

# AN OVERVIEW OF HR ANALYTICS TO MAXIMIZE HUMAN CAPITAL INVESTMENT

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## ABSTRACT

*The aim of this paper was to find out what HR analytics holds the promise of both elevating the status of the HR profession and serving as a source of competitive advantage for organizations that have put it to good use for service industry that can go a long way to make India for human capital investment. The realization of this promise hinges on our individual and collective ability to master the art and the science of HR analytics. That, in turn, will happen much more quickly if we can achieve clarity even consensus on a number of issues where neither clarity nor consensus currently exists. The increasing globalization of the job market combined with an ever increasing shortage of skilful staffs and advances in technology have resulted in large scale changes to the recruitment practices throughout the world through the use of HR Analytics. Future studies can focus on extending the proposed theoretical frameworks into a validated model, and also quantifying the implications of Evidence Based Management practices to HR and Organizational performance can also be explored.*

**Key Words:** Workforce, Analytics, Manpower planning

### 1. Introduction:

Focus on HR analytics has increased steadily over the past decade as evidenced by the continuously growing demand of HR analytics in the management decision making process. HR analytics is reaching more organizations and extends to a wider range of users, from executives and line of business managers to analysts and other knowledge workers, within organizations. In an environment of increasingly faster growing data volumes where operating on intuition is no longer an option, business analytics provide the means to both optimize the organization internally and at the same time maintain flexibility to face unexpected external forces.

One of the founders of the analytics movement has said: "Unquestionably, analytics is going to give HR a major makeover. Analytics is the engine of business intelligence and BI is a prerequisite for sustainable performance. Although analytics have been in use in production, marketing and finance for many years, HR has successfully avoided it. That evasive action will block HR from ever being a strategic partner in decision making. The good news is that there are already a number of companies doing fine work here. The days of anecdotal reporting are over and hard evidence is the new language."

Human resource analytics (HR analytics) is an area in the field of analytics that refers to 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. 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.

### 2. Definition of HR analytics:

HR Analytics provides a data-driven framework for solving workforce problems using existing information to drive new insights. It is smarter decision making, delivered with a combination of software and methodology that applies statistical models to worker-related data, allowing enterprise leaders to optimize human resource management (HRM).

#### 2.1. The Five Evolution stages of HR Analytics:

According to a 2004 Workforce Management (formerly Personnel Journal) article, Human resources activities and their impact on the bottom line could—and should—be measured.

It is important to point out that use of analytics, like most business and technology initiatives, is not a neat and tidy process and that not every organization goes through the exact same progression. And in large companies, different departments may be travelling the same road at different speeds and with more or fewer stop signs.

There is often a progression in developing an analytics culture shaped around better and faster decision making. Harvard Business Review Analytic Services interviews and other research found five stages.

**STAGE 1: Overreliance on Managerial Judgment Such As Intuition and Instincts.**

Companies at the early stages are often start-ups or have leaders who tend to maintain a firm control of all decision making. The way in which they use information is highly unstructured, and often they resist change. The dangers of excessively relying on managerial instinct and experience alone are manifest. As Davenport points out, sometimes intuitive and experience-based decisions work out well, but often they either go astray or end in disaster. The results can range from companies making poor hiring decisions based on hunches to executives pursuing mergers and acquisitions driven by intuition to palliate their egos. As noted earlier, roughly four out of ten survey respondents say that their managers too often based decisions more on judgment rather than on data.

Of course, management judgment remains the most common factor in decision making even today. There is often resistance to move to a data-driven culture. “The initial stage of the evolution was an inherent mistrust of statistics.

**STAGE 2: Use of Analytics in a Few Departments:**

Typically analytics first take hold in a departmental development manner, where they are not integrated into company-wide decision making. They are usually a response to a specific challenge in a high-profile department, such as finance or marketing. The departmental development and focused nature of the implementation often means that workers do not develop a deep grasp of the power of data-driven decisions and so do not develop the necessary skill set to appreciate or use analytics. Top executives and even line managers may lack the analytical skills to “question” data. In addition, the data neophytes are not able to balance the insights from the data with their managerial instincts and experience. Essentially, many individuals at companies in Stage 2 don’t understand the possibilities of analytics.

“Having data and knowing how to use it are two completely different things,” explains Brian Holman, director of customer support for The Standard, a Portland, Oregon-based insurance company. “Knowing how to use data to understand the marketplace, motivate employees, and drive performance is a learned skill.”

Because of the narrow and limited nature of the analytics initiatives, there can be departmental discrepancies and duplicated efforts. These companies can have trouble encouraging interdepartmental collaboration and developing a shared vision of enterprise goals.

**STAGE 3: Expanding Use Of Analytics In Several Departments, Noted By An Increasing Amount Of Collaboration.**

After companies have had success using analytics to resolve or better manage narrow but important challenges, the technology begins to expand to a few other departments. This stage is typified by structured use of analytics, with a disciplined decision-making process in those units. Executives and line managers have learned to rely on past data to identify trends but also are comfortable using their managerial instincts and experience to consistently pose new hypothesis, launch experiments, and test and improve.

Says J.P. Morgan’s Williams, individuals at this stage “look at the past data for information on trends, patterns, or insights and they ask great questions—‘How come?’ and then ‘What if?’” They also test their theories and then run small experiments so that they can use analytics to verify, reject, or modify the theses quickly and often relatively cheaply.

Companies at this level begin to develop integrated knowledge systems that balance departmental goals with enterprise goals. Analytics becomes integrated in the culture of these divisions—it is recognized as an essential corporate asset.

What is interesting is how this approach mixes both data and managerial instincts. “Gut feel is still valuable because there are always multiple paths for any project, and based on your experience and intrinsic knowledge of a domain you can eliminate a lot of options that don’t make sense,” “And that permits a more rigorous process for the better options to determine which is the most valuable.”

**STAGE 4: Scaling Decision Making Throughout All Ranks Of The Organization In An Integrated, Holistic Approach.**

As the benefits of analytics become clear, the technology moves deeper into the organization, empowering more workers to make important day-to-day decisions based on data and instincts. Frontline staff gains a higher level of knowledge that translates into faster decisions that enhance customer relationships. This enables individuals throughout the organization to be more innovative and independent and to take calculated risks that align with corporate goals.

Customers will often contact the finance unit’s call centre asking to skip a car payment due to actual or pending financial distress. The company built an analytics model that suggests whether the skipped payment should be allowed, based on numerous criteria such as the customer’s payment and contact. But the customer service representatives are better than the statistical model is at determining whether the financial distress is based on a temporary situation such as a medical condition. “This helps us decide what to propose to an individual customer,” he says. “The important thing is the ultimate decision is left up to the customer service representative.”

**Stage 5: Continuous Improvement built on an evolving technology.**

“A lot of people miss a key stage,” Bander says. “The point of becoming a data-driven company is to become a wiser company by making better decisions. And that isn’t simply a matter of data but a matter of fitting analytics into your corporate culture. For example, the job is to fit analytics and data-driven decision making into that kaizen framework. An organization with a different corporate culture—whether it’s a mass production manufacturer or a Silicon Valley start-up or a government agency—would find a very different way to integrate analytics into its decision-making processes.”

An organization at this stage is marked by the ability to adapt and expand quickly. BI and analytics are key methods of quickly stimulating, testing, and evaluating ideas. Employees become more proactive and creative. A philosophy of innovation is embedded throughout the organization, results in a constant flow of new ideas supported by ongoing feedback and collaboration.

A key part of continuous improvement is looking ahead rather than behind. Analytics leaders say analytics provides more value when the tools provide insights about the future rather than a snapshot of the past. They say that predictive modelling, especially to support innovation, is currently the most advanced stage of analytics evolution.

## 2.2. The Benefits of Analytics:

Let’s consider the benefits of HR department investing in stronger analytics.

1. HR executives will be included in the conversation, because they can now quantify their numerous impacts on business outcomes.
2. HR departments can be held accountable for impacting the bottom-line the same way business or product leaders are held accountable.
3. The investments that they decide to make that focus on employees will result in tangible Outcomes that benefit shareholders, customers and employees themselves.
4. They can redirect the money they spend today on the wrong employee initiatives to more beneficial employee initiatives. Specifically, those initiatives that impact critical business metrics and outcomes instead of the latest un-quantified HR fads that promise to make employees happier, more engaged and satisfied.
5. The returns on Analytics investments can have their impact from the top to bottom lines, can be quantified.

## 2.3. Human Capital Analytics:

Organizations can use advanced analytics to improve workforce planning, align organizational capabilities more closely with agency strategy and derive better value from workforce talent across the entire HR lifecycle Using advanced analytical techniques, Such as data mining, predictive modelling and factor analysis, for organizations to answer important questions:

- Which programs drive better workforce performance?
- What organizational and talent levers can be pulled to help adjust to legislative changes while maintaining performance?
- Which top performers in the organization are at risk of leaving and how might they be enticed to stay?

Leaders of HR face an overwhelming list of imperatives: predicting and fulfilling business requirements, meeting diversity targets, and decreasing recruiting and retention costs. Meeting these demands requires HR personnel.

To make strategic decisions that can influence much more than obligation authority and public value these decisions have the power to energize, disrupt the workforce, embolden or jeopardize programs that pain points lie in recruitment, retention or any other aspect of the HR lifecycle that have a targeted and goal-oriented approach to reduces redundancy and encourage meaningful transformation.

Strategic approach that clearly defines what constitutes a positive outcome so that the analytical discovery fully aligns with organization’s goals. Where are we today, and where do we want to be tomorrow? The data also establishes a baseline level of performance to measure future outcomes. Using established baseline metrics it quantifies analytics, cost effectiveness and organizational improvements against desired results.

## 2.4. Type of Analytics:

### Descriptive Analytics:

The application of simple statistical techniques that describes what is contained in a data set or database. Example: An age bar chart is used to depict retail shoppers for a department store that wants to target advertising to customers by age.

### Predictive Analytics:

An application of advanced statistical tool, information software, or operations research methods to identify predictive variables and build predictive models to identify trends and relationships not readily observed in a descriptive analysis. Example: Multiple regressions analysis is used to show the relationship (or lack of relationship) between age, weight and exercise on diet food sales. Knowing that relationships exist helps explain why one set of independent variables influences dependent variables such as business performance.

### Prescriptive Analytics:

An application of decision making science, management science, and operations research methodologies (applied mathematical techniques) to make best use of allocable resources. Example: A department store has a limited advertising budget to target customers. Linear programming models can be used to optimally allocate the budget to various advertising media.

## 2.5. The five major steps of Analytical model include:

**1. Track:** Extracting, transforming, loading, and integrating data into a data warehouse as well as monitoring data in a real-time or near real-time environment.



- 2. Analyze:** Analysis of data using business intelligence tools such as query, multidimensional analysis and data mining.
- 3. Model:** Formulating a model for forecasting, optimization, and scenario planning by utilize advanced analytics tools. Descriptive and predictive statistical methods are used to scores and other models used in decision making.
- 4. Decide:** Arriving at a decision based on analysis and pre-existing or newly developed models that combine individual and group input facilitated by collaboration tools or personal interaction.
- 5. Act:** Acting to decision based on the particular business process being addressed. Examples include launching a new marketing campaign based on the analysis of previous campaign results, customer behaviour, new promotional plan and inventory levels. Approving or denying a request for credit based on past financial activity. Re-negotiating sourcing contracts based on supplier delivery trends, product quality, and warranty activity trends, adjusting the type of data being tracked for analysis, etc.

## 2.6. The Future of HR Analytics:

HR analytics is an evidence-based approach for improving individual and organizational performance by making better decisions on the employee's side of the business. Although it is not its purpose to prove the worth of HR, analytics can certainly enhance the credibility of the function and the profession by improving the effectiveness of HR policies and practices and contributing to the competitive advantage of organizations that develop it as a core competency. An added side-benefit is that HR analytics can help expose where effort, resource and budgets are not producing their intended impacts, and in so doing reduce the workload while improving the effectiveness of HR. As such, HR functions and professionals develop new skills and capabilities so that they can effectively partner with marketing and finance on HR analytics initiatives or risk ceding this increasingly important and strategic responsibility to them. Along the way, HR professionals will need to address ethical dilemmas. Do this is proactively by clearly delineating the principles for deciding when HR analytics will and will not be used.

Without a doubt, HR analytics takes effort to reduce these current challenges facing many organizations. But it can also result in an elevation of the status of the profession and its practitioners by helping them to guide their organizations in finding the sweet spot—the intersection between more profitable and more enlightened management and development of employees. Mastering this effort would represent a win-win for employers and employees, and ultimately the society in which we live and work.

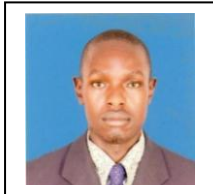
## Conclusion:

The HR Analytics process presented here is straightforward and numerous organizations can use it to gain competitive advantages hence this can achieve the dream of make in India human capital to transform the country's workforce. The evidence suggests that HR field truly is in the midst of a sea change. The radical shift from analogue to digital, like from steel to plastics." It is time for HR leaders to start predicting business outcomes versus trying to improve an employee engagement score and increase participation rates on their initiatives. The cold, hard truth is that many organizations are not yet reaping the benefits promised in all the use of HR Analytics. The proper implementation of HR Analytics is a key initiative to making HR a strategic function in any organization.

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