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A STRATEGIC APPROACH TO HR ANALYTICS: A FRAMEWORK FOR EMPLOYEE LIFE CYCLE MODEL

Supriya P Inamdar
Research Scholar, REVA University, Bangalore

Dr. Shinu Abhi
Director, Reva Academy for Corporate Excellence, Reva University, Bangalore

Abstract: Organizations are becoming more data-focused by utilizing HR metrics to meet its strategic goals. Advancement in technology and tools are guiding companies in the systematic adoption of HR analytics both in operational and strategic levels to give better decisions by utilizing HR metrics, which optimizes performance and better return on investment. Employees are the most significant assets for an organization, and therefore organizations need to manage the cost of improving the employee's knowledge, skills, and experience effectively. HR metrics are one of the ways to analyze the cost-effectiveness of its people initiatives. These metrics help the organization to explain past, present, and future performance/results and their impact on business outcomes. This paper explored the linkages of HR functions and business results throughout the employee life cycle journey. A few best practices adopted by some of the organizations as case studies are discussed to link the use of HR analytics and its impact on business outcomes with few case studies.

Keywords: HR analytics, Return on Investment, HR metrics, Decision making, Employee life cycle model.

Introduction to HR Analytics

The Vast adoption of the internet has changed the scenario in the field of HR, and the rate of adoption for HR analytics is becoming wide, as data can be collected quickly and shared. Collin mentioned that nearly 71% of organizations use HR analytics as a "high priority to their organization's success" (Collins, 2017). An HR Analytics expert Fitz says that HR Executives need to learn to speak in terms of numbers, in qualitative and quantitative terms, storytelling, or to express the activity in value-added terms (Fitz-Enz, 2014). Ramesh, in his book, "Winning on HR Analytics: Leveraging Data for Competitive Advantage," writes, the focus of Human resources has moved away from basic measurement to the scorecard, engagement surveys to strategic planning (Soundararajan, 2016). For a long period, HR has been striving to become a strategic function in any organization, along with other functions like finance, marketing, sales, and operation functions (Schneider, 2006). In a multidisciplinary approach, HR analytics plays a key role in every aspect of HR functions like recruiting, training and development, employee engagement, compensation and benefits, succession planning and others to

improve the quality of individual and organizational performance (Lawler III, 2004), (Khilari, 2017).

A trend in HR had started when HR-focused to be a strategic partner, (Lawler, 2009) When organizations identified in rapid use of technology that makes easy collection and interpretation of data and finally increased awareness of practicing evidence-based HR (Marler JH, 2016). For that HR needs to understand business strategy in which organization grows, dependable and in dependable factors involved, the HR Executives can gather data from various sources like employee databases including surveys, attendance records, demographics, work history, salary, performance appraisals, promotions, recruitment process, employee database, etc. Lengnick-Hall and others mentioned in their paper 'A strategic approach to workforce analytics: Integrating science and agility' that "The growth of analytics and evidence-based decision making supports organizations in improving effectiveness and efficiency" (McIver, 2018). HR analytics is an application of statistics and machine learning tools and techniques, using numerical data, modeling, and analyzing employee-related factors to improve human resources performance. It guides HR Executives to make data-driven decisions to attract, manage, and retain employees who also improve Return on Investment and profitability and overall business outcome.

Growth of HR analytics practices

In the year 1990, comparing data with HR function became popular, and that concept was called 'Benchmarking.' The idea of benchmarking was to support organizations in providing insights and comparing business performance with others. Davenport published an article on 'Talent analytics' in Harvard Business Review on how to measure HR activities, which opened the eyes of many organizations and researchers across the globe (Davenport, 2010). However, data collection, storage, and interpretation became challenging, but still, organizations believe that analytics will answer questions on what has happened? How? Why? What may happen in the future? This will help to understand evidence-based decisions that will impact on the business outcome. One of the studies by Bersin showed that only 10% of the Fortune 500 companies are using advanced analytics, out of which 6% of organizations are still using statistical methods and 4% companies using Predictive and prescriptive analytics (Bersin, Leonard and Wang-Audia, 2013). A study by Massachusetts Institute of Technology (MIT) understands "top-performing organizations use analytics five times more than the low performing organizations" (La Valle et al, 2011). Deloitte (2017) in its survey found that 71 % of companies believe importance of HR analytics to measure company performance, amongst 8% believe that they have usable data and only 9% believe that they have valid report to understand the dimensions which drive their organization performance and 15% have deployed HR scorecards for line managers. An extensive study by Bersin (2016) explains, most of the companies use HR metrics and scorecards, but HR needs analytics to describe the measurement that matters which includes statistics, tools, models, use of appropriate data, analyzing the data and applying statistical and scientific standards to evaluate results and those results which guides business. Put simply; metrics describe measures of past performance while analytics use those measures to gain insights or predict the future.

Most of the organizations like IBM, Oracle, Accenture, Phillips, Google, and Wipro have adopted HR Analytics practices to identify high performers, improve profitability and employee satisfaction, and control attrition and altogether to perform better.

Though many companies are aware of the benefits of HR analytics, they find it difficult to adapt and move out of traditional practices. It was observed in the study by Kapoor (2014) that deficiency among the HR team is to collect and analyze data and lack analytical executives with statistical knowledge. Most of the organizations still depend on spreadsheets and reports to analyze the employee data; among them, few organizations lack in adopting required tools, lack of financial strength and others would not like to take the risk on advanced practices.

In this study, we explore measuring linkages of HR programs and business outcomes with the use of HR metrics in the employee life cycle model, this study tries to give clarity on identifying and categorizing right HR Metrics in operational and strategic level and finding out the impact on business performance.

Strategic Linkages of HR programs and business results

Organizations often think about how to bring out better business outcomes and make the company successful. It may be the nature of the business, infrastructure, investment, culture, or workforce. One of the key differentiators contributing to the companies' success is a company's workforce (Danish Maqsood Khan, 2014). They are the strength of the company, which contributes to better organizational results. Most of the organizations deploy various HR programs across the employee life cycle, beginning from talent acquisitions to retain to exit. An organization spends money on acquiring talent, talent development, employee engagement, and others, which makes sense to managers to invest in HR programs for better business outcomes.

In recent years a great deal of attention has been drawn to strategic human resources management by organizations to balance between 'focus and alignment' (Amitabh Jha, 2019) . As it brings together the top management approach, to support performance, increase productivity, profitability, and effectiveness of organization. The strategy establishes direction and scope for an organization in the long run. Most of the researchers believe that the adoption of strategically oriented HR programs has a positive effect on business performance, which can allocate its workforce more effectively and efficiently. With today's available tools, techniques, and idea's HR professionals have an opportunity to prove themselves as a strategic partner by linking HR strategy to the business strategy by supporting in width and length of orgnaization. The HR department will not only focus on meeting HR strategic goals but also to achieve business goals. It also contributes to financial outcomes like minimizing turnover costs, maximizing revenue, avoiding penalties by mitigating risks, and others. In further, we tried to understand the strategic linkages of HR programs and business results. This paper identifies a few HR metrics both at an operational and strategic level with each HR function to know their impact on business .

Operational and Strategic Metrics

HR metrics are operational measures that direct how efficient, effective, and impactful are organization HR practices. HR metrics can be any number of items that are framed to measure quantifiable issues. The operational level of HR and the strategic level of HR are two faces of the same coin. Operational HR looks over the day-to-day operations and needs of employees. In contrast, strategic HR focus on long term goals like maximizing revenue, profit, productivity, customer satisfaction, low attrition, return on investment predicting future outcomes, and growth of the business. The human resources department uses these metrics to improve their efficiency, effectiveness, and impact to derive the required measures. In Figure1, the authors have framed an employee life cycle model, a flow of HR process, and essential HR metrics, both operational and strategic level, to measure the impact on business outcomes with examples.

Along with collecting data, it is also essential to analyze the data and compare them with industry benchmarks. For example, if the metric is *Time to Fill*, and the collected data shows an average of 30 days per hire, the next immediate action has to compare the industry benchmarks for this set of the job position. If 30 days is quite high than the average industry trends, a set of further analysis needs to be undertaken, such as screening, interviewing, shortlisting, and joining. Authors have found it interesting to study with examples for each HR function with key HR metrics.

Nielsen, an information data measurement firm, observed that there was a high rate of attrition in the company, and to analyze this, they used past five years data and few hypotheses to find the reasons for attrition (Soundararajan, 2016) . They realized that employees with a change in job responsibilities due to lateral movement or promotion made them leave the organization. This insight informed managers who changed their people strategy and helped them to perform the job internally (internal mobility), upgrade skills in the current job role. This action improved employee retention and the same policy was applied to its other units to retain potential employees

Recruitment

Effective recruitment programs will benefit companies' performance on hiring the right talent, reducing time and costs of hire, improves the candidate experience, and support employer brand building. Recruiters think from the strategic level, i.e., to hire the right candidate at less time, to improve the hiring process quality and sourcing efficiently. Effective recruitment programs will also lead to reducing the rate of attrition and improve productivity, which could lead to a competitive advantage.

HR automation tools for the hiring process

Loreal, a personal cosmetic care company, was receiving 2 million applications annually. Still, actual recruitments annually were 5000 people by 145 recruiters globally; it analysed that more time is consumed in the process of an application screening, and time takes to fill the vacant position. With the help of Artificial Intelligence(AI) machines starts recommending suitable candidates to opt for a proper job, depending on the past search, also recommends employees to select candidates with required skill sets on the applicant tracking system. Their new tool took 4 minutes to recruit a candidate, whereas a regular recruiter would take 45 minutes in the process, employees save time to deploy it into more value-added tasks. (Sharma, 2018)

Learning and Development

An essential role of HR executives to provide the required quality training to the employees. HR executives develop personalized training programs to individuals based on their skill gaps, through analytical based dashboards (Bersin, Leonard and Wang-Audia, 2013) . Analytics that provides apparent factors required to impact advanced training practices to see its impact on the increase in customer satisfaction that leading to the rise in sales. And to calculate return on investment in training, whereas just measuring the number of training hours, the number of the employees trained may not help to get valid results.

Creates a culture of learning

The recent study by IBM Smarter Workforce looked at factors involved in best performance and worst performance of the companies, in that 84% of employees who received training performed better than that of employees who were not trained and employees who received 40 hours of training met their project objectives than employees who received 30- fewer hours of training. 90% of the objective will be met by increasing team skills and meeting shareholders' goals. (Corporation, 2014)

Performance management

Performance metrics are the key to track the performance level of employees. Employee performance can be measured on quality, quantity, and terms of efficiency. Few metrics like the number of errors, net promoter score, revenue per employee, profit per FTE (Full Time Equivalent), Absenteeism rate, overtime per employee are few to mention (Kapoor, 2014). Performance metrics measure to assess whether employee performance, activities, and behavior are met.

Performance monitoring and management

In 2011 Hewlett Packard applied HR data analytics to predict employee turnover, they observed that employees who were paid high and promoted and better performance rating were negatively correlated with someone who received a promotion but did not receive

pay rise is likely to leave a job. They called it "Flight Risk Score." The company was losing its talent, therefore considering five years of people data, and with a hypothesis, they identified that most of the factors were highly correlated with attrition. The reason was found that employers with a change in job, responsibility due to promotion or lateral movement, which resulted in ups and downs in performance, and more attrition. (Soundararajan, 2016).

Compensation management:

Compensation related metrics help the organization to assess how well it is meeting an organization needs. Metrics like revenue per employee, average full-time equivalent compensation, overtime rates, etc. helps executives to measure the impact of compensation metrics on business results.

Pay for performance compensation

Sysco Corp, a wholesale food distributor from Houston, strived to change its compensation system for its employees who were paid on an hourly basis, which did not gain any value to the organization, and the compensation system model did not provide better profitability. Therefore Sysco changed its compensation-reward structure from paying an hourly basis to paying on activity-based compensation structure. This new structure leads to fewer mistakes, increased satisfaction level, improvement in retention, reduced delivery time, and reduced delivery expenses. With the new compensation structure, employees were not only satisfied but also more efficient, and company retention rates improved by 8%, and there was a decrease in sales expenses. (Schneider, 2006)

Employee Engagement

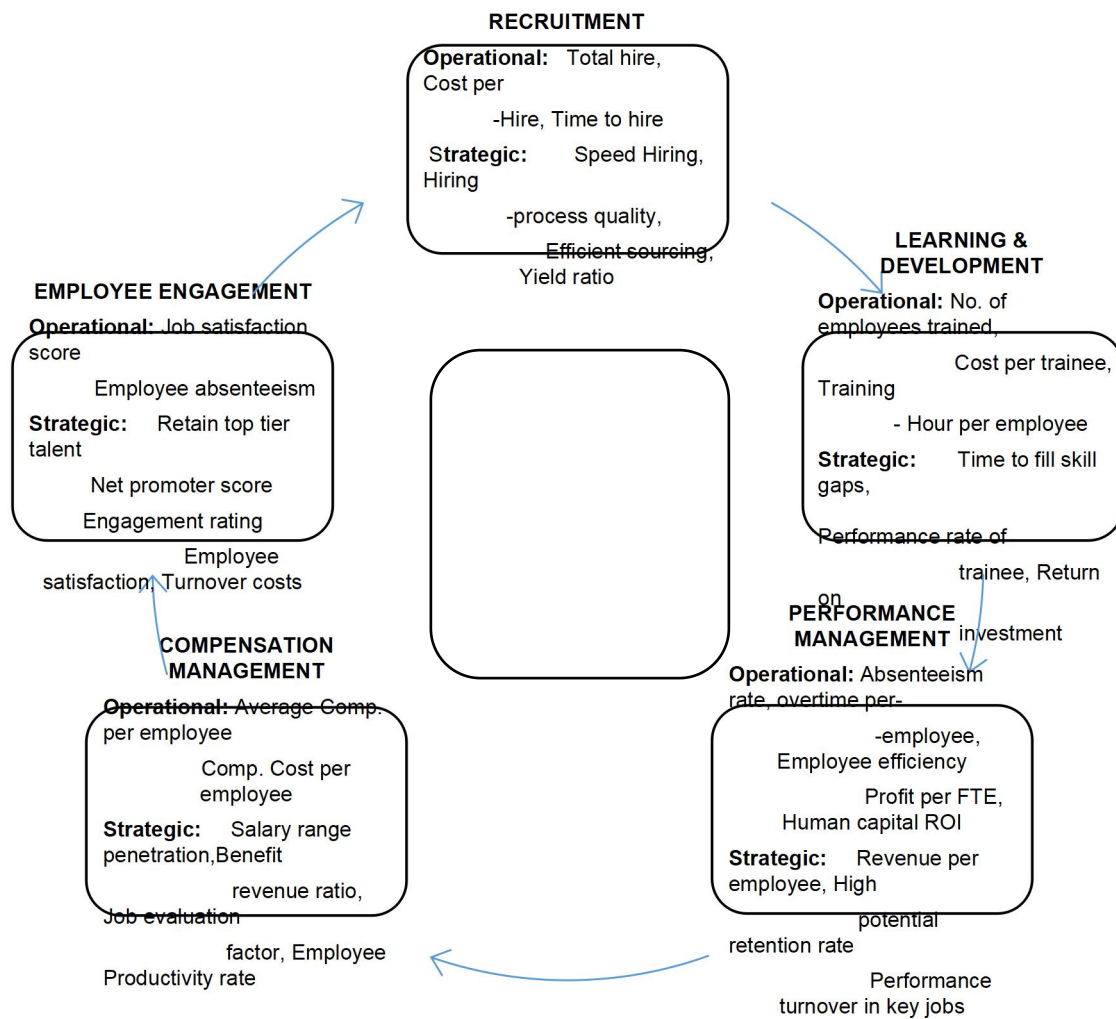
A highly engaged workforce can increase innovation, productivity, and performance and, in turn, increase retention. It is assumed that more engaged employees tend to be more productive; as a result, such employees perform better, and it is also believed that organizational performance is also linked with employee engagement. Here is an example to better understand employee engagement. (Manuela Nocker, 2019)

Employee engagement leads to better organization performance

Sears Inc., a department store, measures the impact of employee engagement on store performance; they framed a model by using total performance indicators, on employee - customer profit chain. They collected 1 million data points and found that a 5 point improvement in employee attitude will drive a 1.3 point improvement in customer satisfaction, which in turn will drive a 0.5% improvement in revenue growth. Employee attitude depends on the mood swings of the individual employee and impacts customer satisfaction and experience, an in turn increase in sales. Sears found that employee work-life balance, benefits, work environment, and the relation between employees are few

factors related to employee's good mood. (Soundararajan, 2016). Another example (Gates, 2002) , Marriott international focusing on employee engagement leading to business performance, it provided health benefits package, which seeks to engage the employee in work and meet the need of their families health benefits. Health benefits are an essential compensation package to attract and retain employees. They believe that taking care of employees will make them happy; in turn, they keep hotel customers happy, and that leads to improving business performance.

Figure 1: Employee Life Cycle model aligned with HR metrics on Operational and



strategic level.
Source: Authors

Measuring the use of HR analytics impact on the business outcome

HR Analytics allows HR Executives to understand the current state and problem caused by Performance indicators and its various factors affecting these performance indicators. It is also essential to look at the historical data, cause-effect analysis of past decisions, and 'what if' use cases in any decisions to effectively implement HR analytics. When HR Executives collect and gather data; HR Analytics feed the same data into sophisticated data models, tools, and algorithms to gain actionable insights (Kapoor, 2014). These tools will provide actionable insights in the form of a dashboard, visualization, and reports. This is how the common HR Analytics works. HR executives may find the use of HR metrics more convenient to measure the effectiveness of HR initiatives, but they are limited to strategic value and are not focused. Therefore only metrics are not sufficient to find insights, use of HR analytics supports to make evidence-based decisions with actionable insights (Falletta, 2014).

A research conducted by i4cp, mentions in its study that analysts are capable of formulating business strategies, asking the right questions, collect and examine the correct data to derive future insights that will help for better competitive skills and business performance (DeTuncq, 2013). The study also shows that in High performing organizations (HPO), there is more support on the use of HR analytics and the supply of required data for the HR department. In case Low Performing Organizations (LPO) lack of data mining, lack of analytical knowledge, lack of measuring HR metrics. HPO can mine big data, getting meaningful insights from the data, utilizing analytical tools and practices, getting valuable results from the data.

Conclusion

Human Resource analytics provides an opportunity for the HR department to be a key driver of the business. Many organizations are considering the HR department as a value-added business partner; many industry experts have predicted that the use of HR Analytics will increase in many organizations in the coming years. The organizations have to adopt new practices to survive in the business field, due to change in globalization, competition, availability of information, and technology for organizations to be competent to survive. It's observed that the use of HR data in analytics helps in making decisions based on facts, and it allows the HR Team to find actionable insights and focus on people and departmental programs to drive better results. HR analytics helps to improve employee work experience, decreased retention, better hiring practice, improved workforce planning, identifying attrition and its causes, identifying best-performing talent, to improve HR performance, predicts demand skills and positions which are needed to improve business performance and very important it transforms the role of HR into a strategic partner. Analytics creates data transparency, by which it benefits employees to view their performance data and fill the skill gaps. In the competitive era, HR Executives need to generate and have greater analytical knowledge and abilities. HR Analytics helps the organization to design strategic workforce planning by analyzing every aspect of HR metrics. Strategic HR framework will allow HR Executives and other users of HR analytics for a better understanding of the linkages between HR programs and practices and outcomes that are important to both operations

and to the bottom line of the organization. For the successful implementations and practice of HR analytics, academicians can help in the successful adoption of HR analytics programs.

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