1. Introduction

1.1. Backdrop of HR Analytics

This chapter introduces the research problem. It further examines the rationale and purpose of the research, which will be accomplished in subsequent chapters in this thesis. An appraisal of reasons for low level of usage of HR Analytics is discussed after which the scope for the research is provided as well as its relevance to the body of knowledge. This Chapter then culminates by providing a structure for the rest of the thesis.

Workforce is considered as the most crucial, volatile and potentially unpredictable resources which an organization utilizes. Manpower planning seeks to make the links between organization’s strategy, structure and employee more explicit. The purpose of manpower planning is to get a better correspondence between manpower requirement and manpower availability while recruiting employees in the organization (Bassi 2011). The new generation of HR executives is moving from making reactive decisions solely based on reports and dashboards towards correlating business data and human resource data to predict future outcomes. Predictive HR Analytics is based on establishing a data-driven statistical relationship between the goals and initiatives of the HR function, which determines success or failure of an organization in achieving strategic goals. No other function of management has changed as rapidly as Human Resource (HR) function. The supportive activity of the value chain began as a mere service provider in the organizations, has been evolving to a higher value charters of becoming a business enabler, business partner and business driver.

HR is in amidst of undergoing a paradigm shift from collecting efficiency of data to effectiveness analysis of data. Following the Resource Based View (year), attention of modern HR is driven by Evidence Based Management (EBM); this is promoted by the significant contribution on the authors such as Briener, Denyer and Rousseau (2009). Evidence Based Management is derived from the much established Evidence Based Medicine. “It is the evidence that helps us to make the right choices.” (Pfeffer & Sutton, 2006, p. 1). Research Studies on measuring the impact of EBM on management practices and business performance are on the rise. Despite the progress that has been made in the academic research (Paauwe, 2009) and the consistent recognition of the importance and value of HR (Boudreau & Ramstad, 2006), only a few organizations are capable of measuring the real value that employees contribute to their business (Mayo, 2008). A shift of data collection
from activities to the outcomes is the order of the day. Hence there is a need for HR to grow itself from descriptive measures and metrics to predictive and prescriptive analytics. Focus on business Analytics has increased steadily over the past decade as evidenced by the continuously growing business analytics usage in the market. business 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.

In a highly competitive globalized business environment and volatile economy, it has become imperative for organizations to go the extra mile to effectively utilize the available resources, capture value, and manage risks. Enhanced decision making through deft interpretation of information and efficient utilization of human capital are emerging as key sources of sustained economic value (Paauwe, 2009). Organizations consistently strive for better innovative business practices to enhance their efficiency and effectiveness. Human resource analytics is one such promising practice, which has the ability to impact the organizational success in the near future.

One of the prominent reasons behind the evolution of HR function from a mere operational to a strategic role is because of a paradigm shift in the decision making process. Gone are the days, when the decision making in the organizations is inclined towards managers’ intuition or sector best practices. Evidence based management practices are increasingly getting recommended, which are primarily based on scientific findings through processed data and unbiased organizational facts. Analytics has evolved out of these market needs and is now a key tool for organizations facts. Analytics has evolved out of these market needs and is now a key tool for organizations to make strategic and well-informed decisions. It is now increasingly used in a wide variety of functions and industries with highly promising outcomes. With the enhanced focus on people capital, the usage of analytics in HR is the next wave of evolution for businesses. Companies are exploring new possibilities for appropriately utilizing the ever-increasing large volumes of data. Organizations can extract data related to turnover, benefits of investing in training programs, quality of hires, and other critical aspects of HR management Fitz-Enz (2010). This can be used to create statistical models that estimate probabilities and predict future behaviour and trends across key HR areas especial recruitment activities.
To adopt predictive analytics, HR leaders require a structured data source that is aligned with the business. While HR processes such as recruitment and resourcing, workforce administration, performance and learning, payroll, and time management often use structured data sources, these are only integrated with each other. The key to leveraging predictive analytics and realizing maximum benefits from the HR data lies in tying the data source to strategic business outcomes. The HR function also needs expertise to use analytical tools to effectively manage talent and recruitment data. HR personnel must be trained sufficiently to play a strategic role in business growth by efficiently leveraging analytics. HR leaders need to ensure that analytics and its outcomes are aligned with business objectives. Every business function is to increase revenue, maximize operational efficiency, and focus on strategic initiatives to stay profitable, sustain agility, and grow Visier Inc. (2012). Whether in developed or emerging markets, HR leaders often struggle to support the business with the skilled workforce it needs, due to budget and time constraints. One of the biggest challenges organizations faces when it plan to recruit the right employee for the job in time for execution. Similarly, businesses bear explicit and implicit costs when talent exits the organization. It is worse when employees quit soon after participating in an expensive recruitment and training program sponsored by the organization. Is there a way to predict such risks and reduce the attrition associated with them?

The advanced analytics driven data analyses allow enterprises to have a complete or “360 degrees” view of their operations and customers. The insight that they gain from such analyses is then used to direct, optimize and automate their decision making Hoffman, Lesser and Ringo (2012a). It results in successful achievement of a variety of specific organizational goals, whether they are associated with an increase in employee’s retention in the organization.

HR Analytics is a general term which simply means applying various advanced analytic techniques to data to answer questions or solve problems. It is not a technology in and of itself, but rather, a group of tools that are used in combination with one another to gain information, analyze that information, and predict outcomes of the problem and solutions. Data integration and data mining are the basis for HR Analytics. The more information that is gathered and integrated allows for more pattern recognition and relationship identification. Statistical analysis is another important component to evaluate trends and patterns in the data. Some other techniques used to manipulate the data is fuzzy logic, to deal with incomplete or
ambiguous data, and neural networks to anticipate decisions and assist in predictive analytics which helps predict likely outcomes (Wu et al., 2006).

HR Analytics is a set of integrated capabilities (technologies, metrics, data and processes) to measure and improve workforce recruitment. The goal is simple: put the right employees with the right skills in the right work, provide them with the necessary skills and development opportunities, and engage and empower them to perform at their highest possible level. HR Analytics, workforce intelligence and human capital analytics envelops the term called HR Analytics. Attention to the domain of HR Analytics started to increase soon after the global economic crises (Harvey, 2012). Today’s organizations are much inclined in collecting more and more HR and business data than ever before so that they can utilize the data for;

1. Identifying and managing employees to drive better recruitment decision making.
2. To determine the skill set required by the employee to perform a given managerial task.
3. Traits of front line supervisors linked to performance.
4. Analyze the differences to uncover key success factors of the organization.

1.2 Research problem

An attempt to study the role of analytics in human resource decision making process with reference to recruitment for business process outsourcing (BPO) sector it is of paramount importance in making effective decisions for better recruitment which depends on critical manpower planning towards Human resource management in this competitive service sector which has gained remarkable position in both local and global market. There is little research work which has been done on this topic i.e. analytics for HR Recruitment decisions making in service sector. The need to rethink conventional HRM practice is urgent. The recent events add further complexity to challenges that by themselves would demand analytics based practice to promote a radical change from management and HRM ‘as usual’. It entails redoubling of efforts to do what will work and to develop critical judgment in making decisions that impact the well-being of organizations and employees in attaining both individual and organization goals mutually.

The present study provides the approach of recruitment with the help of HR Analytics that can be used as a tool to make strategic recruitment decisions in HR department thus it gives the opportunity to conduct a systematic review of the current practical problem so as to avoid the hitch of mismanagement in the organizations. On the other hand, companies can use
analytics to identify key segments of employees. Statistical analysis of good data yields useful segmentation of employees, workforces, talent pools or key skills. For instance, analytics can be used to systematically and rigorously identify critical talent (such as key recruiting targets, high-potential employees and top performers). Companies make a whole range of investments aimed at finding, keeping, engaging and training the employees who work for organization. An analytical approach to these investments can help organizations discover which decision will have a higher payoffs when the employee is recruited, therefore this knowledge can be used to focus in talent investments which the organization are undergoing the process of recruitment on the basis of this knowledge it remains a matter of concern in particular to the last decade that has witnessed continuous changes in technology up gradation and general competition in the global service sector to recruit the best available manpower in the job market, consequently business process outsourcing (BPO) sector is of no exception to this change. The major challenge to wider spread HR Analytics adoption in the sectors is due to lack of understanding on how to utilize analytics to improve Decision making in the business, it is more of managerial challenges rather than technology. HR Analytics requires a number of analytical skills such as data integration, modelling, forecasting and simulation to help explore trends and future patterns of recruitment activities as it is required by the organization.

Recent research by the Institute for Corporate Productivity (2012) on the analytical practices and capabilities of HR, suggests that most organizations are still woefully unprepared to deal with its rapidly rising ocean of data. It reports that while many HR organizations are proficient at collecting and measuring HR activities, few have the ability to measure outcomes or identify the factors that most affect results. There already exists wide. Sophisticated usage of analytics in functions such as Finance, Supply Chain and Marketing where there are dependable metrics and predictive data for business decisions (Hoffmann, Lesser and Ringo, 2012b). However organizations seem to struggle with equivalent models for connecting workforce measures with company performance. The Cornell University (2010) study admits that many companies are slowly evolving their HR Analytics into what Fitz-Enz (2010) calls a ‘model of predictive management’ for human resources. Furthermore, the Cornell University (2010) study on the ‘State of HR Analytics’ surveyed more than fifty participant companies to understand the application, value, systems and structures: and the future regarding state of HR Analytics in their organizations. The main finding from this
study was that most HR professionals agreed that the usefulness of HR Analytics goes beyond reporting what is; and is about predicting the future.

On this basis we lack established research to make the distinct statement on the role of analytics in HR Decision making for recruitment in BPO sector; in India hence at attempt is made in this thesis to bridge this gap. It is then crucial to study recruitment based on analytics for making strategic decision in BPO sector to provide the informed solution to the present crisis to fill this current gap.

1.3 Significance to the study

The primary purpose of this study is to probe into the concept of recruiting using workforce or human resource (HR) Analytics in Business process outsourcing concept, as well as to advance the limited academic research in this field. The basis why this research is both necessary and compelling there has been limited business and consultancy work, and somewhat limited academic interest in the topic of HR Analytics in recent years as shown by Davenport, Harris and Shairo (2010); Bassi (2011); Harris, Craig and Light (2011). The topical journal and business articles written indicate that the topic has prevalent interest across the globe for the HR fraternity Furthermore; the organizations that work was to explore the degree of superiority of HR Analytics in Indian organizations that are in this realm and what it would take to embrace the usage of HR Analytics in India. As worldwide economic and political conditions continue to concern about business trends, their attention turns to the various levers that can foster success in uncertain times. Employee salaries make up close to half of many organizations’ operating expenses and can be even higher in some industries such as financial services; therefore the contribution of the workforce to organization success is perhaps the most important lever to competitive advantage In fact, the challenge of containing attrition rate while developing a high performing workforce is a central challenge faced by most the organizations in India today especially the Business process outsourcing sector in the last decade. But, do organizations know enough about their workforce to optimize the workforce in the organization?

Organizations struggle to understand their multifarious and potential of existing workforce and how to use each effectively. The questions like, which applicants should they recruit? Which of their hires do they wish to retain for their performance and productivity? Who amongst their internal talent do they wish to groom for career advancement? What are the most effective compensation, benefits and development options that will optimize the
organization’s competitiveness in the marketplace? As the organizations navigate today’s
dynamic economy, does the organization need to hire again or pursue growth? The
organizations yearn for answers to these questions almost on a daily basis, in addition to the
most obvious one: what is the employee progress? Many present-day HR systems cannot
meaningfully analyze the complex dimensions of employee and leadership behaviours,
workforce capabilities and HR process that keep top management afloat on course toward
their strategic goals. As budgets shrink, increased scrutiny falls on workforce decisions
makers to promote lean organizations and trim overhead while reacting to financial
constrains. To do so efficiently and effectively, HR departments cannot afford to rely on
historical data alone; they need advanced analytics to drive informed decisions that
demonstrate an understanding not just of past behaviour, but more importantly, of current and
future trends of the organization in relation to the job market requirements.

Research shows that top-performing companies are three times more likely to be advanced
users of HR Analytics than lower-performing companies (LaValle, Hopkins, Lesser,
Shockley and Kruschwitz, 2010). LaValle et al. (2010) have stated that these top-performing
companies are two times more likely to cite HR Analytics as their competitive differentiator.
This indicates that the power of HR Analysis is the core driver of an organization’s success
(Visier Inc., 2012). Further Visier Inc. (2012) suggests that with HR Analytics, HR
Professionals can play a more pivotal role in their organizations to help direct top
management and hiring managers in connecting the spot between their organization’s overall
performance and investment in their workforce. The report puts forward that, it is not
surprising that HR Analytics has become one of the highly debatable current business topics,
as the potential business benefits are too large for enterprises to ignore it. Some global
companies such as Google, Procter and Gamble, Royal Bank of Scotland, Intel and Tesco
have all established HR Analytics groups to get deeper insights into their employees’
practices (Davenport, Harris and Shapiro, 2010). Examples of HR Analytics include
identifying potential candidates most likely to succeed in a role, the probability of
termination, and attributes of high performing employees (Bassi, 2011).

However Chaundary, Subramanian, Sinha and Bhattacharya, (2012) presented a model of
social media analytics for behaviour informatics, HR and customers. They suggest that HR
Analytics can be used for many of the HR value chain elements such as recruitment,
selection, performance, development and transitioning, Mondore, Douthitt and Carson,
(2011) concur by stating examples of where HR Analytics can be used in line with HR
process of selection, on-boarding, performance management, succession and talent planning; and employee engagement surveys. The need to manage talent more effectively has been accompanied with an increased emphasis on talent metrics as advocated by Boudreau and Ramstad (2003). In relation to this view, Wiblen, Dery and Grant, (2012) state that key capabilities that will be required of HR practitioners in the future is HR Analytics, metrics and technology. It states that members of the HR profession should seek to develop these capabilities if they wish to enhance their strategic contribution to workforce management.

Fortunately, it is now possible for organizations to shine at answering workforce-related questions using HR Analytics. HR managers know how to analysis the employee applications to make the wise and informed recruitment process that will tweak organizational benefits and compensation plans, to organization key talent pools. The organization need not turn to across-the-board cost cutting measures and reductions in the benefits staff and services to them. Company can sift through far more data and crunch many more numbers to determine who is performing well, who will be needed, where will they be needed and with what skills? Organizations can look at which individuals are achieving their performance goals and decide which of them have competencies needed for today and tomorrow to build a competitive workforce. With shortage of competencies and skills needed for the future, along with performance metrics, organizations can thoughtfully manage their workforce with targeted training, development and retention programs on future performance and retention. HR Analytics is rapidly becoming the next big issue in the analytics world as companies step up their efforts to cultivate and align human capital resources with core business objectives in hopes of achieving a competitive edge. HR Analytics is helping organization get a better understanding of their talent intelligence and make better recruitment decisions.

The research problem is therefore evident from IBM (2009); Cornell University (2010); Davenport, Harris and Shapiro (2010); Harris, Craig and Light (2010); (Bassi 2011); Hoffmann, Lesser and Ringo (2012a). The value of HR Analytics has been proven, what remains is to gauge how far organizations have gone in adopting this practice, and therein lies the research problem. HR Analytics enables not only to analyze the workforce of today but offers true insights that can drive talent-related decisions that will result in improved recruitment decisions in the future.

1.4 Introduction of HR Analytics
The main purpose for HR Analytics is creating predictive or leading business indicators that can inform business leaders’ for strategic planning and decisions. Although the use of HR metrics is well established today, it is not yet common to convert these metrics into analytics that serve as leading indicators for business decision making. Hoffman, Lesser and Ringo (2012a) say that sceptics of HR Analytics claim that the value of employees cannot be measured or predicted, saying that what is describe as HR Analytics is ‘a way of treating employees like widgets’. The authors state categorically that this is not what HR Analytics is about. HR Analytics is about the basic human and organizational endeavours of putting the right people with the right skills in the right work. More importantly the authors believe that companies that use HR Analytics have the most engaged staff and thrive through difficult times. However it remains a question of talks to the subject of return on investment (ROI) – a holy grail of HR measurement. Boudreau and Ramstad (2007) as well concur that doing HR Analytics for ROI is the wrong focus, and rather call for a “talent decision science” contrary to the view expressed by Mondore, Douthitt and Carson (2011) who maintain that ROI should be one of the reasons for doing HR Analytics.

The 2009 report of IBM found that, there was a correlation regarding the important role of HR Analytics in effective managing workforce performance and talent management. Three quarters of respondents said that the greatest benefit of HR Analytics was a better capacity to manage their workforce, while two thirds cited improved levels of productivity. A large majority considered HR Analytics important in driving a better return on investment for talent management (IBM, 2009). Yet despite that recognized promises of greater efficiencies and returns, HR Analytics continues to be hindered in both technical and skill-related issues associated with its implementation. These issues include data consistency, systems integration, information accessibility Analytic capabilities of end users (IBM, 2009). According to the study, an integrated approach that combines technology and skilled people is needed to assess, deploy and implement a HR Analytics solution in the organization.

Lawler, Levenson and Boudreau (2004) concludes that organizations with data that show the business impact of HR practices report they are much more likely to be a strategic partner than those organizations that do not have such data for their workforce management.

To consider the benefits of organization investing in HR Analytics will achieve based on the objective of the organization.
1. HR executives will be included in the major conversation of decision making in the organization, because they can now quantify their workforce 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 productive, more engaged and satisfied.

5. The returns on HR Analytics investments can have their impact from the top to bottom lines, can be quantified hence making decision making much easier in the organization.

1.5 Obstacles to HR Analytics

HR Analytics implementation in the organization it is a promise of success, but depends on an enterprise’s ability to employ the right manpower, business processes and tools to make organization more effective. Among the reasons for low level of academic literature and usage in HR Analytics:

1. Inaccurate, inconsistent, or hard to access data requiring too much manual manipulation of the data.

2. Lack of Analytics acumen or skills among HR professionals.

3. Lack of adequate investment in necessary HR Analytical systems.

4. Lack of perceived value of a data driven culture; company does not have a data driven culture.

5. Lack of support or expectations for the top management.

6. HR Managers does not know how talk about and relate HR Analytics it to its business outcomes.

1.5.1 Lack of analytics acumen among HR professionals

In the organization employees blend with the right HR knowledge and analytics training can be like looking for a needle in a haystack. “They have these highly specialized skills that are scarce in the labour market almost esoteric,” she says. “As a result, the HR leaders who are hiring and retaining them often don’t understand what data scientists do and that creates a
real challenge for managing and leading the workforce.” According to Craig although many HR leaders are equipped to oversee an analytics system, some tools require skills in data modelling, computer science, statistics and math.

1.5.2 A lack of adequate skills and knowledge

The result of the research conducted by Bersin and Associates 2012 shows six percent of worldwide HR terms feel they are “experts” on the use of HR Analytics in talent management. Only twenty percent believe that the data they capture now is highly credible and reliable for decision-making in their own organization when making recruitment process.

1.5.3 Lack of support from top management

Convincing senior executives that it’s time to invest in yet another HR system can be tough to advocate to the top management. For years vendors have been pitching HR leaders on everything from time and attendance systems and employee self-service tools to performance management modules and enterprise resource planning systems. To build a strong business case for analytics, HR leaders need to measure beyond employees past performance and begin to gather crucial data about workers personalities, motivations, career aspirations, morale and cultural fit-information that feeds into the capabilities of the newer HR Analysis systems and that can lead to a stronger decision making based on the past experience and predict the future with certitude.

1.5.4 Data deluge

The inability to have a properly arranged database can easily result in data dump a bloated repository of information that fails to deliver any real value to an HR team. This can lead to guess work when recruitment decisions are made therefore there is need to have correct and timely data to make better decision of recruitment (Worth 2011).

1.5.5 Inaccurate data

The data it is inconsistent or hard to access data requiring too much manual manipulation, poor data management and wrong data entry by the organization.

1.6 Scope of the study

This research covers BPO firms operating in and around Bangalore city owing to the fact that Bangalore city is the hub of IT and ITES and referred to Silicon Valley of India, where most of the BPO companies are located. The core knowledge based industry (BPO) depends on manpower, their skills and quality of available talent in the organization. In order to
implement a successful business strategy to face global challenges, organizations must ensure that they have the right people and capable of delivering the strategy. Although the research covers BPO units operating in and around Bangalore city of Karnataka state, the conclusions arrived at can be equally and justifiably be applied to the firms operating across the country.

1.7 Relevance of field of study

The purpose of this research work is to advance knowledge regarding usage of human resource data and analytics. This research work is academic in nature in that it expands the boundaries of knowledge on the subject of HR Analytics. It’s no secret that business success today revolves largely around workforce and not capital. This is of paramount importance especially in sector like information technology enabled services. Success in this area of manpower intensive would be as a result of better recruiting and selection policies for the right employees and putting them in right place for the organization to utilize their potential and skills. This research seeks to understand current methods that organizations in India are using HR data and it explores the understanding of, as well as the usage of HR Analytics in organizational decision making for recruitment in respect to Business process outsourcing in India. This research will add to the body of knowledge by researching a framework for the organizations to reduce attrition by utilizing HR Analytics for better recruitment decision making and polices.

1.8 Structure of the thesis

The remainder of the thesis comprises six chapters plus bibliography and annexure. The first chapter: provides an overall introduction to the research and conceptual frame work to the research context. Chapter Two: provides an overview of the extent academic and practitioner literature on the subject of HR Analytics. The literature review provides a profound look at some of the popularly used HR Analytics models in the organizations. Key words, Business process outsourcing, Recruitment, Decision making and HR skills would be discussed the chapter would be summarized with research gap. Chapter Three: furnishes and presents the research design flowing from the gaps identified in the literature review is outlined. In Chapter Four: Organization’s experience with HR Analytics, Data analysis and hypothesis testing of the present research are represented and discussed. Chapter Five: Findings and Suggestions. Chapter six: Managerial implications, conclusion and scope for future research.