Talent Analytics : Understanding The Data-Driven HR

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Abstract

We can define Talent as the method of collecting, analyzing and reporting the HR data. This data can then be used to understand the impact on various HR metrices, which, in turn impact the overall business performance and the decision making process in an organization. It is also known by other names like: HR Analytics/ Workforce Analytics/ People Analytics etc. Heuvel and Bondarouk have defined HR Analytics as a process that systematically identifies and quantifies the drivers of business results. In simple words, we can imagine HR Analytics as an amalgamation of the Human Resources and Information Technology verticals in a company. A team of workers with the proper IT resources and the competence to maximize any to be had technology, self-efficacy for getting to know and the use of new IT resources, and mixing Human Resources and IT information to create fee for an enterprise affords a belief of consolation for growing and maintaining aggressive advantages. The symbiotic relationship established by the combination of HR and IT brings out the best in human resources and leverages investments in IT in order to make sure employee's needs are being met and withinside the maximum green manner (Ramlall, 2003). Even though the clear benefit of the Talent Analytics to not just the HR department but the entire organizations, a research in recognized journals reveals a minimal impact of scientific research (Janet H. Marlera, 2016). The researchers comprise mainly of the qualitative case studies which describe only the current management frameworks in a very vague manner, also, the adopters of

the Talent Analytics are the risk takers in their industries facing a lot of uncertainty, and hoping for high paying risk opportunities (Janet H. Marlera, 2016). Most leaders have one question in mind, when they refer to the Human Resources Department, i.e. What's next for HR? Leaders today have emphasis on adding value to the organizational vision and mission more than ever before. So, how is it that HR could add value to the organization? The answer to this question lies in identification of the areas through which HR can contribute in current scenario, and, this can be done through Talent Analytics, which we have already discussed is all about collecting, analyzing and reporting the HR data. Post the data collection, an outside/inside approach can offer the relevant goals or benchmarks to determine the feasibility and accuracy of Human Resource activities inside the company—in meeting needs of the various stakeholders. Monitoring business contexts and stakeholders, allows the Human Resources to continuously align its tasks with the external factors and to evaluate its journey of adding value(Dave Ulrich, 2015).

Although people analytics field still new, it's picking up momentum. Compared to 2015 where only 4% of the companies had the ability to use predictive modelling, in 2016, this number doubled to 8%(Scott Keller, 2017).

Introduction:

Now that we have got an idea of what Talent Analytics is and how it can prove resourceful to an organization, we can further dig into the feasibility and resourcefulness of this subject. According to Michael Heric, the variety of digital applications have been continuously grow, and it has become mandatory for HR executives to make an arrangement of advanced wagers that will change the labor force insight, settle on better ability choices through investigation, mechanize measures, save time for higher worth exercises, diminish costs and, generally significant, further develop business (Heric, 2018). These digital applications cater to just the data collection element of the Talent Analytics, in order to complete the puzzle advanced models are to be built on the clean data. Now, a good question here would be what exactly is clean data. HR isn't just a department, it is an ocean of information, from employee details, performance management, recruitment, payroll, engagement, branding etc. Therefore, it is important to ensure that when data is collected, it is free of errors in it. To ensure this, we require a data cleaning process. Data cleaning involvescorrecting or omitting incorrect, corrupt, falsely formatted, redundant, or partially correct data within a dataset (Tableau, 2021). Also, its necessary to know what kind of data is to be collected for the analysis. Such data, that according to the analyst's perception is the most important to an organization and will create an immediate impact is also checked for the quality of data. The 5 characteristics of Quality Data are:

1. Validity –extent of correlation between defined business rules or limitations.
2. Accuracy – Minimal variation between observed and actual values.
3. Completeness – extent of all data that is required is known or not.
4. Consistency – no data redundancy
5. Uniformity – extent to which the data is measured using same units(Tableau, 2021).

Finally, Machine Learning and Data Analysis Techniqueshave today become the in-demand techniques for validating the decision making processes for HRM in companies. The employment of such new agedmethods/ algorithms providecomparatively refined solutions to the currentconstraints(Sujeet Narendra Mishra, 2016). Based on the final model that is derived, the management can then take appropriate decisions relating to the HR departments functioning and decide how the contribution of HR can be increased and showcased before the leadership.

Talent Analytics is continuously supported by establishing a foundation that include a data analysis capability, an analytics vision, and strategic human resource management perspective. To achieve success in the previously mentioned approach is to use an agile development method/ process . This process consists of

1. Giving top-most priority to problems faced,
2. Combining deductive and inductive procedures,
3. Data preparation and validation,
4. Usingmore than one methods to support decisions made,
5. Converting the insights into action and generate positive results.

Talent analytics could prove to be a significantfactor for the organization's business. However, the advantages depend upon how it is applied and used by the leaders in the organization (Derrick McIver, 2018).

If and when the management is ready to formulate a talent analytics strategy, they could follow a basic approach of :

1. Business Understanding – Knowing what impacts the business and what is the mission, vision and strategy of the business.
2. Data Understanding – As the business might have huge volumes of information, it is necessary to pin-point the correct data sources. Here, the subject matter experts can play a vital role by collaborating with the data scientists to pull the correct data and ignore the irrelevant data.
3. Data Preparation – This phase is all about cleaning the data, coding it for analysis etc.
4. Modelling – Here the data scientists/ data analysts will create predictive and prescriptive models based on the data that is available.
5. Evaluation – Once the data models have been created, it is necessary to test the results generated by these models and only trust them after sufficient number of test have been performed.
6. Deployment – This is the final phase of the talent analytics strategy that will bear the fruits of all the hard work done through the first five phases(Derrick McIver, 2018)(Alexis A. Fink, 2017).
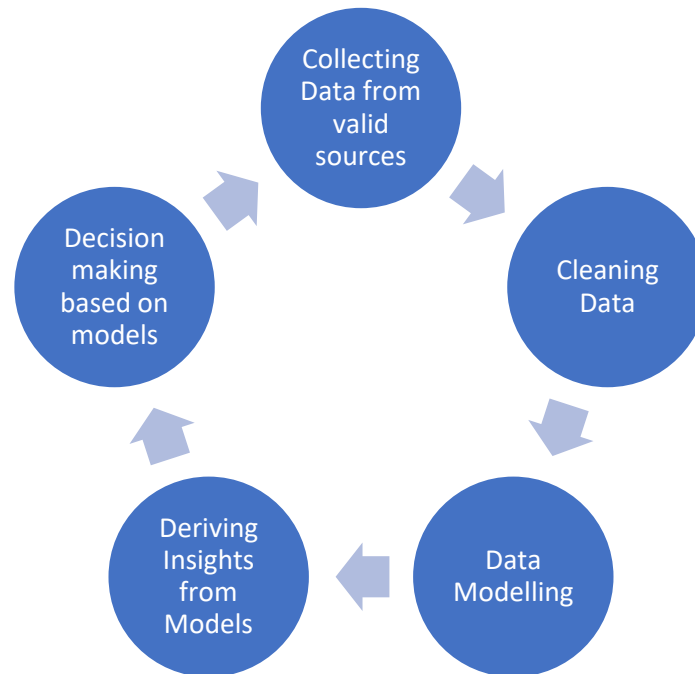
Figure 1 Strategy for Talent Analytics

Research Objectives:
1. To understand the use of talent analytics role in creating value for businesses.
2. To identify what kind of data will be suited to Talent Analytics for improving the HR.

Analysis

Creating Value in businesses

When we talk about creating value through talent analytics, it is not just based on personal intuition but on recorded facts. Richfield Management, for example, implemented a machine learning algorithm for applicant screening, where it searches for character traits pointing to applicant'sproneness to exploit workers' wages/ salaries. Since then, claims dropped to 20%, i.e., a whopping 68% drop in the claims made. Post Xerox's replacement of its applicant screening process with an web-based test designed by Evolve, attrition reduced by 20 percent (Scott Keller, 2017). In institutions where the Human Resources department is practically the faculty population in the premises, it is important that the faculties are the drivers of this change, and promote the use of analytics and benefit from it. Studies signal that majority of the facultieslack makingample use of social media platforms like- Facebook, LinkedIn, or Twitter, and scarcelyusesuch platforms for social interactions and connections in assignments (Atwong, 2015). Owing to the impact of Covid-19 most institutions were forced to make use of the existing digital technologies for carrying out assessments and evaluations and feedbacks. This gave them real time data that could be easily be operated on models to predict the student performance in the annual examinations and their job interview performances could be predicted. This would in-turn allow the faculties to develop PIP

(Performance Improvement Plan for the students to thereby increase the overall institutional performance.

According to studies E-commerce companieswhichhave embedded the Big Data Analytics in their supply/ value chain and other organizational processes have experienced 5% to 6 % increased productivity than other player in the market. The various applications of the big data are: personalized solutions, market relevant pricing, improved customer service, improved supply chain visibility, high security and quick fraud detection and better foresight using predictive modelling(Shahriar Akter, 2016). Though, investing in big data may seem a very great option to generate profits, but it has its own limitations as well. Findings related to IT-intensity found that only companies with huge data assets and significant reach to labor markets with BDA skills are able to benefitthrough investments into big data(Oliver Müller, 2018). Thus, before deciding to invest in big data analytics, leaders should weigh-in the positives and the negatives of the industry in which they operate in, as researchers have suggested that only firms in IT or similar market experience sizable improvements in productivity that can be correlated with big data analytics. In other words, if you are a small organization with limited funds and no real time access to the employee data in your organization, it is not preferred that you forcefully deploy a talent analytics model in your company. Thus, we can establish that an analysis of the ROI of the talent analytics model is at the forefront of the decision making process.

Another obstacle in the talent analytics strategy deployment is the lack of data analysts in the labor market. The PSUsshallface difficulties in attracting such talent as FTEs. On one hand, market-driven ideas require insights, whereas, design-driven ideasrequire foresight! For board members who have alwaysconsidered IT as a support function, the endeavor to bring a change in their beliefs, attract and retain the right talent will be more difficult than ever(Springer, 2015).

The Human Resourcesvertical is behind other functions in the adopting analytics technology and big data analysis. If the HR professionals do not upgrade their existingKSAanddeliverexpertisein these new methods and processes, the currentreputation of TalentAnalytics willcause the HR to be excluded from strategic influence while actively hurting the employees' interests(David Angrave, 2016).

Finally, in terms of creating value in the business- Talent Analytics can answer questions like:

1. What drives employee performance?
2. What changes can be introduced without hampering employee performance?
3. Identify who are the top performers in the organization and reduce their turnover/ attrition?

Talent analytics would also be helpful in hiring talent according to the project's lifecycle, as it is suited to collect, analyze and report information to attract well suited applicants. It is found that managers are not able to actively put the right talent at the right. Talent analytics could modify the Human Resources function by gathering information on the relevant skills for a given project phase (N'Cho, 2017).

Talent Analytics is a data-drivenstrategy for enhancing performance (of both, company's and individual's) by improving decisions madeby the employee that will impact the business(Contractor, 2018). It is not the objective of Talent Analytics to measure and justify the worth of Human Resources but, analytics can definitelyimprove itsvalidity by enhancing the HR policies and practices and make them better in terms of effectiveness, and offer a competitive advantage against its competitors(O, 2015).HRtoday have on-demand, real time access to updated employee information aggregated across various units. The Talent Analytics team is responsible for extractingvaluable insight from the gathered data and not just a collect data and build reports. The problems of Human Resources in verticals like: recruitment, manpower planning, forecasting of employee attrition/ turnover, succession planning etc. can now be solved through predictive and prescriptive analytics (Weena Yancey M Momin, 2015).

What data can be used in talent analytics?

Some of the innovative methods ofcollecting data for talent analytics strategy are:

1. Creating a psychological profile of applicant using their social media activities.
2. Estimating the applicant's job-fit and culture-fit scores using their vocal and non-verbal behavioursduring an interviews.
3. Employing gamification, which can be used to assess certain key competencies required for a job-role(e.g., engaging, competitive, visually- appealing, etc.(Reece Akhtar, 2017)

"There are many metrics which can be used to measure and verify the sources of hiring, the applicant's qualifications and the effectiveness of the recruitment strategy. Some of the key metrices in talent acquisition are:

1. BEP- Break Even Point
2. CBR- Cost Benefit Ratio
3. ROI- Return on Investments
4. HR Expenditure: Company Revenue Ratio
5. Number Exceptions processed for HR functions : Total Exceptions Processes
6. HR : Employee/ Worker Ratio
7. HR : Supervisory Roles Ratio
8. HR : Technical/ Professional Roles Ratio
9. HR : Administrative Roles Ratio
10. HR Expense : Operating Expense Ratio
11. Turnover Cost or Cost per Turnover
12. HR Expense per FTE/ FTW
13. Revenue per Total Human Capital Spend
14. Revenue /FTE
15. Turnover Rate
16. EBIT per FTE
17. EBIT per Human Capital Expense
18. Productivity

19. Percentage of Contingent Representation
20. Time taken for reaching full Productivity by a new employee
21. Time taken to Hire
22. Cost per Vacancy or Vacancy Costs
23. Vacancy or Occupancy Rate
24. Retention Rate
25. Cost per Hire
26. Yield or Selection rate
27. Offer Rate
28. Offer Decline Rate
29. Promotion Rate
30. Retirement Risk
31. Readiness
32. Training Spend Rates
33. Competency Rate
34. Training Participation Rate
35. Average Training Hours
36. Required Training Completion Rate
37. Performance Review Completion rate
38. Average Performance Rating
39. Average Training Spend
40. Performance Rating Distribution
41. Succession Breadth
42. Succession Depth
43. Succession Fill Rate
44. Successor and High Potential Retention
45. Annual Increment on Base Salary
46. Average Compensation Ratio (Current salary to Midpoint salary rates)
47. Direct Compensation Ratios
48. Indirect Compensation ratio
49. Target Bonus For Non-Executives
50. Benefit Participation Rate
51. Benefit Spend Share
52. Total Compensation Spend Rate
53. Annual Change in Benefit Spends
54. Health Care Spend Rate
55. Target Bonus for Executives
56. Organization Share of HealthCare Premiums
57. Employee Relation Incidents
58. Span of control

59. Accidents Ratio
60. Workers Compensation Claims Filled
61. Complaints Ratio
62. Employment Liability Spend

Post identification and the measurement of these metrices, data preparation and data cleaning steps follow. IBM uses IBM Watson, for predictive analytics in their talent acquisition processes(Leon, 2016).

Once the model has been designed, it can be used to attract applicants to apply for a role, recruit applicants with desired qualificationsand select the best fit for the role and the organization in the future. Some of the variables that are considered in these models are: behaviors, attitudes, KSA and preferences. Evidence-based decisions that have strong analytical conclusions can be handy in situations where leadership or stakeholder buy-in is absent(Dana L. Ott, 2018)(Ray, 2018). More aggressive approaches to attracting talent would include searching for talent through the use of recruitment agencies or performing internet searches, combined with the use of intermediaries to identify future employees by exploring talent networks (Dana L. Ott, 2018).

According to McKinsey Quarterly, The three areas that HR may be getting wrong are choosing where to recruit from, using technology to cut the noise in the hiring process, and addressing attrition by improving the talent management in the company (" Henri de Romrée, 2016). Luckily, all these areas can be countered using talent analytics approach with quality data. "People Analytics can be used for Hiring and firing, Performance evaluation,

Quick fraud detection, risk mitigation, dynamic pricing, reducing marketing expense, better allocation of financial assets, retaining talent, recruiting talented employees, and estimation are some of the business applications of data analytics(Dursun Delen, 2018). However, there are certain implications to the use of talent analytics in Hiring and firing, Performance evaluation, work planning, utilization, and optimization, such as, Invasion of privacy, Humans are extraneous to the decision-making activity, Mechanization of the workplace, Erosion of managerial competence, Stifling innovation through conservative predictive algorithms(Uri Gal, 2017).

Conclusion

The main objectives of this research were to establish whether or not talent analytics creates value in the business and what type of data can be used in talent analytics. Clearly there are plethora of examples which have proven the worth of talent analytics and how the HR can use it as a tool to avoid exclusion of Human Resources function from organizational strategy, which will hamper the interests of talent/ stakeholders. However, the organization should also consider the industry it is operating and the budgetary limitations in implementing such strategy as blindly following into the footsteps of big players could do more harm than good. In talent management, mostly it isambiguous who the HR customer really is. Given that, Human Resources have multiple stakeholders like: the employees in the company, senior management, trade unions, community, government, etc. The legislations, the institutions and the societal conventions need to adapt and be reformed to close the gaps or even perhaps be completely reinvented (Claus, 2019). Thus,

getting quality data from the sources becomes all the more challenging, which is why relying solely on technology oriented persons like data scientists in the absence of subject matter experts could be a risky affair. The sources to get quality data in order to define metrics that need to be tracked or fed to algorithms for data modelling must be cautiously selected.

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