

HR ANALYTICS STUDY ON EMPLOYEE ATTRITION AT IBM

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ABSTRACT

This article presents an analysis of employee attrition at IBM, using HR analytics via Tableau to gain insights into the underlying causes and potential solutions. The study focuses on understanding attrition patterns, identifying contributing factors, and implementing effective strategies to mitigate attrition. By leveraging a data-driven approach, IBM's HR analytics team collected and analysed various data sources, including demographics, performance metrics, job satisfaction surveys, and employee feedback. Through this analysis, several key factors contributing to attrition at IBM emerged, including a lack of career growth opportunities, poor work-life balance, job dissatisfaction, and strained relationships between managers and employees. Armed with these insights, IBM has taken proactive measures to address attrition, such as fostering a culture of continuous learning and development, improving work-life balance, enhancing leadership training programs, and implementing flexible work arrangements. Ongoing monitoring and feedback mechanisms allow IBM to measure the impact of these initiatives and make necessary adjustments. This study showcases the importance of HR analytics in understanding and addressing attrition challenges, and highlights IBM's commitment to creating a positive work environment that fosters employee retention and satisfaction.

Keywords: *Employee Attrition, employee morale, HR Analytics, Work-Life Balance, Reason for Attrition, Data driven approach.*

1. INTRODUCTION

Employee attrition, or the rate at which employees leave a company, is a critical metric for any organization. High attrition rates can have a detrimental impact on a company's productivity, morale, and ultimately, its bottom line. In an increasingly competitive job market, understanding the factors that contribute to attrition is crucial for companies to develop effective retention strategies. In this article, we will delve into the analysis of employee attrition at IBM, using HR analytics to gain insights into the underlying causes and potential solutions.

2. OBJECTIVES OF THE STUDY:

1. Investigate the Influential Factors on Employee Attrition at IBM:

This study aims to identify and analyse the factors that significantly contribute to employee attrition within IBM. It will examine individual, organizational, and external factors that may influence employees' decisions to leave the company.

2. Assess the Impact of Employee Attrition on Organizational Performance:

The study seeks to evaluate the consequences of employee attrition on various aspects of organizational performance, including productivity, profitability, customer satisfaction, and employee morale. By understanding these impacts, the study aims to emphasize the importance of addressing attrition rates effectively.

3. Explore the Relationship between Employee Demographics and Attrition:

This study aims to examine whether specific demographic characteristics, such as age, gender, educational background, or tenure, are correlated with higher attrition rates. Such analysis can provide insights into particular employee groups that may be more susceptible to attrition, enabling the development of tailored retention strategies.

4. Identify Patterns and Trends Associated with Employee Attrition:

By analysing historical data, this study aims to identify common patterns or trends regarding when and why employees tend to leave IBM. This analysis can help identify critical points or triggers contributing to attrition, facilitating the creation of targeted retention strategies.

5. Provide Actionable Insights and Recommendations for Reducing Attrition Rates:

The objective is to offer practical insights and recommendations based on the study's findings to effectively address and mitigate employee attrition at IBM. These recommendations may include modifications to HR policies, talent management practices, employee engagement initiatives, career development opportunities, or other interventions aimed at improving employee retention.

3. RESEARCH METHODOLOGY:

Here are the key points regarding the research methodology and approach used in the research on employee attrition at IBM:

1. Sampling design: The research employed a non-probability sampling method.
2. Sampling techniques: Convenient sampling and simple random sampling were utilized.
3. Sampling unit: The unit of sampling was the number of employees.
4. Sampling tool: Structured questions were used as the primary tool for sampling.
5. Area of study: The research focused specifically on the IBM company.
6. Data analysis method: Tableau was employed as the method for analysing the collected data.

Tableau: Tableau is a business intelligence (BI) software that empowers users to visualize and analyse data effectively. It enables users to share their discoveries, create interactive dashboards and reports, and connect to various data sources.

Here are some key features of Tableau: **Data Connectivity:** Tableau offers connectivity to diverse data sources, including databases, spreadsheets, cloud services, and big data platforms. **Data Visualization:** With Tableau, users can leverage a wide range of charts, graphs, and maps to build interactive dashboards and reports. The visualizations are highly customizable, allowing users to modify colours, fonts, and design elements to suit their needs. **Data Analysis:** Tableau provides robust data analysis tools, such as data blending, forecasting, and trend analysis. Users can create calculated fields, utilize statistical functions, and perform complex calculations to derive valuable insights from their data. **Collaboration:** Tableau facilitates collaboration by enabling users to share their

4. LIMITATIONS OF THE STUDY:

The study "Analysing the Impact on Employee Attrition at IBM: An HR Analytics Study" has certain limitations. It is important to critically evaluate the limitations of any study to understand the scope and applicability of its finding.

Some Potential Limitations Include:

1) **Sample bias:** The study may have been conducted on a specific subset of employees within IBM, such as a particular department or location. This can limit the generalizability of the findings to the entire organization or other industries.

2) **Data limitations:** The study's findings may be limited by the quality and availability of data. For example, if the study relied on self-reported or incomplete data, there could be inaccuracies or missing information that could affect the results.

3) **Causality and correlation:** While the study may have identified factors associated with employee attrition at IBM, it may not establish a causal relationship between those factors and attrition. Correlation does not necessarily imply causation, and there could be other underlying factors that were not considered or controlled for in the analysis.

4) **Time frame:** The study's findings may be specific to a particular time period, and the dynamics of employee attrition at IBM could have changed since then. Longitudinal studies that examine attrition trends over time would provide a more comprehensive understanding of the topic.

5) **Internal validity:** There may be potential confounding variables or unmeasured factors that could influence the results. It is important to consider other variables, such as external market conditions, changes in management policies, or economic factors that may impact employee attrition.

6) **External validity:** The study's findings may not be applicable to other organizations or industries due to differences in organizational culture, structure, and employee demographics.

7) **Interpretation and subjective bias:** The interpretation of the study's findings may be subject to the biases and perspectives of the researchers involved. Different researchers may have different interpretations of the same data.

8) **Ethical considerations:** The study should adhere to ethical guidelines regarding data privacy, informed consent, and potential biases. Any potential ethical issues should be addressed and discussed within the study.

5. IBM – ABOUT COMPANY

Headquartered in Armonk, New York, and operating in over 175 countries worldwide, International Business Machines Corporation (IBM), commonly known as IBM or Big Blue, is an American multinational technology company. IBM provides a wide range of services, including hosting and consulting, in various fields such as mainframe computers and nanotechnology. The company specializes in computer hardware, middleware, and software. Listed on the Dow Jones Industrial Average, which comprises 30 major publicly traded companies, IBM is recognized as one of the largest employers worldwide, with over 297,900 employees in 2022. Yet the IT giant is not spared by the industry attrition problem which sees around 26% of attrition compared average 17 – 18 % attrition in IT sector.

IBM – Employee Attrition, Analysis & Retention.

By leveraging HR analytics, IBM has embarked on a journey to identify the key drivers of attrition within its workforce and take proactive measures to mitigate its impact.

With Data-driven approach IBM's HR analytics team collected and analysed vast amounts of data to gain a comprehensive understanding of employee attrition. This report reports a data set of 1500 employee survey from IBM, indicating the level of attrition.

The data was investigated for various factors, including demographics, performance metrics, job satisfaction surveys, and employee feedback. By using sophisticated analytical tools, they were able to extract meaningful insights from this data, enabling them to make data-driven decisions and design targeted retention strategies.

Identifying Attrition Patterns

One of the first steps in the analysis was to identify attrition patterns within different

employee groups at IBM. This involved segmenting the data based on factors such as age, gender, job role, tenure, and performance ratings. By comparing attrition rates across these segments, the HR analytics team could pinpoint areas where attrition was more prevalent and explore the underlying reasons.

Factors Contributing to Attrition.

Through the analysis, several factors emerged as common contributors to attrition at IBM. One key factor was the lack of career growth opportunities. Employees who felt stagnant in their roles or saw limited possibilities for advancement were more likely to leave the company. Additionally, a poor work-life balance and a lack of job satisfaction were found to be significant drivers of attrition. Employees who experienced high levels of stress or dissatisfaction were more inclined to seek opportunities elsewhere.

Another crucial factor that emerged was the relationship between managers and employees. Employees who had strained relationships with their supervisors or experienced a lack of support and recognition were more likely to leave. This finding highlighted the importance of fostering strong managerial relationships and providing effective leadership training programs.

Dashboard



Figure 1 different types of visualizations about the attrition rate in IBM company

6. OBSERVATIONS FROM FIGURE 1:

1. The attrition rate is 16.12%, within the chosen sample space.
2. About two-thirds of those are male employees. However, this is proportional to the overall gender distribution of employees in the chosen sample, with attrition rate within males being 17% and within females being 14.8%.
3. Age wise, the highest attrition is in the 18-27 group (about 28.09%) and the lowest is in the 38-47 group (about 9.36%). At the 18-27 group the attrition rate in females is slightly higher at 29.11% (compared with 27.48% for males) and at the 38-47 group the attrition of males is significantly higher at 9.09% compared with 6.42% for females.
4. The attrition rate correlates with the travel of employees, with employees self-reporting as “travels frequently” having an attrition rate of 24.9%, and employees who report as “travels rarely” having an attrition rate of 14.9%.
5. The attrition rate initially correlates with the number of years the employee has spent with the company, with the attrition rate being 32.9% for those who have been with IBM for less than 5 years, dropping down to 5% to those who have been in IBM for 25 to 30 years, before rising again for employees having been in IBM for more than 30 years, reaching a maximum of 12.5% for 35-40 years.
6. Prior experience also correlates with attrition, with those who have worked with 5 or more companies before being about twice as likely to leave the company.
7. The attrition is predominantly in the sales and R&D departments, with a minute percentage from HR. This reflects the overall departmental breakdown of the sample space; if weighted by department population the attrition in R&D is only 13% whereas it's close to 20% in both sales and HR.

8. Satisfaction surveys correlate strongly with attrition, with job satisfaction, environment satisfaction and relationship satisfaction all showing a pattern of anyone self-reporting least satisfied (1) having twice the attrition rate of those reporting most satisfied (4). By contrast, there seems to be little difference among those reporting 2, 3 or 4 in satisfaction survey regarding attrition.

Addressing Attrition

Armed with these insights, IBM has taken proactive measures to address attrition. Firstly, they have focused on creating a culture of continuous learning and development, providing employees with ample opportunities to upskill and advance their careers within the organization. By investing in training programs and internal mobility initiatives, IBM aims to retain top talent and enhance employee engagement.

IBM has also made efforts to improve work-life balance and job satisfaction by implementing flexible work arrangements and well-being initiatives. Recognizing the importance of strong managerial relationships, the company has enhanced leadership training programs to equip managers with the skills needed to support and motivate their teams effectively.

Being proactive to address the general issues that is most common cause to attrition, IBM has created number of employee engagement and retention programs. For instance, the organization offers training, coaching, and career growth possibilities for employee development. In order to promote work-life balance and employee wellbeing, IBM also provides flexible work schedules, WFH, and other benefits.

Also, more importantly, Measuring the impact - An ongoing HR analytics study monitors the impact of these initiatives on attrition rates. By collecting data on attrition levels post-implementation, IBM can

assess the effectiveness of their strategies and make necessary adjustments. Regular employee surveys and feedback mechanisms also provide valuable insights into the employee experience and help identify areas for improvement.

7. SCOPE FOR FURTHER RESEARCH

This research is done on a limited sample size of 1500 employees. The larger the sample size the more accurate the analysis and conclusions one can draw from them. A future study can be done to survey a larger number of employees.

This analysis is done with Tableau, but there might be other products in the market which can look at a data set and present it in a way that we can draw conclusions from them. One of the fastest growing sectors of technologies is AI (Artificial Intelligence) and soon we might have products that will look at this data and present the conclusions directly. But we don't have such technology readily available at the time of this research.

8. CONCLUSION

While some level of attrition in a company is inevitable, minimizing it and being prepared for the cases that cannot be helped will significantly help improve the operations of organization. As a future development, with a sufficiently large data set, it would be meaningful to run a segmentation on employees, to develop certain "at risk" categories of employees. This could generate new insights for the business on what drives attrition, insights that cannot be generated by merely informational interviews with employees.

The key driver of success in reducing the attrition would be the human element reaching out the employee, understanding the current situation of the employee and acting to resolve the controllable factors that can prevent attrition of the employee.

Employee attrition is a challenge faced by companies worldwide, and IBM recognizes the significance of HR analytics in tackling this issue. Through a comprehensive analysis of various factors, IBM has gained valuable insights into the drivers of attrition within its organization.

By addressing these factors head-on and implementing targeted retention strategies, IBM aims to reduce attrition rates, enhance employee satisfaction, and foster a positive work environment.

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