Analytics Applications in the Human Resources Context

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Abstract: *Human Resource has always been one of the most vital pillars of any organization worldwide. Human resource management is the art as well as science applied practically to maximize employee performance for obtaining pre-defined strategic objectives. Holistic management in organizations involves a major chunk of human resource development and management as they are central to every organization. The study aims at an in-depth analysis of how HR Analytics is being applied in the practical perspective to find solutions to complex business problems. It examines how HR analytics is applying analytic processes to the human resource department of an organization in the hope of improving employee performance and therefore getting a better return on investment and thus increasing productivity.*

Keywords: Human resource Management, Talent Management, talent analytics, people analytics, workforce analytics.

Talent Analytics or HR Analytics uses the application of statistics, technology, and expertise to large sets of people data which results in better decisions for an organization.

The Goal: Make data accessible to enable on-demand reporting

HR analytics does not just deal with gathering data on employee efficiency. Instead, it aims to provide insight into each process by gathering data and then using it to make relevant decisions about how to improve these processes.

1. The Problem Statement

Many HR decisions about hiring, onboarding, promotion, rewards, or retention continue to rely on professional instinct, or gut feeling as it is more commonly known, and a heavy reliance on the company way. This can lead to a normalizing of bad practices which fail to challenge common workplace injustices, such as the gender pay gap, with 17% more men receiving a pay rise than women.

2. Motivation for undertaking the research

In human resource, there are various qualitative aspects when we look at it from a broader perspective as it involves humans. A strong understanding of people analytics /HR Analytics can be vital in moving a business forward.

- The largest expense of organization is -Payroll

How an organization recruits, trains and retains talent has a major impact on business performance. However there are various factors that need to be understood which influence HR Decisions in an organization. To what extent statistical analysis is applied to issues such as recruitment, staff development and retention strategies, calls for an in-depth study to be done to seek answers.

- Where is the HR Data

Data is available in many places, but the difficulty is about collating and analyzing it. PerThomas Watson, it is one thing to discover that 28% of staff has been the victims of bullying in the workplace - creating a policy in response to it is the challenge. For years, companies have collected employee demographics, educational history, performance data and training records. And as social media infiltrates through businesses as an effective way to communicate corporate culture and encourage engagement, the amount of potential data collection points is growing.

- How is this data being used?

The objective of data collection and the presence of data is extremely important to be narrowed. Is it being used to address talent retention issues by actively identifying those who are statistically at risk of leaving? Is it being used to locate recruitment sources that may provide fertile ground for candidates? Is it being used to drive performance? Thankfully the answer to all these questions is increasingly yes. Attend any HR conference and you will find data and analytics high on the agenda. The appetite for analytics is certainly there.

- How HR analytics can push businesses forward

As discussed earlier, most of HR Decisions rely on instinct, HR analytics can help us truly understand what could improve our workforce's performance, create a team that consistently meets its targets, identifies why certain managers continue to thrive whilst others burn out, and predict exactly which candidates are likely to succeed.

As per an example cited by Watson - For example, understanding that nearly 50% of the workforce find achieving a work/life balance to be their biggest challenge can help you approach the issue of workload management. Appreciating that a quarter of the workforce has had issues of micromanagement can also help to build a structure of leadership sympathetic to staff experiences.

- How HR analytics can drive performance

Josh Bersin explains how an organization puts HR Analytics to test. After undertaking an extensive statistical analysis of the talent factors that affected a company's sales productivity, the company discovered indicators that were being considered critical to the recruitment process – such as education and the quality of references – had minimal impact on an employee's actual performance.

In fact the factors that were actually influencing sales achievement came from areas that weren't being taken into consideration, including big-ticket sales experience and the ability to thrive under unstructured conditions. When these analytics were formulated into a recruitment strategy, the result was a staggering $4m growth in the following year. The lesson here is if you haven't used data to analyze the strategy, one is simply guessing.

3. Research Problem

Problem:

In organizations, the qualitative aspects of Talent / People involved are difficult to measure. Due to which most of the decisions in organizations are taken based on guts rather than data. Below are further classified research gaps /issues based on a few studies such as IES Paper studies by Fairhust, Predictive analytics and HR: A Primer by Dey and De.

1. The HR is stuck in reactive and tactical mode- They are mostly backward looking rather than uncovering trends rather than projecting the future.
2. Major draw on time and resources- HR Teams are typically not experts in statistics and analytics and hence things take longer.
3. Ineffective communication or missed opportunity for business impact- The HR is not able to credibly demonstrate the ROI of its activities, missing the critical linkages between the HR Activities and business outcome.
4. Multiple spreadsheets and manual work means a heightened risk of error.

Objectives of the study:

The purpose of the study is multifold:

1. To analyze factors affecting employee productivity.
2. To analyze employee psyche from the professional standpoint.
3. To have an in-depth analysis of employee attitudes and relate how it affects individual productivity.
4. Optimizing human resource management through workplace analytics.

4. Theory

Analytics is information resulting from the systematic analysis of data or statistics. It is the discovery, interpretation, and communication of meaningful patterns in data.

Types of analytics:

The three dominant types of analytics –Descriptive, Predictive, and Prescriptive analytics, are interrelated solutions helping companies make the most out of the big data that they have. Each of these analytic types offers a different insight.

- Descriptive Analytics, which use data aggregation and data mining to provide insight into the past and answer: "What has happened?"
- Predictive Analytics, which use statistical models and forecasts techniques to understand the future and answer: "What could happen?"
- Prescriptive Analytics, which use optimization and simulation algorithms to advice on possible outcomes and answer: "What should be done?"

As mentioned, HR analytics is applying analytic processes to the human resource department of an organization in the hope of improving employee performance and therefore getting a better return on investment and thus increasing productivity.

According to research done by TCS every business function has to reduce cost, maximize operational efficiency and focus on strategic initiatives to stay profitable, sustain agility and grow. Whether in developed or emerging markets HR Leaders often struggle to support the business with skilled workforce as it needs, due to budget and time constraints.

There are various key areas where analytics can be applied – Employee profiling and segmentation, employee attrition and loyalty analysis.

Various modelsas referred by Mishra, Lama and Pal , have been applied to qualitative aspects of human resource – Turnover, response , retention , risk and talent forecasting and prediction models.

5. Variables or factors

- Productivity /Profitability - Dependent variable
- Employee behavior - Independent variable
- Compensation -Independent variable
- Motivation -Independent variable
- Organization culture -Independent variable

- People interface -Independent variable

Hypothesis:

H0: Employee behavior, compensation, motivation, organization culture, people interface has no influence on productivity
H1: Employee behavior, compensation, motivation, organization culture, people interface influence productivity

6. Data collection methods:

Real time data in the workplace environment. The studies conducted so far by enlarge have used secondary data and have more of a qualitative perspective. In the present study, it is intended to use real time data in a medium scale workplace environment for analysis.

References

Secondary Sources:
Websites:
[1] Thomas Watson -totaljobs.com (Assessed Feb 15 2017)
[2] http://www.trainingzone.co.uk (Assessed Feb 21 2017)
[3] Paper by Mishra, Lama and pal - INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH VOLUME 5, ISSUE 05, MAY 2016(Assessed on 20 January 2017)
[4] Linkedin.com (Assessed Feb 15 2017)
[5] Josh Bersin.com -Josh Bersin
[6] http://www.tcs.com/SiteCollectionDocuments/White-Papers/Predictive-Analytics-HR-0115-1.pdf (Assessed Feb 22 2017) Tuhin Shubhra Dey, Prithwis De
[7] International Journal of applied research 2015 (Assessed 24 Feb 2017)
[8] HR Analytics driving return on human capital Investment-Oracle White Paper (Assessed on Feb 10 2017)
[9] Big Data and HR Analytics Paul Fairhust (Assessed on 18 Jan 2017)