CHAPTER 3

REVIEW OF LITERATURE

3.1 INTRODUCTION

Globalization and its ever-rising competition leave no room for relaxation. Aggressive competition within and outside organizations to keep up with the global competition in the market, with changing economy, product innovations, process transformations, lean operations and entrepreneurship encouraging start-ups to mushroom all over the place, seems no dearth of a calm and peaceful environment of employee-employer relationships or entrepreneurial fiefdom.

The review of literature gives a clear idea about the work done on the subject area, the views, research ideas, observations and findings by different researchers. To understand and solve the research problem, it is essential to get an understanding about the various methodologies, techniques, tools, scales, etc used by other researchers. The process of reviewing past literature helps various perceptions about the research objectives, concepts and future research prospects gets vivid for a researcher. This is a guiding stream to the research problem from different perspectives.

3.2 OBJECTIVES OF CONDUCTING LITERATURE REVIEW

1. To understand how other research studies have defined and measured the concepts
2. To identify the research gap that can be considered for further research
3. To understand the linkage between this project and other related works

It is essential to understand the work pressure in different domains, the adoption of Analytics in HR, its effectiveness in decision making and with a broad view of different sectors. Hence reviews were collected based on

- Studies related to workforce stress
- Studies related to decision making and effectiveness
- Reviews from Retail, manufacturing sector
- Reviews from service sector
- Reviews from IT firms.
3.2.1 STUDIES RELATED TO WORKFORCE STRESS

A survey by Les Worrall (1995) on HR management examines broadly about the drives towards stress in working environment. A close ended questionnaire was administered to 1040 respondents of middle management working in different firms. The study observed that impact of stress differs significantly among different sectors and the drivers for stress differs depend upon size of firm, location and control over the management.

Study (Jain & Sharma 2014) focuses on the negativity at work place, in terms of how negativity at work place affects the life of its employees and what impact it has on their functioning. In this respect, it is noteworthy that mutual understanding from the part of employees and employers is vitally important for the higher efficiency and productivity of work of employees and for the success of the company at large that is one of the main goals of employers. If the power of positive thinking can perform miracles, the power of negative thinking can cause disastrous results. In this research, they identified the following factors as the cause of Negativity at workplace –

- Signs & Causes for most of the Employee Negativity:
  - Excessive work load
  - Lack of challenge in their work
  - Insufficient recognition for the level of contribution and efforts provided.
  - Frustration

Some of these factors contribute to failure in work-life balance. And this research paper throws a light on various facets and causes of failure of work-life balance.

Another study was done by (Shujat, Cheema& Bhutto 2011) in the area of Work-life balance and its impact on Job Satisfaction. In this study work-life balance has been looked at from the aspect of change i.e. how the changing banking environment, has led to banks trying to adopt or change their working cultures and styles to meet this demand. This study looks at how, this particular changing scenario like analytics has rocked the work-life balance in bank.
Another article namely Workforce Analytics: Three minute- guide(Fiore, J.,& Houston, J., 2014) describes about the importance of workforce in every organizations. It discusses about the past and present position of HR managers, their data driven analytical thinking and their role in emergency strategic situations of the organisations.

The paper by Weena Yancey et al (2016) analyzes the help of **HR Analytics in HR management** in solving problems in productivity or workforce. The paper first examines the data and determines the strategic move for increasing productivity. This paper is a case study analysis. For this three companies one from Japanese based pharma, European based construction company and A fortune 100, software company were taken for the analysis. Each company has their won different HR problems. Managers are in position to take decision based on HR analytics. The productivity from each employee and workforce performance were calculated by data and management makes the strategic decisions to come of the issues and challengers. They confirm that Analytics has become a cutting edge tool to solve many problems in any organisations. It assists to take good decisions which helped the firms to be competing with their competitors.

The data mining and business analytical techniques by HR managers were clearly discussed in the article Human Resource Analytics (Talent Analytics) by Rouse, M (2012) It discussed about the usefulness of HR Analytics to organisations employees for achieving their vision and mission. These articles clearly explain about the gathering of data, linking data to model and to forecast the firm in getting the maximum profits.

Examination of successful integration of HR analytics in business was done by Thomas Rasmussen & Dave Ulrich in 2015. The study analyzed that there exists remarkable performance improvement and development in skilled workforce which in turn avoid the business from management fraud. Hence implementation of HR analytics enhances the employees to overcome Management Fraud also.
3.2.2 STUDIES RELATED TO DECISION MAKING AND EFFECTIVENESS

The article “How HR Analytics can transform the workplace” (Nerney, C. 2014), explains the efficiency of HR professionals in gathering data, examining and to forecast the results for better understanding about the staff, customers and outcome of the business. The article narrates about the ability of managers in HR department about their skill in data mining, decision making, predicting the need of training programs and their impact in the business reviews.

A qualitative research was done by MuhammedSaleemSumbal et al., (2017) at HongKong to examine the effectiveness of HR department in different firms. Findings show that forecasting can be done through big data analysis. Workforce skill and decision making improves makes the company to move towards profitability.

Rutger Johannik in 2015 adopted Delphi method to identify the drivers for the effective utilization of HR analytics. Drivers like application, logical thinking of data analysis, structure and organizational outcome in decision making plays dominant role in effective implementation of HR analytics. Also quality of data, management interest and step by step execution helps in the adoption of HR Analytics which was concluded with 53 organisations from different sectors in Dutch (Joerik van Doonren et al., 2012).

A mixed methods of survey involving interviews and close ended questionnaire was administered to the management persons in Saudi Arabian Education Universities to understand the effectiveness in adoption of HR analytics. User friendly, speeds up the action during decision making, quality in prediction, risk with peers and societal pressures were the termed factors in the implementation of HR analytics in Universities.

Alamelu, 2015 focuses on the investigation on individual level adoption of human resource analytics (HRA) by Employees. The samples were collected from Bangalore based ITES small firms. 50 registered firms was selected. The findings based on regression revealed adoption to innovation are mainly due to perception from peers and not much usefulness of innovation. Also work environment, turn over costs, recruitment decision etc would forecast the future requirement of the firm. It helps the firm to be sustainable with competitors.
3.2.3 REVIEWS FROM RETAIL, MANUFACTURING SECTOR

Today in fast developing IT world, utilization of internet to gather data has become very common. Also it has become mandatory for to know about the behaviour of customers, trends of lifestyle, shopping attitude and the present scenario especially in retail sector to compete. For this, HR persons have to work more time in measurements. Forecasting the customer needs can be done easier by using analytics in HR. Roslyn Vargas, 2015 argued that adoption of analytics improves the growth revenue of organisation but many organisations hesitate to adopt Analytics in HR. The purpose of his study is to gain insights to find the reasons for not adoption of analytics. He develops a model with the factors that impact the adoption of HRA. Validity and reliability was checked using Partial Least Squares of Path Modelling. He examined 302 HR professionals working in e-retailing. Outcome observed that social factors, availability of statistical tools, skilled workforce, and effort expectancy were the critical factors for the adoption of Analytics. Data availability was not significant which shows that most of the organisation has data but lack in workforce. This shows that adoption does not depend only on skilled professionals but also on firms. Some firms use different forms of tools for data gathering and Business Intelligence to know about workers situation (Khan, Amin, &Lambrou, 2010) to have competitive advantage over others. According to Davenport, Harris & Shapiro (2010) adopters has framed different behaviours or patterns. Fitz-enz (2010) argued that firms does not have information about employees, working details, revenue details cannot adopt predictive HRA. Hence organisations must have past data which will be beneficial for any organisations.

According to Resourced-based theory (Barney, 1991; Prahalad& Hamel, 1990) information’s that are uncommon, incomparable, and non-substitutable offer data’s to be potential for firm with an advantage in terms of human, social and capital asset (Nahapiet&Ghoshal, 1998; Wright & McMahan, 1992). (p. 7) This resource based view help researchers to develop a strategic HR 3 part model with respect to employees and employers (Bamberger &Meschoulam, 2000; Baron & Kreps, 1999). First part Internal Labor Market (ILM), comprises of cost effective approach of training and recruitment., second denotes the employees commitment to job than employers and third part is the combination of both. These type of firms are common in Japan. US based Chrysler and Ford are utilizing this model. (Siegel, 2013).
Evidence based review was carried out by Weena Yancey by reviewing 14 articles. The author referred about 60 articles out of which only 14 was under HR analytics. Most of the articles examined about the definition of HR analytics, its concept, the relationship between staff and management, its prediction about the future and the cost effective approach by the organisation and its profitability. Few articles explain about the outcome after the implementation of HR Analytics. Selected 60 articles, out of it 14 articles published in referred journals were taken for study. Finally this paper conclude that adoption of Analytics in organisation was at slow rate.

Rise of HR analytics for recent years was studied by Dag Oivind Madsen. This study explains the various supply factors for HR analytics to develop and positioned in market as a sustainable solutions to current challenges. It has turned as a management fashion Jung and Kieser (2012, p. 329), and has gained number of portions in management. Consulting firms, market survey and technology improvement have played good efforts in development of HR Analytics and in strategic decision making (Guest & King, 2004; Kaufman, 2014).

“Model of predictive management” framed by Fitz-Enz (2010) for the development of HR analytics. The model surveyed nearly 50 organisations under different sector to understand the usefulness, prediction and data analysis of Analytics. were selected based Finding shows that most of the professionals accepted the benefits of Analytics, data mining and logical thinking.

3.2.4 REVIEWS FROM SERVICE SECTOR

Structural equation modeling was adopted to identify the multidimensional ability of decision making by adopting Business Analytics in different HR functions of various hospital. The survey of 152 respondents from Taiwan was taken for the study (Yichuan Wang and Terry Anthony Byrd, 2016). The study identified that hospitals acquired effective knowledge for emergency care in decision making.

A elaborate study (Vathsala et al., 2012) of 30 firms from manufacturing and service sectors was carried out in Srilanka. The study examines the effectiveness in the measurement and reporting of HR work in different firms. The study found that there was a huge sectoral difference of reporting. Factors like inadequate human
Information system is not a new phenomenon in HR department but it took time to be in a core part of business. It encourages the firm to come out of the risk during loss and deficit of workers. It gains confidence through management in decision making with the dynamic condition of business. An empirical study “Overview of HR Analytics to maximize Human capital investment” conducted with the responses of 72 employees in service sector. A questionnaire was administered to randomly selected samples in service sector. The study found that employees were felt easy in work, reduces time and accuracy of output was better comparing to before implementation of information system. Moreover the study observed that forecasting the requirement, training, assessment of employees and firm growth was easily done with the use of technology in HR department. The general commitment of HRIS is that it helps in overseeing different key exercises of HR division effectively and successfully.

The point of this paper was to discover what HR examination holds the guarantee of both hoisting the status of the HR calling and filling in as a wellspring of upper hand for associations that have put it to great use for benefit industry that can go far to make India towards human capital venture. The acknowledgment of this guarantee relies on our individual and aggregate capacity to ace the workmanship and the exploration of HR investigation. This will happen substantially more rapidly in the event that one can accomplish clearness even accord on various issues where neither lucidity nor agreement as of now exists. The expanding globalization of the activity advertise joined with a regularly expanding deficiency of skilful staffs and advances in innovation have brought about extensive scale changes to the enrolment rehearses all through the world using HR Analytics. The confirmation recommends that HR field genuinely is amidst an ocean change. It is the ideal opportunity for HR pioneers to begin foreseeing business results as opposed to attempting to enhance a representative engagement score and increment interest rates on their drives. The cool, hard truth is that numerous associations are not yet receiving the rewards guaranteed in all the utilization of HR Analytics. The correct usage of HR Analytics is a key activity to making HR a vital capacity in any association. Future investigations concentrate on broadening the proposed hypothetical systems into an approved model, and furthermore measuring the
ramifications of Evidence Based Management practices to HR and Organizational execution.

In the study (Bartek, Ann P, 2004) examined a remarkable database gathered through websites to broaden the investigation of the correlation between the human asset administration condition and foundation execution to the administration segment, particularly the branch operations of a retail bank. Contextual investigations of a few branches were carried out to check the human asset administration influences the branch level execution. An open ended interview with branch managers was taken legitimately in determining the retail banks execution condition. Analysis using econometric models demonstrated that, attributes of market condition like retail location, qualities of the branch representatives, retail branches indirect qualities, workforce management, assessment measurement and criticism framework and the nature of interchanges between the chief and the workers were significantly affected the retail's execution. Also the study critically concluded that, despite the fact that all supervisors in this retail are given a formal arrangement of human asset strategies, they seem to have impressive tact in their application.

Often discussion exists with researchers between the present administration level HR hones and wanted administration level. HR rehearse in two distinct classifications of business associations government segment and private area associations. Study by Yogesh Kumar (2011) gathered information from the representatives of government and non government firms. Random sampling technique was adopted as a part of this exploration to gather information. A total of 50 respondents from government and 50 from non government banks were selected for the analysis. T- test was carried out to find significance between the two selected categorizes. Results indicated the two associations contrast altogether on the present level HR Index. The discoveries in the present study demonstrate that both government and non government firms are falling behind the coveted level of the HR administrations offered by them. There is need for to lessen the hole between the present administration level of HR level and the expected benefit level of HR levels. This should be possible by an efficient HR practices. Also it was observed that both organizations works significantly in recruitment but varies with other HR functions like planning, staffing, directing and training.
One of the principle objectives of Human Resource Management (HRM) is to build the execution of associations. Be that as it may, few investigations have unequivocally tended to the multidimensional character of execution and connected HR practices to different result measurements. This investigation (Brenda Vermeeren, 2014) adds to the writing by relating HR practices to three result measurements: monetary, hierarchical and worker (HR) results. Besides, examining how HR practices impact these result measurements, concentrating on the intervening part of employment fulfillment. This examination utilizes a one of a kind dataset, in view of the 'ActiZ Benchmark in Healthcare', a benchmark think about led in Dutch home care, nursing consideration and care homes. Information from harvest time 2010 to pre-winter 2011 were dissected. Altogether, 162 associations partook amid this period (around 35% of all Dutch care associations). Worker information were gathered utilizing a poll (61,061 people, reaction rate 42%). Customers were overviewed utilizing the Client Quality Index for long haul mind, by means of stratified testing. Money related results were gathered utilizing yearly reports. SEM investigations were directed to test the speculations. It was discovered that HR practices are - specifically or in a roundabout way - connected to every one of the three results. The utilization of HR practices is identified with enhanced budgetary results (measure: net edge), hierarchical results (measure: customer fulfillment) and HR results (measure: affliction nonappearance). The effect of HR practices on HR results and authoritative results demonstrated generously bigger than their effect on monetary results. Moreover, as for HR and authoritative results, the speculations concerning the full intervening impact of occupation fulfillment are affirmed. This is in accordance with the view that representative states of mind are an essential component in the 'black box' amongst HRM and execution. The outcomes underscore the significance of HRM in the social insurance division, particularly for HR and authoritative results. Additionally investigations of HRM in the medicinal services part will end up being a gainful undertaking for the two researchers and HR chiefs.

3.2.5 STUDIES REGARDING ANALYTICS IN IT FIRMS

Strategic move in organisations and the logical analytic thinking indicates the importance of analytics in HR department of IT companies. This was observed by L Ravikiran and VedantanK(2014) by investigating 20 IT companies of South India
covering large and mid sized firms. They conclude that by wide usage of analytics, ability of decision making improves there by increases the profit of the firm.

Mohsin Shaikh and Dr. Ahmed Umar Khan analysed **30 organisations from IT and IT enabled services with 600 customers in Pune.** The author investigates whether HR in each organisations act as administrative role or a strategic role. Statistical techniques and anova were used for the analysis. Researcher observed that HR works depend upon the delivery of the work outcome and not focuses on the activities.

### 3.3 IDENTIFICATION OF RESEARCH GAP

HR analytics started its journey before world war but its usage has been streamlined after 1990. The present study has been reviewed under different contexts, both Indian International journals, books and following gaps were identified. Reviews discusses about the impact of analytics on the profitability of firm. It has become a cost based approach for the organisation to be competitive (Bassi, 2011; Rafter, 2013a). Weena Yancey identified that adoption of Analytics in organisation was at slow rate. Also reviews reveals that knowledge is also a main aspects especially in the highly stressful technology sector. Review of literature concluded that HR Analytics plays an important role in firm’s decision making. From the above literature, it can be said that HR Reviews explains that Analytics is great boon to human resource management in overcoming crucial risk and disputes.

- Present study is conducted with reference to specific sector like IT, Retail & Manufacturing. These three sectors are important in shaping our Indian economy and are not been compared in any of the studies.
- The study is mixed method because it comprises of survey methodology and case study together.
- Several studies have been made pertaining to the adoption of Analytics in organizations, but there is no specific study in relation to extent of adoption of HR Analytics in different HR functions in organizations across different sectors.
- Present study as more scope than of the other studies which restrict to factors for adoption of analytic, whereas current study will emphasize at data environment, data analytics and perceived benefits.