EVOLVING IMPACT OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT IN INDIA

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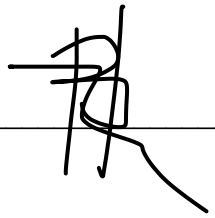

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Dedication

This dissertation is dedicated to the employees and organizations who have been in the process of implementing Artificial Intelligence in Human Resource Management. This would help them to understand various approaches which can be implemented during this evolving AI era and facilitate in building a sustainable culture and improve organization culture.

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In my doctoral journey, I would like to thank my mentor Prof. David Annan for the continuous support and guidance and constant encouragement I have received from him. Without you it would not be possible to complete this dissertation.

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Finally, I dedicate this dissertation to my 4-year-old daughter who have showed maturity when I have taken her precious time and devoted the same in completion of this dissertation.

ABSTRACT

EVOLVING IMPACT OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT

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Human Resource Management when integrated with Artificial Intelligence creates a different aura altogether. Studies show that Artificial Intelligence in Human Resource Management is creating impact in the workplace as well as work life as a result of which researchers have found out several insights which has resulted in more development. It would not be out of place to mention that researchers have also found out several gaps as well which needs to be further mitigated. The contribution of this study also aims to come up with a new theory which would explore the evolving impact of AI both at transactional and transformational aspects of Human Resource Management and study the level of intervention required to facilitate the process of impact.

This research study would help in identifying in which aspect of HRM Artificial Intelligence can replace how much part of human intervention which will keep the trust factor relevant in the organization culture resulting in maintaining a balance between the proper utilization of technological intervention and enhance the productivity in the organization.

KEYWORDS

AI(Artificial Intelligence), Human Resource Management, Performance Management, L&D (Learning and development, Machine Learning, Ethical Decision, Organization Culture, Talent Management, Strategic Leadership, HRM (Human Resource Management).

LIST OF ABBREVIATIONS

AI – Artificial Intelligence

L&D – Learning and Development

ML-Machine Learning

HR – Human Resource

HRM – Human Resource Management

ANN- Artificial Neural Network

MRI- Magnetic Resonance Imaging

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CHAPTER I:

INTRODUCTION

1.1 Introduction

The transformation in Human Resource Management (HRM) has accelerated in recent years due to the increasing prominence of technological enablers such as Artificial Intelligence (AI). Refining the HR processes with the power of AI can minimize the requirement of expert intervention, reveal hidden insights from the data, provide deep learning, and advance the mechanisms affecting HRM daily decisions (Chowdhury et al., 2023).

Using AI in HR practices, primarily for decision-making, is of interest to corporations, as it can impact organizational performance and its management. However, integrating the various HR practices affected by AI will need both practitioners and scholars to engage in open dialogue to attain better insight.

Artificial Intelligence (AI) integrated with HRM can generate highly valuable contributions through leveraging the connected environment's data, increasing the ease and flexibility of making real-time decisions, and applying learning strategies for growth and development opportunities to improve organizational performance (Palos-Sánchez et al., 2022). With its multifaceted impact, technologies such as AI may augment the HRM's historically varied and complex role further. Development and change are long-standing traditions in HRM. Recent theories suggest that AI has advanced at a quicker rate than in previous decades. Some argue that a positive trajectory in the development and application

of AI in the HRM setting can be anticipated. Computational power is accelerating. Vast datasets are becoming increasingly available for use.

Furthermore, there is a massive demand in HRM settings for speeding up decision-making processes. If technological affordances are available, then an increasing attraction and difficulty will occur. Failed attempts to harness the potential of AI could undermine the performance outcomes of HRM and result in usually reputational exposure. In this sense, one might see that the stage is set for a change in technological applications in the HRM domain. Intelligent computing or artificial intelligence (AI) is the foundation of transformative electronic-human (e-human) or digital interactions with rapidly developing global impact. AI maintains an enduring presence and has been evolving constantly for human progress. Today's AI enjoys a noted technological and enabling position in 'game-changing' transformations from industry 2.0 to 4.0. (Al-Shammari et al., 2024).

It possesses a versatile strength ranging from high-tech web, artificial neural networks, blockchain, Internet of Things (IoT), chatbots, to predictive and prescriptive analytics. The current breed of evolving AI can indeed enhance predictive and prescriptive analytics in a domain such as HR. The potential contributions of AI in HR pertain to people's practices—improving candidate experience, learning and development, augmented decision-making in recruiting, designing need-based training interventions, and psychological and behavioral contract fulfillment (Samtani, 2022).

The distinction is that HRM practices in most of the developed nations are adaptive as they were evolutionary in the grooming stages of the AI technology journey. The study see that AI is now also slowly creeping into the HR domain of the services sectors. In India,

India Inc. is truly embarking upon a previously unseen surge in AI-led or amplified HR strategy and functioning.

The goals of this study are to advance the field of AI in human resources and to determine whether India is developing its own unique narrative in AI-HR or leveraging existing research insights in this area. The importance of AI lies in the fact that the mathematical principles driving algorithms rely on data to streamline decision-making processes and improve business operations (Luca, Kleinberg & Mullainathan, 2016). This leads to an algorithm-driven business landscape where algorithms play a crucial role in various organizational functions, facilitating data analysis and decision-making with minimal human involvement (Prentice, 2016).

The impact of these technologies on organizations varies depending on the specific technology and the social interactions of individuals responding to it (Leonardi, 2012). As people engage with technology in diverse contexts, their behaviors and those of their organizations evolve accordingly (Orlikowski, 2015). It can be said that whenever organizations generate the access and facility to employees through AI and big data analytics, knowledge gets distributed throughout the organization making it more autonomous and a place of openness among employees. This results in an environment where employees get a learning environment building a new culture where there is a participative approach of performing tasks through AI driven platforms.

1.2 Research Problem

The incorporation of artificial intelligence (AI) into human resource management (HRM) represents one of the latest advancements and subjects of discussion within the

HRM field. Tremendous changes happen due to the synergy effect of digitalization as well as big data, as it brings a revolution in HR practices that enhance operational efficiency. With the increasing need for highly skilled employees, new trends are emerging that are transformed by AI technologies to produce better outcomes (Vrontis et al., 2023).

In continuation, these AI technologies are rapidly developing in terms of machine learning, predictive analytics, and cognitive capabilities. AI trends like robotic process automation, chatbots, natural language processing, and AI-enhanced social media are greatly improving or replacing earlier used systems. This replacement and innovation could lead to a 'wow' factor for the employees. These developments also have significant impacts not only for HRM but also for the employment scenario, ethics, and other moral values. Increases in AI competition is changing human capital use (Haefner et al., 2021).

The problems for managers and HR practitioners in the design of AI-VR-HRM job characteristics will also be discussed in the research proposal. Within the context of Human Resources, numerous questions about fairness arise. A significant concern is that any algorithm is likely to be influenced by historical data, potentially leading to biased models that favour white males. Such algorithms risk perpetuating the demographic makeup or lack thereof reflected in past data. A notable example of this issue is the biased outcomes produced by Amazon's hiring algorithm. This algorithm favoured male candidates due to historical hiring practices and performance scores, inadvertently discriminating against women by selecting attributes commonly associated with male candidates, such as avoiding "women's studies" courses, even though gender was not explicitly included in the dataset (Tambe et al., 2019).

The above research focuses on the biasness problem arising out of the processes where Artificial Intelligence is applied in the Human Resource Processes. This is where the role of HR Manager takes place who are skilled enough to understand the severity of the situation.

Mittal (2020), stated that, one of the most challenging aspects of implementing artificial intelligence in the workplace is its unconscious reshaping, particularly within Human Resources. AI struggles to make ethical and social decisions, which inherently require human judgment. Additionally, organizations face several challenges such as investment, technical issues, and implementation problems that complicate the integration of AI in HR. It is crucial for HR professionals to understand the evolving workplace dynamics, as roles involving repetitive tasks may face rejection from stakeholders. However, HR can drive a revolution through critical thinking and analysis, facilitating the acceptance of AI in performing more automatable and specialized tasks (Mittal, 2020).

One of the significant challenges in integrating AI into human resource management (HRM) is addressing decision-making that involves ethical dilemmas. Artificial neural networks (ANNs), a type of machine learning, consist of interconnected artificial "neurons" linked by virtual "synapses" that have assigned numerical weights. These weights are modified based on the system's experiences, enabling it to adapt to various inputs and learn progressively (Buzko et al., 2016). With sufficient training, deep learning algorithms can analyze or interpret intricate data with limited human oversight, as demonstrated in the realm of financial trading (Barro & Davenport, 2019).

The integration of specific AI technologies can present challenges for HRM concerning talent development and career progression aligned with organizational objectives. While it is logical for organizations to adopt AI to enhance cash flow and productivity, the deployment of such technologies may also lead to workforce reductions (World Economic Forum, 2020) and limit opportunities for career advancement. Another significant challenge is the need for upskilling existing resources to effectively utilize AI capabilities.

These challenges emphasize the dual effects of AI in HRM, showcasing the possible advantages in operational efficiency while also necessitating the effective management of workforce implications and skill development strategies. The swift adoption of artificial intelligence (AI) in human resource management (HRM) in India offers both opportunities and obstacles for organizations.

These challenges highlight the twofold impact of AI in HRM, illustrating the potential gains in operational efficiency while also requiring effective management of workforce implications and strategies for skill development. The rapid implementation of artificial intelligence (AI) in human resource management (HRM) within India presents both advantages and challenges for organizations.

1.3 Research Objective:

The primary objective of this research is to understand the factors that increase the impact of Artificial Intelligence in HRM. This study aims to create a comprehensive framework that balances the technological advancements offered by AI with the essential human elements such as ethical decision-making, cultural change, and employee

development. The research tries to explore the positive impact on AI implementation with regards to cultural transformation within organizations, highlighting how both employers and employees can adapt their mindsets to leverage AI effectively.

Moreover, this study examines the role of transformational leadership in promoting the effective integration of AI within HRM. By exploring how leaders can facilitate technological adoption and nurture an innovative culture, the research aims to uncover strategies that help organizations fully leverage the advantages of AI.

Additionally, the study will assess the significance of learning and development programs in preparing the workforce for AI-enhanced HR processes, ensuring that employees possess the necessary skills to thrive in a technologically advanced work environment.

Ultimately, this research aspires to provide insights and recommendations for organizations aiming to implement AI in HRM. It highlights the need for a balanced approach that combines technological efficiency with human-centered values. By achieving these objectives, the study intends to contribute to the growing body of knowledge on AI in HRM, offering practical solutions to enhance organizational performance and employee satisfaction through thoughtful AI technology implementation**.**

1.4 Significance of the Study:

Artificial Intelligence, Data Science, Business Intelligence, Machine Learning, and Predictive Analytics have gained significant acceptance within the HR departments of large organizations. The progress in technology, along with the creation of algorithms that utilize historical data to predict future employee behaviors, has prompted HR professionals to

adopt AI tools. In the past, companies relied on AI vendors to create customized models; however, as the use of AI models has grown, organizations are now beginning to build their own internal capabilities.

Technology can be a strong tool for organizations if used appropriately, and models created using empathetic tools can help in understanding human capital in a more efficient manner than the existing traditional models..

The study underscores that if AI-driven HR processes are reliable, stakeholders are flexible, and timeliness is maintained, AI implementation can be successful. Another key development is the replacement of human labor with AI in certain tasks, allowing employees to focus on generating value and becoming specialists. Machines, which often cost less and perform better than humans in specific roles, enable companies to diversify their investments.

According to the U.S. Department of Labor, the average employee tenure is 1.5 years, with attrition costs amounting to $2.1 billion and rehire costs being three times the no-fit costs. These issues often stem from a lack of insights into candidate profiles, alignment with company culture, and subjective evaluations of hard and soft skills. Artificial intelligence and machine learning offer solutions to these challenges, enhancing the efficiency and intelligence of HR practices. AI can seamlessly integrate with existing human capital management systems using open APIs, enabling the retrieval and analysis of relevant data with precision and user-friendly outputs (Richa, 2019).

To remain competitive amidst rapid disruptions, businesses must update and transform their models. Technological advancements are reshaping skill requirements and

competencies in workplaces, necessitating a shift in mindset across individuals, teams, and organizations. For example, the COVID-19 pandemic has hastened the shift toward digitalization, highlighting the significance of employee resilience and well-being in coping with extensive changes in job roles and technology (Trenerry et al., 2021).

Artificial Intelligence has increasingly been utilized in enterprise management decision-making, assisting managers in streamlining monotonous and repetitive tasks. It provides substantial database and analytical support, enabling managers to shift away from routine work and focus on more meaningful activities. According to an Accenture strategic report, intelligent systems can significantly alter the work content of managers in areas such as coordination and governance, problem-solving and collaboration, employee and community engagement, and strategy and innovation. AI helps managers speed up daily repetitive tasks and provides analytical support, enabling them to focus on more meaningful work (Jia et al., 2018).

Some of the benefits of an adoption of technology, adaptability to technological changes, well-being, and collaboration for the HR are.

Enhancing HR Efficiency: Grasping how AI can optimize HR processes will enable organizations to boost efficiency, lessen administrative workloads, and utilize resources more effectively, ultimately increasing overall productivity.

Improving Decision-Making: Data-driven insights from AI can assist HR professionals in making well-informed decisions about talent acquisition, employee development, and performance management. Investigating this impact can demonstrate how AI contributes to improving strategic HR decision-making..

Addressing Workforce Dynamics: As AI technologies reshape job roles and responsibilities, it is crucial to examine their effects on workforce dynamics, including employee engagement, satisfaction, and retention. This research can help organizations adapt to changing employee expectations and needs.

Promoting Ethical AI Use: Examining the ethical considerations of AI in HRM will help establish guidelines and best practices for the responsible use of AI, ensuring that organizations address biases and safeguard employee privacy.

Supporting Organizational Change: The integration of AI into HRM represents a significant organizational change. Research in this area can provide insights into effective change management strategies that facilitate smooth transitions and foster acceptance among employees.

1.5 Research Questions and Hypotheses

The aim of the research is to determine the factors that enhance the influence of AI in HRM. It seeks to establish a balance between technological elements and human aspects, such as decision-making and ethical considerations in HRM.

- What are the factors which will contribute in accelerating the impact of AI in HRM domain throughout organizations?
- How does leadership support affect the acceleration of AI adoption in HRM?
- How do organizational culture and structure influence the implementation of AI in HRM practices?

Research Hypothesis

H1: There is a positive relationship between advanced technological infrastructure and the accelerated adoption of AI in HRM

H2: Strong leadership support positively influences the pace at which AI is adopted in HRM.

H3: A supportive organizational culture significantly enhances the implementation of AI technologies in HRM practices.

1.6 Summary

Chapter one examines the transformative impact of AI on Human Resource Management. It starts with a summary of AI's development since the 1950s, emphasizing its present uses in enhancing business processes and decision-making through data-driven algorithms. The chapter highlights how AI promotes a culture of knowledge sharing and collaboration, affecting both organizational efficiency and employee conduct.

AI tools can also be nuanced to analyze employees' sentiment to understand the current organizational climate and hence develop strategies to improve the employee experience. It is argued that given the pace at which technologies in the HRM space are advancing, their impact on employees, the labor market, and employment relations could be significant.

It is also critically important for HR professionals to understand these technologies as part of their everyday work to leverage their full potential. Despite all these advantages, especially machine learning algorithms-driven hiring and other HR process tools might still carry biases as they learn from historical data, which is known to be biased due to our

implicit bias or due to technological limitations. Critics of HRM AI have also warned about possible discrimination, data privacy challenges, and lack of interpretability in using AI algorithms (Kar & Kushwaha, 2023).

The research problem addresses the biases inherent in AI applications, particularly in hiring processes, and the critical role of HR managers in mitigating these biases. It also identifies challenges in AI implementation, such as ethical decision-making, investment issues, and the need for adaptability in HR practices.

The main research goal is to identify the factors that amplify AI's influence in HRM, striking a balance between technological progress and human aspects such as ethics and cultural transformation. The study intends to create a framework for successful AI integration, highlighting the significance of transformative leadership and learning and development initiatives.

The research questions aim to identify the factors that expedite AI's impact in HRM, investigate the connection between AI implementation and cultural change, and assess the role of leadership and learning in this setting.

In summary, the chapter sets the stage for understanding AI's potential in HRM, emphasizing a balanced approach that integrates technological efficiency with human-centric values to enhance organizational performance and employee satisfaction. The next chapter two evaluates some of the theoretical and conceptual frameworks associated with the implementation of AIs in Human Resource Management (HRM) in an organization.

CHAPTER II:

REVIEW OF LITERATURE

2.1 Introduction

Artificial Intelligence is emerging as a game-changer in multiple industries, profoundly influencing Human Resource Management. The incorporation of AI into HR is transforming conventional HR practices, providing cutting-edge solutions that enhance efficiency, precision, and decision-making. This technology is applied in various HR areas, such as recruitment, performance evaluation, learning and development, and employee engagement, to name a few. Nonetheless, the implementation of AI in Human Resource Management presents notable challenges, especially related to ethical issues, biases, and the need to strike a balance between automation and the human element

The potential of AI in HRM is extensive, offering the promise of enhanced data-driven decision-making, increased operational efficiency, and valuable strategic insights. For example, AI algorithms can evaluate intricate performance data, forecast future outcomes, and create tailored training programs, thus assisting HR managers in making well-informed choices (Qamar et al., 2021). Additionally, AI-driven tools like chatbots and automated screening systems streamline the recruitment process, providing quicker and more impartial evaluations of candidates (Albert, 2019). However, despite these benefits, the implementation of AI in HRM also comes with its challenges.

One of the most pressing issues is the inherent bias in AI systems. These biases often stem from historical data used to train AI algorithms, which may reflect past prejudices and inequalities. As a result, AI can inadvertently perpetuate discrimination,

particularly in recruitment and performance evaluation processes (Tambe et al., 2019). The infamous case of Amazon's hiring algorithm, which discriminated against women, underscores the potential risks of biased AI applications in HRM (Tambe et al., 2019).

Furthermore, the ethical implications of AI in Human Resource Management go beyond issues of bias. Although AI systems can manage large volumes of data and perform intricate tasks, they frequently lack the ethical and social sensitivities necessary for HR decision-making. This shortcoming calls for a balanced strategy in which AI assists rather than substitutes human judgment, especially in situations that demand empathy and ethical considerations (Mittal, 2020).

The changing dynamics of AI in Human Resource Management necessitate a thorough understanding of its effects on different HR functions and the approaches needed for effective integration. This literature review seeks to investigate the diverse impacts of AI on HRM, focusing on its advantages, challenges, and the essential elements for successful implementation. The study looks at various theories such as econmic theory in HRM, Behaviour theory in HRM, theory of determinism and Innovation difussion theory.

2.2 Theoretical Framework

Given the novelty and importance of understanding AI in HRM practices, this paper attempts to comprehend the area by using two broad theoretical orientations, namely, behavioral theories and economic theories. Behavioral theories structure the association between AI and human resource management in terms of elucidating the influence of AI on employees' behavior as well as the dynamics of the organizations. These theories

advocate for the underlying dynamics of communication and collaboration that impact human resource management practices and otherwise (Prikshat et al., 2023).

Economic theories examine the cost-benefit perspective of integrating AI technology into the management of human resources. From this viewpoint, these theories focus on AI as an 'input' or 'engine' in shaping HRM practices that reduce the cost of management and promote the production and productivity of the organizations. Both theories have their own interests and nuances and provide significant meaning to the role of AI in HRM (Vrontis et al., 2023).

This paper assesses the significant contributions and limitations of both theoretical frameworks in elucidating the changing role of AI in HRM practices. Relying on recent developments in the field, this study aims to assist prospective researchers interested in exploring the integration of AI within HRM systems. By recognizing the advantages and disadvantages of these approaches in clarifying the expanding significance of AI in HRM, organizations can achieve a deeper, long-term perspective that informs their decisions regarding the intentional role of AI-driven practices in influencing employees and HR processes.

2.2.1 Behaviour Theory of HRM

The Behavior Theory of Human Resource Management (HRM) emphasizes the significance of understanding and managing employee behavior to enhance organizational performance (Skinner, 1953). This theory is rooted in behavioral psychology and focuses on the actions and interactions of individuals within the workplace. The human resources management (HRM) field has examined the impact of artificial intelligence (AI) from

several behavioral perspectives that involve discussions about employee attitudes, motivation, and engagement. For several HR applications, theoretical considerations of employee satisfaction and motivation closely entangle individual and work-related behavioral dimensions. Several HRM tasks and responsibilities require communication and relationships, impacting team building, coordination, and collaboration at work (Del et al., 2023).

Psychological and behavioral theories have explored the various aspects of AI in HR, including stress, undue affection, the preference for empathic human-machine communication, and the trust and acceptance of AI-driven tools and their outcomes. Following key arguments of these theories, AI can increase employee trust since decisions are deemed fairer. Numerous previous studies have demonstrated that advanced decision-support tools in the recruitment process positively influence employees' desire to apply and be selected for job applications (Prikshat et al., 2023).

Other HR application domains, such as the extent to which AI can enhance effective communication, build trust, and foster collaboration among team members at the individual and team levels, have also attracted scholarly interest. It is finally expected that if AI increases the quality of HRM tasks, it might alter how employees perceive and experience their jobs, leading to intentions to leave current work settings versus those areas attracting high support or desired job performance, such as recruitment attraction. In this research, AI-driven assignments of increasing complexity could have been completed either individually or in work representations with some collaboration. Companies apply AI solutions to facilitate the match and foster collaboration since team ability and effort have

been observed to positively impact the performance of individuals and teams. At employed levels, cognitive AI increases individuals' trust and collaboration, yet cognitive deviation (Ferrario et al., 2020).

AI appears to reduce trust and firm retention. AI also reduces the impact on agents' performance in work partnerships due to flawed gadget dependence and consequently reduces collaboration. In management science, neuromarketing and cognitive theories propose a 'human condition' AI effect: diminished human accountability leads to less effort in risky decisions.

Similarly, in evolutionary theory, dependency on AI in making complex decisions shapes intrinsic human preferences and potential behaviors. In view of the search for understanding an evolving topic and its potential effect, the nature, levels, and purposes of these collaborative dynamics have yet to be unraveled (Chowdhury et al., 2022). The theory highlights critical importance to HRM and ensures continuos imporvement and operational success.

Reinforcement and Behavior Modification:

This theory suggests that behavior can be shaped through reinforcement. Positive reinforcement (rewards) encourages desirable behaviors, while negative reinforcement (removal of unpleasant stimuli) can also promote desired actions. HRM practices, such as performance appraisals and reward systems, are designed to reinforce behaviors that align with organizational goals.

Role of Leadership:

Effective leadership is crucial in shaping employee behavior. Leaders who understand behavioral principles can influence their teams by modeling desired behaviors, providing feedback, and creating an environment that fosters positive interactions.

Group Dynamics:

The Behavior Theory recognizes the importance of group behavior and dynamics in the workplace. Understanding how individuals behave in groups can help HR professionals design teams, manage conflicts, and enhance collaboration.

Training and Development:

Training programs based on behavioral principles focus on skill development and behavior change. These programs often incorporate techniques such as role-playing, simulations, and feedback mechanisms to encourage learning and behavioral adjustments.

Organizational Culture:

The theory emphasizes the impact of organizational culture on employee behavior. A robust culture that reflects the organization's values can steer employees' actions and decision-making processes.

Implications for HRM

Recruitment and Selection: Understanding the behavior of candidates can improve hiring processes. Behavioral interviews, for instance, assess past behaviors as predictors of future performance.

Performance Management: HRM practices can be designed to focus on observable behaviors rather than just outcomes, allowing for more accurate assessments of employee performance.

Conflict Resolution: By understanding behavioral patterns, HR professionals can address conflicts more effectively, fostering a healthier work environment.

Employee Engagement: Involving employees through recognition, feedback, and development opportunities is consistent with the tenets of Behavior Theory, resulting in increased job satisfaction and retention. The Behavior Theory of HRM underscores the importance of comprehending and managing employee behavior for achieving organizational success. By implementing behavioral principles across different HRM practices—such as recruitment, training, performance management, and cultivating organizational culture—organizations can boost employee motivation, engagement, and overall performance. This theory offers a framework for HR professionals to design strategies that align employee behavior with the goals of the organization.

2.2.2 Economic Theory in HRM:

This theory emphasizes the role of economic factors in influencing HR decisions, focusing on efficiency, productivity, and the allocation of resources, Becker (1964). Economic theories are concerned with the financial facts and fallouts of any investment pattern or HR tool being applied in the new and modern digital workplace. AI in general and HR activities in particular have identified benefits in the form of lower costs, enhanced speed, and fewer errors. All such factors can be converted into financial terms.

Monetary values of such benefits can say a lot about the financial worth of AI in HR, provided it is properly converted into the language of the wealth maximization objective of an enterprise. The challenge of finding what AI tools involved in HR functions are capable of contributing to make financial advantages in the form of worth investing is

a very challenging task, as variables involved in investment can be sustainable in the long run, but initially, there can be huge costs to add additional technological features. Keeping all these facts in mind, three economic theories are discussed from different domains as explained hereunder (Johnson et al., 2020)

The fundamental principles involve reducing operational costs and optimizing systems. In the labor market, AI can enhance HR processes, resulting in decreased operational costs. The savings achieved in HR operations can serve as an indicator of the return on investment. AI can bring efficiency, automate roles that were supported by people earlier, and people working in other roles are found to be productive, i.e., optimization of HR operations, which can lead to lower HR operation expenses.

AI can increase employee capabilities, which may decrease the number of timely interventions from HR, as employee matters are handled at an individual level in every organization. AI tools for recruitment and talent management assist in a way that the best-skilled employee-job fit and work assigned complement the skill sets of the employee. Employee rightsizing can be achieved appropriately (Chowdhury et al.2023).

AI tools can boost team-building exercises, allowing the company to avoid overstaffing as well. This means an organization can do with fewer recruitment processes, is more efficient, and can be less stressed about the right long-term investments if the business plans have confirmed that the right employees are in the right roles. All this frees up HR time to focus on other high-yield activities (Aldoseri et al., 2023). The theory draws key concepts such as the market dynamics and human capital theory.

Labor Market Dynamics:

Economic theory examines how labor supply and demand affect wages, employment levels, and recruitment strategies. Organizations must understand labor market conditions to attract and retain talent effectively.

Human Capital Theory:

This theory posits that employees are valuable assets whose skills and knowledge contribute to organizational performance. Investments in employee training and development are seen as ways to enhance human capital, leading to higher productivity and competitive advantage.

Cost-Benefit Analysis:

Economic theory encourages HR professionals to conduct cost-benefit analyses when making decisions about hiring, training, and compensation. This approach helps organizations allocate resources efficiently and maximize returns on investment in human capital.

Incentive Structures:

Economic principles guide the creation of compensation and incentive frameworks. Organizations frequently implement performance-based pay, bonuses, and various financial incentives to encourage employees and align their interests with the objectives of the organization.

Game Theory:

Game theory can be utilized in HRM to examine the strategic dynamics between employers and employees. It helps in understanding negotiation processes, conflict resolution, and the dynamics of cooperation within the workplace.

Efficiency Wage Theory:

This theory suggests that paying employees above-market wages can lead to increased productivity, reduced turnover, and enhanced loyalty. Higher wages can attract better talent and encourage employees to work harder to avoid losing their jobs.

Understanding labor market dynamics allows HR professionals to develop effective recruitment strategies that align with economic conditions, ensuring that the organization can attract qualified candidates.

Investing in employee development is justified through human capital theory, which emphasizes that skilled workers contribute more significantly to organizational success. HRM practices should focus on continuous learning opportunities.

Economic theory supports the need for competitive compensation packages that reflect market conditions and motivate employees. Organizations must balance cost control with the need to attract and retain talent.

By leveraging economic principles, organizations can create performance management systems that align employee objectives with the goals of the organization, guaranteeing that employees are compensated for their contributions. Economic theory aids in workforce planning by analyzing trends in labor supply and demand, enabling organizations to anticipate future staffing needs and manage talent effectively.

Economic Theory provides valuable framework for understanding the complexities of human resource management. By applying economic principles, organizations can make informed decisions that enhance workforce productivity, optimize resource allocation, and ultimately drive organizational success. This approach encourages a strategic view of

HRM, where human capital is recognized as a critical component of economic performance.

2.2.3 Technological determinism (TD) and innovation diffusion theory (IDT)

Technological determinism (TD) and innovation diffusion theory (IDT) discuss complex relationships between societies and technologies in different sectors of human activity. The classical formulation of TD assumes that societal forces and developments are predominantly determined by the development and evolution of technology. Especially, technological advancement can explain societal change. TD also presents different qualifications that specify in which kind of society technology tends to be the force that provokes societal development. IDTs are based on the assumption that innovations, which often have the nature of technologies, spread through a society. Innovations arrive from outside the society, are filtered by a society or sub-society, and finally ensconce and possibly transform the societal or sub-societal unit.

Both TD and IDT theories have found a supportive climate in the management and especially HRM literature. For the current time – given the relatively fast development and deployment of new technologies that fundamentally change organizations like the steam engine in industries and Fordism on a broader social scale, digitization in offices, robots on factory floors, and now advanced AI – they provide a basis on which to conceptually approach exploring the impact of AI on HRM.

Hence, AI in HRM provides an interesting empirical case to show that although TD and IDT have their limitations, they can help to understand changes in production that

inundate society. This understanding helps to question and develop the relationships between society and technology as highlighted by the TD and IDT theoretical work.

Although the theories can have mechanical implications, too, they have sociological weight as well. There are several interpretations of Technological Determinism, but in general, it is based on several common assumptions, such as technology having an autonomous character, technology being the main driver of change in society, technology developing in a way that no one can anticipate, technology needing to be assessed and evaluated in its own context, and lastly, innovation being the only way to solve problems. This perspective stands out against the two other theories, such as the Social Construction of Technology, which emphasizes technological artifacts, and Social Stratification of Technology, which focuses on the social processes of technology. The theoretical depth of Technological Determinism is further explored below to understand the view of this theory in human resource management (Hallström, 2022).

In terms of its theory, Technological Determinism holds the belief that technology shapes social structure, cultural conditions, and human behavior. Technology is seen to bring changes to society in a deterministic manner. This perspective holds the position that technology has the authority to shape the values and norms to be followed by society. Technological artifacts have an ideology embedded in them, which then embeds a similar value within the people.

Technology not only automates work but also transforms organizational goals and values. In HRM, job advertisements for the position of a computer operator sometimes do not emphasize data inputting skills, even though this is the primary function of that office.

Instead, they emphasize interpersonal skills, creativity, the ability to work independently, and the achievement of work-related goals based on an employee's discretion. This is because technology has changed the role and responsibility of an employee. It is easier to find employees with data inputting skills than those who can work independently and can solve problems. People, therefore, need the right technology for HRM, in terms of automation and digitization, to conform to the desired goals (Kraus et al., 2023).

The Innovation Diffusion Theory (IDT) describes the process through which innovative ideas, practices, or technologies spread through social systems and, in turn, subsequently end up being adopted by that system. This social system of diffusing innovation could be an individual, a company, or even a community. The theory addresses the question of why adoption rates of new innovations vary across different adopters in a system over a certain period.

The contribution of IDT is twofold. For one, the theory provides an overview of what factors play a role in influencing the diffusion of an innovation. In essence, it explains what can facilitate or hinder the adoption of a certain innovation. Furthermore, it provides academics and practitioners with a framework on how adoption rates of an innovation are shaped over time. This is of specific interest as it helps us understand what the current stage of diffusion can tell us about future developments (Buskens, 2020).

From a practical perspective, the theory helps to anticipate future changes in demands and movements from an operational, strategic, or public policy perspective. Understanding the dynamics of how innovations are taken up in a system sharpens our insights and helps us take those factors into account, especially upon their introduction. In the coming parts,

we will first discuss the theoretical foundations of IDT. Throughout this part, we will draw examples from various fields where diffusion processes are seen as relevant to identify. Subsequently, we provide an overview of the actual process of innovation diffusion, as described by IDT. Here, we will specifically reflect on how HRM doctoral practices have been studied from a perspective of diffusion.

Finally, we will briefly discuss two particular adopter categories that play an important role in shaping the diffusion landscape of an innovation: the early adopters and the opinion leaders. This will form the basis for the subsequent section, in which we will introduce our context of interest (Ejaz et al.2020)

2.3 Conceptual Framework

2.3.1 The Evolution of Artificial Intelligence in HRM

Artificial Intelligence has drastically changed Human Resource Management practices, reshaping the ways organizations recruit, manage, and cultivate talent. The development of AI in HRM can be traced back to the early use of expert systems and decision support systems in the 1980s, which streamlined routine activities such as payroll processing and employee record management (Mariana et al., 2019). These foundational systems paved the way for more advanced AI applications in the following decades.

Throughout the late 20th and early 21st centuries, progress in machine learning algorithms and natural language processing sped up the incorporation of Artificial Intelligence into HRM. AI-driven technologies started to enhance a variety of HR functions, including recruitment, talent management, employee engagement, and performance assessment (Tristram & Albert, 2019). For example, AI-enhanced recruitment

platforms were developed that could evaluate resumes, forecast candidate success, and automate preliminary screening processes more effectively than conventional methods (Sangita, 2019).

The proliferation of AI in HRM has been bolstered by an expanding array of research and development, as indicated by the increasing number of publications and varied applications within the field (Mariana et al., 2019). Researchers have investigated AI's ability to improve decision-making processes, minimize biases in candidate selection, and enhance overall organizational effectiveness through insights derived from data (Jinu & Mary, 2019).

Moreover, AI technologies have enabled HR departments to adopt proactive, predictive approaches to workforce management. AI-based analytics tools have the capability to process vast quantities of data to predict future talent requirements, pinpoint skill deficiencies, and create customized training programs for employees (Wang et al., 2021). This predictive capability not only streamlines HR operations but also enhances employee satisfaction and retention by aligning organizational goals with individual career development.

While Artificial Intelligence holds promise for transforming HRM, its integration faces significant challenges and ethical considerations. Primary concerns encompass issues such as data privacy, algorithmic bias, and the ethical implications of AI in decision-making processes (Hunkenschroer & Luetge, 2022). It is imperative to prioritize fairness and transparency in AI algorithms to minimize biases and uphold ethical standards within HR practices.

Looking ahead, the future of Artificial Intelligence in HRM is poised for ongoing innovation and progress. As AI technologies advance, HR professionals must adapt by developing new skills and competencies to fully leverage the capabilities of AI (Tristram, 2019). Furthermore, continuous research and development will be essential for tackling emerging challenges and enhancing AI applications to fulfill the changing demands of organizations and their workforce.

In conclusion, the advancement of Artificial Intelligence in HRM signifies a transformative move toward data-driven, predictive HR practices designed to optimize organizational performance and improve employee experiences. By adopting AI technologies in a responsible and ethical way, organizations can uncover new opportunities for growth, innovation, and strategic decision-making in human resource management.

2.3.2 Strategic and Financial Impacts AIs in HRM

Artificial intelligence in Human Resource Management offers the potential to drive substantial strategic and financial benefits for organizations. The incorporation of Artificial Intelligence technologies into HR practices can create a more efficient and effective HRM system, fostering organizational growth and profitability.

Strategically, AI enhances HRM by improving decision-making processes and enabling more personalized employee experiences. AI-driven tools have the ability to examine extensive amounts of data to identify patterns and trends that may be overlooked by human analysts. This functionality enables HR managers to make more educated choices regarding recruitment, employee development, and retention strategies. For example, AI can enhance the recruitment process by evaluating resumes and performing

initial interviews, which saves time and minimizes biases in selecting candidates (Kaur, 2023).

Additionally, AI systems can predict employee turnover and identify factors contributing to employee dissatisfaction, allowing HR managers to address these issues proactively and improve retention rates (Albert, 2019).

AI also helps align HRM with organizational goals. By automating routine tasks, AI enables HR professionals to focus on strategic activities that add value to the organization. The transition from administrative to strategic roles strengthens the HR department's ability to support organizational goals. For instance, AI-enabled performance management systems offer real-time feedback and tailored training suggestions, promoting a culture of ongoing improvement and development (Murugesan et al., 2023). This alignment helps ensure that the workforce is flexible, skilled, and prepared to meet the changing demands of the business landscape.

Financially, integrating AI into HRM can yield significant cost savings and productivity gains. By automating repetitive tasks like payroll processing, benefits administration, and compliance reporting, AI reduces reliance on manual labor, thereby lowering labor costs. Additionally, AI enhances the accuracy and efficiency of these operations, reducing errors and the expenses associated with rectifying them. For instance, Google’s use of AI to predict energy usage and optimize equipment control has led to a 41% reduction in energy consumption, translating into significant financial savings (Dhanabalan & Sathish, 2018).

AI also contributes to financial performance by improving employee productivity and engagement. Personalized training programs and career development plans, informed by AI analytics, ensure that employees are continuously developing their skills and capabilities. This targeted approach to learning and development not only enhances individual performance but also contributes to overall organizational productivity. Additionally, AI-powered employee engagement tools, such as chatbots and virtual assistants, can provide immediate support and feedback, fostering a more engaged and motivated workforce (Siocon, 2023).

Moreover, the strategic use of Artificial Intelligence in HRM can enhance an organization’s competitive edge. Organizations that successfully leverage AI technologies are in a stronger position to attract and retain high-quality talent, as they can provide more tailored and responsive HR services. AI-powered diversity and inclusion analytics can highlight areas needing improvement and aid in developing more inclusive workplaces, which enhances the organization's reputation and attractiveness to a diverse range of candidates (Black & van Esch, 2020).

Nonetheless, to fully achieve these strategic and financial advantages, it is crucial to consider the ethical and social implications of AI in HRM. Concerns related to bias, data privacy, and the potential for job displacement need to be managed with care. As noted by Wilfred (2018) and Mojsilovic (2019), "Ensuring transparency in AI decision-making processes and maintaining human oversight in critical HR functions are essential to building trust and acceptance among employees."

Companies should prioritize enhancing the skills of their workforce to effectively collaborate with AI technologies, promoting an environment where humans and AI systems can work together synergistically (Raeburn, 2023).

In conclusion, the strategic and financial impacts of AI in HRM are profound. By enhancing decision-making, aligning HRM with organizational goals, reducing costs, and improving productivity and engagement, AI has the potential to transform HRM into a more strategic and value-adding function. However, to fully harness these benefits, organizations must address ethical concerns and invest in developing the necessary skills and infrastructure to support AI integration in HRM.

2.3.3 Learning and Development

Learning and development constitute a vital area within HRM where the growing influence of Artificial Intelligence is especially pronounced. The convergence of AI with L&D offers both advantages and challenges, requiring a thorough understanding of how these technologies can be incorporated to improve employee development and organizational effectiveness.

AI-driven learning and development tools offer unprecedented capabilities for personalizing employee training and development programs. These tools have the ability to process vast quantities of data to tailor educational content to suit individual learning styles, preferences, and career aspirations. For instance, AI systems can monitor employee performance, detect skill deficiencies, and suggest particular training modules or career development options, thereby making the learning experience both efficient and effective.

As Jarrahi (2018) states, "AI systems can track employee performance, identify skill gaps, and recommend specific training modules or career development paths."

One fundamental advantage of AI in L&D is its ability to provide real-time feedback and continuous learning opportunities. Unlike traditional training programs that might occur annually or semi-annually, AI-powered platforms can facilitate ongoing development. Employees can engage with interactive content, simulations, and gamified learning experiences that are continuously updated based on their progress and the evolving needs of the business. This shift from static to dynamic learning environments helps maintain employee engagement and fosters a culture of continuous improvement (Votto et al., 2021).

Additionally, AI has the capacity to significantly enhance the accessibility and inclusivity of learning programs. By utilizing natural language processing and machine learning algorithms, AI systems can translate content into various languages, accommodate different learning disabilities, and provide personalized learning experiences that address the diverse needs of employees.

This inclusivity guarantees that every employee, regardless of their background or abilities, has the same opportunities to enhance their skills and progress in their careers (Samarasinghe & Medis, 2020). Another significant effect of AI on learning and development is its capacity to anticipate future learning requirements based on organizational patterns and individual career paths. AI systems can examine data from various sources, such as performance evaluations, employee feedback, and market trends, to project the skills and competencies that will be necessary in the future. This predictive

capability allows HR managers to proactively design training programs that address these future needs, ensuring that the workforce is well-prepared for upcoming challenges and opportunities (Kaur, 2023).

Nonetheless, the incorporation of AI into learning and development comes with its own set of challenges. A significant concern is the risk of bias in AI algorithms, which may reinforce existing inequalities and impede the creation of a genuinely inclusive learning environment. It is essential for HR managers to comprehend the data and algorithms that underlie AI systems and to adopt strategies that promote fairness and transparency in AI-enhanced learning programs. As noted by Qamar et al., (2021), this involves "regularly auditing AI systems for biases, ensuring diverse data inputs, and involving a diverse group of stakeholders in the design and implementation of AI-driven L&D initiatives."

Moreover, although AI can improve the efficiency and effectiveness of learning and development programs, it cannot fully substitute the human element that is frequently essential for making ethical and nuanced decisions regarding employee growth. Human resource managers need to strike a balance between utilizing AI and applying their own expertise and judgment to foster learning environments that are both technologically sophisticated and fundamentally human.This balance is particularly important when addressing sensitive issues such as employee well-being, ethical dilemmas, and the development of soft skills, which AI systems may not fully grasp (Raeburn, 2023).

In conclusion, the evolving impact of AI on learning and development within HRM is profound. AI offers powerful tools for personalizing learning experiences, providing real-time feedback, enhancing accessibility, predicting future learning needs, and ensuring

continuous improvement. However, to fully realize these benefits, HR managers must address challenges related to bias, transparency, and the need for human oversight. By integrating AI thoughtfully and ethically into L&D programs, organizations can harness its potential to foster a more skilled, engaged, and inclusive workforce.

Incorporating AI into training programs enables employees to effectively utilize AI tools, algorithms, and frameworks, equipping them to tackle complex challenges and remain competitive in their fields. AI-driven training can enhance efficiency and productivity by automating repetitive tasks, allowing employees to concentrate on more strategic and value-driven initiatives. This not only simplifies work processes but also empowers employees to harness their creativity and problem-solving abilities. Additionally, the research can reveal the best approaches and strategies for incorporating AI into training and development processes, taking into account aspects such as content curation, tailored learning experiences, and adaptive feedback systems

Gaining insights into the most effective strategies for AI integration can enable organizations to develop comprehensive training programs tailored to individual learning needs, resulting in improved skill acquisition and performance outcomes. It was noted that personalized learning experiences, immersive simulations, real-time feedback, and on-demand support are particularly advantageous. Furthermore, the study highlighted the significance of leadership commitment, strategic alignment, clear goals, data quality, strong infrastructure, change management, collaboration, user experience, and ongoing evaluation as essential elements for successful AI integration. These factors were

recognized as critical success factors in implementing AI in training and development (Gupta and Garg, 2023).

According to the analysis by Licy et al. (2023), technology-based training methods such as e-learning and virtual simulations are increasingly important for promoting employee development. These approaches provide flexibility and accessibility, enabling employees to learn at their own pace and on their own schedule. Furthermore, incorporating multimedia and interactive features in e-learning modules boosts engagement and information retention. In contrast, virtual simulations offer immersive and hands-on learning experiences, which are especially advantageous for skill-based training.

Nonetheless, challenges like technical difficulties and the risk of disengagement in virtual settings should not be overlooked. The success of these methods largely depends on the quality of the content and the learner's motivation (Licy et al., 2023).

2.3.4 Recruitment and Talent Management

The integration of AI into recruitment and talent management signifies a major change in human resource management, greatly improving efficiency, objectivity, and scalability. The importance of AI in these areas is growing, especially given the rising amounts of applicant data and the necessity for more advanced talent management strategies.

The main application of AI in recruitment is the automation of screening resume. Traditional resume screening is a time-consuming and error-prone process, often limited by human biases and subjectivity. AI, utilizing machine learning algorithms, is capable of processing large volumes of resumes at remarkable speeds, pinpointing the most qualified

candidates according to established criteria. This process saves time and more objective assessment of candidates. For instance, AI can sift through resumes to detect relevant skills, experiences, and qualifications without being manipulated by determinants such as the candidate's name, gender, or ethnicity, thereby promoting fairness and diversity in hiring (Albert, 2019).

AI-powered chatbots have also revolutionized the initial stages of recruitment. These tools can interact with prospective candidates, address their questions, arrange interviews, and even perform initial assessments through conversational interfaces. Chatbots offer a more responsive and personalized experience for candidates, which is essential for attracting top talent. They guarantee that candidates receive timely updates and feedback, thereby improving the overall candidate experience and decreasing dropout rates during the recruitment process. As noted by Kaur (2023), "they enhance the overall candidate experience and reduce dropout rates during the recruitment process."

Video interviews augmented with AI capabilities represent another significant advancement. AI has the capability to analyze video interviews, evaluating candidates verbal and non-verbal cues, including tone of voice, facial expressions, and body language, to determine their fit for a particular position

These evaluations rely on data-driven insights instead of subjective human opinions, which can improve the accuracy of candidate assessments. Additionally, AI can facilitate consistent interview processes, minimizing the chances of bias and increasing the reliability of the selection procedure. As noted by Black and van Esch (2020), "AI can

ensure that interviews are conducted consistently, reducing the likelihood of bias and enhancing the reliability of the selection process."

AI's predictive analytics capabilities play a critical role in talent management by forecasting employee performance and turnover. By examining past data and recognizing trends, AI can forecast which candidates are expected to thrive in particular positions and identify those who may be at risk of departing from the organization. This information enables HR managers to make proactive decisions, such as implementing targeted retention strategies or offering tailored development programs to high-potential employees. These insights contribute to more strategic talent management, aligning HR practices with organizational goals and improving overall workforce productivity (Wilfred, 2018).

The implementation of AI in recruitment and talent management raises important moral considerations. While AI can enhance objectivity, it is not entirely free from bias. The algorithms employed in AI systems are trained on historical data that can reflect existing biases and inequalities. For instance, if an organization's past hiring data reveals a bias toward specific demographics, the AI system might unintentionally reinforce these biases. Therefore, it is essential to continuously monitor and refine AI algorithms to ensure they promote diversity and inclusion (Hunkenschroer & Luetge, 2022).

Furthermore, transparency and explainability of AI decisions are essential to building trust among stakeholders. Candidates and employees need to understand how AI-driven decisions are made, and organizations must be able to justify these decisions. Providing clear explanations and maintaining transparency about AI processes can mitigate

concerns about fairness and ethical implications, fostering a more positive perception of AI in HRM (Murugesan et al., 2023).

Despite these obstacles, the advantages of AI in recruitment and talent management are significant. By automating repetitive tasks, AI allows HR professionals to concentrate on more strategic endeavors, such as fostering relationships with candidates and creating thorough talent strategies. Furthermore, AI facilitates data-driven decision-making, offering HR managers greater insights into their workforce and improving the efficacy of HR practices. As noted by Raeburn (2023), AI "provides HR managers with deeper insights into their workforce and enhances the effectiveness of HR practices."

Successfully fusing of AI in recruitment and talent management requires a balanced approach that combines technological advancements with human judgment and empathy. While AI can handle data processing and predictive analytics, human HR professionals are essential for making nuanced decisions, understanding the unique contexts of each candidate, and addressing ethical dilemmas. This symbiotic relationship between AI and human intelligence can lead to more effective and ethical HR practices, ultimately benefiting both organizations and their employees (Siocon, 2023).

In summary, AI holds the promise of transforming recruitment and talent management by improving efficiency, objectivity, and strategic alignment. Nevertheless, it is crucial to tackle ethical issues and maintain transparency to foster trust and acceptance among stakeholders. By combining the advantages of AI with human judgment, organizations can attain more effective and fair HR results, paving the way for a more innovative and inclusive future in human resource management.

AI-powered performance management tools are effective in forecasting the performance of top employees and detecting those who may be at risk of leaving. By reducing biases and providing prompt feedback to both supervisors and employees, these tools improve the performance evaluation process. In the realm of compensation management, AI-driven software promotes fairness by utilizing vast amounts of data for salary assessments. HR professionals gain from streamlined salary reviews made possible through AI algorithms. These tools facilitate pay decisions by comparing salaries against market rates for specific skills and adjusting pay scales according to employee location. By leveraging the capabilities of artificial intelligence in these HR areas, organizations can enhance talent management processes, encourage employee development, and promote organizational success in a highly competitive environment (Neha and Arora, 2023).

Harnessing the above process of AI into the system leads to many fair practices in an organization and results in parity which give rise to employee satisfaction and maintain best industry practice.

2.3.5 Ethical and Legal Considerations in AI-HR Integration

Artificial intelligence has been instrumental in enabling large-scale deployment and adoption by HRM in the big data era. AI technologies, however, are not without risks. The use of AI tools often raises potential ethical or privacy concerns, including security threats, both perceived and real, to applicants and current employees. The widespread use of AI and big data in HRM may lead to privacy infringement or the unauthorized collection of big data and to a negative impact on equality in society.

Moreover, AI tools can be programmed to induce decisions solely benefiting the employing organization. AI-based decisions for recruiting and selecting employees should not be made in a way that would adversely affect the rights and opportunities, or the mental and physical well-being of individuals based on irrelevant factors.

Moreso, the AI community has long acknowledged that biases are still concealed in the input data of AI systems. Whether the biases stem from the data itself or are encoded into the algorithms, this will likely influence the decision-making of the AI system. In the context of HRM, AI tools exhibit an autopilot mechanism in preventing the underprivileged classes from accessing job opportunities, and hence are important for the protection of individuals' rights seeking employment. Some major laws and regulations that address the deployment of AI technology in HRM were also identified, but the guidelines were less clear about the protections reserved for the employee or the applicant. A closer look reveals that while these guidelines or local regulations are instrumental in promoting a safe employment atmosphere where AI and other technologies are being deployed, they stand indirectly to also promote the interests of the employers (Hofeditz et al., 2022)

The implication here is that there is a need for robust policy to protect the rights of the employee, as these guidelines were less clear about the extent to which unauthorized access may potentially have an effect on the interests of these parties. The interpretation of these guidelines reveals that society is more concerned about the privacy of personal and sensitive information of the job seeker, rather than its potential effects on the employing organization. It follows that when collecting big data on employees, it is imperative that due attention is given to the social and psychological security of all persons involved. The

refusal to do this could lead to a well-meaning act that resides in the best interest of the employing organization being perceived as over-ambitious, unethical, and negatively motivated (Bankins, 2021).

It is imperative to state that incorporation of AI in Human Resource Management has generated substantial conversations regarding bias and ethical issues. As AI becomes more integrated into HR functions like recruitment, performance management, and employee development, the risks of algorithmic bias and ethical challenges increase. This section delves into these issues, examining their roots, implications, and potential solutions.

AI algorithms in HR are often trained on historical data, which reflects the existing biases and inequalities in the workplace. For instance, if an organization's historical hiring data shows a preference for white males, an AI system trained on this data may perpetuate these biases by favoring similar profiles in future recruitment processes. This phenomenon was starkly illustrated by the case of Amazon's hiring algorithm, which was found to discriminate against female candidates. The algorithm penalized resumes that included terms associated with women, such as "women's studies," due to the historical underrepresentation of women in technical roles at Amazon (Tambe et al., 2019). This backward-looking nature of AI can inadvertently reinforce existing demographic disparities rather than fostering diversity and inclusion.

Additionally, the implementation of AI in HR presents considerable ethical issues related to transparency and accountability. AI systems frequently function as "black boxes," which means their decision-making processes are not readily understandable to

humans. This ambiguity can hinder HR professionals from grasping the reasons behind the selection or rejection of certain candidates, resulting in difficulties in maintaining fairness and accountability. The unclear nature of AI algorithms can also erode trust among employees and job applicants, who may perceive that their qualifications and potential are not being evaluated fairly.

Mittal (2020) highlights another ethical dimension: the difficulty of using AI to make ethical and social decisions, which inherently require a human touch. AI lacks the nuanced understanding and empathy needed to navigate complex human interactions and ethical dilemmas. For example, decisions related to employee well-being, cultural fit, and team dynamics are difficult to quantify and analyze using AI. Thus, while AI can assist with data-driven decision-making, it cannot replace the critical human judgment required in many HR scenarios.

Furthermore, the application of AI in HR brings forth issues concerning data privacy and security. AI systems depend on extensive personal data to operate efficiently, which raises questions about the methods of data collection, storage, and usage. Employees and candidates may be wary of sharing sensitive information if they are unsure how it will be handled, potentially leading to issues of consent and trust. Ensuring data security and protecting individuals' privacy is paramount, and organizations must develop robust policies to safeguard personal information while leveraging AI technologies.

The technical limitations and biases inherent in AI systems also present challenges. AI algorithms have the potential to reinforce human biases if they are not thoughtfully designed and overseen. For example, if an AI system is trained on biased data, it is likely

to generate biased results, thereby perpetuating stereotypes and discrimination. This highlights the need for thorough testing and validation of AI models to detect and address biases. Additionally, organizations should commit to continual monitoring and updating of AI systems to maintain their fairness and impartiality over time. As stated by Qamar et al., (2021), "organizations must invest in ongoing monitoring and updating of AI systems to ensure they remain fair and unbiased over time."

Ethical issues also encompass the potential effects of AI on workforce dynamics and employment. The implementation of AI technologies may result in job cuts and alterations in job roles, prompting questions about the ethical ramifications of replacing human workers with machines. Although AI can improve efficiency and productivity, it is essential to weigh these advantages against concerns regarding employee well-being and career advancement. Organizations should prioritize reskilling and upskilling initiatives to assist employees in adjusting to the evolving technological environment and to ensure that the shift to AI-enhanced HRM is both inclusive and fair.

Ultimately, establishing trust in AI systems is crucial for their effective implementation in HRM. Trust hinges on transparency, reliability, and fairness. Employees and candidates must comprehend how AI systems operate and have confidence that their results are accurate and impartial. Organizations need to communicate clearly about the use of AI, including its advantages and limitations. Additionally, creating ethical guidelines and standards for AI application in HRM can further foster trust and ensure the responsible and ethical deployment of AI technologies. As noted by Mojsilovic (2019), "developing

ethical guidelines and standards for AI use in HRM can also help build trust and ensure that AI technologies are deployed responsibly and ethically."

In conclusion, while AI offers significant potential to transform HRM, its adoption must be approached with caution, particularly regarding bias and ethical concerns. Organizations must actively address these challenges by ensuring transparency, accountability, and fairness in their AI systems. By doing so, they can harness the benefits of AI while fostering a more inclusive, ethical, and equitable workplace.

2.3.6 Technical and Organizational Challenges of AIs in HRM

Despite facing several barriers, HR departments across various organizations in India are keen on leveraging state-of-the-art technologies such as artificial intelligence to transform their operations. Primarily, such technologies are capable of automating routine and repetitive tasks in HR management, thereby increasing both employee and management efficiency. Even though organizations acknowledge AI's potential, practitioners are also concerned about the number of jobs that could be lost due to large-scale automation. Currently, there are no formal studies that comparatively examine whether the intention to let go of HR professionals is any lower in global or Indian MNCs (Chowdhury et al., 2023; Meena & Santhanalakshmi, 2024).

Clearly, based on practitioners' review of the literature and our primary survey on Indian MNCs and global MNCs, there are several issues in the AI adoption process. Most critical among these are resistance to change, cost of AI adoption, the need for existing HR professionals to develop an understanding of the technology, ethical concerns regarding its

potential for replacing some jobs with machines, and hence heightening the prospects of job displacement and loss of human touch.

From a different angle, while AI improves the effectiveness and efficiency of a work process, it increases workforce dynamics and uncertainty, hence leading to security concerns that workplaces may have to ponder upon. Evidently, AI also offers opportunities such as more data-driven decisions, predictive analytics, personalized practices in HR such as assessment, resource allocation, development, and virtual automated touchpoints. This break also necessitates an urgent need to upskill HR professionals towards a strategic and organizational focus as the technology inputs would become a commodity service like electricity and information technology.

Hence, HR should begin developing AI ecosystems for their practices with a partnering focus on vendors for selection and analytics among senior managers and strategic partners in business. Considering the rapidly changing workplace, it behooves employees and HR managers to create and support a culture of continuous innovation that is also strategic (Jaiswal et al., 2023)

Implementing AI in Human Resource Management posits a spectrum of technical and organizational obstacles that must be addressed to leverage the technology's full potential. Although AI has the potential to greatly improve numerous HR functions, such as recruitment and performance management, these challenges can hinder its adoption and successful integration within organizations.

One major technical hurdle is the concern regarding data quality and integrity. AI systems, particularly those that use machine learning algorithms, depend significantly on

large volumes of accurate and pertinent data to operate effectively. In HRM, this data often includes sensitive employee information, which must be meticulously collected, stored, and processed. Inaccuracies or biases in this data can lead to flawed AI models, perpetuating existing inequalities within the workplace. For example, historical biases in hiring data can result in AI systems favoring certain demographics over others, as seen in the Amazon hiring algorithm case, where the AI was biased against female candidates (Tambe et al., 2019). Ensuring data quality requires robust data governance frameworks and continuous monitoring to identify and rectify biases.

Another technical hurdle is the complexity of AI algorithms. Advanced techniques like artificial neural networks (ANNs) and deep learning require specialized knowledge to develop, implement, and maintain. HR professionals, who may not possess this expertise, often find it challenging to understand and trust these systems. This "black box" nature of AI—where the decision-making process is not transparent—can lead to reluctance in its adoption. AI systems must be designed to be interpretable, with clear explanations of how decisions are made, to build trust among HR practitioners and employees alike (Qamar et al., 2021).

On the organizational front, the integration of AI into HRM necessitates significant changes in workplace culture and mindset. There is often resistance to change, especially when it involves adopting new technologies that may alter traditional HR practices. Employees may fear job displacement due to automation, while HR professionals might be concerned about their roles becoming obsolete. To mitigate these fears, organizations must foster a culture of continuous learning and development. This involves upskilling HR

personnel to work alongside AI and ensuring employees are equipped with the necessary skills to adapt to an AI-enhanced work environment (Mittal, 2020).

Investment in AI technology poses another substantial organizational challenge. Implementing AI solutions can be expensive, involving costs related to software, hardware, training, and ongoing maintenance. Smaller organizations, in particular, may find it difficult to justify these investments without clear, immediate returns. Moreover, the initial phases of AI implementation may require significant time and resources to overcome technical and operational hurdles, which can be a deterrent for many businesses (World Economic Forum, 2020).

Furthermore, ethical considerations are paramount when integrating AI into HRM. AI systems must be designed to adhere to ethical standards, ensuring fairness and transparency in their operations. Decisions such as hiring, promotions, and performance evaluations significantly impact employees' lives and careers, necessitating a high level of scrutiny to avoid unethical practices. HR managers must play a crucial role in overseeing AI applications to ensure they align with organizational values and ethical guidelines (Mittal, 2020).

Technical issues related to AI implementation also include the integration with existing HR systems and processes. Many organizations have legacy HR systems that may not be compatible with modern AI technologies. This necessitates either upgrading existing systems or developing interfaces that allow seamless integration, both of which can be technically challenging and resource-intensive (Fang Wang et al., 2021).

Moreover, data security and privacy are critical concerns when implementing AI in HRM. AI systems that manage employee data need to adhere to strict data protection laws, including GDPR. Ensuring data security involves implementing robust cybersecurity measures to protect against data breaches and unauthorized access, which is particularly challenging given the sophisticated nature of cyber threats today (Sangita, 2019).

Finally, the issue of trust cannot be overstated. For AI to be effectively utilized in HRM, there must be trust in the technology from both employees and HR professionals. Building this trust involves transparency in AI operations, clear communication about how AI systems work, and assurances that the AI is used to complement rather than replace human judgment (Kim, Park, & Lee, 2018). Developing trust also requires addressing concerns about AI's reliability and ensuring that AI systems are regularly audited to maintain their accuracy and fairness (Mojsilovic, 2019).

In conclusion, while the integration of AI in HRM holds immense potential, it also brings a host of technical and organizational challenges that need to be carefully managed. Addressing these challenges involves ensuring high data quality, providing adequate training and upskilling, fostering a supportive workplace culture, making strategic investments, and maintaining ethical standards. Only by navigating these complexities can organizations fully realize the benefits of AI in HRM, enhancing efficiency, fairness, and overall performance.

2.4 Conclusion

This chapter presents a comprehensive exploration of the theoretical frameworks and practical applications of AI in Human Resource Management. The integration of

Artificial Intelligence into HRM activities such as performance data analysis, personalized training development, employee satisfaction prediction, and recruitment—can introduce risks of biases and unfair practices. This concern is especially pronounced when expert systems and fuzzy logic are used, as they can perpetuate existing biases in HR processes.

However, the research emphasizes the potential of AI to significantly enhance HRM by improving decision-making accuracy, efficiency, and fairness. HR managers need a decent understanding of both HR systems and AI technologies to leverage AI effectively and ethically.

The conceptual and theoretical frameworks posit the significance of aligning human resources with business strategies, with AI serving a crucial role in enhancing the effectiveness of HRM. Research indicates the growing utilization of AI in HRM, pointing out its potential to tackle challenges in areas such as recruitment, performance management, learning and development, and employee engagement. AI's role in transforming HRM practices is evident in various sectors, including manufacturing and finance, where it improves efficiency, personalization, and decision-making.

In summary, the chapter illustrates the dual-edged nature of AI in HRM—its capacity to both introduce and mitigate biases, and its potential to revolutionize HR practices while requiring careful management of ethical and practical challenges. The insights gained from this review provides foundation for developing strategies to integrate AI into HRM effectively, balancing technological advancements with human-centric values to enhance organizational performance and employee satisfaction. The next chapter introduces the

methodology constrcuts of the study and highlights the research design and the validity of of the research and lts applications.

CHAPTER III:

RESEARCH METHODOLOGY

3.1 Overview of the Research Problem

Artificial intelligence and machine learning models are used for an assortment of tasks in management decision-making processes in organizations, including Human Resource Management (HRM). In HRM, these tools promise to better support employee selection, appraisal, training, and development. The evolving impacts of artificial intelligence in HRM are researched in academic literature.

To gain valuable predictive insights, employers are increasingly using data analytics, including artificial intelligence and machine learning algorithms, to address a range of human resource management functions. While it is known that data analytics has been applied to HRM for several decades, it is often perceived that AI in HRM is new and still in an 'emergent' stage. However, both the scope and scale of its impacts have been the source of much debate. This is primarily due to AI introducing new ethical, moral, and privacy challenges in HRM.

Furthermore, AI can replace jobs, and the use of AI as a screening tool has been found to particularly discriminate against minority groups. This places a corresponding responsibility on researchers to systematically evaluate evolving AI applications' performance and impact. Our study uses a mixed-method approach to develop and evaluate how AI can improve predictive models explaining employee turnover (Sakka et al., 2022).

This research holds significance for several reasons. Firstly, there is a lack of academic investigation into the use of AI in HRM and its ethical implications. This is

concerning as AI is already widely utilized for screening and automating job matches, as well as various other talent management functions. However, almost 89% of recent database search results' abstracts did not address AI in HRM, and about 79% of the final search results were published in the same time frame. This highlights a growing research gap despite the increasing interest and priority in evaluating the impact of AI on HRM.

Secondly, the academic literature has not kept pace with technological advancements, particularly in addressing the potential perceived accuracy in AI tools and its impact on fairness in decision-making.

Thirdly, our examination of AI is relevant in light of the impact of AI and robotics on human employment, especially in the early 2020s downturn. This is leading to significant changes in how jobs are performed, with tasks being increasingly outsourced to workers in developing economies, particularly in Asia. This poses a risk of job loss for Asian workers due to automation.

Fourthly, despite growing awareness of the potential network impacts, privacy concerns, and perceived lack of intent for good in AI applications in HRM, their advancement continues. There is still a lack of clarity on how AI and machine learning should be organized and used in companies, including HR, to align with strategic and social goals.

Furthermore, fundamental questions about how workers worldwide will define their rights, such as digital rights, in relation to these technologies remain unanswered. Our study addresses these issues by presenting a cross-disciplinary framework to align economic and social goals (Arslan et al., 2022).

Homogeneous data thus only limits the efficiency of understanding preferences and work behaviors of key employees. This paper argues that a mixed-method approach is more appropriate for studies that analyze socio-technical systems, i.e., the interactions between information technology and human, social, and economic factors that, in aggregate, determine the outcomes of those systems. In particular, studies that work in the human resource setting should also consider socio-technical issues of the effectiveness of human/robot collaborations, identification of tasks and activities susceptible to automation, and work organization (Williams2024). As new technologies such as artificial intelligence continue to advance rapidly, the demand for labor is expected to undergo fluctuations (Qiu & Lei, 2018).

The challenge which most of the organization face will be inadequate trained manpower for the skill set required for Artificial intelligent implementation and modality. Hence, efforts need to be given in setting up of the training establishment to cater the needs of trained manpower to mitigate the skill gap required to effectively utilise the advantages of AI in Human Resource Management.

3.2 Operationalization of Theoretical Constructs

Operationalization is the process of transforming abstract concepts into defined metrics. In social research operationalization is used to: (i) create measures of abstract concepts in order to clarify their meaning, (ii) prove their adequate scaling in order to assure the quality of research results. One of the dominant interpretational approaches that research can contain are the quantitative and qualitative research approaches. There are various research methodologies available, including quantitative, qualitative, and mixed-

method approaches. Quantitative methods involve using numerical data to analyze differences or relationships among variables, typically through statistical techniques (Koys & Adams, 2015; Saunders et al., 2015). On the other hand, mixed-method approaches integrate elements from both quantitative and qualitative methodologies to provide a comprehensive understanding (Saunders et al., 2015).

Qualitative methods, as highlighted by Silverman (2016), are well-suited for exploring specific phenomena in depth through techniques such as interviews, observations, or case studies. Integration of the results of the two approaches into a single interpretation is relatively rare.

This study employs a a mixed methodology appraoch, utilizing in-depth interviews and surveys to investigate leadership perspectives on enhancing job performance using AIs. The data collected will undergo triangulation, a methodological approach to validate findings by cross-verifying information from multiple sources or methods (Johnson et al., 2017). Triangulation enhances research credibility by reducing biases that may arise from relying solely on one method.

In summary, this research methodology integrates qualitative case study techniques with triangulation to provide a robust exploration of leadership strategies in improving job satisfaction and business performance.

3.3 Research Purpose and Questions

The aim of this study is to identify the factors that enhance the influence of AI in Human Resource Management. Additionally, this study will examine how transformative leadership and the development of mindsets among both employers and employees

contribute to this impact. The target recipients are employees of organizations irrespective of industries and a very few of employers who who have implemented Artifitial Intelligence in their organizations.

Specific Aims

What are the factors which will contribute in accelerating the impact of AI in HRM throughout organizations?

The first aim of this study is to identify and analyze the factors that can accelerate the integration and impact of artificial intelligence within Human Resource Management across various organizations. These factors might include technological infrastructure, organizational readiness, employee and management receptiveness, investment in AI technologies, training programs, data management practices, and regulatory compliance.

By understanding these factors, the study aims to offer practical insights for organizations looking to utilize AI to improve their HR functions. This involves examining how the optimal blend of these factors can result in more efficient recruitment processes, better monitoring of employee performance, enhanced training and development programs, and overall improved HR efficiency.

The study hypothezises that to eshtablish an impact of AI in HRM is positively related to cultural change and development of mindset of employer as well as employees.

The secondly to test the hypothesis that the successful establishment of AI in HRM is positively linked with significant cultural changes within organizations and the development of progressive mindsets among both employers and employees. This involves examining how AI adoption impacts organizational culture, including openness to

innovation, adaptability, and a insight-led decision making. The study will explore whether AI can foster a culture of continuous improvement and learning, thereby influencing the attitudes and behaviors of employees and employers towards embracing new technologies and methodologies in their daily work. The hypothesis suggests that organizations that effectively integrate AI into their HRM processes will experience a shift towards a more collaborative, innovative, and technologically savvy workplace culture.

The study also focuses on how transformative leadership and learning and development plays an important role in implementing the effectiveness of AI in Human Resource Management.

The third aim is to investigate the roles of transformative leadership and ongoing learning and development in enhancing the effectiveness of AI implementations in HRM. Transformative leadership is defined by leaders who encourage and energize their teams to accept change, promote innovation, and guide the organization in reaching its strategic objectives. This study will examine how such leadership styles can facilitate the adoption and integration of AI technologies in HRM by creating an environment that encourages experimentation, risk-taking, and open communication. Furthermore, the study will investigate the significance of ongoing learning and development programs in providing both employees and management with the essential skills and knowledge needed to effectively utilize AI tools and systems. This includes assessing the impact of targeted training initiatives, workshops, and educational programs on the successful deployment and utilization of AI in HRM, ultimately contributing to improved organizational performance and employee satisfaction.

In summary, this study aims to provide a comprehensive understanding of the factors that accelerate AI integration in HRM, the cultural and mindset shifts associated with AI adoption, and the critical roles of transformative leadership and continuous learning in maximizing the effectiveness of AI in HRM practices.

3.4 Research Design

The current study is exploratory in nature to capture the evolving impact of AI. The study needs a deep dive to explore the existing research to understand the ever-changing paradigm of AI. Therefore, a mixed-method approach to conduct a systematic literature review using a scoping method that is exploratory in nature to conduct a deep analysis of the significance of AI in HR and figure out its right trajectory.

The primary reason was to triangulate the findings of foundational theories through literature review with empirical data. The qualitative research method would involve qualitative analysis at the HR operational level that operates and executes AI systems.

In contrast, the quantitative research method would involve responses or feedback on the development of AI from 40 to 50 HR executives or directors at the strategic level. The trial-and-error process of building a research project from a basic research question to a theory, followed by the development of data to confirm or refute the initial question, would be as follows: this research uses a mixed-method approach to review the AI and HR changes in the empirical studies among organizations (Basnyat and Clarence, 2020).

The findings of this research are used to offer an integrated, practice-oriented, and substantive review of the AI and HR changes. A useful conceptual framework that will stimulate the debate about the modernized HR role in the age of technology is suggested.

This research centers on assessing the changing influence of AI in human resource management, particularly the role of HR at both operational and strategic levels. The current study is exploratory, intended to grasp the evolving effects of AI. The study explores the existing research to understand the ever-changing paradigm of AI. The primary reason was to triangulate the findings of foundational theories through literature review with empirical data.

There are already established case studies and empirical studies. For foundational theories, the extent of their use and citation by various researchers will indirectly help us identify the research gaps. Further, it also enables us to unearth the nascent issues that are currently the hottest research areas as part of the future research agenda (Akram et al., 2024).

After an in-depth qualitative examination, numerous pertinent themes will be identified from extensively reviewed articles. The primary coding will be done utilizing coding meta-analysis to construct a conceptual model of how artificial intelligence affects human resources. The qualitative analysis involved regression models and a survey of 108 prominent small, medium, and large multinational organizations, from which guidelines were derived to effectively recognize the potential practical implications of AI integration in HR. The proposed framework's significance is underscored by these guidelines, as they allow organizations to assess the extent of AI's influence on human resource management for a thorough evaluation of its impacts (Chabowski & Samiee, 2023).

It is essential to acknowledge that alternative research designs, including historical research, phenomenology, grounded theory, ethnography, and correlational designs, were

taken into account but ultimately deemed unsuitable for this study. The aim is to explore and comprehend the underlying reasons and perspectives, aligning with qualitative research as articulated by Silverman (2016).

The study intends to investigate human behaviour by inviting participants to respond to open-ended, semi-structured interview questions, thereby gaining insights into the dynamics of job satisfaction and leadership attitudes. Moreover, employing semi-structured interviews and surveys allows for diverse perspectives on business strategies, thereby enhancing understanding of the phenomenon under study.

3.4.1 Population and Sample

The primary data of this study was acquired via numerous approaches in order to maintain comprehensive sampling coverage. This included a period of primary data collection escalating personnel for a large multinational company. This allowed the acquisition of the most current understandings and attitudes. These questionnaires highlighted both qualitative and quantitative responses and could be considered as semi-structured interviews.

To add to the validity of these responses, secondary data were collected via professional SurveyMonkey. This was considered an extremely rich and often untapped source of representative views and opinions. This was then supplemented with significant follow-up qualitative discussions (Karunarathna et al., 2024)

Secondary data was gathered on a wide sample of HR professionals employed in multinational companies around its geographical region of interest. There was a total of 68 responses from personnel at a number of senior levels. This also represents the cross-

section of relevant businesses HR is currently active in that are at the forefront of AI HRM developments. Its small numbers of recruits were crucial to enable the extraction of richer, more supportive data.

Sampling techniques including referrals enabled the recruitment of a respondent base split fairly evenly by gender. The countries of relevance considering different AI social-political drivers were included as part of the interviews. Alongside these structured interviews, a number of informal nondirective discussions with respondents have proven to be valuable to gain richer information for the following data presentation (Wiblen and Marler, 2021).

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Alongside these structured interviews, a number of informal nondirective discussions with respondents have proven to be valuable to gain richer information for the following data presentation (Wiblen & Marler, 2021).

Purposive sampling was employed to achieve the study's objectives. In purposive sampling, researchers deliberately select participants based on their ability to provide reliable and pertinent information that addresses the research questions or meets the research objectives (Abdullah et al., 2015). The research participants who met the criteria for purposive sampling were selected. This non-probability sampling method allows the researcher to use their judgment in choosing study participants who are most suitable for the research (Yin, 2018).

The research population is categorized into five levels of AI maturity within HRM:

- Organizations that have fully implemented AI in HRM.
- Organizations that have partially implemented AI in HRM.
- Organizations that are in the nascent stage and have just started using AI in HRM.
- Organizations that are planning to implement AI in HRM.
- Organizations that are naïve to the concept of AI in HRM or are unaware of its impact.

This bifurcation ensures a diverse sample population that includes a variety of perspectives and experiences regarding the implementation of AI in HRM. The sample population for the study is thus designed to cover a wide range of organizational experiences with AI, ensuring comprehensive insights into the evolving impact of artificial

intelligence in human resource management. To conduct the interviews, permission was received from all research participants, ensuring ethical compliance and informed consent.

3.5 Participant Selection

A total of 11 objective survey questions about the impact of evolving Artificial Intelligence have been framed. The survey will be conducted online using SurveyMonkey Furthermore, an additional 30 semi-structured interviews were carried out to obtain detailed insights. The interviews were held in confidence, enabling participants to respond honestly. These semi-structured interviews will involve both employees and employers gathering their views on the effects of AI in Human Resource Management. To solicit their permission, letters will be sent to potential participants in advance. Upon receiving confirmation of their willingness to participate, informed consent forms and invitation letters with suitable dates will be sent.

As noted by Tong and Dew (2016), in qualitative case study designs, it is essential for researchers to choose participants who can offer insights pertinent to the research question to reach data saturation. This study aims to reach data saturation by interviewing twenty-five small business leaders about strategies for increasing job satisfaction to improve business outcomes.

Achieving data saturation ensures that the study's objectives are met, and that overlapping data is collected, eliminating unknown issues that could alter the study's outcomes (Morse, 2015). Morse (2015) recommended starting with a small data, collecting and evaluating information, and then conducting more interviews until no new themes or data emerge.

Sivell et al., (2015) emphasized that for interviewees to communicate openly and effectively, interviews must be conducted in a comfortable setting for the respondents. Therefore, the study interviews will be scheduled at times and places convenient for the employees and employers. However, even with purposive sampling, limitations may arise as the researcher might inadvertently leave out quality samples, thus not capturing the entirety of essential information needed to fully explore the research questions (Sivell et al., 2015). Participants were selected for the interview process because of their thorough knowledge of their respective organizations, ensuring that the data collected is relevant and insightful.

3.6 Instrumentation

Data collection involves gathering essential details about the study phenomenon, encompassing participants emotions, thoughts, and perspectives (Silverman, 2016). Both primary and secondary methods were utilized in this study. Primary data sources encompassed objective closed-end survey questionnaires and semi-structured interview questions, offering a thorough understanding of the effects of Artificial Intelligence in Human Resource Management. The main methods for data collection included surveys, individual semi-structured interviews, and observations. Secondary data was gathered through document reviews, government websites, and academic journal articles, focusing on the evolving influence of AI in HRM.

According to Shirani (2015), semi-structured interviews allow researchers to focus, structure, and offer flexibility for participants to freely express their views and elaborate on responses through follow-up questions. This approach facilitates gaining in-depth

understanding and detailed insights from participants. Interviews enable researchers to gather firsthand knowledge and experiences, delving into the meanings behind participants' business exposures and experiences (Yin, 2018).

Furthermore, one-on-one interviews are crucial for establishing rapport with interviewees and ensuring accurate data collection for validation purposes. Yin (2018) identifies six sources of evidence in qualitative research: (i) interviews, (ii) documentation, (iii) direct observation, (iv) physical artifacts, (v) participant observation, and (vi) archival records. This study utilized interviews, direct observations, and document analyses as secondary data collection methods. Document analysis plays a pivotal role in helping researchers gather pertinent documents to enhance their understanding of the study phenomenon (Schneider, 2016).

Morse (2015) emphasizes that researchers can enhance trustworthiness and generalizability through member checking. To ensure reliability, this study employed member supervision. For validity, all interview sessions were digitally recorded and securely stored to uphold the confidentiality of participants, adhering to university ethical standards and consent protocols, thereby minimizing bias.

3.7 Data Collection Procedures

This research project opted to rely on dual techniques, quantitative and qualitative, for data gathering. Concurrent use of both surveys and in-depth interviews enhanced the study by producing a rich and contextual set of data. A survey instrument was designed to obtain and quantify data on the change in the processes empirically since AI has been used, thus offering some viable insights into the impact of AI in HR at present.

In-depth interviews, on the other hand, allow for a much more in-depth, contextual exploration and understanding of the experience and perception of HR managers involved in a talent acquisition and retention process, which is a bit more personal and unique to each case. One of the first criticisms of these types of interviews, but also the strength, is that they generate findings that are not generalizable (Yin, 2018).

To recruit appropriate participants for the time-consuming in-depth interviews, the study members specified and reported selection criteria in the participant information letter distributed with the survey. The survey was created to be as simple as possible to complete in order to avoid placing too much burden on participants for free participation, which could lower completion rates. The survey was distributed to professionals who were then asked to distribute it among their own networks. Completing the survey took approximately 15 minutes. Both the survey and the interviews were conducted in a way that accommodated the participants' convenience. All of the interviews were conducted at a place of work of the interviewees, except for two, to accelerate travel time (Karan et al., 2021).

Some of the delays in organizing and carrying out interviews were attributed to logistical arrangements, rather than unwillingness or timidity on the part of interviewees. Several other additional factors outside of the researchers' control had an influence as well, all of which are discussed below. Good and effective data collection techniques are crucial for every goal. The potential results are limited and dependent on the satisfactory data collected. In order to produce actionable findings, it is also important to refine and adapt data collection methods in order to meet the desired research objectives. Deciding on a

random location or time slot to collect data for the study is not a very successful approach for the majority of the research project, unless enough resources are available (Khraisat & Alazab, 2021)

To ensure a positive rapport with interviewees and obtain accurate and valid data, a structured interview process was implemented. Prior to commencing each interview, the researcher provided a brief overview of the research and expressed gratitude for the participation. Consent forms were distributed and signed by the interviewees to confirm their acceptance. Throughout the interview, efforts were made to ensure the participant felt comfortable and at ease. An electronic device, such as a mobile phone or laptop, was used to record each interview session, which typically lasted between 20 to 25 minutes (Lopez & Whitehead, 2012).

Maintaining consistency in sample size and question format is crucial to achieve reliable results. According to Malterud et al., (2015), standardizing these aspects ensures uniformity in responses and interpretation across all participants. This approach helps mitigate variability and enhances the study's reliability.

To mitigate potential issues related to document collection, such as edited documents that may lose their original meaning or compromise confidentiality, rigorous member checks were employed to validate and ensure the accuracy of collected data. Following Yin's (2018) guidelines, the study focused on accessing and utilizing documents from the past five years relevant to the research topic, thereby enhancing the study's reliability and applicability.

These numbers are approximate and were carefully considered in relation to the study's specific requirements. By adhering to these rigorous data collection procedures, the study aimed to uphold validity, reliability, and ethical standards throughout the research process.

3.8 Data Analysis

The data analysis consists of two types of techniques to capture and understand the views and factors that guide the HR experts. Two types of data analysis techniques have been used to capture quantitative and qualitative data systematically. For those in quantitative data analysis, measures, statistics, and software have been employed substantively to provide a rigorous and meaningful assessment of the requisite data for argumentation. These include descriptive statistics and inferential statistics and analysis (Ciampi et al., 2021).

To capture the semantic pattern in qualitative data, the analysis primarily includes thematic analysis through the interviewee responses, grouping them into various subthemes and coding them, and then into higher-order themes which allow explaining the outcome and arbitrating the two findings. The thematic analysis was primarily done by associating broad problems into themes and further expanding them into significant patterns and then deciphering them to the two SDs (Xu & Zammit, 2020).

3.9 Reliability and Validity of the Study

The reliability and validity of the findings of research articles are crucial to the mixed-method analysis of research studies. Measurement reliability means that the variables are measured in a consistent way, which is dependent on the nature of the

variables, the measurement process, and the capability and flexibility of the researcher. The measure should be stable over time, across places, and resistant to the effects of extraneous public events.

Reliability exists in several forms in research and is concerned with consistency. The specific reliability form appropriate for any given research project depends on the nature of the research question. It is always desirable that when data is collected for research, it has the smallest error variance possible in the results, but this is not always achievable (Polisetty et al., 2024).

Measurement validity is concerned with the fit between theory, constructs, and operational variables in the study regarding the adequacy of the theories used to guide the research campaign. It is the extent to which the measurement accurately measures the concept that the researcher is attempting to measure, or the current theoretical questions demonstrate the coherence and specificity of the evidence; in reality, they measure the concepts in question.

Measurement validity is a necessary condition for measurement reliability. Data that are not valid cannot be considered reliable. Theory validation is the establishment of the probative role of the theory in determining the construct. Mindful of the discussion relating to reliability and validity so far, these two assessments of a research result need to be addressed by using mixed methods, as this approach embodies an appreciation and consideration of theory in the research design and structure (Schaufeli et al., 2020).

Reliability

Ensuring the study's trustworthiness, the researcher addresses key components like dependability, transferability, credibility, and conformability, as outlined by Shoaib and Mujtaba (2016). The reliability of findings regarding individuals' views, attitudes, and interests raises fundamental questions about the nature of truth in people's expressions. While textual data in scientific research are often assumed to convey singular meanings, achieving true scientific insight may require analytical approaches such as hermeneutics, deconstruction, and the archaeology of knowledge (Mustafa, 2016).

Reliability is a crucial issue for measurement across all scientific disciplines. While it can be defined and assessed in various ways, the core concepts are relatively simple and should be grasped by both practitioners and methodologists. Reliability theory is applicable not only to psychometricians who evaluate latent variables but also to anyone seeking to draw conclusions from measurements of individuals or groups (Revelle & Condon, 2019).

Validity

Validity is regarded as crucial throughout the research process, not merely assessed at its conclusion. A processual approach demands continual attention, maintaining a holistic perspective and integrated stance across all stages of the research. This approach enhances validity by dynamically balancing creativity and rigor, influencing the flow of internal and external dialogues and intuition, thereby propelling the research forward. Unlike rigid methodological rules, this approach involves actions, observations, reflections, and occasional withdrawal from the field to re-examine and refine the research process (Paulo et al., 2019).

3.10 Research Design Limitations

According to Yin (2018), assumptions are considered as facts that have yet to be verified but are crucial for validating a study. Authors often present propositions as opinions rather than absolute facts, thereby acknowledging the uncertainties inherent in their research. Reliability is a crucial issue for measurement across all scientific disciplines. While it can be defined and assessed in various ways, the core concepts are relatively simple and should be grasped by both practitioners and methodologists. Reliability theory is applicable not only to psychometricians who evaluate latent variables but also to anyone seeking to draw conclusions from measurements of individuals or groups (Revelle & Condon, 2019).

Limitations of a study typically involve potential weaknesses that are often beyond the researcher's control and are closely tied to the chosen research design, constraints of statistical models, funding limitations, or other factors. Therefore, it is essential to contextualize study limitations, delimitations, and assumptions within the entirety of the research paper (Dimitrios & Antigoni, 2018).

For instance, in a study on the impact of Artificial Intelligence (AI) on organizational culture, (Öztırak, 2023) the researcher made assumptions about the positive influence of AI and the significance of learning and development in AI's integration into Human Resource Management.

However, a limitation arises from the presumption that participants answered interview questions honestly and accurately. This limitation is compounded by factors such as the non-generalizability of findings and the possibility that participants may have been hesitant to share information openly, despite the researcher's precautions.

Furthermore, given the evolving nature of AI, another assumption was that all participants possessed sufficient knowledge to assess its overall impact. These assumptions and limitations underscore the need for researchers to transparently address potential weaknesses in their study design and interpretation, enhancing the credibility and applicability of their findings.

3.11 Conclusion

The above mentioned chapter extensively explored mixed method and analysis techniques employed to comprehend and focus on the particular challenges and limitations that organizations encounter in comprehending the influence of Artificial Intelligence on HRM. The chapter outlined the methodology, research design, and sample size, employing case studies to examine approaches that organizations can use to evaluate the impact of AI on HRM.

Emphasis was placed on ensuring reliability and validity through practices such as member checking and triangulation. This approach enables organizations to utilize the research findings effectively to evaluate the current landscape of AI and enhance employee performance while fostering a culture of continuous learning and innovation.

Subsequently, the following chapter will present the findings derived from the research on AI's impact in Human Resource Management, building upon the groundwork laid out in this comprehensive exploration of methodologies and analytical approaches.

CHAPTER 4:

RESULTS

4.1 Introduction

Chapter 3 outlined the research methodology employed in this study, focusing on the exploration of AI integration within HRM. The research was conducted in two main phases: a quantitative survey and qualitative interviews. The survey, consisting of 11 questions, garnered responses from 108 participants across various industries, while the interviews involved 30 respondents with diverse professional backgrounds, addressing 8 key questions. This dual approach was designed to provide a comprehensive understanding of the impact and perception of AI in HRM, capturing both broad trends and in-depth insights.

This chapter discusses the results obtained from a comprehensive analysis of the gathered data. The survey findings provide quantitative insights into the demographic characteristics of respondents, their views on the role of AI in HRM, and the current status of AI implementation within their organizations. Complementing these findings, the qualitative data from the interviews provide nuanced perspectives on the practical experiences and challenges faced by professionals in different sectors regarding AI adoption.

The analysis begins with a detailed examination of the survey responses, highlighting key demographic trends, the extent of AI implementation, and the perceived benefits and concerns associated with AI in HRM. Following this, the chapter delves into

the qualitative findings from the interviews, organized around thematic categories such as initiatives taken to implement AI, the importance of training and development, cost optimization, and the impact on organizational culture and work-life balance.

By integrating both quantitative and qualitative data, this chapter aims to present a holistic view of AI's transformative potential in HRM, offering valuable insights for organizations looking to navigate the complexities of AI adoption and leverage its benefits for enhanced human resource practices.

4. 2 Trends and Association Analysis

The presented section explicitly discusses the results obtained from the examination of the survey data conducted during the research study reveals significant trends related to AI usage in India. Our findings show that artificial intelligence (AI) is progressively being incorporated at various stages of human resource management (HRM) practices in India. These trends are related to the implementation of AI in recruitment and selection, talent management, HR analytics, and employee engagement (Budhwar et al., 2022).

The integration of HRM and AI use indicates a change in the attitudes of the HRM department, which has now started accepting the use of technology in hiring and in reaching potential employees. A survey interviewee narrates how AI has revolutionized modern-day hiring platforms, enabling them to attract and retain passionate, skillful, and committed employees who are eager to explore possibilities at the workplace (Vrontis et al., 2023)

AI is also being widely used in conducting various employee-related analyses and forecasting for better decision-making. The use of AI in HR analytical tools has significantly hastened the day-to-day decision-making process, enabling strategic planning in a firm. While AI has the capability to predict, the application of the results it produces is determined by the intellect of the humans in charge.

In essence, AI aids employees in gaining insight by performing analyses in no time. Since AI is not influenced by emotions or personal bias and only considers data, it makes for an accurate appraisal of issues. The successful use and application of AI in HRM has accelerated the transformation of the HR system and enabled HR professionals to function as strategic business partners within any organization. The following paragraphs provide insights on the use of technology in HRM at different levels as observed in India through the interviews (Pandey et al., 2023).

4.2.1 Survey Findings

The incorporation of Artificial Intelligence (AI) into Human Resource Management (HRM) has revolutionized conventional practices in multiple industries, including India. As organizations progressively implement AI-driven solutions, it is crucial to examine the changing effects of these technologies on HR functions such as recruitment, employee engagement, performance management, and talent development. This survey seeks to evaluate how AI is transforming HRM in India, concentrating on the views of HR professionals and employees about the effectiveness, challenges, and opportunities that AI tools present.

The findings reveal a growing awareness of AI's ability to improve efficiency and decision-making in HR processes, while also emphasizing concerns regarding ethics, data privacy, and the necessity for human oversight. By examining feedback from a variety of organizations, this survey offers important insights into the present state of AI in HRM in India and suggests ways to utilize these technologies to create a more agile and responsive workforce. The survey data uncovered several key insights regarding demographics, stages of implementation, and perspectives on AI in HRM.

4.2.2: Types of Industry

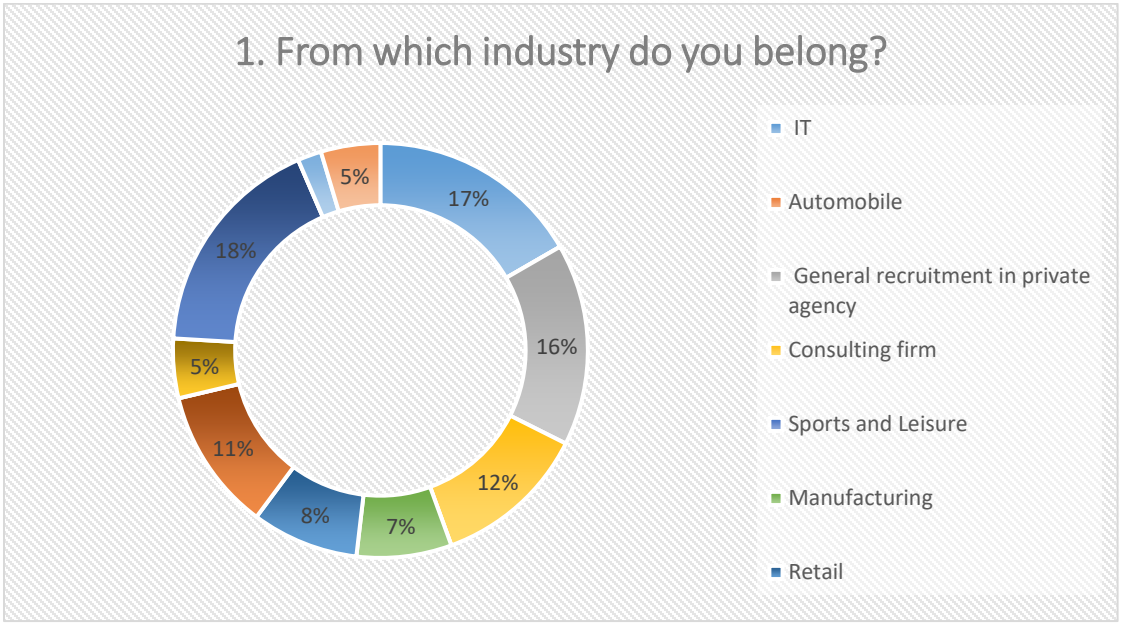

Fig:1: Industries

The survey participants represent a diverse array of sectors, with notable contributions from Retail (18%) and IT firms (17%). Additionally, there is significant representation from private firms, consulting firms, and technology companies. Furthermore, sectors such as Sports and Leisure and Automobile firms contribute a smaller percentage, each

accounting for 5%. This broad range of participation enhances the applicability of the findings across various industries.

4.2.3 Age Distribution of Participants

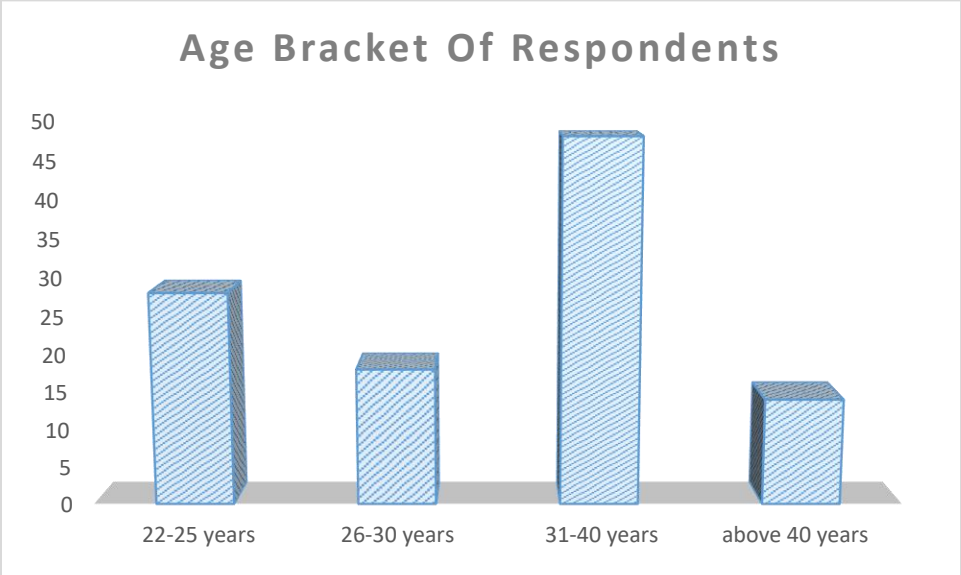

Fig: 2: Age Distribution of Participants

Most survey participants are aged between 31 and 40 years, highlighting a strong interest in the effects of AI on HRM within this demographic. This implies that individuals in this age group are likely to be either key decision-makers or are notably affected by technological innovations in their work environments.

4.2.3 Designation of Respondents

The respondents encompass a diverse range of designations, including HR professionals, managers, executives, and industry specialists across various sectors. This diversity not only enriches the data collected but also ensures that the findings reflect a comprehensive perspective on how AI technologies are perceived and utilized within

different organizational contexts. By analyzing responses from individuals in various roles, we aim to identify trends and correlations that can inform best practices in integrating AI into HRM strategies.

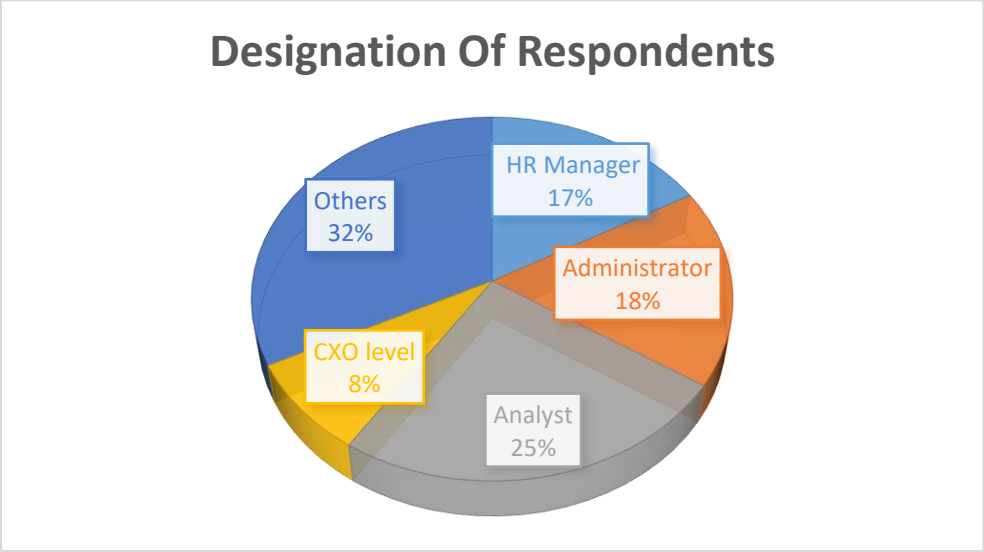

Fig:3: Designation of Respondents

The survey revealed that 25% of respondents are Analysts, 18% are Administrators, 17% are HR Managers, 8% are at the CXO level, and the remaining 32% are in other professions. This distribution highlights that the survey covered a wide range of job roles, each potentially impacted differently by AI in HRM. Based on these responses almost all professions are engaged in AI in workplace, moreover, managerial level responses have been captured more than CXO levels.

4.2.4 Stages of implementation

various stages of Artificial Intelligence (AI) implementation within organizations as reported by the survey respondents. Understanding the stage of AI integration is

essential for assessing the maturity of AI adoption in Human Resource Management (HRM) and identifying the challenges and opportunities that arise at each phase.

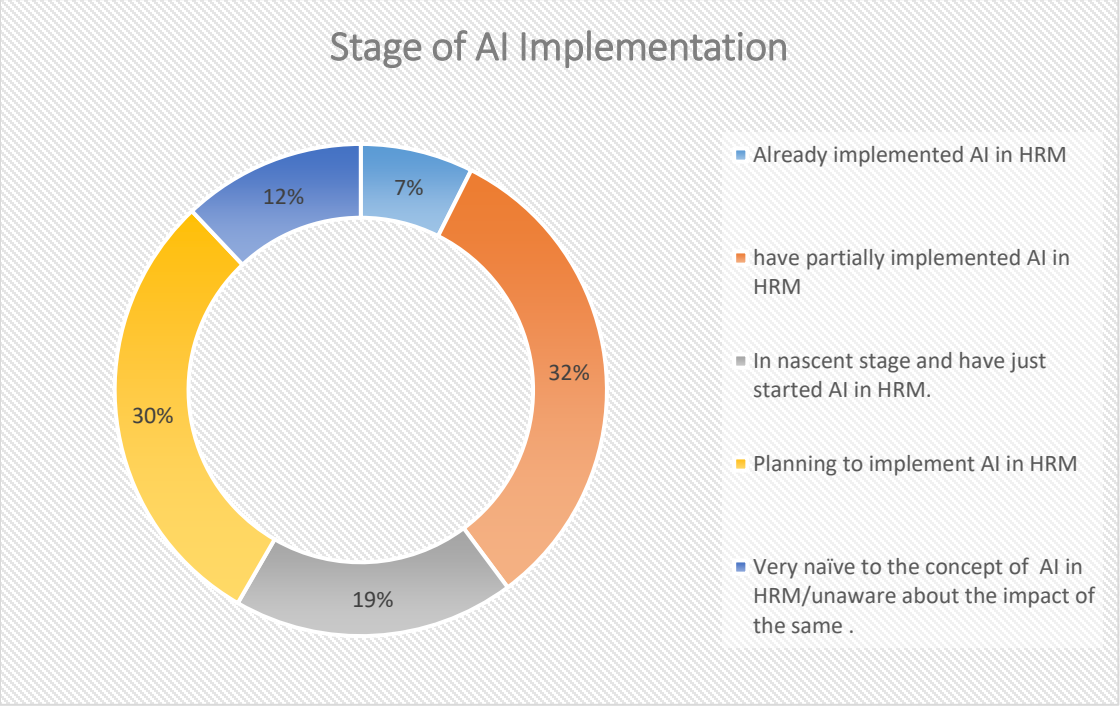

Fig:4: stages of implementation

About 32% of respondents indicated that their organizations have partially implemented AI in HRM, while 30% reported that their organizations are planning to implement AI. Only 7% confirmed full implementation of AI in HRM. This suggests that while there is significant interest and initial adoption, comprehensive AI integration is still in its nascent stages. There needs to be a regulation and internal drive from HR department to push the AI implementation in the organization.

4.2.5 Future of AI in HRM

AI will progressively deliver data-driven insights that enable HR professionals to make well-informed decisions about talent acquisition, employee engagement, and

performance management. Predictive analytics will assist organizations in forecasting workforce requirements and recognizing potential challenges before they occur.

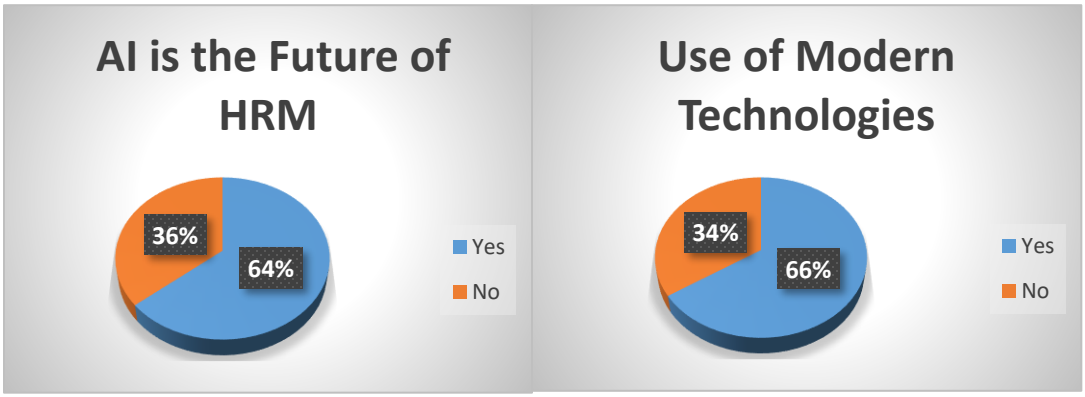

Fig:5: Future of AI in HRM

A significant 64% of respondents believe that AI is the future of HRM. This optimistic outlook is further supported by the fact that 66% of respondents have already utilized modern technologies such as AI-based screening software and database management systems. The fact that gradually most of the organization are implementing AI according to the previous research responses it can be considered that AI is the future of HRM.

4.2.6 Usage of AI in HR Processes

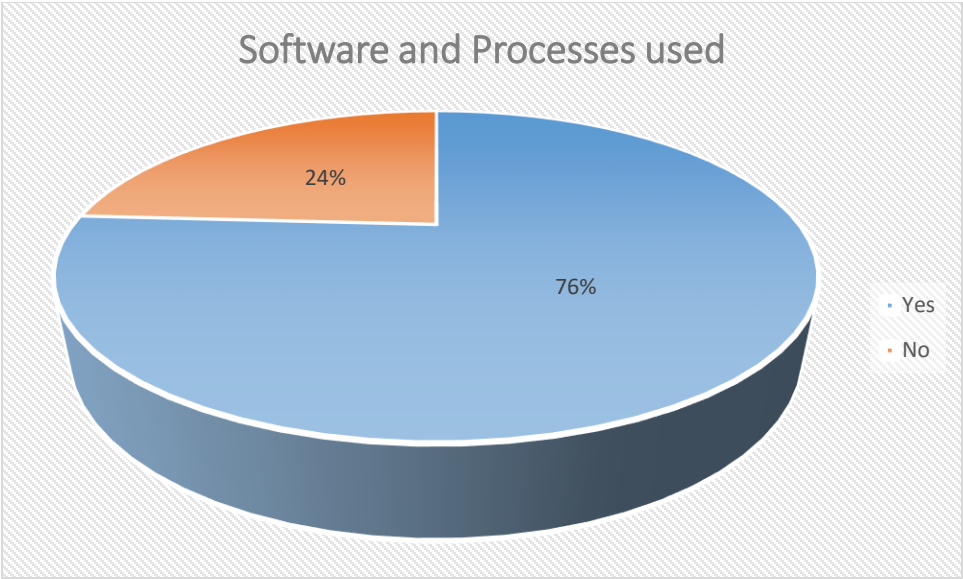

Fig. 1.7: Software and Process

A notable 76% of respondents indicated that AI is currently being used for processes like recruitment and talent management. This highlights AI's growing role in automating and enhancing critical HR functions. A Artificial Intelligence-based software will allow HR to operate more effectively and efficiently. This will free up HR staff to focus on more significant responsibilities and tasks that genuinely contribute to organizational performance. AI reduces the administrative workload for HR professionals and enables them to make decisions based on data trends rather than relying solely on intuition. As noted by Rathi (2018), "AI helps to lessen the administrative burden on HR professionals and helps them to make decisions based on data patterns rather than gut feeling alone."

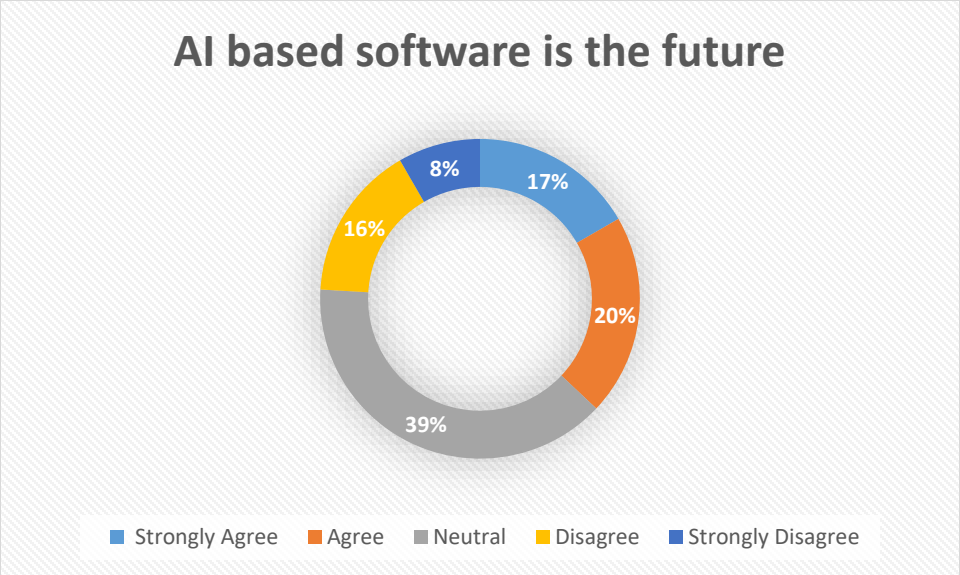

Fig:8: AI Software

Future of AI

According to the respondents only 37% considers that AI based software is the future whereas 16% still disagrees with the statement. The probable implications might be because of the fact that still there are possibilities that there can be trust issues or ethical concerns which the employees are concerned about.

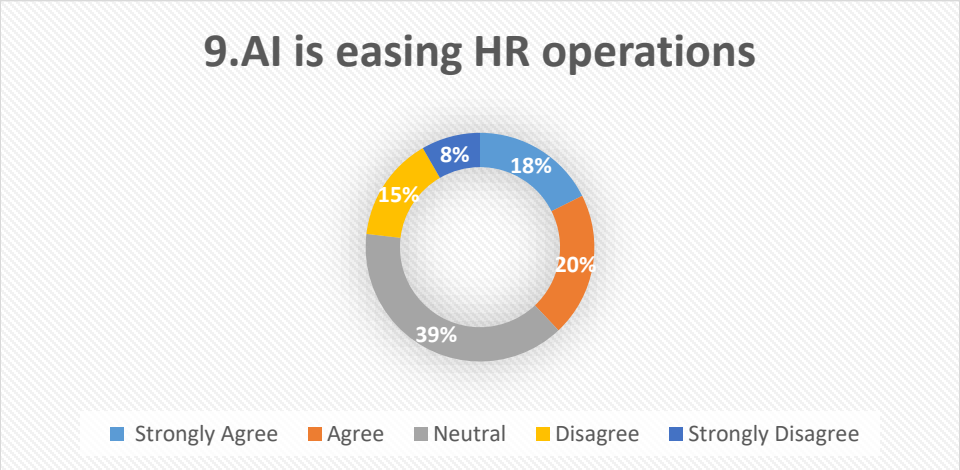

Fig:9: HR Operations

Impact on HR Operations

Opinions on AI's impact on easing HR operations were mixed. While 20% strongly agreed and 18% agreed that AI is making HR operations easier, 39% remained neutral, and a combined 23% disagreed or strongly disagreed. Most of the respondents agreed that AI is easing HR operations, the implication signifies that this process is experimental and the more HR operations will get exposure to AI applications more the scope will be there to get impacted.

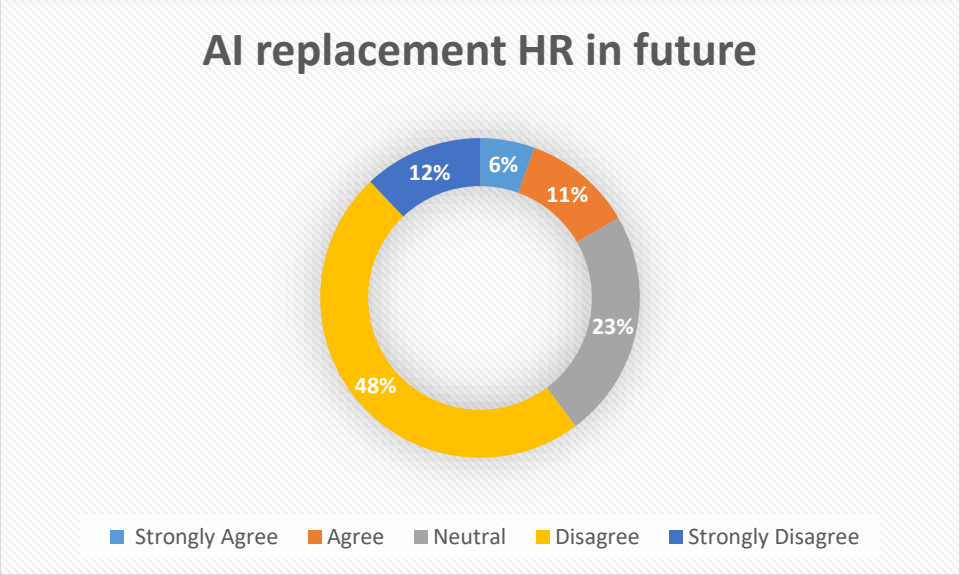

Fig:10: HR replacement

Replacement of HR Roles

There is scepticism about AI replacing HR roles, with 48% disagreeing with the notion that AI will replace HR in the future, and only 17% agreeing. This study implies that though AI is impacting gradually in the areas of HR operations, it will take time to replace HR in future. The reason is replacing HR would involve many facets including

human factor, ethical factor, factors including situations which would need human interventions.

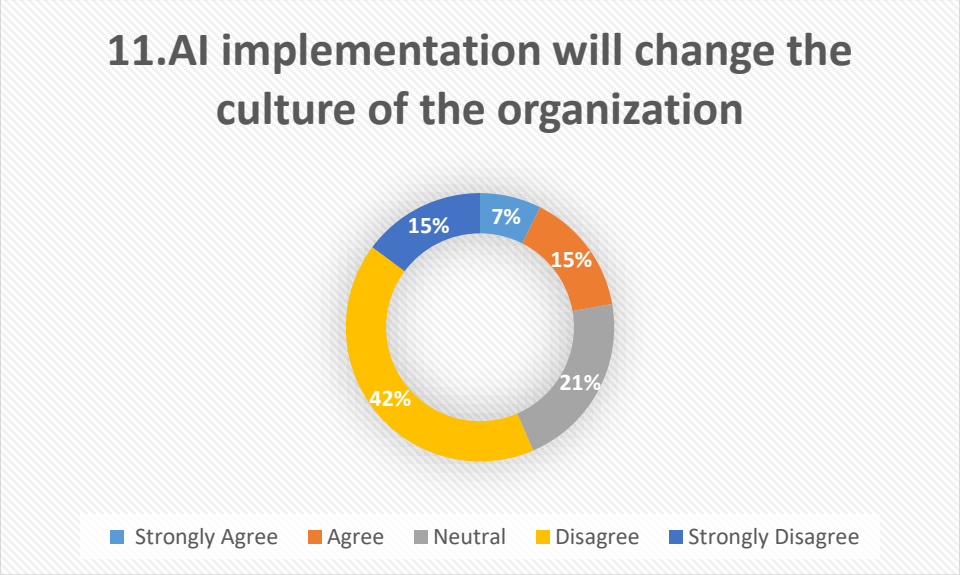

Fig:11: Cultural Change

Cultural Impact

Only 22% of respondents believe that AI implementation will change the organizational culture, indicating that most respondents do not foresee significant cultural shifts due to AI. The implication for this study would be the fact that culture study does not involves technology and still there is more to find and explore regarding this.

The responses are more shifted to disagreement because culture involves factors other than just technologies like people, external and internal factors, environment, diversity and inclusion of people within an organization.

4.3 Interview Findings

The qualitative data gathered from the interviews provided deeper insights into the practical aspects of AI implementation and its impact on various sectors:

The findings were in congruence with the literature of the study to address the semi structured questions.

Table 1:Details of Interview Participants

R1	Age	Business Type	Educational Background	Job Category	Experience	Interview Duration (in minutes)
1	35	Health care	MBA	Human Resource	15 years	25
2	42	Health Care	Doctor	Medical	8 years	30
3	54	Education	Phd	Principal	26 years	25
4	36	Education	B.Ed	Teacher	18 years	35
5	28	Hospitality	Hotel Management	General Manager Operations	19 years	30
6	45	Hospitality	Hotel Management	Chef	22 years	29
7	55	Retail	Business Management	Business Partner HR	9 years	27

8	35	Retail	Digital Marketing	Marketing	13 years	28
9	39	Power	Engineer	Executive Engineer	5 years	25
10	37	IT	Engineer	Software Engineer	8 years	25
11	40	Healthcare	Graduation	Billing Executive	9 years	32
12	38	Healthcare	Graduation	Receptionist	12 years	30
13	29	Healthcare	BBA	Patient Service Executive	10 years	28
14	30	Healthcare	BSC Nursing	Nursing Tutor	5 years	33
15	25	Hospitality	BBA	Executive Housekeeping	4 years	25
16	30	Hospitality	Diploma in Hotel Management	Captain-F&B Services	9 years	30
17	32	Hospitality	Diploma in Hotel Management	Executive Sous Chef	10 years	32

18	26	Health care	MBA-Human Resource	Recruiter	2 years	25
19	26	Education	B.Ed	Teacher	2 years	22
20	54	Education	B.Ed	Principal	25 years	26
21	32	Education	Bsc-Nursing	Tutor	8 years	30
22	35	Health care	MBBS, DNB Orthopaedics	Consultant-Orthopaedics	5 years	31
23	37	Hospitality	MBA-Marketing	Marketing & Sales Manager	10 years	26
24	38	Hospitality	MBA-Human Resource	Manager-Human Resource	12 years	28
25	32	Health Care	MBA-Marketing	Executive Marketing	7 years	30
26	45	Education	MBA-Operations	Administration Head	15 years	32
27	32	Education	M. ped	Physical Education Teacher	12 years	31

28	40	Hospitality	Diploma in hotel Management	F&B Manager	25 years	29
29	41	IT	B.Tech	Project Manager	18 years	28
30	42	Health care	MBA	Manager-Operations	18 years	35

The qualitative study of the interviews was encapsulated under different categories. These categories have been deduced from the outcome of the various discussions of the research questions. The discussions were analyzed and were noted down in Microsoft word file to ensure the answers from the recordings were scripted in an authentic way.

During the study the observations and thought patterns which came though this study are mentioned below:

- Initiatives taken to implement AI in the organization
- Perspective of training and development in the organization
- AI implementation and cost optimization
- Culture and work life balance post AI

4.3.1 Initiatives taken to implement AI in the organization

The qualitative data gathered from the interviews revealed that the COVID-19 pandemic significantly accelerated the adoption of Artificial Intelligence in various organizations, particularly in the healthcare sector. The urgent need to adapt to the rapidly

changing environment during the pandemic prompted many organizations to explore and implement AI technologies to maintain and even enhance operational efficiency.

A compelling example of AI implementation in the healthcare sector comes from an orthopaedic doctor who is respondent 22 state that:

"The *introduction of AI-based MRI machines in his hospital as a game-changer. These advanced machines have revolutionized the diagnostic process, enabling quicker and more accurate diagnoses. The AI-based MRI machines have not only streamlined the workflow but also significantly reduced the workload for medical professionals*."

By automating routine diagnostic tasks, these machines allow doctors to focus on more complex and critical aspects of patient care. This has led to improved job satisfaction among healthcare professionals, who now experience less stress and greater efficiency in their roles.

The doctor's account illustrates how AI can optimize decision-making processes. With AI's ability to analyse vast amounts of data swiftly and accurately, medical professionals can make more informed decisions in a shorter time frame. This enhancement in decision-making capability has a direct positive impact on patient outcomes, further contributing to the job satisfaction and professional fulfilment of healthcare workers. The AI-driven efficiency gains also extend to administrative tasks, freeing up valuable time for healthcare providers to engage in patient care and other essential activities.

Beyond healthcare, the pandemic has prompted organizations in various sectors to adopt AI technologies to address new challenges and opportunities. The urgency to adapt to remote work environments and ensure business continuity has driven many companies

to explore AI solutions that can support these needs. For instance, AI-powered tools have been implemented to manage remote recruitment processes, onboard new employees virtually, and provide continuous training and support. These tools have proven invaluable in maintaining HR functions during the pandemic, ensuring that organizations can continue to operate smoothly despite the disruptions caused by the crisis.

According to respondent 29 who is a Project Manager in IT industry:

"*With increase in AI organizations are accessing to large data sets as a result it is becoming difficult to handle complicated data. Organizations are adapting cybersecurity skills to handle the other perspective of AI."*

The push for AI adoption during the pandemic also highlighted the importance of flexibility and resilience in organizational operations. Companies that were quick to implement AI technologies were better equipped to navigate the challenges posed by the pandemic. They were able to maintain productivity, optimize resource allocation, and respond effectively to changing market conditions. This experience has underscored the strategic value of AI in enhancing organizational agility and preparedness for future disruptions.

Moreover, the pandemic has fostered a greater appreciation for the role of technology in enhancing employee well-being and job satisfaction. AI tools that facilitate remote work, provide personalized support, and automate routine tasks have contributed to a more balanced work-life environment for employees. As organizations continue to navigate the post-pandemic landscape, the insights gained from this period will likely drive

further investments in AI and other advanced technologies to support sustainable growth and resilience.

In conclusion, the COVID-19 pandemic has acted as a catalyst for AI adoption across various sectors, with notable advancements in the healthcare industry. The introduction of AI-based technologies, such as MRI machines, chatbots has significantly improved efficiency, decision-making processes, and job satisfaction among professionals. The pandemic has underscored the strategic importance of AI in enhancing operational flexibility, resilience, and employee well-being. As organizations move forward, the lessons learned from this period will continue to shape their approach to AI implementation, driving ongoing innovation and improvements in HRM and beyond.

Gulumbe et al., (2021) emphasized the importance of promoting innovation in AI and investing in education and training. Addressing challenges related to digital equity, ethical and regulatory concerns, as well as the thorough evaluation of AI tools, is essential as the world moves through the post-emergency phase of the COVID-19 pandemic. Taking these steps will solidify AI's position as a powerful ally in global health, enhancing health equity, improving health outcomes, and building resilience against future health crises.

Shaheen (2021) noted that artificial intelligence plays a significant role in influencing patient outcomes in healthcare. Medical AI companies develop systems that assist patients at every stage of their care. Clinical intelligence analyzes patients' medical information and provides insights aimed at improving their quality of life. AI and machine learning have much to offer in the rapidly evolving healthcare sector, which is currently

experiencing one of the fastest digital transformations, with the potential to greatly enhance patients' quality of life.

Data-driven medicine has the capacity to enhance not only the accuracy and responsiveness of genetic disease identification but also to pave the way for personalized medical treatments (Hummel & Braun, 2020).

According to respondent 14, *"with initiatives taken to implement AI there has been a need to enhance the competency of nursing team to be acquainted with the newly introduced software's along with functional skills"*

According to the research by Abbas et al. (2021), future studies should explore various avenues: new opportunities in AI continue to arise due to specific needs, energy efficiency, cost savings, and the goal of minimizing or eliminating the environmental impact associated with electricity generation, transmission, and distribution. Additionally, discussions on sustainable energy solutions and their effects on energy usage in the context of a future pandemic could be valuable.

AI will introduce several opportunities, including the creation of payment platforms that accept cryptocurrencies for product purchases, offering discounts on products when paid for with digital wallets, implementing AI-driven monitoring systems applicable across various industries, enhancing the promotion of AI systems and robotic technologies with minimal human intervention in factories, and utilizing machine vision technology and image processing to assess product quality.

4.3.2 Perspective of training and development in the organization

The qualitative data obtained from the interviews indicated that training and development are essential components for the successful implementation of AI in organizations. As AI technologies advance and become integrated into different business processes, the demand for thorough training programs grows more critical. This necessity is especially apparent in the retail industry, where swift technological progress compels employees to regularly enhance their skills to stay competitive and effective in their positions.

A Business Partner HR from the retail sector emphasized the necessity of robust training programs to help employees adapt to AI.

Respondent 28 mentioned that:

"The transition to AI-driven processes is not without its challenges, particularly when it comes to upskilling older employees who may be less familiar with new technologies. The generational gap in technological proficiency presents a significant hurdle, as older employees often require more time and support to adjust to new systems. Therefore, continuous learning and de-learning processes are crucial to ensure that all employees, regardless of age, can effectively use AI tools and contribute to the organization's success."

Another respondent 35 responded that: *" In our sector grooming standards are very important and with advancement of technology feedbacks are taken from customers. Using AI like chatbots, feedback portals customers are able to provide feedback regarding the services and as a result this helps in enhancing our overall organization."*

The respondent underscored the importance of creating a learning environment that promotes both acquiring new skills and unlearning outdated practices. This dual approach helps employees embrace AI technologies more confidently and seamlessly integrate them

into their daily tasks. For example, implementing AI-based screening software for recruitment or AI-driven inventory management systems in retail requires employees to understand how these technologies function and how to leverage them to improve efficiency and productivity.

Another HR Manager respondent 18 highlighted the need for organizations to enhance their internal AI capabilities*, "through targeted training programs and on-the-job training methods for developing AI skills among employees are very effective."*

By integrating AI training into regular work activities, employees can learn in a practical, hands-on environment, which helps solidify their understanding and application of AI tools. Additionally, this approach allows employees to see the immediate benefits of AI in their work, further motivating them to embrace the technology.

The HR Manager also advocated for the inclusion of AI modules in the company's internal digital platform. This approach provides employees with easy access to learning resources and allows them to progress at their own pace. By offering a range of AI-related courses and training materials, organizations can cater to different learning preferences and skill levels, ensuring that all employees could develop their AI competencies.

Furthermore, according to respondent 24, *"organizations promote the acquisition of academic degrees related to AI. Encouraging employees to pursue formal education in AI not only enhances their technical skills but also demonstrates the organization's commitment to professional development. This investment in employee education can lead to a more knowledgeable and capable workforce, better equipped to handle the complexities of AI implementation".*

In conclusion, training and development are essential components of successful AI implementation. Organizations must invest in comprehensive training programs that address the needs of all employees, particularly those who may be less familiar with new technologies.

By cultivating a culture of ongoing learning and offering access to a variety of educational resources, organizations can guarantee that their employees are adequately equipped to utilize AI to enhance efficiency and productivity. This strategic emphasis on training and development will ultimately aid in the successful integration of AI technologies and support the organization's long-term success.

4.3.3 AI Implementation and Cost Optimization

The qualitative data gathered from the interviews underscored the significant role of Artificial Intelligence in cost optimization across various sectors. Respondents consistently highlighted the potential of AI technologies to streamline operations, reduce labour costs, and improve overall efficiency, thus contributing to significant financial savings for organizations. One of the most commonly cited examples of cost optimization through AI is the use of chatbots.

Respondents noted that chatbots chatbots are capable of managing numerous customer interactions at once, offering immediate answers to routine questions and addressing common problems without requiring human involvement. This capability not only reduces the workload on customer service representatives but also allows organizations to operate more efficiently by addressing a higher volume of customer interactions without increasing staff numbers. The scalability of chatbots makes them an

attractive solution for businesses looking to manage costs while maintaining high levels of customer service.

Based on the response of respondent 23 who is a Marketing and sales Manager in hospitality sector, "there *has been a significant change in the productivity of services with introduction of AI. Our organization is using various tools and techniques through AI. I track my team through apps and have all historical data regarding there market movements. I have also been able to receive feedback through online which helps me in market correction initiatives as well as customer satisfaction."*

Furthermore, AI-driven automation extends beyond customer service. In many organizations, tasks that are repetitive and time-intensive, such as data entry, scheduling, and report generation, have been automated using AI. By minimizing the time employees dedicated to these mundane tasks, organizations can redirect human resources toward more strategic and value-enhancing activities. This shift not only boosts productivity but also improves employee satisfaction, allowing staff to concentrate on more stimulating and significant work. The reduction in administrative burdens translates to lower operational costs, as fewer human resources are required to perform tasks that can be efficiently managed by AI.

Respondents also discussed the cost benefits of AI in the context of resource management and optimization. Respondent 7 who is into retail, *"I have witnessed several impacts in business productivity because of implementation of AI. The AI analytics drives the operations team to take decisions regarding the product handling"*

For instance, AI-powered analytics can predict demand patterns and optimize inventory levels in real time. This predictive capability helps organizations minimize excess inventory, reduce storage costs, and avoid stockouts. In sectors such as retail and manufacturing, where inventory management is critical to operational efficiency, AI-driven insights can lead to substantial cost savings and improved profit margins. Additionally, the ability to analyse and act on real-time data enables organizations to make more informed decisions, further enhancing their cost management strategies.

Another area where AI contributes to cost optimization is in the recruitment and hiring process. Traditional recruitment methods often involve significant time and expense, including job postings, resume screenings, and multiple rounds of interviews. On being asking regarding AI implementation and cost optimization respondent 1who is currently in Human Resource department responded that, *"AI implementation has brought a boon in recruitment specially in mass recruitment. Screening has become lot easier, and cost related to employee during hiring has reduced a lot".* AI-based screening software can automate many of these processes, quickly sifting through large volumes of applications to identify the most qualified candidates. By reducing the time and resources spent on recruitment, organizations can lower their hiring costs and accelerate the onboarding process, ensuring that positions are filled more efficiently and with greater accuracy.

However, while AI offers substantial cost-saving opportunities, respondents emphasized the importance of maintaining a balance between cost optimization and the quality of human interactions. AI should augment, not replace, the human element in customer service and employee engagement. For example, while chatbots are effective for

handling routine inquiries, complex issues that require empathy and nuanced understanding should still be managed by human agents. Maintaining this balance ensures that organizations can achieve cost savings without compromising the quality of service and customer satisfaction.

Moreover, the initial investment in AI technologies and the ongoing costs of training and maintenance must be carefully managed. While AI can lead to significant long-term savings, organizations must be prepared for the upfront costs associated with purchasing, implementing, and integrating AI systems into their existing operations. Additionally, continuous training for employees to effectively use and manage AI tools is essential to maximizing the benefits of these technologies.

In conclusion, AI has the potential to drive substantial cost optimization across various sectors by automating routine tasks, enhancing resource management, and streamlining recruitment processes. Organizations that strategically implement AI can achieve significant financial savings while improving operational efficiency and employee satisfaction. However, it is crucial to maintain a balance between leveraging AI for cost savings and preserving the quality of human interactions to ensure a holistic approach to organizational improvement.

4.3.4 Culture and Work Life Balance Post AI

The qualitative data gathered from the interviews underscored the significant impact of AI on organizational culture and work-life balance. Respondents highlighted how the integration of AI technologies is not just a technical shift but a transformative change that affects the very fabric of workplace dynamics and employee experiences. This

transformation brings both opportunities and challenges, requiring careful management to ensure a positive and productive work environment.

According to respondent 18 who is a HR professional, *"there has been a shift in my organization as what we perceive as transformational activities. We use AI tools for talent management and development, measuring potential in 9-box grid model has been lot easier through software's now. Identifying resources like hi potential employees, critical resources has become lot easier. But one of the most important factors while using these AI tools are the right kind of human intervention. We try and maintain taking 360-degree feedback from all the sources before coming to conclusion."*

A key theme that surfaced from the interviews is the way AI is transforming HR processes, enhancing their efficiency and centralization. AI tools such as virtual assistants and analytics platforms are revolutionizing traditional HR functions by automating routine tasks, providing data-driven insights, and enhancing decision-making processes. For instance, AI-driven analytics can identify trends in employee performance, predict potential issues, and recommend proactive measures. This increased efficiency enables HR professionals to concentrate on more strategic tasks, such as talent development and organizational planning, thereby enhancing their position within the company.

The implementation of AI also facilitates better feedback mechanisms, which are crucial for employee development and satisfaction. Respondents noted that AI-enabled systems can provide real-time feedback on various performance metrics, allowing employees to understand their strengths and areas for improvement continuously. This

instant feedback loop not only helps in personal development but also keeps employees engaged and motivated, knowing that their progress is being monitored and appreciated.

AI's role in enhancing employee participation was another critical point discussed by respondents. By leveraging AI tools, organizations can create more inclusive and interactive platforms for employee engagement. For example, AI-powered surveys and sentiment analysis tools can gauge employee morale and collect feedback more effectively than traditional methods. This data can then be used to tailor initiatives and policies that resonate with the workforce's needs and preferences, fostering a more inclusive and responsive organizational culture.

However, the integration of AI into the workplace is not without its challenges, particularly concerning the generational gap in technology acceptance. Respondents observed that younger employees are generally more receptive to AI and its applications, given their familiarity with digital technologies. In contrast, older employees might struggle with adapting to these new tools, leading to resistance and potential friction within the team. This generational divide necessitates comprehensive change management strategies to ensure smooth transitions and mitigate resistance.

According to respondent 20 who is a Principal in a CBSE affiliated boarding school, *"Implementation of AI based tools in my school was initiated partially but now we are planning to expand the area by involving AI more into the classroom teaching technique. It's a huge shift for teachers and parents as well. There has been a cultural shift as traditional approach is to be replaced by a modern approached and we need to it sensitively as teachers and students' communication approach should not get affected."*

Effective change management involves not only providing adequate training and support but also fostering a culture of continuous learning and adaptability. Organizations

must emphasize the benefits of AI and demonstrate how these technologies can enhance rather than replace human roles. By highlighting success stories and involving employees in the implementation process, companies can build trust and buy-in across all age groups. Respondent 28 stated that,

"Employee in Hospitality sector should be on their toe 24 hours to serve the customers. Here, AI plays an important role in all the departments. The major challenge is developing the competencies of employees for this the hotel management institutions needs to train the students to be prepared and be market ready for the internship. We want more change in the area of training and development because employees specially in F & B services and F & B production department remains burnt out due to work pressure. Handling stress management becomes an important parameter. There should be balancing factor between the work stress and stability in personal life."

The interviews also shed light on the impact of AI on work-life balance. AI's ability to automate repetitive and time-consuming tasks means that employees can focus on more meaningful and fulfilling work, potentially reducing job-related stress and burnout. Moreover, AI-powered tools can facilitate flexible working arrangements, such as remote work and personalized schedules, by ensuring that employees remain productive and connected regardless of their location. These flexible arrangements are particularly beneficial in maintaining a healthy work-life balance, as they allow employees to manage their professional and personal responsibilities more effectively.

However, there is also a concern that the pervasive use of AI might blur the boundaries between work and personal life. The constant connectivity and real-time nature of AI tools can lead to an expectation of continuous availability, potentially encroaching on personal time and leading to work-life imbalance. Organizations must address this by

setting clear boundaries and expectations, ensuring that AI enhances rather than hinders employees' overall well-being.

In conclusion, the integration of AI in the workplace significantly impacts organizational culture and work-life balance. While AI brings efficiency, enhanced feedback mechanisms, and increased employee participation, it also presents challenges such as generational divides and the risk of work-life imbalance. By adopting comprehensive change management strategies and promoting a culture of continuous learning, organizations can harness the benefits of AI while mitigating its potential drawbacks. This balanced approach will help create a more productive, inclusive, and satisfying work environment for all employees.

4.4 Summary of Findings

The research sought to investigate how Artificial Intelligence impacts HRM using a blend of surveys and interviews. The results derived from both quantitative and qualitative data offer a holistic perspective on the present situation and future potential of AI in HRM.

The survey data, collected from 108 respondents across various industries, revealed a strong belief in the transformative potential of AI. A significant 64% of respondents agreed that AI is the future of HRM, and 66% indicated they have already integrated modern technologies such as AI-based screening software and database management systems into their HR processes. This widespread adoption reflects a growing recognition of AI's ability to enhance efficiency and decision-making.

One notable finding was that 32% of respondents have partially implemented AI in their HR functions, while 30% are planning to do so. Only 7% reported full implementation, highlighting that while interest and initial steps are widespread, full integration remains limited. The age demographic most engaged with AI in HRM falls within the 31 to 40 years bracket, suggesting that mid-career professionals are particularly attuned to technological advancements.

Respondents identified several specific benefits of AI, such as improved efficiency in recruitment and talent management processes.

Respondent 18 also stated that, *"Recruitment and talent management is one of the driving forces in human resource and AI contribution is being significantly used in our organization. This is both cost effective as well as timebound."*

A striking 76% believe AI is already influencing these areas, though a significant portion remains sceptical or neutral about AI's overall impact. Interestingly, while 48% of respondents do not believe AI will replace HR professionals, 17% think it might, indicating mixed feelings about AI's long-term role in HRM.

The qualitative interviews further enriched these insights by delving into the practical experiences of AI implementation across different sectors. For instance, in healthcare, an orthopaedic doctor highlighted how AI-based MRI machines have streamlined decision-making, reduced workload, and enhanced job satisfaction.

According to the respondent 2 who is a doctor by profession, *"The new model of MRI machine has deep learning AI in it. This is a technological breakthrough in this locality. Now, the image quality of the MRI will be enhanced resulting in a better diagnosis*

as well as the time would be reduced by 10 times resulting in patient comfort as well as more cases."

Training and development emerged as crucial factors for successful AI integration. A Business Partner HR from the retail sector emphasized the importance of robust training programs to help employees, especially older ones, adapt to new technologies. Continuous learning and de-learning processes are essential to bridge the generational gap in tech adoption. The respondent stated, *"Regular training interventions in the field of AI resulted in better adaptability specially for the generations who are not that technologically advanced."*

Cost optimization was another recurring theme. Respondents pointed out that AI technologies, such as chatbots, significantly reduce labor costs by handling multiple customer interactions simultaneously. However, they stressed the need to balance cost savings with maintaining the quality of human interactions, suggesting that AI should complement rather than replace human efforts.

The interviews also highlighted AI's impact on organizational culture and work-life balance. According to respondent 5, *"The initiative of introducing AI at our organization have brought a shift in the work environment. Employees now are more trained, and reduction of manual work has resulted in a better work life balance. Now we take KOTs through software and tabs are used to take orders and feedback."*

AI tools like virtual assistants and analytics platforms are enhancing productivity, facilitating better feedback mechanisms, and improving employee participation. However, there is a generational gap in acceptance, with older employees more resistant to these

changes. Effective change management strategies are needed to address this disparity and ensure smooth transitions.

4.5 Conclusion

The research findings underscore the transformative potential of AI in Human Resource Management, though the journey towards full integration is still in its early stages for many organizations. The partial implementation of AI, as reported by 32% of survey respondents, reflects a cautious yet optimistic approach towards embracing this technology. While 66% have adopted modern technologies, full-scale AI implementation remains limited to just 7%, indicating significant room for growth and development.

AI's influence on HRM is already evident in improved efficiency and decision-making processes, particularly in areas like recruitment and talent management. The strong belief among respondents that AI is the future of HRM suggests that organizations are keen to leverage these technologies for strategic advantages. However, the mixed sentiments about AI replacing HR professionals highlight a critical concern: the need to balance technological advancements with the irreplaceable human touch in HR functions.

The qualitative insights reveal that sectors like healthcare are leading in AI adoption, with tangible benefits such as reduced workload and increased job satisfaction. This sector-specific success story illustrates AI's potential to positively impact not just organizational efficiency but also employee morale and engagement.

Training and development are pivotal for successful AI integration. The generational gap in technology adoption is a significant barrier, emphasizing the need for continuous learning and adaptive training programs. Organizations must invest in

upskilling their workforce to ensure smooth transitions and maximize AI's benefits. The insights from the retail sector highlight the importance of robust training frameworks to help employees adapt and thrive in an AI-enhanced environment.

Cost optimization through AI is a clear advantage, as evidenced by the widespread use of chatbots and other AI-driven customer service tools. However, organizations must be mindful of preserving the quality of human interactions. AI should augment rather than replace human efforts, ensuring that cost savings do not come at the expense of customer and employee satisfaction.

AI's impact on organizational culture and work-life balance is profound. Tools like virtual assistants and analytics platforms are reshaping HR processes, making them more efficient and centralized. However, the generational gap in acceptance presents a challenge that requires effective change management strategies. Organizations must foster an inclusive culture that embraces technological advancements while addressing the concerns of all employees.

In summary, AI is positioned to transform Human Resource Management by offering a multitude of advantages such as enhanced efficiency, cost-effectiveness, and improved decision-making capabilities. However, achieving seamless integration of AI necessitates careful consideration of training requirements, cultural implications, and maintaining a harmonious balance between technology and human interaction.

Addressing these complexities enables organizations to fully leverage AI's potential, fostering more effective, adaptable, and inclusive HRM practices. This approach ultimately drives superior organizational performance and boosts employee satisfaction.

The study underscores the importance of a nuanced strategy that melds technological advancement with human-centered approaches, ensuring AI serves as an augmentation tool rather than a substitute. The next chapter five delves into the discussion of the pertinent areas that arose from the findings in the research questions.

CHAPTER V:

DISCUSSION

5.1 Introduction

The purpose of this research is to identify the factors that accelerate the impact of artificial intelligence in Human Resource Management, with an emphasis on balancing technological advancements with human elements such as decision-making and ethics. The study aimed to answer three key research questions:

1. What are the factors that contribute to accelerating the impact of AI in HRM throughout organizations?
2. Is the establishment of AI's impact in HRM positively related to cultural change and the development of the mindset of both employers and employees?
3. How do transformative leadership and learning and development play a role in implementing the effectiveness of AI in HRM?

To address these questions, the research was conducted through a two-pronged approach: a quantitative survey with 108 respondents and qualitative semi-structured interviews with 10 experienced professionals. This combination of quantitative and qualitative methods enabled a thorough grasp of the topic, blending extensive statistical analysis with detailed personal viewpoints.

5.1.2 Correlation of Research Results with Research Questions One

The survey revealed several critical factors contributing to the acceleration of AI in HRM. About 64% of respondents agreed that AI is the future of HRM, highlighting a strong belief in its potential. Moreover, 66% of respondents acknowledged using modern technologies such as AI-based screening software and database management systems in their HR processes. These technologies are pivotal in streamlining HR functions and improving efficiency. Additionally, 76% of respondents stated that processes like recruitment and talent management are increasingly relying on AI applications. This widespread adoption underscores the growing integration of AI into HR practices, driven by the need for improved accuracy, speed, and cost efficiency.

The interviews further emphasized the role of specific sectors in accelerating AI adoption. For instance, the healthcare sector has seen significant AI implementation, particularly during the COVID-19 pandemic. A healthcare respondent mentioned the acquisition of an AI-based MRI machine that enhanced decision-making and optimized time management. Similarly, in retail, the necessity for online engagement has driven the adoption of AI to meet customer demands, as noted by a Business Partner HR in the retail industry. These examples illustrate that sector-specific needs and challenges significantly influence the pace of AI adoption in HRM.

As noted by Reim (2020), AI can be characterized as a form of intelligence that is more efficient and capable of handling larger volumes of information than humans. People are less likely to trust an AI application if they lack an understanding of its functionality. Trust can be associated not only with technology itself but also with the innovative company and its effectiveness in communication.

Kaur, (2023) through his research stated that like in other organizational functions, as explained before, AI also has a crucial role in reducing the overall cost of HRM activities. In all HR processes, the ability to locate the right information, with reduced costs, in lesser time, and in a safe manner contributes the impetus, and it starts with the talent acquisition function (Ernst & Young, 2018).

AI can enhance the quality of hiring decisions and cost optimization, as organizations save the cost of poor hiring decisions (Barboza, 2019). Similarly, rightsizing can enable organizations to maintain a competitive advantage while gaining an advantage from a cost perspective (Armstrong-Stassen et al., 2005).

Literature, industry reports, and insights from interviews suggest that the operational cost of other HRM activities are also reduced through AI technologies. However, a well structure infusion of Artificial Intelligence has the potential to transform HR in every function if applied correctly and will have a selective impact on key HR functions. Following are the new capabilities that are increasingly being used by organizations: (1) Recruitment and Onboarding, (2) Employee Management. Recruitment is one of the most widely applied AI technologies in HR, which largely consists of screening candidates' resumes, hiring for mass roles, etc. (Zehir et al., 2020).

Algorithms are being employed to screen and grade candidates based on matching keywords, semantic analysis, analyzing a candidate's career progression, matching job titles, using assessment tests, and calligraphy analysis, etc. AI has led to a reduction in the time of candidate screening, improved the quality of hire by reducing bias, and shortlisting

candidates based on talent rather than experience alone, providing a better predictor of performance than just past experience Chowdhury et al., 2023).

5.1.3 Correlation of Research Results with Research Questions Two

The study hypothesized that the impact of AI in HRM is positively related to cultural change and the development of the mindset of both employers and employees. Survey results indicated that 48% of respondents do not believe AI will replace HR roles in the future, suggesting a perception that AI is a tool for enhancement rather than replacement. However, only 22% agreed that AI implementation would change organizational culture, indicating some resistance or scepticism towards cultural transformation through AI.

The Interview responses provided deeper insights into this hypothesis. The qualitative data revealed that AI implementation necessitates a shift in mindset, especially regarding training and development. For example, a respondent from the healthcare sector highlighted the importance of on-the-job training and internal digital platforms for AI learning. This indicates that organizations need to foster a culture of continuous learning and adaptability to fully realize the benefits of AI.

Additionally, respondents noted the challenge of bridging the generational gap in AI adoption, with older employees finding it harder to adapt to new technologies. This underscores the need for targeted training programs and support systems to facilitate cultural change and mindset development.

Cultural Change: Adoption of an Innovation Culture:

The integration of AI into HRM necessitates a shift toward a culture that values innovation and adaptability. Organizations that successfully implement AI often cultivate a culture where experimentation is encouraged, and learning from failures is accepted. This cultural shift not only facilitates the adoption of AI but also promotes continuous improvement and agility in HR practices.

Collaboration and Teamwork:

AI tools can enhance collaboration among teams by providing insights and data that inform decision-making. As employees become accustomed to using AI, there is often a greater emphasis on teamwork, as AI can facilitate communication and streamline processes. This collaborative environment fosters a culture of shared knowledge and collective problem-solving.

Employee Empowerment:

The implementation of AI in HRM can enable employees by automating repetitive tasks, freeing them to concentrate on more strategic and fulfilling responsibilities. This transition can result in higher job satisfaction and engagement, as employees perceive their contributions to the organization as more meaningful. A culture that embraces AI can also boost employee morale and motivation.

Mindset Development: Growth Mindset

The introduction of AI in HRM encourages both employers and employees to adopt a growth mindset. Employers need to be open to learning about new technologies and their applications, while employees must be willing to develop new skills to effectively interact

with AI tools. This mindset shift is crucial for maximizing the benefits of AI and ensuring that individuals are prepared for the evolving workplace.

Resilience to Change:

As organizations implement AI, both employers and employees must cultivate resilience in the face of change. Understanding that technological advancements are part of the modern workplace helps mitigate resistance and fosters a proactive approach to learning and adaptation. This resilience is essential for navigating the uncertainties associated with AI integration.

Focus on Lifelong Learning:

The rapid pace of technological change necessitates a commitment to lifelong learning. Organizations that successfully integrate AI into HRM often encourage continuous professional development, enabling employees to acquire new skills and knowledge relevant to their roles. This focus on learning not only benefits individual career growth but also enhances the overall capability of the organization.

Impact on Organizational Performance

AI offers data-driven insights that enhance decision-making in HRM. By adopting AI, employers can make more informed decisions related to talent acquisition, employee engagement, and performance management. This leads to improved organizational outcomes, such as higher retention rates and increased productivity.

Attraction and Retention of Talent:

Organizations that leverage AI effectively are often seen as innovative and forward-thinking, making them more attractive to potential employees. A positive cultural change

that embraces technology can enhance an organization’s employer brand, aiding in attracting top talent and retaining existing employees.

The recognition of AI's influence in HRM is closely linked to cultural transformation and the evolution of mindsets among both employers and employees. By promoting a culture of innovation, collaboration, and ongoing learning, organizations can successfully incorporate AI into their HR practices, resulting in improved performance, greater employee satisfaction, and overall organizational success. Highlighting these cultural and mindset changes is crucial for fully realizing the advantages of AI in HRM and ensuring sustainable growth in a fast-evolving work environment.

5.1.4: Correlation of Research Results with Research Questions Three

The study also explored how transformative leadership and learning, and development contribute to the effectiveness of AI in HRM. Survey data showed that 37% of respondents consider AI-based software as the future of HRM, reflecting the necessity for leadership to guide AI integration. Transformative leadership was seen as crucial in initiating and sustaining AI adoption, particularly during the pandemic, when rapid digital transformation was necessary.

Interview findings reinforced the significance of leadership and learning. Respondents emphasized that leadership initiatives were pivotal in AI implementation, especially in sectors like healthcare and retail. For instance, a healthcare HR manager advocated for extensive training programs and the inclusion of AI modules in internal platforms. This highlights the role of leadership in fostering an environment conducive to AI adoption through structured learning and development initiatives. Moreover, the

importance of external training providers was noted, indicating that partnerships with specialized AI training organizations could enhance the effectiveness of AI implementation.

Khan et al., (2023) noted that the primary advantages of AI include increased efficiency and improved quality of work, particularly in eliminating repetitive and mundane tasks. However, the most significant challenge lies in organizations' preparedness to adopt and integrate new technologies. Transformative leadership is defined by the capacity to inspire and motivate employees to welcome change, encourage innovation, and accomplish shared objectives. The findings identified that Leaders in this model focus on creating a vision for the future, encouraging collaboration, and empowering team members.

Driving Cultural Change:

Transformative leaders are pivotal in instilling a culture that embraces change and innovation. They articulate a clear vision for how AI can enhance HR practices, helping employees understand the benefits and potential of these technologies. By promoting a culture of openness and experimentation, transformative leaders facilitate smoother transitions to AI-driven processes.

Empowerment and Engagement:

Transformative leaders enable employees by including them in decision-making regarding AI implementation. This participation cultivates a sense of ownership and responsibility, resulting in increased engagement. When employees perceive that their contributions are appreciated, they are more inclined to adopt new technologies.

Role Modeling:

Leaders serve as role models for adopting new mindsets and behaviors. By actively engaging with AI tools and demonstrating a willingness to learn, transformative leaders encourage employees to do the same. This modeling can help shift organizational attitudes toward technology and innovation.

Continuous Learning Culture:

The integration of AI in HRM necessitates a culture of continuous learning. Organizations must prioritize L&D initiatives that equip employees with the skills needed to work effectively with AI technologies. This includes training on data analytics, AI tools, and soft skills like adaptability and problem-solving.

Skill Development:

L&D programs should emphasize both technical skills (such as proficiency in AI software) and soft skills (like communication and collaboration). As AI automates routine tasks, employees will need to cultivate advanced skills that enhance AI capabilities. Additionally, learning initiatives should be aligned with the organization's strategic objectives to maintain their relevance.

Tailored Learning Paths:

Transformative leaders can advocate for personalized learning paths that cater to individual employee needs and career goals. By leveraging AI-driven learning platforms, organizations can provide customized training experiences that enhance employee engagement and effectiveness.

Feedback and Improvement:

Establishing mechanisms for ongoing feedback allows organizations to assess the effectiveness of L&D programs continually. Transformative leaders should encourage a feedback-rich environment where employees can share their experiences and suggest improvements to training initiatives.

The interplay between transformative leadership and learning and development is vital for successfully integrating AI into HRM. Transformative leaders set the tone for a culture of innovation and continuous improvement, while effective L&D initiatives equip employees with the necessary skills to thrive in an AI-enhanced workplace. Together, these elements foster an environment where both the organization and its employees can adapt, grow, and succeed in the face of technological advancements.

In summary, the research findings underscore the multifaceted factors influencing AI's impact on HRM. Technological advancements, cultural shifts, leadership, and continuous learning are interdependent elements driving the successful integration of AI in HR processes. The data suggests a positive trajectory towards AI adoption, contingent on strategic leadership and a culture of adaptability and continuous improvement.

5.1.3 Correlation with Existing Literature

The integration of Artificial Intelligence into Human Resource Management is increasingly recognized as a pivotal development in both academia and industry. The factors that accelerate AI’s impact in HRM encompass various dimensions, including technological advancements, cultural change, and leadership dynamics. This section delves into these factors in detail, highlighting their implications and impacts, while correlating them with existing literature to provide a comprehensive understanding.

The first aspect to consider is the technological advancements that AI brings to HRM. As highlighted by Qamar et al., (2021), these advancements enhance operational efficiency by automating time-consuming tasks such as recruitment and performance management. By simplifying these processes, AI enables HR professionals to concentrate on strategic decision-making instead of getting overwhelmed by administrative tasks.

Moreover, Mariana et al., (2019) emphasizes the importance of integrating AI into decision-making processes, asserting that AI enhances the credibility and reliability of information. This capability leads to more accurate and timely insights, enabling HR managers to make informed decisions that can significantly improve organizational outcomes. The literature underscores that a robust technological foundation is critical for reaping the benefits of AI in HRM.

The second factor revolves around the necessity of cultural change and mindset development within organizations. The literature strongly supports the idea that a cultural transformation is essential for the successful implementation of AI technologies. Fang Wang et al., (2021) argues for the development of a learning organization, where enterprises and employees share common goals, thereby fostering a culture of continuous learning and adaptation. This cultural shift is vital as it creates an environment conducive to embracing technological changes.

Similarly, Sangita (2019) underscores the need for educational initiatives that equip employees with the necessary technical skills to navigate AI systems effectively. By investing in training and development, organizations can cultivate a workforce that is not

only adept at using AI but also open to change, ultimately leading to greater organizational resilience and innovation.

Transformative leadership plays a crucial role in facilitating the integration of AI into HRM practices. As noted by Jinu and Mary (2019), effective leaders are essential in navigating the complexities associated with AI implementation. Transformative leadership fosters an organizational culture that embraces change and innovation, thereby enabling organizations to harness the full potential of AI technologies.

Moreover, Jarrahi (2018) emphasizes the concept of human-AI symbiosis in decision-making, suggesting that while AI can provide valuable insights, human judgment remains indispensable. This perspective highlights the necessity for leaders who can strike a balance between leveraging AI tools and preserving the human elements essential to effective HRM.

The importance of learning and development initiatives cannot be overstated in this context. Kaur (2023) provides practical examples of how AI can be effectively utilized in HRM, such as using AI for resume screening and the development of personalized learning plans for employees. These applications illustrate that integrating AI into HRM is not solely about technology; it also requires a commitment to fostering continuous learning and development among employees. This commitment ensures that employees are equipped to adapt to new technologies and methodologies, ultimately maximizing the benefits of AI within HR practices.

Ethical considerations and trust in AI systems emerge as recurring themes in the literature. Kim, Park, and Lee (2018) argue that trust in AI is fundamentally based on the

transparency of its processes and the reliability of its outputs. For AI to be widely adopted, it must not only perform effectively but also be understood and trusted by its users. Mojsilovic (2019) echoes this sentiment, asserting that confidence in AI systems is critical for their successful integration. In HRM, where decisions can significantly affect employees' careers and lives, ensuring fairness and accountability in AI-driven processes is paramount. Ethical considerations can lead to increased transparency in decision-making, thereby building trust among users and stakeholders. Furthermore, addressing ethical concerns ensures that organizations remain accountable for the outcomes of their AI systems, reducing the risks of bias and discrimination.

The implications of trust in AI are equally significant. Trust can greatly influence user adoption rates; when employees have confidence in AI technologies, they are more likely to utilize them and rely on their recommendations. This heightened trust can enhance overall organizational performance, as employees who believe in the AI systems in place are more willing to embrace change and engage in innovative practices. Additionally, the public perception of organizations utilizing AI is shaped by the degree of trust established through ethical practices. Companies that prioritize transparency and fairness in their AI implementations can enhance their brand reputation and foster customer loyalty.

In conclusion, the existing literature robustly supports the research questions posed in this study, emphasizing the critical roles of technological advancements, cultural change, transformative leadership, and ethical considerations in accelerating AI’s impact in HRM. By focusing on these factors, organizations can effectively leverage AI to enhance their HR practices, leading to improved decision-making, greater efficiency, and more equitable

outcomes. Addressing the implications of trust and ethics in AI not only fosters a more inclusive work environment but also positions organizations favourably in the eyes of employees and the broader public, ultimately facilitating a more successful integration of AI technologies in HRM. There are various impact which may take place based on the actions taken.

5.4: Ethical and Legal Consideration in AI-HR integration

Artificial intelligence has been instrumental in enabling large-scale deployment and adoption by HRM in the big data era. AI technologies, however, are not without risks. The use of AI tools often raises potential ethical or privacy concerns, including security threats, both perceived and real, to applicants and current employees. The widespread use of AI and big data in HRM may lead to privacy infringement or the unauthorized collection of big data and to a negative impact on equality in society (Bankins, 2021).

Moreover, AI tools can be programmed to induce decisions solely benefiting the employing organization. AI-based decisions for recruiting and selecting employees should not be made in a way that would adversely affect the rights and opportunities, or the mental and physical well-being of individuals based on irrelevant factors.

Moreover, the AI community has long acknowledged that biases are still concealed in the input data of AI systems. Whether the biases stem from the data itself or are encoded into the algorithms, this will likely influence the decision-making of the AI system. In the context of HRM, AI tools exhibit an autopilot mechanism in preventing the underprivileged classes from accessing job opportunities, and hence are important for the protection of individuals' rights seeking employment. Some major laws and regulations that address the

deployment of AI technology in HRM were also identified, but the guidelines were less clear about the protections reserved for the employee or the applicant. A closer look reveals that while these guidelines or local regulations are instrumental in promoting a safe employment atmosphere where AI and other technologies are being deployed, they stand indirectly to also promote the interests of the employers.

The implication here is that there is a need for robust policy to protect the rights of the employee, as these guidelines were less clear about the extent to which unauthorized access may potentially have an effect on the interests of these parties. The interpretation of these guidelines reveals that society is more concerned about the privacy of personal and sensitive information of the job seeker, rather than its potential effects on the employing organization.

It follows that when collecting big data on employees, it is imperative that due attention is given to the social and psychological security of all persons involved. The refusal to do this could lead to a well-meaning act that resides in the best interest of the employing organization being perceived as over-ambitious, unethical, and negatively motivated (Hofeditz et al., 2022). Hence, it is imperative that companies address transparency, accountability, fairness and trust using AI.

Transparency: Ethical considerations in AI can lead to increased transparency in how AI systems make decisions, helping to build trust among users and stakeholders.

Accountability: Addressing ethical concerns can make organizations and developers accountable for the outcomes of AI systems, reducing the risk of biases and discrimination.

Fairness: Ethical considerations can promote fairness in AI applications, ensuring that decisions made by AI systems do not discriminate against certain individuals or groups.

Trust Impact:

User Adoption: Trust in AI systems can influence user adoption rates. When users trust AI technologies, they are more likely to use them and rely on their recommendations.

Trust in AI among employees can impact organizational performance. When employees trust AI systems used in HRM, for example, they may be more willing to embrace change and enhance their productivity.

Trust in AI can shape public perception of technology companies and organizations using AI. Building trust through ethical practices can enhance brand reputation and customer loyalty.

5.5 Triangulation of Research Hypotheses with Existing Literature

The study analysis indicates the presence of important trends regarding AI usage in India. AI is increasingly being integrated at different stages in the human resource management (HRM) practices in India. These trends pertain to the use of AI in the recruitment and selection process, talent management, HR analytics, and employee engagement (Budhwar et al., 2022).

The integration of HRM and AI use indicates a change in the attitudes of the HRM department, which has now started accepting the use of technology in hiring and in reaching potential employees. A survey interviewee narrates how AI has revolutionized modern-day hiring platforms, enabling them to attract and retain passionate, skillful, and

committed employees who are eager to explore possibilities at the workplace (Vrontis et al., 2023).

AI is also being widely used in conducting various employee-related analyses and forecasting for better decision-making. The use of AI in HR analytical tools has significantly hastened the day-to-day decision-making process, enabling strategic planning in a firm. While AI has the capability to predict, the application of the results it produces is determined by the intellect of the humans in charge.

In essence, AI aids employees in gaining insight by performing analyses in no time. Since AI is not influenced by emotions or personal bias and only considers data, it makes for an accurate appraisal of issues. The successful use and application of AI in HRM has accelerated the transformation of the HR system and enabled HR professionals to function as strategic business partners within any organization. The following paragraphs provide insights on the use of technology in HRM at different levels as observed in India through the interviews (Pandey et al., 2023)

The research findings from the current study correlate significantly with existing literature on the impact of AI in human resource management. Several key themes emerge from this comparison, including the role of AI in cultural change, mindset development, the mitigation of biases, cost optimization, and training and development.

AI and Cultural Change in Organizations

Existing studies emphasize AI's potential to profoundly alter organizational cultures. Mariana et al., (2019) asserts that incorporating AI into HRM can substantially enhance the reliability of information, thereby facilitating more confident decision-making

processes. This aligns with the survey findings where 22% of respondents agreed that AI implementation will change the culture of their organizations. Similarly, Wang et al., (2021) emphasizes the importance of a sound human resource management information system powered by AI to fundamentally improve the quality of HR practices in manufacturing enterprises, highlighting the broader cultural shift towards more data-driven and efficient operations.

Digital transformation goes beyond simply adopting and utilizing new digital technology solutions; it involves a comprehensive change within an organization that is driven by the integration of new digital knowledge, fostering a culture open to rethinking operational processes, and embracing new practices and business models.

Leaders play a vital role in influencing organizational culture and creating an environment that nurtures, develops, and manages digital-based knowledge. They propel the organization's digital transformation by reevaluating existing structures and processes, promoting a culture of change, and guiding individuals to reshape their mindsets, knowledge, attitudes, and work practices in alignment with the organizational strategy and the essential aspects of the organization's framework (Schiuma, 2024).

Development of Employer and Employee Mindset

The study by Jarrahi (2018) illustrates the supportive role of AI in decision-making processes within organizations, emphasizing the symbiotic relationship between humans and AI. This supports the current research finding that a significant portion of respondents (64%) agreed that AI is the future of HRM. The necessity for HR managers to be proficient in both HR and AI systems to mitigate technical gaps, as suggested by Qamar et al., (2021),

is also reflected in the qualitative responses where participants highlighted the need for continuous learning and adaptation to new AI technologies.

Mitigation of Biases and Ethical Concerns

Bias in AI systems is a critical concern highlighted by Qamar et al., (2021), who caution against the potential for AI to perpetuate human biases in HR activities. The current study echoes this concern, noting that while AI can streamline HR processes, careful management is required to ensure ethical decision-making. This is particularly relevant given that only 37% of survey respondents were confident in AI's ability to improve HRM without bias, indicating a need for robust training and ethical guidelines in AI implementation.

Cost Optimization through AI

The cost-saving potential of AI in HRM is well-documented. Samarasinghe & Medis (2020) argue that AI can address issues such as labor cost reduction and efficient talent management. This is corroborated by the current study's findings, where respondents acknowledged the benefits of AI in cost optimization, particularly through automation and improved efficiency in HR processes. The qualitative insights from interview participants further underscore AI's role in reducing labor costs and enhancing operational efficiencies, as seen in the healthcare sector's use of AI-based MRI machines to optimize decision-making.

Training and Development in AI

The importance of training and development in AI adoption is highlighted across multiple studies. Wang et al., (2021) stresses the necessity of continuous learning and development to keep pace with technological advancements in AI.

Similarly, Sangita (2019) emphasizes the need for workshops and educational programs to enhance AI proficiency among HR professionals. The current study supports this, with respondents and interview participants alike advocating for robust training programs to facilitate AI adoption. The HR managers interviewed noted the significance of internal training centers and external experts to bridge skill gaps and enhance AI utilization in HRM processes.

Enhancing Decision-Making and Trust

Establishing trust in AI systems is essential for their widespread adoption, as pointed out by Kim, Park, and Lee (2018). The requirement for transparency and comprehension of AI systems to cultivate trust corresponds with the findings of the current study, which underscores the significance of ethical AI practices. Participants emphasized the necessity for clear guidelines and training to guarantee the responsible and effective use of AI systems, mirroring the broader literature's emphasis on trust-building strategies in AI implementation.

5.6 Conclusion

Although the introduction of AI entails a long list of challenges and concerns, providing the necessary technical infrastructure for coordinating the demands according to ethical, transparency, and protection-relevant criteria is implied. This need consequently

turns HR platforms into strategic tools for safeguarding the sustainment of corporate goals, even when the managerial horizon might be asynchronous.

In summary, the current research findings align closely with existing literature on the impact of AI in HRM. AI's potential to drive cultural change, enhance decision-making, mitigate biases, optimize costs, and necessitate continuous training is well-supported by both the current study and previous research. As AI continues to evolve, its integration into HRM will likely become more profound, necessitating ongoing research and adaptation to ensure ethical, efficient, and effective utilization. The last chapter of the thesis delves into the summary, implications and recommendations for the research.

CHAPTER VI:

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

Artificial intelligence has evolved to have a profound and lasting impact on business and management. It has the transformative potential to influence our economies, industries, jobs, and management, thus HRM practices. The findings of this study suggest that AI has the potential to enhance the HR decision-making process. At the same time, both challenges and potential resistance need to be taken seriously. This special issue gives a comprehensive multidisciplinary view of the topic, combining legal, ethical as well as more technical perspectives. It provides valuable insights for researchers, practitioners, and policymakers (Yanamala, 2023).

Artificial intelligence is significantly impacting both technical operations and human resources within organizations. According to Bankins (2021), AI is increasingly involved in various functions of human resource management such as job applicant sourcing, task allocation, learning and development, career coaching, and cost optimization. While AI offers numerous benefits, there are also concerns about potential harms if not implemented thoughtfully, particularly in domains like HRM which handle sensitive aspects of individuals' employment lifecycles. The ethical implications of AI deployment in these areas continue to be a topic of debate and research.

Moreover, the societal impact of AI has prompted many organizations to initiate efforts aimed at establishing ethical guidelines for its adoption (Floridi & Cowls, 2019).

The integration of AI into workflow processes represents a shift towards AI-driven decision-making, particularly for routine decisions based on structured data, which can reduce cognitive biases inherent in human decision-making. However, caution is warranted due to the risk of biased data leading to unfair outcomes, highlighting the importance of understanding both the generation and use of data.

Colson (2019) suggests that the future lies in organizations that seamlessly blend AI capabilities with human contributions from inception, rather than attempting to retrofit AI into existing structures. This evolutionary process mirrors natural selection, favoring organizations that efficiently adapt to technological advancements.

In today's hybrid work culture and evolving perspectives, strategic HRM plays a crucial role in leveraging AI to enhance Human Resource Management practices. This strategic integration holds promise for optimizing organizational processes and fostering a productive and inclusive workplace environment.

intelligence (AI) combines innovations in machine learning, data storage, computational prowess, and applicative algorithms to solve real-world problems. Many organizations have achieved operational excellence by employing AI to streamline tasks across various functions such as customer service and product design. AI helps automate mundane tasks and provides a data-driven tool for making future predictions by using historical data.

Predictive analytics and other cognitive technologies offer several potential advantages in HR functions. The impact of AI can be mapped in various HRM functions including talent acquisition, learning, training, and innovation. In recent years, AI has

transformed the workplace and core human resource functions such as recruitment, talent development, retention, and employee motivation. Most frequently, the adoption of AI has been seen in sourcing, screening, matching, tracking or records administration, evaluating, matching or pre-employment assessment, and predictive analytics.

The adoption of AI is not only transforming the look of HRM functions; it also has implications for improving the human element of HRM. AI in the HR industry can serve as neutral ground, aid in quality and job fit, increase employee engagement, or benefit the greater HR function through enhanced decision-making. It is worth noting the positive implications on the employee aspect of AI-driven HR.

Leaders must continue to keep up with the latest technologies impacting the industry. By hearing how other professionals are investing in technologies, attendees know where they should be focusing their energies. Most importantly for HRM leaders, this is an opportunity for them to get ahead of the competitors in the market and attract the best talent. However, the growing presence of AI in the IT environment has given rise to several concerns over individual privacy and security, which will increase as AI becomes more autonomous.

6.2 Implications

6.2.1 Implications in organizations

The integration of Artificial Intelligence in HRM is reshaping core organizational processes such as recruitment, streamlining operations that traditionally consumed significant managerial time. Research by Vulevic et al., (2022) suggests that by 2025, the collaboration between humans, machines, and algorithms could lead to the displacement

of 85 million jobs, while creating 97 million new jobs that align better with this new paradigm (World Economic Forum, 2020). This shift will necessitate upskilling for half of the current workforce over the next five years. However, there is currently a shortage of basic digital skills among young people, with limited opportunities for learning these skills after high school. Additionally, there remains a significant gap in Information Communications Technology (ICT) job training, despite the existence of 1 million job openings in digital transformation.

As noted by Ali and Rafi (2024), the intersection of transformational leadership and AI integration in HR offers both opportunities and challenges for organizations navigating digital transformations. Transformational leaders play a vital role in promoting innovation and adopting technological advancements within their teams. They utilize AI-driven analytics to gain insights into employee behaviors, preferences, and performance, which allows for informed decision-making regarding talent management strategies. By effectively leveraging AI, transformational leaders can enhance HR processes, increase employee engagement, and propel overall organizational success in the digital age.

In this context, transformative leadership plays a pivotal role in implementing effective changes, cultivating a culture that embraces innovation, and transforming both employer and employee mindsets, thus fostering a balanced integration of AI in HRM.

Impact of Machine Intelligence in HRM on Talent Acquisition

Recruitment and selection have been the most significant fields in Indian organizations to test tools and products based on machine intelligence. Several AI tools are automating the recruitment process in several organizations. They include the use of

applications of AI such as Robotic Process Automation and chatbots in addressing inquiries from external candidates or internal employees for information that totals millions in developing organizations.

AI tools for recruitment are disrupting talent acquisition and candidate engagement at every step. It estimates that a talent management system with an AI component could save upwards of 20-70% of an organization's IT team's time, boosting productivity by 140%. One significant domain where AI might play a role is to automate the costlier yet essential screening of a large number of applications for a given job. Two such systems are usually found in hiring, with some serving as filters rather than predictors of future performance (Nechytailo, 2023).

AI in Employee Training Engagement

A significant trend in HR technology is the use of AI for employee development. AI has the capability to analyze large amounts of data, recognizing patterns of success, as well as identifying employees' strengths and areas that require improvement. Such learning can lead to making a course’s curriculum fit individual employees' learning styles and fill in gaps. AI-driven assessment at the learning level also delivers very targeted feedback to learners to help them master the necessary skills.

Performance Management

Involvement of all managers in periodic performance appraisals is not possible in today’s scenario. Therefore, ways are being explored to make performance management a continuous, tech-driven, and AI-supported process. AI can facilitate continuous monitoring and evaluating performance of employees on a real-time basis through regular updates of

their activities on software monitored through dashboards by superiors. This will result in accurate assessment of employee performance and help in avoiding errors caused due to recency or primacy bias.

AI in Diversity and Inclusion

The usage of artificial intelligence (AI) for diversity and inclusion initiatives could have transformative implications for many organizations. AI can help prevent discrimination in hiring practices and improve the efficacy of diversity and inclusion efforts. Candidate matching tools can offer accurate assessments of whether a candidate has the necessary skills and background for a given role.

6.3 Recommendations for Future Research

In addition to the identified research gaps, several other research paths emerged during our analysis, which we believe warrant further academic attention. Most importantly, the study calls for a focus on longitudinal studies to assess the impact of AI on contemporary HR practices for employees and on the unintended consequences of AI for employee careers.

Such future research should investigate not only short-term phenomena but should also stress the long-term impact of AI on HRM.

Moreover, Researchers should also explore to what extent contemporary HR trends are influenced by the type of employment structure of the organization.

Another research direction could center around the socio-technical relationship, examining the synergy between AI implementation for HR on one side and innovation and the profiling of an innovative image of the organization on the other.

Although AI provides significant advantages in handling and analyzing extensive datasets, it is vital to preserve human oversight and interpretation to uphold ethical considerations, fairness, and transparency in decision-making. Implementing strong governance frameworks and ethical guidelines is necessary to direct the development, implementation, and continual monitoring of AI algorithms in HRM (Ali & Rafi, 2024).

Organizations that prioritize the integration of AI can foster a culture of inclusiveness and strike a balance between technological innovation and human involvement. Future research should focus on exploring the ethical implications and decision-making processes where AI in HRM can operate without bias.

By addressing these research recommendations, we can advance our understanding of AI's potential in HRM while ensuring its responsible and effective integration in organizational practices.

6.4 Conclusion

Artificial intelligence (AI) is not just a new tool – when thoughtfully realized, it has the potential to transform HR practices and improve the effectiveness of employers' HRM strategies. It is one area of technological advancement that we are both excited and cautious about. AI innovations range from breaking down job descriptions and job postings to comprehensive recruitment platforms that aim to improve the efficiency of matching graduates and job employers.

Although caution is advised regarding heavy reliance on AI at certain stages of the employee life cycle, our preliminary insights suggest that many forms of AI have the power

to be transformative in HR, ranging from reducing biases in selection to improving employee engagement and retention. Under this light, HR professionals should start to work at finding the balance between AI's potential benefits and its associated challenges in terms of fairness and ethical implications, as well as the adaptation and training challenges for post-hire AI tools and employees in the early stage of their career.

All the recommendations are aimed at facilitating the effective adoption of AI technologies in HR practices. Organizations should not only think about their implications on privacy and job characteristics proactively when initiating conversations or implementation with workers, but they should also consider all dimensions of organizational culture and practice. For example, leadership should consider the four pillars of trust, purpose, autonomy, and work-life balance when transitioning to AI-adaptive processes.

Companies should prioritize the continual evaluation of both the AI data feed and their strategy to reduce any potential biases or ethical decision-making regarding its adoption. Companies should also ensure the ongoing training and evaluation of employees to learn how to work with AI tools and accommodate any challenges among employees.

Additionally, there is a foundational need for companies to increase the transparency of AI's practices for employers and potential employees to improve trust. It is critical for companies to foster a workplace culture of trust and safety in the context of AI's use in HR activities, which in turn will help them attract and retain a diverse workforce around the globe. This includes partnering with all areas of the organization as well as external stakeholders.

While AI offers numerous benefits in HRM, including enhanced efficiency, accuracy, fairness, and transparency, challenges such as data security and privacy remain significant concerns. Establishing clear policies and frameworks for data collection and usage is essential to ensure responsible AI deployment.

Research by Sangeeta (2019) underscores the positive impact of AI on HRM, emphasizing simplification, timeliness, fairness, and accuracy in HR processes. However, comprehensive education and workshops are needed to broaden understanding and expertise in AI within HRM, addressing gaps in technology proficiency and ensuring data protection.

Dhanabalan and Sathish (2018) highlight the critical need for regulatory oversight in the AI landscape, advocating for frameworks that govern ethical considerations, decision-making processes, and infrastructure security. Such measures are essential to safeguard against potential misuse of AI technologies.

In conclusion, AI's integration into HRM represents a transformative force driven by organizational leadership, ethical considerations, and enhanced decision-making capabilities. Finally, proactive workplaces should be receptive to the change management implications of AI from a worker and managerial perspective from the beginning of the implementation process. This balanced approach fosters a productive and technologically empowered environment while mitigating potential risks associated with AI adoption in HRM.

APPENDIX A

SURVEY COVER LETTER

Dear Respondent, I am a student of Doctorate Research Program with Swiss School of Business Management, Geneva. This survey is intended for gathering the individual's views regarding Evolving impact of Artificial Intelligence in Human Resource Management.

This survey does not gather any personally identifiable information from the users. The information collected as part of the survey will be kept confidential and will be used only for building statistical analysis and conclusions.

As part of this study, I would like to invite you to participate in a survey that will help us gather valuable insights. Your participation is crucial, as it will contribute to a better understanding of how AI influences HR practices and employee engagement.

If you experience any difficulties or have questions about the survey, please contact my supervisor, Professor David Annan, at david.annan@ssbm.ch.

Your feedback and suggestions are important to us, and we are committed to supporting you in any way possible. Thank you again for your participation and valuable insights.

Thank you for taking time for this survey.

Merry

APPENDIX B

INFORMED CONSENT

EVALUATING THE EVOLVING IMPACT OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT

I, ……. agree to be interviewed for the research which will be conducted by ……... a doctorate student at the Swiss School of Business and Management, Geneva, Switzerland. I certify that I have been told of the confidentiality of information collected for this research and the anonymity of my participation; that I have been given satisfactory answers to my inquiries concerning research procedures and other matters; and that I have been advised that I am free to withdraw my consent and to discontinue participation in the research or activity at any time without prejudice. I agree to participate in one or more electronically recorded interviews for this research. I understand that such interviews and related materials will be kept completely anonymous, and that the results of this study may be published in any form that may serve its best. I agree that any information obtained from this research may be used in any way thought best for this study.

…… ……

Signature of Interviewee Date

APPENDIX C

INTERVIEW GUIDE

The interviews were conducted using a variety of methods including face-to-face meetings, Google Meet, WhatsApp, observations, and telephone calls, ensuring flexibility and smooth interaction to gather high-quality data. Factors such as crafting effective interview questions, proximity to participants, communication channels, participants' availability, and interview timing all influenced the development of the interview guides used in the study. These guides served as a structured framework for my research, aligning with Silverman's (2013) notion that they encourage productive discourse.

The interview guides were designed to be adaptable, allowing me to adjust based on the evolving perspectives and new insights from respondents, as emphasized by Merriam (2009, p. 90).

Additionally, I took into account organizational maturity, cultural diversity, age, gender, and social contexts during the application of these guides. This approach ensured that the interview process remained dynamic, responding to unexpected circumstances and modifying the application of guidelines as needed to suit the specific situations encountered.

APPENDIX D:

SURVEY QUESTIONS

The survey is done as part of my Doctorate Research Program with Swiss School of Business Management, Geneva. This survey is intended for gathering the individual's views regarding Evolving impact of Artificial Intelligence in Human Resource Management.

Please choose the reply as applicable:

1) **From which industry do you belong?**

a) IT

b) Automobile

c) General recruitment in private agency

d) Consulting firm

e) Sports and Leisure

f) Manufacturing

g) Retail

h) Technology

i) Construction

j) Education

k) Healthcare/Pharma

l) Finance

m) Hospitality

n) others

2) **In which age bracket do you belong?**

a) 22-25 years b)26-30 years c) 31-40 years d) above 40 years

3) **What is your designation?**

a) HR Manager b) Administrator c) Analyst d) CXO level e) Others

4) **In which category does the implementation of AI at your organization fall:**

a) Already implemented AI in HRM

b) have partially implemented AI in HRM

c) In nascent stage and have just started AI in HRM.

d) Planning to implement AI in HRM

e) Very naïve to the concept of AI in HRM/unaware about the impact of the same .

5) **Do you think that AI is the future of HRM?**

a) Yes b) No

6) **Do you use modern technologies for e.g. AI-based screening software, Database management software, training and development, etc. in your HRM process?**

a) Yes b) No

7) **Do the software used in your organization for processes like hiring, Talent Management etc. are based on application of Artificial Intelligence or latest technologies?**

a) Yes b) No c) May be

8) **Do you think that AI based software is future for HR practices?**

a) Strongly Agree b) Agree c) Neutral d) Disagree e) Strongly Disagree

9) **Do you think that Artificial Intelligence is easing Human Resource operations?**

a) Strongly Agree b) Agree c) Neutral d) Disagree e) Strongly Disagree

10) **AI will replace Human Resources in future**

a) Strongly Agree b) Agree c) Neutral d) Disagree e) Strongly Disagree

11) **Implementation of AI in HRM will change the culture of the organization.**

a) Strongly Agree b) Agree c) Neutral d) Disagree e) Strongly Disagree

INTERVIEW QUESTIONS

1. What specific applications of Artificial Intelligence are currently implemented in your HR department, and how are they being utilized?
2. What initiatives has your leadership undertaken to facilitate the implementation of Artificial Intelligence within your HR department?
3. Do you have plans to establish an internal training and development center focused on AI training and its impact? If so, what specific objectives do you aim to achieve with this initiative?
4. Have you engaged any external organizations or consultants to provide AI-related training within your organization? If so, what were the key reasons for this decision?
5. If your organization is utilizing AI applications, what strategic advantages or benefits have you gained from their implementation?
6. In what ways has the implementation of AI contributed to cost optimization within your organization? Could you provide specific examples or outcomes?

7. Did your organization provide professional training prior to the implementation of AI? If so, what aspects of AI were covered in the training?
8. What mode of training was utilized for the AI-related professional development? For example, was it conducted through workshops, online courses, hands-on sessions, or other methods?
9. In what ways has the introduction of AI impacted your work life? Could you describe specific changes in your responsibilities, workflows, or overall job experience?

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