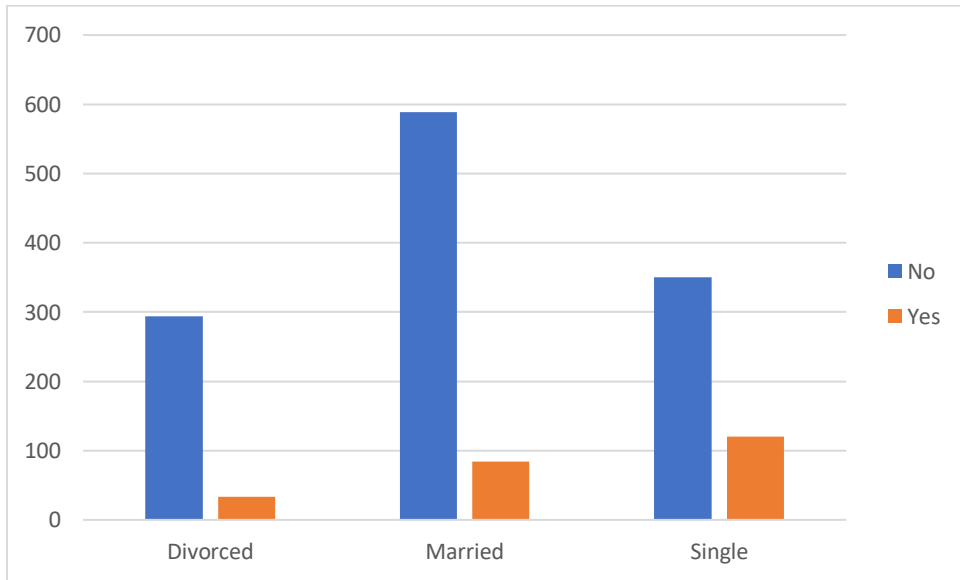


Figure 5: Marital Status

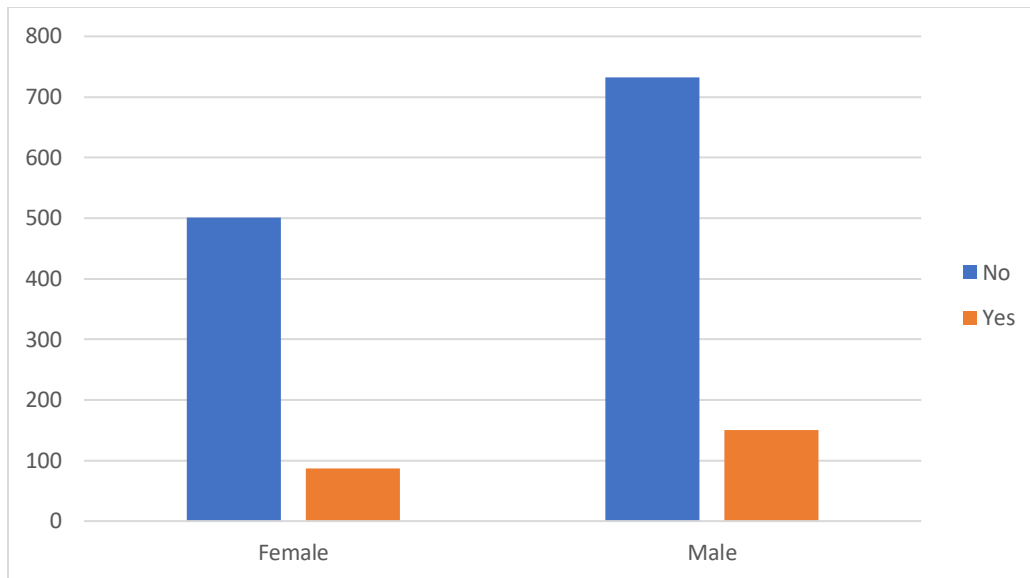


Figure 6: Gender

Here, attrition rate is high for those who travel rarely. Further, figure 2 indicates that attrition is high among research and development department. Employee with life science as education background is showing highest attrition. Lab technicians are the one who has highest level of attrition.

The most significant aspect that contributes to a decision to resign from one's current position is the occurrence of any form of change in one's personal life. It is possible that a change in either your wife's career or your child's school is what's driving you to look for new employment opportunities. It is also possible that you've made the decision to retire early because of concerns about your health. Attrition among employees is inescapable because there are a variety of personal factors that can influence an employee's decision to leave his or her current position for another one, which can be explained using more straightforward language (Fallucchi, Coladangelo, Giuliano & William De Luca, 2020). One of the primary factors that are considered to contribute to employee turnover is the absence of opportunities for professional advancement inside the worker's current business. It's possible that your lack of opportunities to advance in your organisation, despite the fact that you have the skills and qualifications necessary to do so, will convince you to look for a new career. However, the HR department plays an important part in this stage of the process. To put it another way, you do not want to remain employed by a company that does not recognise or appreciate your abilities and does not offer any opportunities for professional advancement. A situation like this is highly likely to result in the departure of some of the workforce. This is yet another important aspect that contributes to the loss of employees. It is highly possible that you will experience a lack of motivation if the organisation you work for does not adequately meet your requirements in the job. Because of this, you might feel the need to quit your employment as a result of the situation. You should give some serious consideration to finding a new job if the atmosphere at your place of employment is not one that is conducive to productive and positive work. On the other hand,

if the objectives of both your professional life and your personal life are congruent with those of your organisation, then you are likely to remain employed by that same company.

Once again, HR plays an essential role and is required to conduct an investigation into the factors that contribute to a high rate of employee turnover. It is possible that the reasons given by employees in the leave interview will be investigated, and steps will be taken to address them in order to bring the staff turnover rate down.

On the other as mentioned in the appendix, the regression model is indicating that the model is statistically significant as the p value is less than 0.05. however, the adjusted r square value is showing that the model can predict attrition with 10.79% accuracy, which is really low. Further, the regression model is also indicating that there are factors like salary hike percent and performance rating is not impacting the attrition decision in the current situation al though they are significant factors in general.

4.0 Conclusion

Therefore, to come to a conclusion, employee turnover might be attributed to a number of different causes. On the other hand, the majority of these can be avoided if the company conducts thorough analysis and takes the necessary actions in the right direction. In point of fact, the present precarious state of the economy is going to see an increase in the amount of employee turnover. Therefore, businesses should make preparations in advance to deal with this issue in order to ensure that nothing will stand in the way of their expansion and success.

5.0 References

- Fallucchi, F., Coladangelo, M., Giuliano, R., & William De Luca, E. (2020). Predicting employee attrition using machine learning techniques. *Computers*, 9(4), 86.<https://www.mdpi.com/878302>
- Haldorai, K., Kim, W. G., Pillai, S. G., Park, T. E., & Balasubramanian, K. (2019). Factors affecting hotel employees' attrition and turnover: Application of pull-push-mooring framework. *International Journal of Hospitality Management*, 83, 46-55.<https://www.sciencedirect.com/science/article/pii/S0278431918309149>
- Sriram, K. V., Joseph, J., Mathew, A. O., & Rai, A. S. (2019). Factors affecting high employee attrition in manufacturing firms—A case study. *Calitatea*, 20(169), 23-28.<https://search.proquest.com/openview/01a40526b8d12298ec1657a379f0542b/1?pq-origsite=gscholar&cbl=1046413>
- Srivastava, D. K., & Tiwari, P. K. (2020). An analysis report to reduce the employee attrition within organizations. *Journal of Discrete Mathematical Sciences and Cryptography*, 23(2), 337-348.<https://www.tandfonline.com/doi/abs/10.1080/09720529.2020.1721874>

6.0 Appendix

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.342786
R Square	0.117502
Adjusted R Square	0.107784
Standard Error	0.347473
Observations	1470

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	16	23.35823	1.45989	12.09144	0.0000
Residual	1453	175.4316	0.120737		
Total	1469	198.7898			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.823694	0.117271	7.023852	0.000	0.593655	1.053733
Age	-0.00402	0.001405	-2.85928	0.004	-0.00677	-0.00126
JobInvolvement	-0.06239	0.012814	-4.86849	0.000	-0.08752	-0.03725
JobSatisfaction	-0.0349	0.008252	-4.22874	0.000	-0.05109	-0.01871
MonthlyIncome	-6.2E-06	3.06E-06	-2.01053	0.045	-1.2E-05	-1.5E-07
NumCompaniesWorked	0.013556	0.004055	3.342678	0.001	0.005601	0.021511
PercentSalaryHike	-0.00376	0.003924	-0.95941	0.338	-0.01146	0.003932
PerformanceRating	0.032302	0.039801	0.811572	0.417	-0.04577	0.110376
RelationshipSatisfaction	-0.01741	0.008446	-2.06111	0.039	-0.03398	-0.00084
StockOptionLevel	-0.05481	0.010692	-5.12585	0.000	-0.07578	-0.03383
TotalWorkingYears	-0.00318	0.002514	-1.26591	0.206	-0.00812	0.001749
TrainingTimesLastYear	-0.01702	0.007058	-2.41216	0.016	-0.03087	-0.00318
WorkLifeBalance	-0.03109	0.012897	-2.41099	0.016	-0.05639	-0.0058
YearsAtCompany	0.006067	0.003163	1.917671	0.055	-0.00014	0.012272
YearsInCurrentRole	-0.01168	0.004114	-2.83949	0.005	-0.01975	-0.00361
YearsSinceLastPromotion	0.011729	0.003637	3.224632	0.001	0.004594	0.018864
YearsWithCurrManager	-0.01172	0.004222	-2.77639	0.006	-0.02001	-0.00344