Workforce Analytics the Prospect of Human Resource Management

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Abstract: *The overall purpose of human resource management is to ensure that the organization is able to achieve success through it is manpower. The aim of this study is to provide a framework with the basic concepts of workforce Analytics in HR system, generally, and more specifically for Recruitment. The first part provides thoroughly to the reader the definitions of workforce Analytics and recruitment. Due to the fact that the recruitment and selection function in many organizations has experienced rapid changes particularly in its operations, the factors that influence recruitment and selection in organization have been mentioned. HR function is recognised as a strategic partner of the organization. To be a consistent strategic partner, HR Analysis provides direction to HR actions to be taken in the organization. But often it is noticed that HR lacks data based decision-making and Analytics capability required to influence strategies. HR Analytics refer to the fusion of quantitative and qualitative data and information to have an insight in decision making to support the management of employees in organisations. Finally, some concluding comments and recommendations for further research are been addressed.*
Keywords: *Workforce planning, Analytics, Recruitment, Decision Making*

I. Introduction

In present scientific managerial literature the call for Evidence-Based Management (EBM) is on rise. Authors like Pfeffer and Sutton (2006) and Briner, Denyer and Rousseau (2009) contribute their research to the impact of EBM on management practices, and subsequently the business performance. According to their work, decision making it should be based on data. The present business decisions demand accurate information, meaningful insights and more than that information with proper evidence in an analytical way of representation. HR Analytics it is a tool that gives evidence that helps us to make the right choices (Pfeffer & Sutton, 2006, p. 1). When we hold this view in light of the current functioning of Human Resource (HR) departments and their management of the workforce in many organizations, it can be argued that HR is doing a little job with respect to EBM. Though HR interventions like training and development can lead to outcomes such as an increased satisfaction and commitment, that subsequently influence the organizational performance, hardly do HR decisions supported by a sophisticated data analysis. In spite of all the progress that has been made in academic research (Paauwe, 2009) and the increasing recognition of the importance and value of HR Analytics (Boudreau & Ramstad, 2006), only a very few organizations are nowadays able to measure the real value that employees bring to their business (Mayo, 2008). As mentioned by Mayo: "very few organizations have a fully integrated approach to workforce measurements.

Majority of the organizations are thus not able to measure the contribution of their intangible assets objectively, or based on the right measurement and decision making. Instead, methods used are fairly standard analytical tools, such as regression, and most organizations only focus on data that is easy to understand and consume (Fink, 2010). In general, the main focus of HR is on collecting and reporting data about activities instead of outcomes, while the analyses are mostly very simplistic (e.g., limited analyses of drivers of outcomes). As a result, there is a need for HR to develop itself from descriptive metrics to predictive analytics (Ulrich, 2010) in their decision making.

In order to achieve an EBM approach for HR within organizations, the present study is aimed at highlighting the methods and instruments used in the field of HR Analytics. The concept of HR Analytics can be defined as: a methodology for understanding and evaluating the causal relationship between HR practices and organizational performance outcomes (such as customer satisfaction, sales or profit), and for providing legitimate and reliable foundations for human capital decisions for the purpose of influencing the business strategy and performance, by applying statistical techniques and experimental approaches based on metrics of efficiency, effectiveness and impact (Lawler, Levenson & Boudreau, 2004; Boudreau & Ramstad, 2006). It will promote to predict workforce developments within the organization.

II. Definitions

Workforce Analytics can be defined as using a variety of HR and organizational data for the benefit of strategic decision making by organizing, analyzing, interpreting and presenting that data in a meaningful way and giving it predictive and prescriptive power through the application of statistical tools and techniques. According to Gustafsson (2012), Analytics targeting human resources has been given many names in the past include; Talent Intelligence (Snell, 2011), Talent Analytics (Davenport, Harris and Shapiro, 2010), HR Analytics (Mondore, Douthitt and Carson, 2011) or workforce Analytics (Hoffmann, Lesser and Ringo, 2012b). Bassi (2011) suggest that HR Analytics ranges from basic reporting of HR management information or metrics, to the end of the spectrum being that of predictive HR for major decision making of the organization.

Davenport and Harris (2006) define Analytics as the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions. Boudreau and Ramstad (2007) accept that there is no widely accepted definition of a talent decision science. Worth (2011) concurs with the views advanced by Boudreau and Ramstad (2007) that in HR Analytics, it is vital to measure what is important, rather than what is easy. It seems that there is indeed a wide variety of views and opinions regarding what HR Analytics really are HR management information, HR metrics, predictive HR, from data to insights.

Workforce Analytics is can be defined as evidence based approach that contains the elements of business intelligence, tools and methods ranging from simple reporting of HR metrics to the predictive model. The purpose of HR analytics is to enable the organizations to make better strategic decisions on the employee's side of the organization.

III. Literature Review

In an increasingly competitive business world, organizations need to invest in workforce Analytics wisely in order to build and sustain their competitive advantage (Becker, Huselid & Beatty, 2009). Human capital analytics is a most powerful tool which helps to determine and validate decisions that illustrate the driving forces behind individuals' and groups' behaviours and performance. As Boudreau and Ramstad (2006) point out, that Analytics need to be embedded within logic. Framework that is linked to the business and a (change) process is needed so they are used in a way that ensures maximum impact. The logic framework ensures that the Analytics are focused on the right issues and are set up to maximize the discovery of data and analysis results that are actionable towards organization objectives. The process for using the results of the HR Analytics ensures the data is turned into action of making evidence based decision in HR department decision making process.

It is important to recognize that many organizations use metrics to measure or audit their HR programs and activities. Historically, the use of such audit metrics to measure the effectiveness of HR was identified by Cascio (1987) and Fitz-enz and Davidson (2002). The Society for Human Resource Management has identified a number of metrics that organizations can use to measure their HR effectiveness (SHRM, 2010)

The course to insight of organizations seeking to use HR Analytics for business advantage will follow the same path to Analytical maturity: First, reporting what happened. Organizations need an accurate assessment of the way things really are, one not skewed by emotion or limited to anecdotal evidence. Second, explaining why it happened. They must diagnose the causes of whatever problems exist and create plans to address the underlying causes. Third, predicting what might or should happen. Organizations want to develop forecasting and optimizing capabilities to help them focus the road before they encounter them, or to seize opportunities that others organizations cannot perceive.

HR departments are now beginning to look beyond historical data that is a derivative of transaction and compliance reporting systems. They are raising important questions about what really matters: Do recruiting processes create an adequate leadership pipeline? Does the organization currently have the right skills mix to achieve our goals? What skills will we need in eight years? Which employees and what positions create the most value for organization? For companies looking to maximize the value of every investment, workforce Analytics can help direct resources toward the people and programs most essential to high performance. In today's rapidly moving, dynamic, uncertain and highly competitive global manpower market, the companies are facing major decisions making and challenges in global talent management of employees (Schuler et al., 2011; Scullion et al., 2010; Tarique and Schuler, 2010). The empirical evidence on talent management remains limited but does point to wide differences between the rhetoric of formal policies and the reality of what happens in practice. While organizations tend to recognize the importance of talent management, they often fail to manage employee's data effectively (Scullion et al., 2007; Schuler et al., 2011; Collings et al., 2011).

The implications of framing Talent management decisions based on this facts include questions about to what extent to which decision makers search for pertinent information to guide their decision making process and satisfying it in terms of the level of information required before managers feel they can make a decision and stop the process of gathering more information on the matter (Simon, 1979). In practice it is unlikely that

managers faced with global talent management decisions will have the time or the capability to scrutinize all possible candidates from all subsidiaries who fit the criteria in recruitment process (Mellahi and Collings, 2010). It has been argued that in such situations decision makers are likely to select candidates closer to them who are considered based on previous experience and predispositions and biases. As Makela et al. (2010) point out; talent decisions are often made on the basis of cognition based choice processes, in which bounded rational decision makers evaluate available performance data and anticipations of future potential. In his contributions over the past decade Boudreau has attempted to move the nature of talent decisions beyond such imprecise and bounded frameworks to decisions supported by scientific data and processes. The aim is to improve decision makers' ability to make informed decisions around human capital and talent management.

The most recent contributions point to evidence of the increasing adoption of sophisticated methods of analyzing employee's data in pursuit of competitive advantage (Davenport et al., 2010b). Indeed, Davenport et al. (2010b) have developed a useful typology of Analytics which represents the different uses organizations can make of workforce Analytics. These range from simple human capital facts which include individual level performance data and enterprise level data such as head-count, attrition and recruitment metrics to sophisticated real-time deployment of talent based on quickly changing needs. However, the potential of Analytics in understanding which actions have the maximum impact on business performance is also an important category in their typology which some could argue is the most significant. Understanding the impact of key roles and optimizing investments in manpower are central aspects of maximizing the efficiency of decisions around talent management in the organization environment (Becker et al., 2009; Collings and Mellahi, 2009; Boudreau and Jesuthasan, 2011). All in all the effective use of Analytics (Davenport et al., 2010a) and proven business tools (Boudreau, 2010; Boudreau and Jesuthasan, 2011) in making talent decisions are reflective of the shift towards evidence based management (Rousseau and Barends, 2011) and represent an important step in maximizing the contribution of the HR function to organizational decision making and performance of employees.

Objective of the study
1. To assess the function of workforce Analytics in Recruitment decisions for HR department.
2. To enumerate the benefits an organization realize when using Analytics in HR Recruitment decisions.
3. To assess how workforce Analytics will reduce employee attrition in the organization.

Research Methodology used
The validity of any research depends on the systematic method of collecting data, and analyzing the same in a sequential order. In the present study, the researcher has used secondary data to make analysis of workforce Analytics in making better recruitment decisions for present and anticipating the future requirement of manpower in the organization and its importance in decision making. The study is conceptual and exploratory in nature. Secondary data is used from different research works for understanding the workforce Analytics concept and its necessity in current labour market scenario.

Workforce Analytics as a Strategic Component of manpower planning in the organization
It is important to note that for organizations to have a competitive edge, aligning core organization's objectives with Human capital strategy is a need of the hour. Various HR matrix needs to identified and these matrix are measured in order to bridge the gap between other functional parts of the organization towards the mission of the organization. For workforce Analytics to function properly various components of HR matrix are needed to taken into account. This analysis normally consists of appraising employee recruitment, promotion and turnover strategies. The analysis also reveals the hidden roots of overtime, absenteeism, and low productivity.

Benefits of Workforce Analytics
Workforce Analytics can identify and addresses the loopholes in the firm's talent mix and suggest the solution to overcome the problem for better organization results. Workforce Analytics also measure HR effectiveness, helps processes for addressing gaps in labour skills, derive metrics for benchmark interpretation and trends, provide compensation and retention planning tools for proactive analysis and support talent development. Success factors (2012) explored that what-if scenario and historical trends can be presented in a graphical way by integrating and comparing raw workforce data through workforce Analytics. Analytics can set the pace for business operations, however; many firms are still unaware of this fact. Workforce analytics also facilitates the owners of various workforce segments as line managers to make more informed and fact-based decisions about the recruitment and selection of their employees. Integration and analysis of data from multiple sources requires a consistent analytics platform to make better decision of recruitment in the organization this includes;
a) To increase the quality of HR-related decisions by the adoption of Analytics in the organization.

b) Though the utilization of HR Analytics it will minimize the attrition rate in the organization.
c) The performance of the employees will improve because they would be involved in making the decisions affecting the welfare and working conditions.
d) Aligning resources with strategies HR Analytics proof to be an important tool.
e) Responding to user needs for availability of data on a timely basis for example which top performers in the organization are at risk to leaving and how might they be enticed to stay?
f) HR Analytics improve the organization's competitiveness.

Better Problem solving and Decision Making using HR Analytics

In organizations, decisions results from tactical choices. These choices may be among alternative tactics to achieve specific outcomes or in response to specific problems. The choices could also involve a specific tactic to adopt a standard response, as compared trying something new, or to take no action at all. Making these decisions requires three things:

(1) Better understanding of the outcomes that one is attempting to achieve.
(2) Considering the factors that influence those outcomes and their current situation.
(3) The available tactical options and their costs involved.

For any information system, including an HR department that can produce metrics and Analytics for improving decision making requires the sources of information that influence decision makers to choose to a better alternative among the available options.

IV. Discussions

The central question being addressed in this study was about how HR practitioners can successfully use HR Analytics to inform decision making in workforce issues, with a focus on recruitment and selection. Analytics teams in various disciplines are now still operating rather independently from each other. However, in the near future a centralized Analytics function is expected to be established. This function will focus on identifying opportunities for improving business performance, while covering all functional areas that may be of relevance, including human resources. Consequently, HR Analytics as a separate team, function, discipline or practice may very well cease to exist.

Employee's data was identified as the main driver of the development of workforce Analytics. Not only by means of integrating the currently fragmented IT field, but also by automating data collection and data preparation activities, correlating manpower data and business is definitely the future of analytics. However, care must be taken not to use the same for major decision-making as correlation can, sometimes, identify only mere coincidences. A powerful data collecting tool, should be used as a way of glancing at data, and should not be considered as an analysis procedure. In order to perform cause-effect analysis in Human Capital analytics, Structural Equation modelling methods are being used that is cause-effect analysis. Finally regression as a statistical tool helps to view multiple facets of data simultaneously and enables the user prioritizes the facets of employee's data that impact organization's outcomes and has the potential to speed up the development of workforce Analytics considerably.

V. Managerial implications

The corporate landscape has changed dramatically over the past few decades. These changes are due to globalization, information availability, and the requirements of a high-tech economy. This article advocates HR practitioners to start moving in a more applied direction. By identifying organization objectives when utilizing HR Analytics efforts, obtaining employee's data, evaluating the presence and accessibility of reliable data, determining if internal needs meet analytical demands, going extra mile outsource or gather required talent if it is not found in-house, and developing a plan for using the results of an analysis, the organization can position itself to find success through the use of data analytics. In HR Analytics, oftentimes one sets out to solve a specific problem only to be led in a completely different direction by the data. Although the original problem should not be forgotten, there is a need to remain open to other possibilities for organizational improvement as analytics often expose hidden management issues to the surface. HR Analytics should be adopted because it is application can drive a widespread organization improvement in the present and future needs of the organization.

VI. Conclusion

This paper attempts to provide the critical examination of the HR Analytics phenomenon, a concept that van den Heuvel (2016) points out has not received much attention by HR practitioners. Furthermore, we have examined the development of HR Analytics using the management fashion theory as a theoretical backdrop. Intense global competition and rapid changes in technology is forcing organizations to change its basic strategy. In the present day, every organization focuses its attention on aligning its HR strategy with

overall organizational goals. The practical workforce Analytics is the need of the hour. The rapid changes in the business currently are causing intense competition among organizations. Hence to have an upper hand over these competitors, organization must establish HR Analytics for yielding accurate and real time information using employee's data. HR Analytics thus help the organization to design a strategic workforce planning by analyzing the every aspect of manpower data in the organization.

VII. Scope for future studies

Future research in this area of study may focus on finding more detailed information to extend proposed theoretical frameworks of use employee's data, by testing and validating them thereby new models can be created with the help of HR Analytics. In this whole process, employee's perceptions regarding the change from traditional decision making to evidence based decision making can also be studied using HR Analytics therefore this areas can be advanced;

1. Research among HR data users to understand what they would value beyond data and moving into insights to their decision making especial recruitment function.
2. A study among those companies that do have developed HR Analytics functions, the governance around these how are they organized, funded, and reporting structures;
3. A case study on an organization conducting world-class HR Analytics - what different analytics techniques are being used? What are they finding most useful? How, by whom and how are these being auctioned?

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