



**The Advantages of Using Prescriptive Analytics in  
Recruitment and Performance Management processes by  
HR professionals based in Ireland**

**By:**

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## **Abstract**

As scholars and professionals try to comprehend how data may be translated into useful insights that improve organisational performance, they have become more interested in the idea of advanced analytics and how they are applied in management. Because of this, this interest has expanded beyond human resources management (HRM), as indicated by the rising number of HR departments using HR analytics to enhance decision-making. This research paper demonstrates how prescriptive analytics may aid HR pioneers specifically in Ireland in analysing the patterns and processes for recruitment adequacy and performance management, considered to be imposed under holistic concepts of HR service's impact on the working culture. It also shows how prescriptive analytics may be used to address some of the most pressing HR issues associated with the profound recruitment and performance management challenges.

This research has utilised an application of qualitative semi-structured interviews that is valid in the current research as it is based on analysing the effectiveness of prescriptive analytics in HR. In-depth semi-structured interviews based on personal experiences can be used to examine the efficacy of prescriptive analytics. Since the current study is exploratory in character, semi-structured interviews with ten HR experts are employed. The results of the interviews revealed that most of the interview participants showed a great interest in HR Analytics. This is due to the great significance of HR Analytics in human resource management activities. Most of the HR-based participants in the project revealed that the use of prescriptive analytics is not itself challenging as it includes the past records of the employees and their performance, the criticality lies with the presence of sorted and defined data. The study's findings suggest that businesses should use the organisational data produced by HR analytics and factor it into their decision-making.

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## **Appendices**

Appendix 1- Participant Information Sheet

Appendix 2- Participant Consent Form

Appendix 3a- Semi-Structured Interview Process and Guidance

Appendix 3b- Semi-Structured Interview Questions

## **Abbreviations**

**HR**= Human resources

**HRM**= Human Resource Management

**DHRA**= Descriptive Human Resource Analytics

**BI**= Business Intelligence

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# **1. Chapter 1: Introduction**

## **1.1 Introduction**

Human resource leaders in the modern era are moving away from making reactive decisions based solely on reports and dashboards and instead are integrating data from both the business and employees to better predict outcomes. Establishing a data-driven, measurable connection between HR's stated goals and actual actions, as well as building the present and future productive measures for the organisation, through adequate recruitment and performance parameters, is the foundation of prescriptive analytics for human resources (Shah, et al., 2017). Human resources managers can benefit from this connection by getting advice on how to foresee the outcomes of their decisions and create a sustainable strategy

## **1.2 Study Background**

Businesses want HR professionals to demonstrate expertise in influencing and managing human capital rather than just delivering administrative services centred on minimising expenses. Knowledge-based human resource management (HRM) approaches are being adopted by forward-thinking companies as a means of gaining a competitive edge, marking a significant departure from the previous nominal-based model (El-Kassar & Singh, 2019). As per the study by Hunter et al. (2016), HR professionals' roles as strategic business partners and change agents have also received a lot of attention recently. This suggests that HR professionals play a crucial role in ensuring an organisation's success by fostering an environment conducive to productive work and a positive attitude among workers such as human resource techniques that instil in workers the positive mindset fundamental to realising an organisation's most pressing strategic objective. For example, Schoenherr and Speier (2015) argued that an HRM culture that can effectively harness and deploy potentials inside the business is essential to achieving the ultimate purpose of the organisation. Given this context, it's fair to claim that better human resource management has a major impact on an organisation's ability to compete based on its own merits.

Recruiting, development, retention, engagement, remuneration, and benefits are just a few of the HR activities that benefit from HR analytics (Pirker, et al., 2012). Data exploration is engaged to "Predict" future events and provides the foundation for prescriptive HR Analytics' (HR) futuristic

insight. In contrast to descriptive HR analytics (DHRA), which focuses on presenting data in the form of tables, reports, metrics, and dashboards in an after-the-fact fashion, prescriptive analytics provides data-driven insight that helps organisations make more informed choices about their people. It helps businesses look back and forward to identify patterns in areas such as human resource management and other potential risk areas. According to Therkildsen et al., (2014), there is consensus among experts that HR helps businesses get useful insights from their data and provides decision-makers with a sense of the outcomes of various courses of action. There has been some interest in utilising HR to calculate employee turnover rates. Human resources professionals rely on attrition scores to estimate the likelihood of an employee leaving the company at a certain point in time. Only 17% of companies globally reportedly used their HR data, and even fewer were able to use it to create prescriptive models, in terms of exploring the skilled applicants for recruitment and the ways through which their performance can be managed and uprooted (Kemp, et al., 2012).

The pioneers in workforce analytics rely on data to learn about shifts in employee behaviour, predict events, find anomalies, forecast using what-if simulations and detect patterns and trends, all of which help them guide their staff toward the achievement of organisational goals. The research by Meena and Parimalarani (2019) reported that prescriptive and proactive HR practices may be a game-changer in areas like recruitment and performance management, as prescriptive analytics blends a forward-looking viewpoint with the historical capabilities of static and descriptive models. As a result, users of HR analytical tools can learn more about not just future hiring plans but also the performance standards that should be anticipated of employees to maintain organisational productivity. Companies who invest heavily in talent analysis, to the extent of deciding to use workforce analytics, have more success in closing transactions, increasing networking salaries, and closing more deals per employee (Tambe, et al., 2019). Using workforce analytics, businesses may improve the quality of their staff's transmission of hierarchical execution and increase the financial return on their investment in human resources. This research paper demonstrates how prescriptive analytics may aid HR pioneers in analysing the patterns and processes for recruitment adequacy and performance management, considered to be imposed under holistic concepts of HR services' impact on the working culture. It also shows how prescriptive analytics may be used to address some of the most pressing HR issues associated with the profound recruitment and performance management challenges.

### **1.3 Research Problem**

Human resources leaders often face challenges in attracting and retaining the qualified workers that companies need due to funding constraints and power demands (Birzniece, 2022). When preparing to roll out a new line of services or products, it may be challenging to find and hire the proper people in time to meet the launch deadline, which can harm a company's public image. Similar costs are incurred by businesses when skilled workers depart the company (Kemp, et al., 2012).

This research paper shows that human resources experts may use technology to smooth out any wrinkles in the process, increasing efficiency and saving workers a ton of money in the process (Waller & Fawcett, 2013). Human resource management professionals do more than just display statistics to make strategic decisions about the acquisition and retention of talent motivation (Pirker, et al., 2012). The purpose of this research is to shed light on these issues by exploring the role that prescriptive HR analytics (HR) plays in the human resource management processes and how HR professionals can use this tool to strengthen their recruitment and performance strategies, leading to the holistic effective positioning of the human capital as a prominent and substantial asset in the business.

### **1.4 Research Question and Objectives**

1. Investigate how much the use of prescriptive analytics in human resources has improved the selection and hiring processes.
2. Examine how much the use of prescriptive analytics in human resources may enhance the efficacy of performance management.
3. Analyse the extent to which prescriptive HR analytics in HR expression enhances hiring process planning outcomes.

### **1.5 Research Significance**

Different scholars and researchers have worked persistently over the last HR decades to advance the quality of human resources data, which will aid HR professionals in realising and retaining their strategic role inside organisations. (Sheehan, 2014). Nonetheless, the strategic significance of HR metrics' usage has not yet been demonstrated, despite these initiatives, research, and campaigns. Since many of these human resource management studies have narrowed their

attention to the use of metrics for successful practices of human resource management, they have fallen short of providing human resource management professionals with the competitive edge and proof of success they need to succeed in their organisations. According to (Dubey, et al., 2019) many businesses fail to see their human resource managers as strategic allies. This is the case because HR professionals lack the analytic and database decision-making expertise crucial to improving organisational effectiveness. They could not have enough measurements, analytics expertise, or models, which might be contributing factors. Only using prescriptive HR analytics (HR) to forecast future needs and preferences, workforce data, and past usage patterns are examined. The prescriptive layer then steps in to make recommendations for which recommendations to display, how to tailor a particular promotion, and whether to use any specific messaging to engage the user (Ulrich & Dulebohn, 2015).

To foresee the need for a combination from quarter to quarter, prescriptive analysis is used. HR may effectively manage to recruit needs without running into overstaffing or understaffing issues by taking the reins of several new contracts and preparing maintenance plans for current employees with high attrition ratings (Mathis, et al., 2016). This can be interpreted as a data-driven workforce planning method in which each step of allocation, optimization, and addition (hiring) is governed by a pre-established roadmap. However, present workforce planning strategies frequently rely on outdated tools and insufficient data. Prescriptive analytics has a huge potential for use. Employers will be able to see more than just a broad overview of what's to come and identify future moves thanks to its assistance in integrating new data streams. As a result, you should not see the implementation of prescriptive analytics in and of itself as the final goal, but rather as part of a larger plan that involves alignment with the business's goals (Marler & Boudreau, 2017). The research will evaluate the advantage of using prescriptive analytics in HR for an organisation. In addition, this research will establish the relationship between HR practices and prescriptive analytics that improve the overall HR management.

## **1.6 Structure Outline**

The purpose of this study is to assess the value of prescriptive analytics in human resources for a business. There are a total of six chapters in this dissertation, and each one is dedicated to a certain topic.

The purpose of the study, the issue it sets out to answer, the research questions, goals, and hypotheses, and the overall outline for the paper will all be presented in the first chapter

The study will evaluate the relevant literature by concentrating on the important factors, such as human resource management practices, recruitment, and selection, and so on through the relationship between HR practice and prescriptive analytics.

The research approach that will be used to carry out the study is the topic of Chapter three. Discussion of the study's intended participants, relevant. These include the study's designs, sampling method and methodology, data collecting equipment and methodologies, and data analysis or statistical measurements.

The results of the analysis and interpretation of the data obtained will be presented in Chapter four.

The results and discoveries will be discussed in Chapter five.

Finally, the research will be summed up and wrapped up in Chapter six. The report will also include a discussion of the study's limits and future research possibilities in addition to management suggestions and consequences.

## **1.7 Conclusion**

On the conclusive grounds, the chapter is designated to present the in-depth overview of the research project including the research background, problem statement, purpose, objectives, and the significance of considering the research project to be practically performed. The chapter concludes that HR presence and its processes result in the prescriptive impression, involving the development of the culture, aligning performance productivities, addressing, and resolving issues, etc. Thus, the major workforce management appears in context with HR process and responsibilities. The main purpose of this chapter was to extract and present the aim and objectives of the research project, which are precisely defined, directing the focus towards analytics in HR under prescriptive management.

## **2. Chapter 2: Literature Review**

### **2.1 Introduction**

Human Resource plays a significant role within the organisation and prescriptive analysis in HR is a multidisciplinary approach for integrating the methodology to improve the decision quality of the people. This helps to improve the performance of an organisation as HR analytics functions in every aspect regarding training, selection, training, engagement, retention, and benefits (Prah Ruger, 2020). HR analytics involves high-end prescriptive results for forecasting the conditional consequences and changes in policies concerning recruitment and the performance management of the core and critical responsibilities. Analytics is not involved in solving every challenge of HR but can provide an understanding of the functions of business for optimising the initiatives within an organisation, in terms of its future depiction of the workforce panel and the efficiencies invested in through their skilled performances (Ortega, 2020).

### **2.2 Prescriptive Analytics in Human Resources**

Various statistical techniques are involved in prescriptive analysis for studying the outcomes and the historical data of the organisation. These techniques are involved in the development of formula or algorithm for mimicking the outcomes to predict the future outcomes of the organisation. Prah (2020) said that the prescriptive analysis in HR is involved in analysing the resumes, ATS, description of jobs, and HRIS for predicting the outcomes as per the talent acquisitions. The term prescriptive analytics refers to the category of data intelligence that enables businesses to combine the power of descriptive analytics with an eye toward the future. HR users can learn to explore and construct the future grounds to be considered in the recruitment process, but prescriptive analytics also provide knowledge on what the organisation should do for the better performance management of the employees. It uses the historical data including the skills of the person, their productivity, and engagement within the organisation, and predicts the future position and outcomes of the employee for the betterment of the workplace. This also helps to evaluate the position of the employee and whether he is fit for the organisation or not as per their skills and experiences whilst preventing the most skilled employees from leaving the organisation (Byrne, 2020).



### *2.2.1 Association of Skill Gap*

Bryne (2020) claimed that the organisation recruits the employees by their skills and qualifications for evaluating if the candidates are right for the position or not and HR prescriptive analytics is a tool that can help to overcome the gap in evaluating the skills of employees. To provide predictive and prescriptive data analytics, analytically advanced HR departments use data and statistical platforms but integrate them with more sophisticated HR technologies such as business intelligence (BI) tools, AI-enabled platforms, and open-source statistical packages. This begs the question of whether utilising more sophisticated HR technologies results in more illuminating HR statistics. However, the analytics development and exploring the criticalities requires performance analytics and thus, a lot of resources and time to get the person acquainted with the position and train them accordingly with the right set of skills and descriptions (McCartney, and Fu, 2022). This resulted in creating a skills gap which is inefficient and unfavourable for the organisation as prescriptive analysis in HRM provides leverage to close this gap. An algorithm for prescriptive analysis helps with the historical data to determine the skills of the individual for the organisation (Hofmeyer, et al., 2020).

### *2.2.2 Hiring the Right Candidate*

To recruit the candidate, human resource managers evaluate the educational background and skills whilst considering the age group, activities, behaviour, past experiences, and skills for hiring within the organisation. This has led to an increase in the mission of HR to find suitable candidates every few months and can cause imbalances in the organisation as well. HR prescriptive analysis adheres to the procedures for advancing their background check for evaluating the personality of the right candidate in the first instance whilst saving the time and energy of the organisation as the recruitment process becomes adequate through holding the sorted descriptions and the predictive measures for prescriptive efficiencies to be gained (Tierney, et al., 2019).

## **2.3 Human Resources Management (HRM) Practices**

### *2.3.1 The relation between prescriptive analytics and HR practices: Recruitment and selection*

Employee acquisition is one of the most critical HR procedures, according to the Centre for Talent Reporting used to find and hire talented people to meet the strategic needs of a firm. Assessment, selection, recruitment, and onboarding are all parts of the employee acquisition process. The point of recruitment and selection is to find as many talented candidates as possible and pick the best ones to improve an organisation's advantages (Lee & Mao, 2020). Recruitment is attracting people who want to work for an organisation to open jobs. Empirical studies by Delany and Huselid (2019) have shown a link between recruitment and other factors. Therefore, giving it enough attention (Hamza, et al., 2021).

On the other hand, the selection is the next step after recruitment. It is the “gathering information about job applicants” to determine their qualifications for the position for which they are applying. In other words, it is the process of screening job applicants. Metrics and analytics should be incorporated into a better selection process to ensure that the process operates as efficiently as possible (Khan, 2019). “Staffing activities need to be done analytically to keep up with changes in job performance, increased competitive advantages, and other HR-related challenges (Abbasi, et al., 2022). This is necessary to maintain a competitive advantage. According to Stone (2019), an effective way for organisations to deal with changes in their environment is to ensure that their recruitment and selection practices are part of their overall strategies and HR processes. This can be done by ensuring that recruitment and selection practices are part of an organisation's overall strategies. According to Irwin (2019), one of the reasons decision-makers might not pick the best candidate is how they make their selections. According to Doyle's (2022) research, many of a company's most important hiring decisions are made based on subjective or random factors. This leaves the process vulnerable to being abused and manipulated, and it frequently results in incorrect or misguided decisions.

### *2.3.2 The relation between prescriptive analytics and HR practices: Performance management*

A performance appraisal procedure is a way to make sure that subordinates and their supervisors understand each other. This is done by directly evaluating the subordinate's job-specific performance, communication skills, and expressions along with his responsibilities (Hristov, et al., 2019). Performance evaluation is also seen to give feedback on a regular and planned basis, improving teamwork and making people more efficient and skilled (Tweedie, et al., 2019). Managers may use performance appraisal to train and shape their subordinates so that they can do their jobs as expected. Focusing on how the organisation communicates and its shared values and goals can improve job performance (Camilleri & Camilleri, 2020). According to Chang and Chen (2019), previous research on performance management has shown that the performance appraisals and the degree to which an organisation is successful are linked to each other in carrying out its responsibilities. "Also, according to Ahmed and SchRoeders (2020), performance appraisal results assist managers in setting goals and continuing to assist employees in improving their work.

According to Martins (2011), the use of analytics enables human resource managers to improve the performance of their employees and more effectively manage their departments. It is anticipated that HR will provide support to HR professionals in the areas of calculating and managing return on human capital investment (ROI), in addition to enhancing the efficiency of HR departmental operations. This support will be provided in addition to HR's mission to improve the effectiveness of HR departmental operations. The HR can assist with identifying and evaluating workforce performance indicators and boosters, as well as predicting future developments in the organisation's workforce. In addition, HR can forecast future workforce developments. In addition to this, HR can assist in developing projections regarding the future of the workforce. HR professionals and businesses can generate forecasts that are not only more accurate but also better-informed regarding issues such as employee performance with the assistance of HR. HR was developed by the Performance and Human Resources Association (HR) (Grillo & Hackett, 2018)

According to Murphy and Cleveland (2019), it should not come as a surprise that one of the most significant aspects of a performance review is making decisions regarding promotion, an increase in pay, or other types of incentives. Even though most of these studies indicate a connection between how an organisation handles performance appraisal and how well it does, none of them were able to figure out how this connection can be strengthened or made more reliable.

## **2.4 The importance of prescriptive analytics in HR expressively improves recruitment and selection results**

All the organisations that are looking forward to embracing the recruitment analytics and selection results are needed to make their hiring decisions with a data driven. The selection and recruitment results within the organisation are improved by the prescriptive analytics in human resources that helps to significantly improve the hiring process (Smith, et al., 2018). As, expressed that the possibilities for effectively using the more extensive predictive and prescriptive analytics are enormous if even the most basic and readily available internal data can aid in providing precise insights for decisions about employee retention, training, and recruitment, the prescriptive serves as the holistic option (Yorks, et al., 2022).

### *2.4.1 Creating More Efficient Process*

The recruiting process in analytics helps for identifying the countless opportunities that are available for the hiring process of the candidate within the organisation. This is done by analysing the employee data and candidates by which the organisation can effectively identify the bottleneck of hiring to make the process of recruitment more effective. This process will not only streamline the flow of work but also effectively allows it to decrease the cost of hiring and provide a new recruiting budget for trying new ways for the process of hiring. Prescriptive analytics also improve the quality of the hiring process and help to make data-driven hiring decisions for identifying the top qualified clients for the position in the organisation (Hofmeyer, et al., 2020). The prescriptive analytics will also help to match the clients better to improve the quality of hiring and avoid the repeat process to reduce employee turnover.

### *2.4.2 Optimising Recruiting Costs*

The utilisation of the employee data and candidate allows the human resource managers to reduce the spending on different channels that are not necessary to bring the high-quality candidates. Prescriptive analytics is all about hiring and selecting in a smarter way which is not always cheaper as optimising the cost of the hiring can make the process of hiring stronger, cost-efficient, and smoother as well (Huey, 2020). The process to be included is the creation of a system based on mathematical modelling that offers an organisational level worldwide prescriptive recruiting strategy. By considering multiple turnover scenarios and pre-recruitment data, the machine learning model initially estimates the odds of successful hires and placements. Unlike some

previous evaluation schemes from the HR literature, the suggested technique is objective and founded on an integrated performance indicator. It enables a review of current hiring practices and the extraction of understandable and useful pattern-based findings, which delivers adequacy to the recruitment matters, resulting in controlled cost expenses in recruitment (Pessach, et al., 2020).

### *2.4.3 Performance Tracking*

Prescriptive analytics can assist to shed the light to track the process that is against the key performance indicators of the selection processes. Huey (2020) said that the tracking of the performance helps to gain insight into the performance of the recruiting team to make improvements and optimise the flow of work for the efficacy of the organisation. This helps to measure the performance of the candidate over time and can compare with the benchmark of the organisation where they are employed. Whilst having the right data, it is necessary to check the diversity initiatives of the candidate and make changes as per the need of the organisation (Khalili, 2020). The prescriptive analysis in the recruitment and selection process is done by evaluating the historical data and making future predictions about the performance and activities of the candidate. This analytics is all about analysing and collecting the information by using statistics, techniques, and machine learning for the prediction of the scenarios that can affect performances. The collection of data from a variety of platforms can help to increase the workforce analytics to detect the solution whilst measuring the variables including the engagement and the performance of the employees (Harris, 2020).

The complex prescriptive analytics including the algorithms are applied for forecasting future results by evaluating the pools of large data. ATS is a recruiting element that allows for evaluating the absolute objectivity in the decision-making of the data and avoiding the traditional ways of selecting candidates by the gut approach. The analytical hiring decision by the algorithm-based data and prescriptive results can help the recruiter to remove the biases from the selecting and hiring procedure to yield productive results for the organisation (Asamani, et al., 2019). Prescriptive analytics in the recruitment and hiring process is a significant tool for human resources that allows them to pinpoint the trends and assist the organisation to optimise their results by evaluating the actions of the candidate. This can make the decisions quicker and more precise which is important when the company is in desperate need of a suitable candidate. Prescriptive analytics can help to identify the strong hiring for job openings and helps the HR professionals to

provide the candidate with relevant job experiences. Prescriptive analytics advances toward making overall better selections by building on predictive analytics forecasts and transitional analytics solutions like diagnostic analytics. Prescriptive analytics in talent acquisition is starting to take on some early potential. Employees' learning trajectories may be predicted by prescriptive analytics, extending their employment with a company. With the help of the candidate's joining probability and a suggested remedy, recruiters may also predict when candidates would reject an opportunity (Kuhn, et al., 2021). This can also help the organisation to predict whether their candidate is close to the risk of retiring or resigning and make sure to rely on the agile methods of talent acquisitions to capture employees by filling the candidates with the positions to avoid switching in the future (Squires, et al., 2019).

## **2.5 The role of prescriptive analytics in HR expressively improves performance management results**

The human resource participates in functions other than onboarding and hiring of the candidates as they are involved in the process of improving the performance management of the employees as well. The HR prescriptive analytics play a key role in improving the performance management of the employees in the organisation by undergoing a radical makeover of the employees. The organisations are utilising HR analytics for optimising the talent of the supply chain and extracting the insights for making the decisions as well. HR analytics improves the productivity, profitability, and performance of the organisation whilst offering the workforce the talents to drive the business (Byrne, 2020). HR users can "prescribe" a variety of potential actions and be directed toward a solution using the new subject of business analytics. The purpose of this type of analytics is to recommend the optimal course of action for predictions established using predictive modelling. Additionally, it offers suggestions for how to proceed to benefit from the predictions. This aids in improving employee performance and decision-making. These analyses can be conducted using technology, expert services, or a combination of both, involving the past employee data under holistic impressions. Simple reporting of HR metrics is the first step in the process, which leads to prescriptive modelling of business activities (Singh et al., 2022).

### *2.5.1 Performance Management and HR Analytics*

Simbeck, (2019) stated that prescriptive analytics in HR improve five major areas including the improvement in the performance of HR, transforming them more into strategic planning, and

predicting the skills that are required within the candidate to fill the vacant position. It also helps to predict the demand for evaluating and managing the process of appraisal. This is a key process for making the workforce happy and motivating them for better outcomes for the business. Performance management is motivated by factors that include the Bell Curve method which is based on subjective and time-consuming data. The inaccuracy, biases, and poor dynamics with the inadequate feedback are making this model bad to fit within the environment. HR prescriptive analytics helps to collect high-quality data and track it as all the collected data is extracted from the systems of human resources (Kabeer, 2021). The development and learning systems are the collection techniques of the analytics that include the cloud-based systems. The data that is involved includes the employee's profile, their performance over time, salaries, and history of promotions with the engagement, retention, pieces of training, and absenteeism that are necessary to evaluate their performances. The performance appraisals are then made by HR analytics by ensuring the annual review transparencies by using the decision in the backed data and lend the legitimacy of the entire process by using the performance prediction and also to measure the performance of the business for evaluating the benefits. Prescriptive performance management also derives insight into all the available data that can help HR for identifying the better performance of the individuals that can help them to incentivize and make promotions (Seidel, et al., 2019).

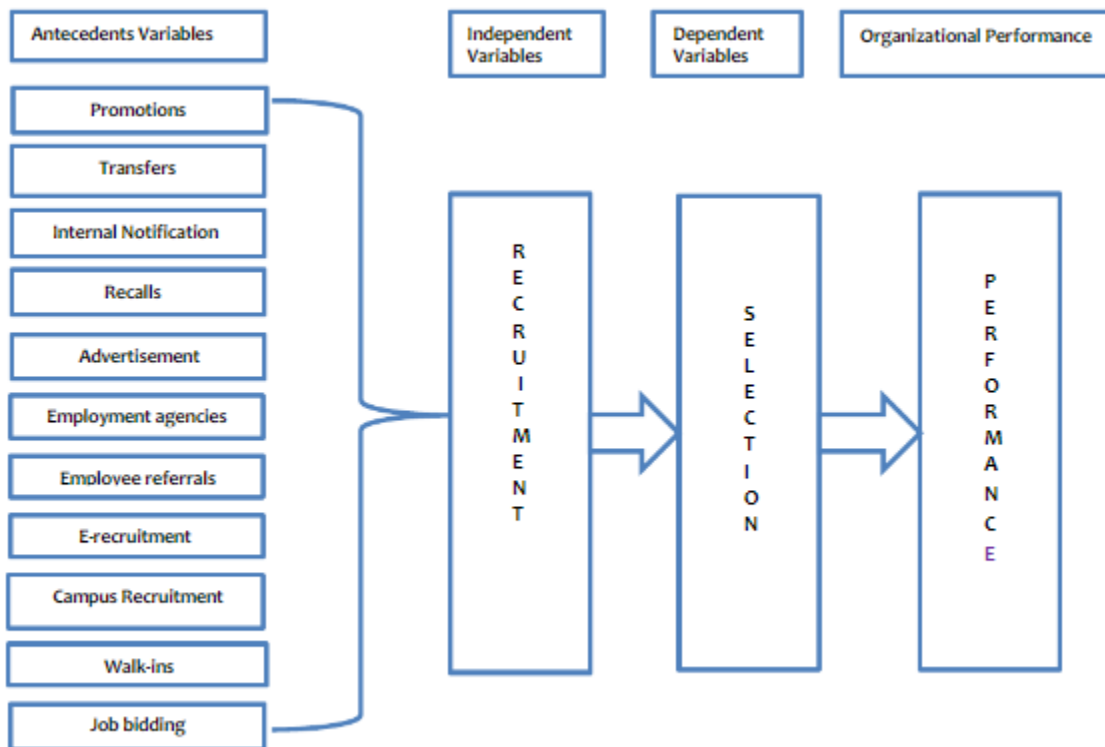
### *2.5.2 HR Analytics in Appraisal Process*

Prescriptive analytics is applied in the organisation for identifying the patterns that are interrelated with the objectives to increase the performance drivers and work preferences of the employees. It encourages the organisation for investing in activities related to performance building which is easily correlated with the performance of the engagement and motivates the organisation to spend the cost on the activities and establishes statistical links to involve the performances. To make rapid decisions several businesses are switching from annual performance assessments to real-time performance analysis (Khalili, 2020). This enables a thorough evaluation of performance and makes it easier to spot warning signs and determine risks. HR can use the same data to monitor and appraise performance for planning as promotions, transfers, and career breaks are possible. Analytics enables workers to maximise the value of feedback as performance feedback has a positive effect on employee productivity HR can boost business performance and staff retention by using prescriptive analytics, as they accommodate descriptive as well as predictive analytics.

Prescriptive analytics serves as the last phase within HR analytics, as it combines the use of the descriptive as well as the predictive analysis for the holistic impacts to be formed on recruitment and performance management overall. Using past data and outside information due to the nature of statistical algorithms to detect opportunities and identify the causes behind failure or success, specifies the steps to be done to avoid future risk or to fully capitalise on a potential trend (Jabir, et al., 2019). The most significant influencers of the workforce decide to remain or are identified using statistical modelling for the development of strategies and taking appropriate action (Tulchin-Francis, et al., 2021).

## 2.6 Conceptual Framework

As seen in the illustration, to investigate the relationship between prescriptive analytics and the HRM practices of performance management, recruiting and selection, and hiring process planning, a conceptual model has been developed (Karim et al., 2021).



The processes of recruitment and selection are structured, but they are not necessarily exclusive of one another. In most cases, the phase of recruiting will be finished well before the phase of selecting candidates will get underway. The people working for a company are that company's



most asset. Every business is required to carry out a recruitment procedure that ends with the selection of the applicants who are the most qualified. In this model, there are types of variables: independent variables, dependent variables, and outcome variables (Hayati, 2019). To recruit participants for this study, precursor variables are being used. It is essential to have access to both internal and external recruitment resources. Employee referrals, advertisements, employment agencies, electronic recruitment and labour offices, campus recruitment, walk-ins, radio and television, and walk-ins are all examples of sources of information and resources that can be found both internally and externally. Within the scope of this discussion, recruitment functions as a dependent variable (internal and external sources). When it comes to selection, antecedents are more important than independent variables in the recruitment process. An investigation into the applicant's past is the first step. After that, an interview is carried out. After that comes the employment examination (Easa & Orra, 2020). The next step is to check the individual's references. The level of success that an organisation achieves because of recruiting and choosing the appropriate staff members is the output variable of the model. The process of selecting, recruiting, and retaining employees has a direct bearing on the effectiveness of an organisation. The processes of recruitment and selection are organised, but they are not necessarily mutually exclusive from one another. In most cases, the process of recruiting will be finished before the process of selecting candidates will get underway. The people working for a company are that company's most asset (Hong, et al., 2019). Every business needs to compile a list of potential employees to hire, then evaluate each applicant on a set of criteria to choose the best ones. This model considers types of outcomes: independent, dependent, and final. To recruit participants for this study, precursor variables are being used. Within the scope of this discussion, recruitment functions as a dependent variable (internal and external sources) (Suwanto and Subyantoro, 2019).

## 2.7 Empirical Studies

References	Validity
(Ghani, et al., 2022)	According to Ghani, et al., (2022), the recruitment process may differ from one organisation to the next and from one position to the next. The treatment should take no more than two to four weeks. Inefficiency in recruitment may harm the candidate experience, causing an organisation's reputation to suffer and to lose top talent. The recruitment manager and recruiter may also suffer from decreased productivity and potential long-term burnout.

(Zamir, et al., 2018)	According to Zamir, et al. (2018), Recruiters that use different methods make a concerted effort to stay in touch with quality candidates even when there is no immediate need for their services. When this occurs, recruiters have a pool of quality candidates ready to go for any future opportunities. The recruitment team must work continuously and persistently to maintain an effective talent pipeline. This includes networking, applicant relationship management, social media participation, and referral program administration.
Olson, 2022)	By using current questions and a logical interview flow, companies may ensure accurate and effective screening procedures, according to Olson (2022). Unwanted people are weeded out through pre-employment screening techniques including questionnaires and exams. The search for resume keywords and scheduling are two examples of jobs that could be automated. When combined, these strategies could considerably cut down on the amount of time spent
(Nawaz & Gomes, 2019)	According to Nawaz and Gomes, (2019), Recruiting software has advanced significantly in recent years, allowing firms to expedite operations such as resume screening, interview scheduling, question answering, and rejection communication. As previously stated, inefficient communication is a major source of lost time throughout the hiring process. Hiring managers and recruiters who assess candidates in solitude are likely to make a bad decision. It is better to seek the views of as many interested people as possible to make the best possible decision.
(Termini & Traver, 2020)	According to Termini and Traver, (2020), Collaborative hiring is one way to keep lines of communication open and productive throughout the recruitment process. Recruited is only one example of a platform that allows selected team members to analyse and assess candidate replies and profiles, facilitating collaborative hiring. Consequently, the hiring manager or recruiter may fully view the applicant pool, including the candidate with whom the team is most eager to work. When talent pipelines are combined with collaborative recruitment, the right prospect may be spotted and engaged long before a job opening is published. As a result, the company will save time, money, and energy that would have been spent on recruiting new staff

**2.8 Limitation of Previous Research**

Most of the available literature focused on human resource management and its limited essential features. The selection and hiring procedures are outlined so that you may see how the whole personnel structure fits together (Huey, 2020). By focusing on online channels and selection processes, the prior theoretical framework is condensed to focus on the most well-known sources of recruitment. There is also a brief discussion of different recruiting strategies. Also, the essential

features were discussed in limited variations of recruitment and performance reaching only hiring schemes and performance management; however, the gaps included the discussion over the impact the adequate and structured recruitment and performance management can pool into the working culture, and thus, discussing the impact of prescriptive analytics considered on the futuristic productivity performance measures of the organisation. It's general knowledge that effective communication and management are prerequisites for any kind of cooperation between individuals in a corporate setting. Understanding how to construct communication, leadership, and management procedures is also crucial when discussing the daily running of a business. These days, no business can succeed with only a well-thought-out plan and well-defined goals; human resources are the lifeblood of every firm. Human resource management (HRM) is the practice of identifying, recruiting, interviewing, hiring, onboarding and developing a company's human capital to achieve organisational goals such as growth and development. Previous research focused mostly on developing more effective employee retention techniques, recruiting and selection procedures, and channelling people via appropriate channels while limiting the discussion over the impacts the adequacy of the HR processes has yielded on organisational performance. The HR department wanted to have a better understanding of the situation in the firm therefore that was the primary goal. The second step is to identify the channels and techniques of recruiting and selection that are the most efficient, as well as provide advice for retaining current employees. Previous research focused mostly on the most efficient recruiting channels, the selection techniques that the example firm should prioritise, the function of a human resource manager in the company, and the retention tactics that the company should utilise (Hofmeyer, et al., 2020).

## **2.9 Significance of current research**

Prescriptive analytics may help recruiters and HR professionals by accomplishing the following:

- Find qualified applicants to fill available roles.
- Improve the pace and quality with which you make proposals to prospects.
- Please, recruiters, make the candidate experience more enjoyable.
- Raising the standard in terms of productivity and employee loyalty.
- Reducing the time, money, and uncertainty involved in recruitment (Davis, 2018).

Studies may use prescriptive analytics to speed up and increase the quality of their candidate sourcing with the right HR technology stack. Prescriptive recruiting is based on analytics' capacity

to analyse enormous volumes of human data in search of previously unknown trends, exploring and structuring the gaps that serve as the futuristic trends to be covered through new recruitments, and upgrading the performance skills of the existing employees. Recruiters may find suitable candidates well in advance of the recruiting process by using insight-driven data and applicant tracking system (ATS) solutions. Recruiting managers may also utilise prescriptive analytics to detect process bottlenecks, as the use of prescriptive analytics in the data form resolves the critical issues by answering “what should be done next?” Also, it is not just connected with recruitment, the analysis of the prescriptive data in use exhibits the existing gaps that need to be covered through recruiting adequate skilled applicants, while also focusing on the weaknesses in the performances of the existing workforce. Thus, making decisions based on the overall experiences and the past productivity grounds of the working culture. Businesses may improve their application process and operating operations in this manner. Hiring managers may reduce the number of unqualified applications by using prescriptive analytics to evaluate employee performance and attrition rates. When considered together, these criteria may help hiring managers choose outstanding candidates for open jobs (Birzniece, et al., 2022).

## **2.10 Conclusion**

The establishment of a guiding model for HR application in HRM practice is a significant contribution to this study. This literature review also establishes a very strong link between HR and human resource Practices, but this is not its most significant contribution. Various studies on the prescriptive analytics cited in the study conclude how powerful analytics can be in HRM; they do not place as much emphasis on how to carry out the analytics. In conclusion, the usefulness of this study's findings to professionals, business owners, policymakers, and managers is a good indicator of the practical contribution that this study has made.

# **3. Chapter 3: Research Methodology**

## **3.1 Introduction**

This chapter will cover the various aspects of research techniques that will be used to find, select, process, and analyse data on the issue of ‘The Advantages of Using Prescriptive Analytics in Recruitment and Performance management processes by HR professionals based in Ireland.’ The researcher will be able to evaluate the inclusive reliability and variability of the planned study with

the help of the methodological section in a better way. Moreover, the methods of data collection, participant observations, and statistical analyses are all examples of aspects of the study that will be covered by the research methodology of the researcher (Cr, 2020).

### **3.2 Research Paradigm**

The research paradigm is defined as a collection of frequently held views and ideas within an academic research group concerning methodological, ontological, and epistemological concerns. The application of the research paradigm allows the researchers to develop their perspective related to the study field by the inclusion of assumptions from the social world (Khaldi 2017). Moreover, the research paradigm is based on the various assumptions of epistemology and ontology. The goal of ontology is to provide an account of the universe and the fabric of reality (Al-Ababneh 2020). Epistemology is defined as the branch of philosophy dealing with the various aspects of knowledge including the initiation, nature, and restrictions of human-based knowledge. This branch of philosophy examines how people process information and form opinions about the world. Therefore, qualitative research grounded on epistemological principles determines in-depth participant engagement (Russ 2014). As a result, qualitative research relies on information derived from individual perspectives and experiences of the participants by application of interpretivism. The implementation of the tenets of interpretivism, allows individuals to obtain insights into the inner workings of organisations by analysing the complex interactions of relationships that exist between the many parts of an organisation, including the individual functions, personnel, environment, and surroundings (Potrac, Jones & Nelson 2014). The application of the interpretivism paradigm is valid in the current research as it allows the detailed analysis of the rapidly changing roles and responsibilities of the recruiters due to digital transformations. Moreover, the application of interpretivism is also valid as it allows the analysis based on individual perspectives and experiences of the recruiters based on the use of prescriptive analytics.

### **3.3 Research Strategy**

The research strategy is defined as the intended method of the researcher for approaching the research problem. Moreover, the research strategy entails the skills, attitudes, and beliefs that inform the execution of the chosen research paradigm by the researcher (Oliva 2019). There are two methods of research strategy: the deductive method and the inductive method. The primary focus of inductive reasoning is theory development, while the focus of deductive reasoning is

theory testing (Azungah 2018). Inductive reasoning involves extrapolation from limited data to broader patterns. Inductive research is commonly conducted when there is scant prior literature on a topic with no established theories for evaluating the topic. The implementation of inductive research requires a detailed accumulation of the specific data as per the goals of the study and the pertinent focus of the researcher. Once enough information is collected, the researcher further critically evaluates the data. After a critical evaluation of the information, the researcher examines the data for repeatable trends to formulate a hypothesis that can account for the observed phenomena (Pellegrino & Glaser 2021). Therefore, the progression in inductive research is from empirical evidence to theoretical explanations, or from the specific to the universal aspects. The application of the inductive research strategy is valid in the current research as the aims are focused on analysing the effectiveness of prescriptive analytics in HR through the acquisition of detailed individual perspectives. The detailed analysis of the individual perspectives will allow the development of the hypothesis on the effectiveness of the software instead of testing any prior hypothesis through inductive strategy.

### **3.4 Research Methods**

The research process is defined as the practice of systematically acquiring, evaluating, and analysing facts to discover more about specific research subjects as per the interests of the researcher. The most used research methodologies include quantitative, qualitative, and combined approaches. The specific method of research is selected by researchers depending upon the nature of the data required to address the research issue (Patten & Newhart 2017). For instance, if numerical data is necessary, a quantitative approach is appropriate, for textual data evaluation, the qualitative method is used. However, the mixed method is used in case of the requirement of both numerical and textual data for research. In the current research, the method of qualitative primary research is selected. The primary research method refers to the material that has been collected directly from a source to answer a research topic. There are four methods of primary qualitative research (Abutabenjeh, and Jaradat, 2018). Goldkuhl, (2019), states that action research, case studies, surveys, and qualitative interviews are frequently employed by business and management scholars as primary research strategies. The action research focuses on the interpretation of the social system through implementing the changes and observing the subsequent impact instead of monitoring the social system from the outside. However, case studies are used to create ideas or factual representations of the relationship between an individual, group, or event and their

environment (Mac Naughton 2020). Moreover, a survey is defined as a tool that allows researchers to collect information from a large number of individuals by inquiring into their opinions, sentiments, perceptions, and beliefs. Whereas the goal of qualitative semi-structured interviews is to provide a comprehensive insight into human perspectives, opinions, and viewpoints on a certain issue, allowing researchers to gain valuable information on a particular sociological phenomenon (Driscoll 2011). Interviews are an effective research approach in terms of gathering meaningful insights on a topic with less amount of available information. Interviews also allow for the effective answering of the research questions through analysis of the individual perspectives of the participants (Archibald, et al., 2019). The application of qualitative semi-structured interviews is valid in the current research as the research is based on analysing the effectiveness of prescriptive analytics in HR. The examination of the effectiveness of the prescriptive analysis is achievable using in-depth semi-structured interviews based on personal experiences instead of developing theories and empirical descriptions between the recruiters and the technology by using action research and case studies.

### **3.5 Data Collection Method**

In the current research, the primary data collection method of semi-structured interviews is used. Interviews are a form of qualitative research that implements questioning as a primary data collection technique. In an interview, one or more of the participants are involved to ask questions to the questioner (Roulston & Choi 2018). There are various methods of interviewing in primary qualitative research. The main methods of conducting interviews include structured, unstructured, and semi-structured interviews (Stuckey 2013).

In a structured interview, the questions are chosen ahead of time and asked in a specific order. They often consist of closed-ended questions like yes/no or multiple-choice. However, unstructured interviews provide the most liberty to the participants in answering the questions. There is no predetermined pattern to the questions or their ordering. On the other hand, the interview can take a more natural course as it is built on the past responses of the participant. Whereas the semi-structured interview is a combination of unstructured and structured interviews (Branaghan, et al., 2021).

The semi-structured interviews are not based on a particular phrase or order. Moreover, these interviews are also designed based on the specific information required by the researcher as per

the aims and objectives of the research. While the questions in semi-structured interviews are typically left open-ended, they still adhere to a predetermined thematic framework that provides some structure (Newcomer, Hatry & Wholey 2015). In the current research 8 to 10 HR professionals based semi-structured interviews are used as the nature of the research is exploratory. The use of semi-structured interviews allows the acquisition of an adequate amount of information on the topic for detailed analysis through open-ended and semi-structured questions as per the exploratory nature of the research.

### **3.6 Sampling Strategy**

The sampling technique is the method used to identify entities from the manageable size of the population including companies, creatures, consumables, and so on. The goal of sampling techniques is to help researchers select subsets of their intended study population to reduce the overall volume of data needed for analysis. There are two distinct sampling strategies in research: the probability sampling strategy and the non-probability sampling strategy (Rapley 2014). Probability sampling refers to the random selection of participants from the population resulting in developing statistical inferences related to the whole population. Whereas non-probability sampling refers to the non-random selection of the participants from the population involving convenience or other related criteria of selections for collection of specific information only (Buelens, et al., 2018). There are various methods of non-probability sampling. In the current research, the purposive method of non-probability sampling is used. Purposive sampling entails the utilisation of the knowledge of the researcher for selecting a sample that is most relevant to the goals of the study (Campbell et al. 2020).

Purposive sampling is often used in qualitative research studies. Moreover, the application of purposive sampling is also used in research involving the acquisition of more knowledge on the subject rather than developing statistical inferences on the subject (Guest, et al., 2020). In the current research, the application of purposive sampling is implemented for allowing the acquisition of relevant information only from the various HR managers of the firms, belonging to Ireland, on the effectiveness of prescriptive analytics. Also, the use of purposive sampling is valid as the sample size of the current research is small, and purposive sampling allows the extraction of more relevant information from the small population.



<b>Interviewee</b>	<b>Job position</b>	<b>Work experience</b>	<b>Language</b>	<b>Sector</b>
Manager 1	Senior HR Manager	7 years	English	Manufacturing
Manager 2	Assistant HR manager	5 years	English	Retail
Manager 3	HR Recruiter	3 years	English	Retail
Manager 4	Senior HR Manager	8 years	English	Pharmaceutical
Manager 5	Assistant HR Manager	6 years	English	Sports
Manager 6	Junior HR Manager	2 years	English	Sports
Manager 7	HR Specialist	4 years	English	Retail
Manager 8	HR Manager	4 years	English	Manufacturing
Manager 9	HR Manager	4 years	English	Sports
Manager 10	Senior HR manager	7 years	English	Retail

### **3.7 Data Analysis Method**

Data analysis entails collecting, analysing, and evaluating information to conclude the development of future decisions. Analyses of the data are conducted using a wide variety of approaches, each with its own set of benefits and drawbacks depending on the field and the specifics of the inquiry. The two most common methods of data analysis involve the qualitative and the quantitative method which is further divided into other methods (Wickham 2016). In the current research, thematic analysis is used. Thematic analysis refers to an approach to analysing qualitative data. It is typically used with textual data, such as interviews or transcripts. The researcher conducts a comprehensive analysis of the data in search of recurrent themes, which might be interpreted as themes, concepts, or structures of meaning (Braun & Clarke 2012). There are numerous ways to conduct thematic analysis, but the most common technique involves six

steps: familiarisation, encoding, topic generation, theme evaluation, theme definition and identification, and report writing (Gauthier, and Wallace, 2022).

Based on the research described above, the application of thematic analysis is valid as it allows the detailed evaluation of the data collected through interviews for the identification of individual perspectives. The application of thematic analysis allows the generation of important themes of the collected data on the effectiveness of HR analytics. The generation of themes allows ease in the interpretation of the findings and more convenience in conveying the results to the public as well.

### **3.8 Reliability and Validity**

The reliability of the research includes the consistent elements of the study for allowing the research to be used by future researchers as well. The concept of reliability further includes additional aspects of accuracy, trustworthiness, and the component of repeatability. The element of reliability is achieved in the research by eliminating all possible sources of errors in the measurement of the items using the specific instrument of research (Mohajan 2017). As a result, the research instrument's dependability allows for the collection of scores comparable to those recorded in the first observations via prior measurements of the research. In the current study, reliability is achieved using semi-structured interviews by the selection of purposive sampling for participants in the HR field only. The involvement of participants from the HR field allowed the acquisition of relevant information on the topic by use of open-ended questions through semi-structured interviews. Microsoft Teams was used to conduct the interviews, and every interview was recorded to guarantee the accuracy of the information gathered. Similarly, Microsoft Word was used to transcribe the interviews. In order to ensure the accuracy of the findings, the recording as well as the consequent transcription were checked during the data analysis.

Moreover, the concept of validity is also included in the current research. Validity in research instruments guarantees that they are dependable and can be relied upon to produce accurate results. Testing both the construct and the content of the instrument is required to determine its reliability and validity (Li, et al., 2022). Construct validity relates to the degree to which the findings of the study are relevant considering the stated aims of the study, whereas content validity measures how well the study compares to the previous studies (Cohen, Manion & Morrison 2017).

### **3.9 Ethical considerations**

In the current study, ethical concepts are evaluated and considered throughout the research procedure. Ethical research techniques restrict the generation of false results and eliminate any identified instances of suspected falsification in acquired data and results. In addition, the application of ethical standards in research permits the protection of the diverse rights of study participants concerning equality, privacy, responsibility, and clear communications (Reijers et al. 2018). In the current study, the ethical principles of consent approval, communication of the procedures and results, preservation of confidentiality, and fair use of assembled data are implemented. Initially, the information is presented in easy language and by using terms that can be easily interpreted by the participants.

In addition, individuals were given sufficient time to decide whether to engage, and undue pressure and compulsion were eliminated related to forceful participation (Suri, 2020). The subjects were informed in this regard via the participant consent form and the information sheet provided in **Appendix 1 and Appendix 2**. Both formats were emailed to all participants before the interview. In addition, participants provided informed consent, which allows them the option to participate in a survey or deny it, as well as the option to not answer a question if they so choose. Furthermore, the identities of the participants and contact information are shielded from disclosure at all points in the research process. Also, the job stability and future career opportunities of the respondents are not at risk, and they will not be limited by participation in the planned study. Moreover, the credentials obtained by the investigator through either direct inquiry or the company's internal network will be used only for the current research (Nayak & Narayan, 2019).

### **3.10 Limitations**

It is qualitative which indicates that it has mostly concentrated on the relationship among the variables and closed surveys have been used in this study, although mixed techniques can yield more insightful results (Mazhar et al., 2021). The inaccurate rejection of the hypothesis from respondents may be due to the possibility that they provided false information on the questionnaire. It is possible to argue that the survey results cannot be generalised considering the information given when considering changes both before and during the pandemic (Lemon, 2017). The changes brought on by the pandemic determine when the hiring process and recruiting of the prescriptive analytics of HR return to normal. It is necessary to investigate because the objectives of the study

met with precise and comprehensive data due to the complexity of the subject. The primary data collection strategy used by the researcher involved using direct sources (Mertens, 2018).

The main data approach was incorporated which focused on many other surfaces and elements associated with the choice and employment of recruiters, the use of prescriptive analytics to enhance the hiring process, and many other issues. There were no such restrictions that prohibited the researcher from structuring the study given the gravity of the issue (Fallon, 2016). During the research process, the following limitations were discovered:

- This study's findings are based on a small number of participants. As a result, it's best not to try to generalise across the entire recruitment and performance management industry.
- Because the subjects had varying levels of work experience, their interaction with using analytical tools may have varied, as may their perceptions of prescriptive analytics.
- The main flaw is that it relied heavily on questionnaires and interviews as its primary means of gathering data to produce adequate and comprehensive findings.
- Another limitation is that the rate of technological advancement may subject HR professionals to continuous change. As a result, the research's dependability may suffer.

### **3.11 Summary**

The current research methodology is based on a qualitative examination of the efficacy of HR analytics in Irish businesses. The detailed analysis of the technology's effectiveness is based on the application of interpretivism and an inductive research approach via the qualitative method of in-depth interviews. Also, the selection of interview participants through purposive sampling allows the acquisition of relevant information using a small size of the sample. Moreover, the collected information is analysed through thematic analysis of the detailed responses for the identification of important themes of the issue.

### **3.12 Conclusion**

Thus, the chapter concluded in terms of depicting the methodological process implemented for the performance of the research project. There is in-depth reasoning for the selection of the various methods and techniques, such as the integrated use of the inductive strategy and the interpretivism paradigm; the reasoning is clarified in terms of the qualitative analysis performed. Besides, the in-depth illustration is also exhibited in terms of the respondents' selection, i.e., the appropriate use of the sampling technique. Overall, the section depicted the elongated explanations for the selected methods and techniques for the research performance.

## **4. Chapter 4: Findings and Discussion**

This chapter's goal is to summarise and report the results of the primary investigation carried out using semi-structured interviews. This research article illustrates how prescriptive analytics might help HR pioneers, specifically those in Ireland, in analysing the patterns and procedures for performance management and recruitment adequacy, which are thought to be mandated under comprehensive concepts of HR service's impact on the working culture. Additionally, it demonstrates how prescriptive analytics may be applied to some of the most urgent HR problems linked to the significant difficulties in hiring and managing employees. Since the current study is based on an analysis of the efficacy of prescriptive analytics in HR, the use of qualitative semi-structured interviews has been used. The effectiveness of prescriptive analytics can be investigated using in-depth semi-structured interviews based on human experiences. Ten HR professionals were interviewed using a semi-structured format because the current study is exploratory. Moreover, **Appendix 3a** contains the interview guide used to conduct the primary research, and transcripts are available upon request.

## **4.1 Use of HR Analytics, in terms of recruitment and performance management processes**

HR analytics is considered one of the key roles and responsibilities of the HR management team. The interview results showed that most of the interview participants showed interest in the use of HR analytics. More than half of the interview participants used this approach of HR analytics in their workplace, but they were unaware of the proper use of software and advanced technologies for this purpose (Karmańska, 2020).

When the participants were asked “Do you use HR Analytics, in terms of recruitment and performance management processes?”, participant 1 commented:

“See, being HR professionals, it is our role and responsibility to consider the use of HR analytics in terms of identifying the skills gaps, as the analytical data serves as an aid for the recruitment process on futuristic grounds.

Participant 2 responded:

“Making accurate projections for the future and determining factors like cost per employee, time to recruit, budget, and success, as they serve as the core essentials for impacting the organisational processes and its overall performance construction.”

Many of these HRM studies have focused only on the use of metrics for effective practices of human resource management. Many organisations do not view their human resource managers as strategic allies, according to (Dubey, et al., 2019). Because HR practitioners lack the analytical and database decision-making skills necessary to increase organisational effectiveness, this is the situation (Oliva, 2019).

Prescriptive study in HR is a multidisciplinary technique for integrating the methodology to improve the decision, and quality of the people and HR plays a vital role inside the organisation. HR analytics operate in every area of training, selection, training, engagement, retention, and benefits, which enhances an organisation's success (Prah Ruger, 2020). HR analytics includes high-end prescriptive results for predicting conditional outcomes and policy changes regarding the fundamental functions of hiring and performance management. Analytics may help an organisation's initiatives be optimised in terms of its future depiction of its workforce panel and

the efficiencies invested in through their competent performances, even if it is not involved in solving every HR difficulty (Ortega, 2020).

In addition to onboarding new employees and hiring applicants, human resources also play a role in enhancing how well employees are managed in terms of performance. By enduring a radical transformation of the workforce, HR prescriptive analytics play a significant part in improving the performance management of the employees in the organisation (Hangal, 2019). Organisations use HR analytics to optimise the people in their supply chain and to derive knowledge for decision-making. HR analytics boosts an organisation's performance, productivity, and profitability while giving its workers the skills they need to grow in the company (Byrne, 2020). Using the relatively new field of business analytics, HR users can "prescribe" a range of alternative actions and be pointed in the direction of a solution. This kind of analytics essentially serves the aim of advising the best course of action for predictions made via predictive modelling. It also provides advice on how to move forward to take advantage of the predictions. Employee performance and decision-making are aided by this (Belizón & Kieran, 2022). These assessments, which use historical personnel data under holistic perceptions, can be performed utilising technology, professional services, or a mix of the two. The first phase in the process is straightforward reporting of HR metrics, which leads to prescriptive modelling of business activities (Singh et al., 2022).

The analytics gathering methods that involve cloud-based systems are the development and learning systems. The information needed to assess an employee's performance includes their profile, their performance over time, their salary, and their history of promotions, as well as engagement, retention, training, and absenteeism data (Tambe, 2017). Then, HR analytics makes the performance evaluations by assuring the annual review transparency by using the choice in the supported data, lending the validity of the entire process by using the performance prediction, and by measuring the business' performance for evaluating the benefits. Prescriptive performance management also yields insight into all the available data that can assist HR in identifying the individuals who do better than average so that they can reward and promote them (Seidel, et al., 2019).

## **4.2 The value of HR Analytics**

During the interview, the participants were asked the following question: “In what sense is analytics valuable?”; correspondingly, participant 3 answered:

“Yes, it is. Data analytics entails gathering and analysing pertinent data. This procedure helps us predict more effective ways to find, evaluate, and choose individuals in the recruitment process. As a result, we can hire more efficiently and effectively.”

Participant 4 replied:

“The use of analytics in the performance management process contributes to discovering performance gaps and trying to help close them. Better data enables better planning, which can lay the groundwork for the best results. Thus, in the end, the performance success of the organisation is mainly the valuable use of the HR analytics.”

The results of the interviews revealed that most of the interview participants showed a great interest in HR Analytics. This is mainly due to the great significance of HR Analytics in human resource management activities. This is discussed and supported in several research studies. Businesses that put a lot of money into talent research, to the point where they use workforce analytics, are more successful at closing deals, raising networking wages, and doing more deals per employee (Tambe, et al., 2019). Businesses may raise the effectiveness of their staff's transmission of hierarchical execution and the financial return on their investment in human resources by using workforce analytics. The predecessors in workforce analytics rely on data to discover changes in employee behaviour, forecast using what-if simulations, find anomalies, predict occurrences, and identify patterns and trends, all of which aid in directing their staff toward the accomplishment of organisational goals (Dahlbom et al., 2020). As prescriptive analytics combines a forward-looking perspective with the historical capabilities of static and descriptive models, proactive and prescriptive HR practices could be a game-changer in areas like performance management and recruitment. To sustain organisational productivity, users of HR analytical tools can gain additional knowledge about both future hiring plans and the performance expectations for employees (Kremer, 2018).

Studies show, according to Therkildsen et al. (2014) that HR aids firms in drawing insightful conclusions from their data and gives decision-makers a sense of the expected results of certain



actions. HR experts use attrition scores to calculate the probability that a certain employee will leave the organisation at a specific time. Only 17% of businesses worldwide reportedly exploited their HR data, and even fewer were able to use it to develop prescriptive models, in terms of identifying the most qualified candidates for hiring and ways to monitor and enhance their performance (Kemp, et al., 2012). Prescriptive analytics uses a variety of statistical approaches to examine the outcomes and historical data of the organisation. These methods are used in the creation of formula or algorithm that mimics results to forecast future results for the organisation. According to Prah (2020), prescriptive analysis in HR involves analysing resumes, ATS, job descriptions, and HRIS to forecast results based on talent acquisitions. The category of data intelligence known as "prescriptive analytics" enables firms to combine the strength of descriptive analytics with a forward-looking perspective. Prescriptive analytics also give knowledge on what the company should do for better performance management of the personnel, but HR users can learn to research and build the future criteria to be considered in the hiring process. For the benefit of the workplace, it makes use of previous data that includes the employee's abilities, productivity, and engagement. It also makes predictions about the employee's future position and results. Additionally, this assists in assessing the employee's position and determining whether he is a good fit for the company given his qualifications and experience while keeping the most qualified workers from leaving the company (Byrne, 2020).

Organisations use HR analytics to optimise the people in their supply chain and to derive knowledge for decision-making. HR analytics boosts an organisation's performance, productivity, and profitability while giving its workers the skills they need to grow the company (Byrne, 2020). Using the relatively new field of business analytics, HR users can "prescribe" a range of alternative actions and be pointed in the direction of a solution. This kind of analytics essentially serves the aim of advising the best course of action for predictions made via predictive modelling. It also provides advice on how to move forward to take advantage of the predictions. Employee performance and decision-making are aided by this. These assessments, which use historical personnel data under holistic perceptions, can be performed utilising technology, professional services, or a mix of the two. The first phase in the process is straightforward reporting of HR metrics, which leads to prescriptive modelling of business activities (Singh et al., 2022).

### **4.3 The benefits experienced or perceived to be effective for HR analytics engagement in the HR processes**

While conducting the interviews, the participants were asked to share the benefits they have experienced or perceived to be effective for HR analytics engagement in the HR processes. Therefore, the majority of the participants responded that there are certain benefits, such as improved retention. For example, I would say the study of employee survey sentiments and utilising the results as the HR data analytics, the recruitment strategies appear accurate, while the skills gaps are identified, based on which along with future recruitments, the rewards, compensation, and performance management processes are realigned. It can also indicate measures that may be required to prevent known instances of departure. For example, it can identify gaps in engagement and cross-reference them back to the prior attrition rates of distinct employee groups.

There are several types of benefits of using HR Analytics. This has also been endorsed by interview participants. Data and analytics provide information that goes beyond merely tracking performance and gauging motivation. Using this technique, a low-performing employee can be identified and predicted. After looking for trends in the data, a performance enhancement strategy can be implemented. There are certain advantages to HR analytics engagement in the HR processes, such as increased retention. As a result of HR data analytics, recruitment methods are effective, and skills gaps are found. Based on these findings, future recruitment strategies and systems for rewards, compensation, and performance management are realigned. It may also suggest steps that should be taken to stop known cases of departure. For instance, it can spot engagement gaps and connect them to past turnover rates for various staff groups.

A better selection process should combine metrics and analytics to make sure that it runs as effectively as possible (Ugoani, 2019). "To stay up with changes in job performance, heightened competitive advantages, and other HR-related difficulties, staffing actions need to be done analytically" (Abbasi, et al., 2022). To keep a competitive edge, this is essential. According to Branaghan (2021), integrating recruiting and selection techniques into the overall strategy and HR procedures is a useful way for firms to adapt to changes in their environment. We can achieve this by making sure that an organisation's overall strategies include recruitment and selection methods. Tweedie (2019) asserts that decision-makers selection processes could be one of the reasons they do not choose the best applicant. Most Companies make crucial employment decisions based on

arbitrary or subjective variables, according to Tursunbayeva (2018) research. Due to this, the process is open to abuse and manipulation, which usually leads to poor or misinformed conclusions. These all are considered benefits and advantages of HR analytics. In addition to this, the proposed use of HR Analytics strategies helps in the formation of a useful and cooperative working environment in a firm. It helps in increasing the level of teamwork, employee motivation, and employee loyalty level. This is due to the reason that the outcomes and results of HR analytics highlight and outlines the most deserving and appropriate person for promotion and other rewards. This also develops a lot of interest among other staff towards their respective job roles. This results in a strong positive impact on the financial and economic outcomes of a firm on local as well as global grounds. According to Patten (2017), the results of HR analytics allow the HR team to assign certain tasks and job responsibilities to the right and best-fit employee of the company. This approach and strategy help in increasing the level of efficiency and productivity on a large scale which reflects in the economic outcomes of a firm.

#### **4.4 Difficulties or weaknesses in the adequate utilisation of HR analytics**

There are several difficulties or weaknesses present in the effective utilisation of HR analytics which is discussed by the interview participants. Regarding whether the systems for recording and storing data are efficient, there is no defined level of complexity to be recognised. The key issues with the hiring process and performance management are related to a lack of ability to comprehend the data and use it effectively for HR procedures. The main challenge encountered was the availability of unsorted or, more precise, encoded data, which has a significant impact on how decisions are made within processes but is related to conventional HR procedures. The software can be used to create performance standards, or performance grids, which appear to be the most difficult step in performance management, and incorporating HR analytics appears to be the second phase. Recruiting and maintaining the skilled people that businesses require can be difficult for human resource management because of financial restrictions and power needs (Birzniece, 2022). Finding and hiring the right individuals in time to meet the launch deadline can be difficult when getting ready to debut a new line of services or products, which can negatively affect a company's reputation. Businesses incur comparable costs when skilled employees leave the company (Kemp, et al., 2012). High-end prescriptive results for anticipating conditional outcomes and policy changes about the essential and crucial functions of hiring and performance management are included in HR analytics. Analytics may help an organisation's efforts be

optimised in terms of its future depiction of its personnel panel and the efficiencies invested via their competent performances, even if they cannot be used to fix every HR issue (Ortega, 2020).

On the other hand, Pellegrino (2021) states that the main challenge in the effective utilisation of HR Analytics is the type and nature of the working environment. The impact of the working environment is found strong in the effective utilisation of HR Analytics. Yorks (2020) states that the effective use and utilisation of HR Analytics are followed in multinational companies which have an adequate number of literature and skilled staff to effectively use the approach. However, in most of the local companies, there is exceptionally low use of the HR analytics approach in their respective firms. This is considered one of the main challenges for HR analytics and its effective implementation. To overcome this challenge, there is a strong need of understanding the needs and requirements of HR analytics in the companies. This could be done through training and spreading the benefits and advantages of HR analytics for local companies. A vast number of examples of case studies and a positive change in their life after the use of HR analytics is considered as a positive impact of HR analytics in a firm. Roulston (2018) supports the idea and states that most local businesses employ an HR analytics approach little in their separate businesses. This is seen as one of the major obstacles to effective HR analytics adoption. Understanding the demands and expectations of HR analytics in companies is crucial to overcoming this obstacle. This could be accomplished by offering training and promoting the advantages of HR analytics to nearby businesses. The positive impact of HR analytics in a company is demonstrated by a large number of case studies and people's lives changing for the better because of its application.

All this reflects that there is a strong need of making awareness regarding the use of HR analytics and their beneficial impact on the financial and economic outcomes of a firm on a local as well as on ground basis. This could be easily done through organisation of necessary training sessions regarding the use and proper implementation of HR analytics in the firm. This approach and strategy would lead to a strong positive impact on the economic and financial outcomes of a firm. This would also help in making useful changes and improvements in the formation of an effective, cooperative, and goal-oriented working environment in a firm.

## 4.5 Overall Discussion

Moving forward, knowing that prescriptive analytics works as the holistic data available for HR decision-making (Yorks, et al., 2022); the next question is related to using prescriptive analytics by the respondents, and their experiences. The rationale for considering the question valuable is that it is claimed that prescriptive analytics in human resources can improve the HR recruitment and performance processes, referring to the future organisational performance success growth. In regards, the response generated revealed that maximum respondents expressed that the use of the prescriptive analyst by the HR officers is directly used for the anticipation of the performance of the existing policies, exploring their effects on the performance level and the recruitment effectiveness. Most of the respondents also emphasised the use of prescriptive analytics, perceived as the holistic data through which the HR professionals can evaluate the success of their policies in terms of the impact on the health, happiness, and financial performance of the workforce. Most of them also expressed that the use of such analytics also supports exploring the weaknesses, gaps, or grey areas, which becomes the supporting evidence for justifying future policies; thus, letting the HR department achieve cost efficiencies through adequate planning. Similar revelations were provided by Ortega, (2020), labelling prescriptive HR analytics as the high-end organisational data, which is used for structuring future strategies for recruitment and performance management. Prah, (2020), further explained the working efficiencies of prescriptive analytics, explaining that the critical understanding is that prescriptive analytics, considers the descriptive as well as the predictive data and then analyses the weaknesses and the gaps that HR needs to cover in the future for maintaining the efficient performance record.

On the other hand, as the respondents' revelations generated the claim that prescriptive analytics is used for the anticipation of the performance of the existing policies, including both recruitment and performance management; the findings of Bryne (2020), appropriately fixed the concern, which this research project is designated to explore. It was claimed that HR prescriptive analytics displays the gaps within the existing employees' skills, compared to the ones that are demanded by the external factors for remaining successful. The particular notion of lacking the appropriate human capital skills is considered to be a certain factor in declining performance productivity. However, it is also mentioned that for such analytical evaluations the HR personnel requires using business intelligence (BI) tools, open-source statistical packages, or AI-enabled platforms. Thus, it is observed that the findings of this research question are directly linked with the information

and perspectives shared through the existing literature. However, the revelations expressed by the literature include the use of technological upgrades and advanced systems and software, which can be taken as suggestive measures for practical usage by the HR professional in the future.

Nevertheless, as the participants have responded in the favour of practically using the prescriptive HR analytics for recruitment and performance management, with concern for future success, the consecutive question raised the query regarding challenges they have faced while using the prescriptive HR analytics for their strategic decisions making regarding recruitment and performance management.

Correspondingly, while conducting the research, the participants were asked to share any difficulties or weaknesses that still seem to exist in the adequate utilisation of HR analytics, in terms of recruitment and performance management. Thus, participant 8 responded:

“See there is no specific level of difficulty to be marked, as far as the data recording and storing systems are effective. The major problems referring to the recruitment process or the performance management are connected with the absence of skills to understand the data and utilise it appropriately for the HR processes”

Participant 10 answered;

“The major difficulty I faced is the presence of unsorted or I can say encoded data, which holds a drastic impact on the decision-making within the processes; however, it was associated with the traditional practices of HR.”

Few of the participants mentioned that;

It is challenging for the software engineering person or the one who is the data entry operator, to adequately align the data. Also, assigning values under an analytical stance is a skilled and challenging task, as for them analysing the outcomes of the data can impact their updating or realignment of the recruitment strategies and policies and the development of the new frameworks and compensation packages, which mainly impact the performance management of the employees. The criticality of the data that needs to be maintained as expressed by the respondents, can also be explored through the claim of Prah (2020), as it was asserted that to forecast results in line with talent acquisition, prescriptive analysis in HR involves analysing resumes, ATS, job descriptions,

and HRIS. Thus, the literature also validates that the main challenge is linked to the data illustration, sorting, and retrieval, as the HR officers will analyse the illustrated findings through the software. Similar were the claims of Hofmeyer, et al., (2020), as the research work mentioned that a prescriptive analysis uses the algorithm series for the past data management to identify an individual's skills for the organisation; hence, the manipulation or the presence of the undefined and unsorted data could cause the complications of the inadequate policies development.

Moreover, the process of recruiting the applicants with accuracy also appears under challenging consequences, if the past data records remain invalid or distorted. Under such consequences, the critical aspect of achieving cost optimisation in the recruitment process appears to be low expectations (Huey, 2020). As, Hofmeyer, et al., (2020), commented prescriptive analytics also enhance the effectiveness of the recruiting process and aid in the creation of data-driven hiring decisions for locating the most qualified candidates for each open position inside the company. It also aids in improving client matching, enhancing hiring efficiency, and avoiding repetitive processes to lower employee turnover. Hence, it is evaluated that the responses shared by the interviewees hold parallel attributes with that of the defined literature, expressing that the major challenge relates to the data management, or the use of adequate data, in terms of achieving cost optimisation and significant outcomes and effects of the recruitment and performance management of the employees.

However, although the explained challenges by the respondents were not directly connected with their practices, the revelations, which are also supported by the existing literature findings; yet, as the techniques and strategic concerns are changing, such as HR from traditional approaches shifted to HRIS; there, appears to be highly expected changes of the successful changes to be included in the prescriptive analytics techniques. Under such impressions, the question was asked regarding the success chances of prescriptive data analytics techniques in HR recruitment and performance management processes. The maximum number of respondents shared their perspectives as future advancement relates to the effective achievement of HR analytics-based organisational productive performance. The reason expressed is that the general morale of employees is raised when data from HR analytics is used to improve their everyday work experiences, such as by examining how strong their commitment to belonging to the company is, and where they excel in their skills and knowledge. However, the major concern is to understand their preferences, needs, and demands,

and mainly using the past performance and recruitment data to explore the adequate steps to be taken. Hence, the summarisation of the HR analytics delivers the accuracy to the strategic protocols, resulting in the success rate of efficient recruitment and performance management. Here, the validity of the respondents' claims can also be observed through the existing literature. For example, Nawaz and Gomes, (2019), revealed that recent advancements in recruiting software have made it possible for businesses to speed up processes including resume screening, interview scheduling, question answering, and rejection communication. Based on such efficiencies of the analytics techniques the traditional practices of inefficient communication, and absence of the adequate internal and external knowledge due to which the hiring managers waste the additional cost, are all eliminated. As the use of analytics provides them with appropriate knowledge of the skills the working culture is facing and the possibility of integrating adequate vacancies for boosting the organisational performance.

Under distinctive trends, assertions of Zamir, et al., (2018), can also validate the success rate of the analytics technique, as exhibited by the respondents within this research project. Such as Zamir, et al., (2018), findings revealed that to maintain the potentially skilled and talented workforce pool, the recruitment team needs to work tirelessly and persistently. Furthermore, there is a constant need of covering the digital networks, manage candidate relationships, use social media, and referral programmes. Thus, these all factors appear under the prescriptive analytics frame. The pooling of the applicants through various networks, or social media channels, is linked with the acquisition of diverse data, which is then sorted according to the defined algorithms of the HR-based software to gain adequately skilled employees. Also, on comparative grounds, as Ghani, et al., (2022), highlighted that hiring procedures vary from one organisation to another, depending upon the workforce capacity and capabilities required to achieve the company's goals. However, it is observed that none of the organisations invests more than two to four weeks in recruitment and selection. It exhibits that the urgency or the limitation of the time can result in recruitment inefficiency harming the workforce productivity while harming the organisation's reputation. Additionally, the recruiter and hiring manager could experience diminished productivity and long-term burnout. Therefore, such evidence regarding the traditional method defaults itself and expresses that integration of the prescriptive analytics would be effective in terms of delivering success rate in recruitment and performance management domains of HR, as addressed by the respondents of the current research.



Overall, the interview responses remained positive and supported the claims of the past literature engaged as profound evidence for the research performance. However, in terms of finalising the interview, the ending stance integrated the inquiry-based question of sharing the improvements the HR professionals as interviewees are concerned about, addressing the reconstruction of the strategies, or considering the appropriate use of the prescriptive analytics. Under the answerable dilemma, the maximum percentage of the respondents emphasised the factor of data accuracy as the necessary consideration for making improvements in their recruitment and performance management processes. They claimed that the more accurate the data, the more effectively HR analytics can be used. As a result, the performance management and hiring processes appear to be working. Besides, since a diverse workforce is a continual development, there needs to be more variation in the data used for HR analytics, due to which maintaining the improvements in the data collection, sorting, and retrievals, the improvements need to be consistent. In relevance, the claims of Lee & Mao, (2020), appear to be parallel to the respondents' emphases, expressing that talent reporting holds the amount of data, which is used to identify and hire talented individuals to satisfy a company's strategic needs. The personnel acquisition process includes the steps of evaluation, selection, recruitment, and onboarding based on the accessed data.

Thus, resulting in the findings of as many outstanding individuals as possible and choosing the top ones is the goal of hiring and selection to increase an organisation's benefits. Hence, it seems for the continuous improvements within the recruitment and performance management processes, the leading role in improving management is played by the presence of adequate data. Further, the claims of Yorks, et al., (2022), can also be considered supportive and parallel to the contemporarily generated responses. As it was highlighted that the opportunities for using the more comprehensive predictive and prescriptive analytics effectively are limitless. The prescriptive approach is the all-encompassing choice if even the most basic and easily accessible internal data may help in delivering exact insights for decisions on staff retention, training, and recruitment. Therefore, it is accepted that in terms of achieving optimisation through recruitment and performance management processes for organisational success, the use of valid and authentic data management plays an essential role. On holistic grounds, the literature evidence engaged in the research project and the responses shared depicted the acceptance that the use of prescriptive analytics is a potential and efficient tool, which along with delivering the cost and time efficiencies to HR, also exhibits promising trends toward organisational productivity improvements.

## **5. Chapter 5: Conclusion and Recommendations**

Performance management has a long history of being an important HR function. It has several purposes. Firstly, it provides employees with a set of guidelines they must follow to succeed in their positions. Employees can utilise performance management to determine whether they are accomplishing their goals by receiving obvious signs of which aspects of their work need to be improved and which are up to par or even beyond expectations. Secondly, it helps the employer structure jobs better, which might boost team productivity. Overall, performance management aids in providing a clear outline of what workers must accomplish at work to be retained, given a raise, or promoted (Byrne, 2020). Finally, it aids managers in better understanding the motivational or communicational needs of their groups or fellow employees to boost productivity. Employing the brightest and most productive workers from the beginning is one approach for firms to improve employee performance. To gain a greater understanding of which candidates are more likely to be motivated, committed, invested, and engaged, managers can better examine applications as well as other talent criteria with the aid of HR analytics. HR professionals may use HR analytics to find and screen candidates based on factors like being promoted within the organisation, having good references, finishing tasks promptly, and other signs. In the past, an employee's immediate supervisor has typically overseen performance management (Singh et al., 2022). A more comprehensive perspective of performance management is being achieved using technological solutions and HR analytics in more contemporary HR practices. With the aid of HR analytics in employee engagement, HR may identify warning signs or reduced indications as well as resolve them before they are a problem that results in a lost worker or decreased productivity as well as revenue at the corporate level. To improve performance and productivity, things like more frequent tardiness, missing assignments, and other issues can be tracked and shared with management and staff.

Clarity may be gained for both employers and employees when HR analytics is a component of a comprehensive human resources administration strategy and software solution. Performance reviews are easier for employees to access with an HCM system since their goals are more specific, measurable, and tractable. Real data can be used by HR analytics to educate staff members and managers and support their decision-making and goal setting. Employers can monitor patterns over time with the use of HR analytics (Khalili, 2020). They may be able to dig deeper into underlying

problems, such as demoralising managers, a lack of training or opportunities for advancement, the need for verbal relationships, or even other HR analytics in performance evaluation if they are observing a lot of low productivity or staff turnover in particular departments. Businesses may better understand what is required of their employees to increase productivity and improve performance across the board by using HR analytics in employee engagement. Using data provided by analytics helps businesses identify performance gaps and work to close them. Better data leads to better planning, as planning is critical in laying the groundwork for the best results. As a result, analytics allow HR to contribute strategically; however, not all analytics provide ROI and cost comparison. Additionally, Tulchin et al. (2021) discuss why it is the appropriate moment for HR to establish a centre of competence for HR analytics and lay the groundwork for analytical proficiency throughout the department.

This research study explains how prescriptive analytics may help HR pioneers in examining the patterns and processes for performance management and adequate recruitment, which are thought to be imposed under comprehensive notions of HR service's that impact the working culture. It also demonstrates how prescriptive analytics may be used to address some of the most urgent HR problems linked to the significant hurdles in recruitment and performance management. This study mainly examines how much the use of prescriptive analytics in human resources has enhanced the hiring and selecting processes. It also looks at how much prescriptive analytics may increase performance management effectiveness. Additionally, the research project examined how much prescriptive HR analytics in HR expression improved hiring process planning outcomes. In the context of resource implications, employing prescriptive analytics is an effective option that can help the business in recognising strategic decisions derived from the data and assist in avoiding the limitations of standard practices of data analytics, incorporating; exhausting expensive resources on housing data that does not notify the decisions related to the business, spending the shift of time by the unused data sets, and eliding exceptional insights and revenue streams.

Since the current study is based on an analysis of the efficacy of prescriptive analytics in HR, the use of qualitative semi-structured interviews in this study is valid. Instead of creating theories and empirical descriptions between recruiters and the technology by using case studies and action research, the success of the prescriptive analytics can be examined using in-depth semi-structured interviews based on human experiences. Semi-structured interviews are the main method of data

gathering in the current study. Interviews are a type of qualitative study that use questioning as their main method of data collecting. One or more interviewees engage in question-and-answer sessions with the interviewer (Roulston & Choi 2018). Since the current study is exploratory, semi-structured interviews with 8 to 10 HR experts are employed. Due to the exploratory character of the research, semi-structured interviews enable the collection of sufficient data on the subject for in-depth analysis through open-ended and semi-structured inquiries. On the other hand, the use of purposive sampling is employed in the current research to enable the collecting of pertinent information on the usefulness of prescriptive analytics from the various HR managers of the organisations, mostly those located in Ireland.

Purposive sampling is also appropriate since it enables more pertinent data to be drawn from the tiny population despite the current study's very small sample size. The use of thematic analysis has been used in this study because it enables a thorough assessment of the information gathered via interviews for the discovery of unique perspectives. The use of thematic analysis enables the development of significant themes from the data gathered on the efficacy of HR analytics. The development of themes makes it easier to interpret the results and more convenient to communicate the findings to the public. There were several restrictions in place when conducting this study, and future research may focus on including factors in the analysis to fill the vacuum in the body of knowledge. Researchers can move away from previously understood components and enter those that could have far-reaching future repercussions by adding a stress-related element. The largest barrier to finishing this research is a lack of time, which has a negative effect on its scope. The largest obstacle the researchers encountered during this examination was gathering legal and accurate information because most of the pertinent records require permission to access and authorization from the authorities. The lack of funding has also limited the breadth of this research due to budgetary limits, which is another key hurdle that researcher in this study must overcome. Due to time constraints, the researcher did not have access to the most pertinent research findings.

The interviews' findings demonstrated that most of the interviewees had a keen interest in HR Analytics. This is mostly attributable to HR Analytics' significant role in HRM activities. Most of the project's HR-based participants found that while using prescriptive analysis, which considers historical performance data for employees, is not inherently difficult, having sorted and specified data is crucial. Technically speaking, they stated that the algorithms and data categories needed to

be precisely established for them to create the flaws and analyse performance patterns. Only a few of them mentioned how difficult it is for the software engineer or the data entry operator to properly align the data. Analysing the results of the data can have an impact on their updating or realigning of their recruitment strategies and policies as well as their development of new frameworks and compensation packages, which primarily impact their performance management of the employees. This makes assigning values under an analytical stance a skilled and challenging task.

## **5.1 CIPD Requirements**

### *5.1.1. Practical Recommendations*

According to the research's findings, the suggestions presented in this section are important for enhancing the role of HR analytics in the recruitment process

#### *5.1.2. Recommendation 1*

By enhancing performance, productivity, and profitability, HR analytics equips employees with the knowledge and abilities they need to advance the business (Byrne, 2020). HR users can "prescribe" a variety of different activities and be directed towards a solution using the new subject of business analytics. The main purpose of this type of analytics is to recommend the best course of action for predictions obtained via predictive modelling. It also offers guidance on how to proceed to benefit from the predictions. This helps with decision-making and employee performance. These evaluations, which combine professional services with technology or a combination of the two and use historical personnel data under holistic perceptions, can be carried out. Simple reporting of HR indicators serves as the first step in the process, which leads to prescriptive modelling of business activities (Singh et al., 2022).

#### *5.1.3. Recommendation 2*

Metrics and analytics should be used together in a better selection process to ensure that it operates as efficiently and feasible (Ugoani, 2019). Staffing decisions must be prepared analytically to keep up with changes in job performance, heightened competitive advantages, and other HR-related challenges (Abbasi, et al., 2022). This is necessary to maintain a competitive edge. Branaghan (2021) asserts that one effective way for businesses to adjust to changes in their environment is by incorporating recruiting and selecting tactics into the overall strategy and HR practices. We may accomplish this by ensuring that they are a part of an organisation's broader strategies.

#### 5.1.4. Recommendation 3

Below mentioned are some of the important recommendations for HR professionals to effectively utilise HR analytics in recruitment and performance management systems.

- To improve sourcing, HR directors can provide recruiters with information on the quality of hires. After engaging with applicants who join the organisation, hiring managers and their recruiters can profit from predictive HR analytics. Notably, they can leverage quality-of-hire data gathered by HR to understand better which kind of people they source, develop, and interview to become top-tier workers (by job, team, and/or department). In turn, this can assist them in addressing their shortcomings with all these recruitment activities, particularly their sourcing (Davis, 2018).
- The recruitment team could use sophisticated (and even unofficial) employee surveys to enact changes to the way it operates, from the kinds of people it publications (e.g., create a talented workforce with a much more broad range of candidates) to how someone helps in promoting the brand in the best possible light to candidates (e.g., note employee satisfaction goals scored, relayed through surveys routinely sent to the working population to encourage more prospective employees for responsibilities).
- The human resources division can strengthen its employer's brand by using candidate feedback. For instance, HR could indeed collaborate with the talent management to meet these recruiting "mistakes" to ensure better insights into the potential candidates. If comments from recently engaged prospects reveal that the recruitment process took too long or some interviews seemed unnecessary or, worse yet, unhelpful in the process of teaching about just the company and role, HR could indeed collaborate with this team to address these issues (Birzniece, et al., 2022).
- This study also underlines that to succeed as well as economically improve the outcomes of human resource practices in their business, practitioners should aim to go beyond simple data display in their activities.
- This study concludes that creating and fostering a culture that is decision-focused can significantly enhance organisational performance. This study provides evidence in favour of the critical role HR analytics play in hiring and performance evaluation. For example, HR analytics provides information through tools like scorecards, dashboards, and predictive analytics. As a result of the connection between HR analytics and

recruitment made possible by these sources of organisational knowledge, HR people and business partners can now make better-informed informed decisions regarding their staff. So, we conclude that organisations should use facts produced by HR analytics as well as implement these into their process for decision-making (Azungah 2018)

## **5.2 Timescale for recruitment in Analytics:**

Week 1: Application review

Week 2: Initial screening

Week 3: Take home

Week 4: Onsite interview

Week 5: Debrief

Week 6: Final call

Week 7: Offer

### **5.3 Personal Learning Statement**

From start to finish, conducting this research and writing this dissertation has been a monumentally difficult piece of work. However, having worked as a recruitment professional in my home country for more than five years, I approached this process with lots of enthusiasm and confidence. Through this dissertation, I developed research skills and I was able to make my work more presentable and informative. I acknowledged that recruiting, development, retention, engagement, and remuneration are the main activities performed in HR analytics. By acquiring and understanding the basic knowledge regarding analytics in recruitment, I obtained a greater and in-depth understanding of the scientific process. Thus, I was able to formulate the questions relevant to the research and enhanced my capabilities for decision-making.

In addition, I initially thoroughly analysed the details and requirements of the project from the marking rubrics to acknowledge what I would need to complete the current research. I also developed new skills and acquired more knowledge about how much the use of analytics in human resources has improved the selection and hiring processes. I also learned new skills and gained a better understanding of how much the use of analytics in human resources has improved the selection and hiring processes as well as performance management. In addition, for conducting this research, I felt important to learn about the extent to which HR analytics in HR expression enhances hiring process planning outcomes.

Additionally, the anticipated research was helpful and useful for me as it provided me with greater skills in problem-solving, a better understanding of how the primary qualitative research is conducted, and an in-depth understanding of the performance management processes by HR professionals based in Ireland. It also gave me independence and confidence, as well as a better understanding of educational and career options. Most importantly I learned about the various statistical techniques used in analytics for analysing the outcomes and historical data of the organisation, which will be useful to me in the future as a professional.



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## **7. Appendix**

### **7.1- Appendix 1 - Participant information sheet**

**Title of the study:** The Advantages of Using Prescriptive Analytics in Recruitment and Performance management processes by HR professionals based in Ireland.

I'd like to invite you to take part in a research project. Before making a decision, you should understand why the research is being done and what it means for you. Please carefully read the following information. Ask questions if anything you read is unclear or you need more information. Consider your options carefully before deciding whether or not to participate.

#### **WHO AM I AND WHAT IS THE PURPOSE OF THIS RESEARCH?**

My name is Dimple Samtani, and I am an MA in Human Resource Management student at the National College of Ireland. To complete my studies, I must conduct research and write a dissertation in this field. Based on my education and experience, I've decided to investigate the advantages of using prescriptive analytics in recruitment and performance management processes by HR professionals based in Ireland.

#### **WHAT WILL YOUR PARTICIPATION IN THIS STUDY INVOLVE?**

Participation in the study will involve an interview in which you will be asked eight questions on your preferred day and time, but no later than June 2022, for a maximum of 45 minutes to one hour. The interview will be through MS Teams and the questions will be quite open-ended, allowing you to share any topics that are important to you, making the process more collaborative.

#### **WHY HAVE YOU BEEN ASKED TO TAKE PART?**

Being an HR professional your insights and experiences are valuable for generating the answers to the research questions. Your part is essential, as you can share the details about using technology, and mainly if you have experienced the use of prescriptive analytics in human resources, it would appear in the research as realistic findings. Whether your point of view is positive or negative in terms of the effectiveness of HR, it will be essential for delivering the answer through research, suggesting the readers consider it or else search for ways of improvements.

### **WHAT IF I DO NOT WISH TO TAKE PART OR CHANGE MY MIND DURING THE STUDY?**

With due respect, your participation is on voluntary grounds, in case you accept to be part of the research it would be valuable for us. In case you want to leave the study either in the beginning or even after your acceptance, there is no pressure, you are on your will free to withdraw anytime without submitting the reason. Also, if you need some clarifications to further clear the doubts you can always ask.

### **WHAT HAPPENS TO THE RESEARCH DATA?**

On ethical grounds, the detailed insights of your experience you share for the research purpose are protected under the authorised university database and are solely associated to be used for this specific research project. Only, the authorised university personnel, such as the research head and the associates. The research will not include your name when structuring details, you shared it will only highlight your designation or else would refer to ‘participant 1 or participant 2’ it is because, under the confidentiality deed, the disclosure of the name is an unethical practice. Also, after submission of the responses to the database, the changes would not be allowed; however, within the timings of response collection, you can contact to change any of your shared detail.

### **HOW WILL THE RESEARCH BE REPORTED?**

The final research work will be submitted in the dissertation form and upon approval can be presented as the conference paper, holding valid information that can be practically implemented. Apart from being published as a research paper, it can also appear like a presentation if offered at the conference and covered as a matter of publication. For confidentiality matters as clarified the data will remain under the authorised control of the university database. In case you would be interested in the results, the option of a soft copy of the published research would be emailed to you.

### **HOW CAN I FIND OUT MORE INFORMATION?**

If you have any questions, you can reach out to the researcher, these are my details:

Dimple Samtani [x20255764@student.ncirl.ie](mailto:x20255764@student.ncirl.ie) for any future correspondence you would like to make, including access to the results, or even for seeking any additional information regarding the research.

#### **WHAT IF I WANT TO COMPLAIN ABOUT THE RESEARCH?**

In case of any complaints feel free to contact me at the provided email address. Also, if you want to reach the university administration-based discussion, you can always reach out to the official email address of the National College of Ireland as provided or contact the registered contact number of the university, from where you can reach the Research Department Head.

#### **SAFEGUARDING AND CHILD PROTECTION**

The research study's aim and objectives are highly professional, with the exclusion of any discriminatory and biased gestures. The focus is to deliver the practicality regarding prescriptive analytics in human resources process usage, in terms of measuring the efficiency in the selection and hiring processes. Also, in the domain of performance management, hiring planning is connected, which includes no presence of any human disgrace, or mental and physical harm. It is entirely for the organisational purpose and HR processes efficiency enhancement.

Thank you for going through the information sheet and I look forward to speaking with you soon.

Yours sincerely,

Dimple Samtani

## **7.2 Appendix 2- Participant Consent Form**

‘The Advantages of Using Prescriptive Analytics in Recruitment and Performance management processes by HR professionals based in Ireland.’

### **Aim of the Research:**

This research aims to explore the issues by exploring the role that prescriptive HR analytics (PHRA) played in human resource management processes. Also, addressing how HR professionals can use this tool to strengthen their position in the business, by increasing the effectiveness and potentiality of the HR operations.

### **Main Questions of the Research:**

1. Investigate how much the use of prescriptive analytics in human resources has improved the selection and hiring processes.
2. Examine how much the use of prescriptive analytics in human resources may enhance the efficacy of performance management.
3. Analyse the extent to which prescriptive HR analytics in HR expression enhances hiring planning outcomes.

### **Method of Data Collection:**

The research includes the semi-structured interview performance for collecting professional responses.

Please answer the following questions by circling or boldening your responses:

1. **Have you read and understood the information sheet about this study?** YES / NO
2. **Have you been able to ask questions and had enough information?** YES / NO

3. **Do you understand that you are free to withdraw from this study at any time, and without having to give a reason for withdrawal? YES / NO**
  
4. **Your responses will be redacted of personal information. Do you permit members of the research team to analyse and quote your redacted responses? YES / NO**
  
5. **Do you agree to any interviews or focus groups being recorded? YES / NO**

Please sign below (physically or digitally) if you wish to take part in the research and feel you have had enough information about what is involved:

**Signature of participant:** ..... **Date:** .....

**Name (block letters):** .....

**Signature of researcher:** ..... **Date:** .....

### **7.3 Appendix 3a- Semi-Structured Interview Process and Guidance**

Semi-structured interviews fall between a fully structured survey and an unstructured or casual conversation. As the research relates to using the semi-structured interview, depicts that there is room for additional information, instead of limiting the receiving of knowledge with the simple acceptance of the statements or the rejections. The use of semi-structured interviews provides opportunities to communicate with the interviewee more than once for maintaining the adequacy of information collection. Also, the effectiveness is that the interviewee holds the empowerment and authoritative willingness to answer the questions with any the appropriate direction and perspective. Overall, the use of the semi-structured interview transcript appears to be open-ended and flexible and results in the collection of focused information.

Below is the structured process for preparing the semi-structured interview:

**Preparing for the Interview** – The stage relates to writing down the key points to be covered in the interview. It may include seeking the weaknesses, discussing the identified gaps in the past articles, or else the levels of exploration. For example, referring to the aim of the research select the focus variables or the factors on which the insights are required. Such as, questioning the core purpose of prescriptive HR analytics (PHRA), and then connecting the second question with its significant impact on the HR core processes. The next domain would be operational efficiency of PHRA or connected that can deliver the efficiencies to HR, and then leading to the discussion over the personal experiences, and use of professional skills, related to PHRA.

**The Guidance Path** – Holding the command over the information, which needs to be discussed prepare the guiding question sheet. It can be informal or may act as the mind map to be considered during the interview. The rationale is semi-structured interview is not rigid to the series of the interview, based on the answers of the interviewee, the transcript can be transformed by spontaneously entering the new; yet, connected questions with discussion.

**Introductory Phase** – Before initiating the actual process, always introduce yourself, either by seeking consent or establishing the contact for the interview date and time approval. Also, assure that all the adequate details related to the projects are shared to order to avoid any miscommunications.

**Questioning Technique** – The beginning should be with basic or simple questions, and then based on the response of the interviewee answers improvisation can take place leading to the complex questions.



**Acknowledging the Stage to End Interview** – Make sure to align the questions which should not take a maximum of 45 minutes. However, it depends on the time selected by the interviewee on the agreed grounds.

**Integrating Impressions at the End** – On finishing the interview, do right own understandings, points, and insights collected, which have to be separately noted down from the main interviewee's responses.

**Recording the Interview** – Semi-structured interviews are challenging because the openness of questions can result in improvisations within the questions and so in the answers; thus, along with transcript generation, record the interview, as the missing information can be collected through the replay modes.

### 7.3 Appendix 3b- Semi-Structured Interview Questions

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

1. Do you use HR Analytics, in terms of recruitment and performance management processes?
2. In what sense is analytics valuable?
3. Kindly share the benefits you have experienced or perceived to be effective for HR analytics engagement in the HR processes.
4. Kindly share any difficulties or weaknesses you still seem to exist in the adequate utilisation of HR analytics, in terms of recruitment and performance management, as per your experience.
5. It is claimed that prescriptive analytics in human resources can improve the HR recruitment and performance processes, as the future illustration is highlighted. What is your opinion?
6. Are there any complexities you have experienced or in your opinion prescriptive analytics in HR appears to be challenging to use?
7. What are the success chances of this technique?
8. Also, if you can share any improvements reported in the HR strategies using HR analytics, addressing recruitment and performance strategies?