LARGe HR Management in the Fintech Disruptive Innovation Era

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ABSTRACT

LARGe HR Management in the Fintech Disruptive Innovation Era

This study investigates the integration of the LARGe HRM framework and its impact on financial institutions' human resource management *(HRM)* practices, particularly in the context of rapid technological advancements. The study explores how adopting the LARGe HRM framework and HR technology influences HR effectiveness, employee engagement, and satisfaction within the financial sector. Using a sample size of 105 employees from various organizations, including financial institutions, participants were selected through a stratified random sampling technique to ensure representation across different levels *(Managers and employees)* and departments *(HR and Non-HR)*. Data were collected via a survey through Google Forms and analyzed using Excel and SPSS. When strategically integrated with human-centered HR practices, the findings suggest that HR technology adoption can support organizational goals, contribute to operational efficiency, and create a more engaged, satisfied, and high-performing workforce. These findings have practical implications for HR practitioners, providing insights into balancing technology adoption with employee-centric HR strategies in the financial sector.

Keywords: LARGe HRM Framework**,** Disruptive Technology**,** Employee Satisfaction, Employee engagement**,** financial institutions, FinTech**,** Human Resource Management Practices**.**

Table of Content

List of Table 11
List of Figures ..... **Pogreška! Knjižna oznaka nije definirana.**
Chapter 1 12
Introduction 12
1.1 Background of the Study 12
1.2 Problem Statement 21
1.3 Purpose of the Study 24
1.4 Significance of the Study 24
1.5 Research Questions 25
Chapter 2 27
Literature Review 27
2.1 Underpinning Theories for the Study 29
2.1.1 Technology Acceptance Model (TAM) 29
2.1.2 Resource-Based View (RBV) 33
2.1.3 Theory of Reasoned Action (TRA) 35
2.1.4 Theory of Planned Behavior (TPB) 36
2.2 Lean HRM in the Fintech Disruptive Innovation Era 38
2.2.1 Value: Focusing on Strategic HR Contributions 39
2.2.2 Value Stream: Eliminating Inefficiencies Across HR Processes 39
2.2.3 Flow: Ensuring Seamless Progression of HR Activities 40
2.2.4 Pull: Responding to Actual Needs 41
2.2.5 Perfection: Driving Continuous Improvement 42
2.3 Lean HRM and the Seven Categories of Waste in Fintech 42
2.3.1 Overproduction 43
2.3.2 Waiting 43
2.3.3 Transportation 44
2.3.4 Extra Processing 44
2.3.5 Inventory 45
2.3.6 Motion 46
2.3.7 Defects 46

2.4 Agile HRM: Enhancing Flexibility and Responding to Change 47
2.4.1 Welcoming Change: Adapting to Emerging Technologies and Trends 48
2.4.2 Frequent Delivery of Incremental Improvements 49
2.4.3 Collaboration Across Teams to Align Objectives 49
2.4.4 Simplicity: Streamlining Processes for Efficiency 50
2.4.5 Continuous Improvement: Retrospectives and Learning Loops 50
2.4.6 Agile HRM in Fintech: A Strategic Imperative 51
2.5 Resilient HRM: Building Capacity for Adaptation and Recovery 51
2.5.1 Principle 1: Preparedness 52
2.5.2 Principle 2: Adaptability 52
2.5.3 Principle 3: Diversity 53
2.5.4 Principle 4: Well-being 53
2.5.5 Principle 5: Continuous Learning 54
2.6 Key Practices in Resilient HRM 54
2.6.1 Regular Goal Reviews 55
2.6.2 Proactive Workforce Analytics 55
2.6.3 Scenario Planning 56
2.6.4 Employee Well-being Programs 56
2.6.5 Cross-functional Training and Talent Mobility 57
2.6.6 Agile Communication Strategies 58
2.6.7 Technology-Enabled Resilience 59
2.7 Green HRM: Promoting Sustainability in the Workforce 59
2.7.1 Environmental (E) 60
2.7.2 Social (S) 61
2.7.3 Governance (G) 61
2.8 Green HR Practices in Key HR Functions 62
2.8.1 Green Onboarding 62
2.8.2 Green Training and Development 62
2.8.3 Green Performance Management 63
2.8.4 Green Employee Engagement and Retention 64
2.8.5 Green Leadership and Culture 64

2.8.6 Green HR Systems and Technology 65
2.9 Principles of Entrepreneurship 65
2.9.1 Innovation and Creativity 65
2.9.2 Empowerment and Autonomy 66
2.9.3 Leadership and Vision 67
2.9.4 Collaboration and Networking 67
2.9.5 Entrepreneurial Mindset 68
2.9.6 Adaptability and Resilience 68
2.9.7 Measurable Outcomes and Accountability 69
2.10 HR Practices Supporting Entrepreneurship 70
2.11 Challenges in Entrepreneurial HRM in the Fintech Industry 72
2.11.1 A Tech-Driven Environment presents hurdles to change adoption 72
2.11.2 Fear of Failure in a Fast-Paced Industry 73
2.11.3 Short-Term Focus vs. Long-Term Innovation 73
2.11.4 Resource Constraints in High-Growth Fintech 74
2.11.5 Cultural Misalignment in Diverse Fintech Workforces 74
2.11.6 Regulatory and Compliance Constraints 75
2.11.7 Evaluation and Measurement of HR Innovation 75
2.12 Benefits and Challenges of Entrepreneurial HRM 76
2.12.1 Innovation and Growth 76
2.12.2 Employee Engagement and Retention 76
2.12.3 Reduced Risk 77
2.12.4 Faster Implementation 77
2.13 Challenges of Entrepreneurship 77
2.13.1 Resistance to Change 77
2.13.2 Limited Autonomy 78
2.13.3 Resource Allocation 78
2.14 Human Resources Practices in Entrepreneurship 79
2.14.1. Gamified Recruitment 79
2.14.2. Flexibility in Work Environments 80
2.14.3 Data-Driven Engagement 81

2.14.4 Innovation Labs 81
2.14.5 Personalized Employee Learning and Development 82
2.15 Benefits of HR Entrepreneurial Practices in the Fintech Industry 83
2.15.1 Increased Innovation 83
2.15.2 Enhanced Agility 84
2.15.3 Improved Employee Experience 84
2.15.4 Stronger Business Alignment 85
2.16 HR Effectiveness 86
2.17 Employee engagement 88
2.18 Employee Satisfaction 90
2.19 Lean HRM and HR Effectiveness 92
2.20 Lean HRM and Employee Engagement 95
2.21 Lean HRM and Employee Satisfaction 98
2.22 Agile HRM and HR Effectiveness 101
2.23 Agile HRM and Employee Engagement 103
2.24 Agile HRM and Employee Satisfaction 104
2.25 Resilient HRM and HR Effectiveness 107
2.26 Resilient HRM and Employee Engagement 110
2.27 Resilient HRM and Employee Satisfaction 112
2.27 Green HRM and HR Effectiveness 114
2.28 Green HRM and Employee Engagement 116
2.29 Green HRM and Employee Satisfaction 118
2.30 Entrepreneurial HRM and HR Effectiveness 119
2.31 Entrepreneurial HRM and Employee Engagement 121
2.32 Entrepreneurial HRM and Employee Satisfaction 123
2.33 HR Challenges in the FinTech Industry in the Middle East 125
2.33.1 Talent Acquisition and Retention 125
2.33.2 Employee Adaptability to Change 126
2.33.3 Cultural Fit and Diversity 127
2.33.4 Compliance and Regulatory Issues 127
2.33.5 Agility in HR Processes 128

2.33.6 Employee Well-being 129
3.34 Implementation of a LARGe HR Framework for financial institutions..... 130
3.34.1 Lean HR: Driving Operational Efficiency and Strategic Alignment..... 130
3.34.2 Agile HR: Strategic Flexibility and Responsiveness 130
3.34.3 Resilient HR: Long-term Sustainability and Crisis Management 131
3.34.4 Green HR: Sustainability and Social Responsibility 132
3.34.5 entrepreneurial HR: Innovation, Leadership, and Strategic Growth 133
3.34 Framework..... 133
3.36 Hypothesis 134
Chapter 3 135
Methodology 135
3.1 Overview of the Research Problem 135
3.2 Operationalization of Theoretical Constructs..... 136
3.3 Research Purpose and Questions..... 136
3.4 Research Design 137
3.5 Population and Sample 137
3.6 Participant Selection..... 137
3.7 Instrumentation..... 137
3.8 Data Collection Procedures 138
3.9 Participant Selection..... 138
3.10 Data Analysis..... 138
3.11 Research Philosophy 138
3.12 Research Approach..... 139
3.13 Research Design Limitations..... 139
Chapter 4 141
Data Analysis and Results..... 141
4.1 Descriptive Analysis..... 141
4.2 Correlation Analysis 142
4.3 Regression Analysis 143
4.3.1 Regression Analysis for Employee Engagement (EEN) 144
4.3.2 Regression Coefficients for Predicting Employee Satisfaction (ESA)..... 145

4.3.3 Regression Coefficients for HR Effectiveness (HRE) 146
Chapter 5 148
Discussion 148
H1: LARGe HRM has a positive and significant impact on HR effectiveness. .. 148
H2: LARGe HRM has a positive and significant impact on Employee engagement. 149
H3: LARGe HRM has a positive and significant impact on Employee Satisfaction. 151
Discussion of Research Questions 152
Chapter 6 159
Summary, Implications, and Recommendations 159
6.1 Summary 159
6.2 Implications 161
6.3 Limitations and Future Recommendations 168
Limitations 168
Future Recommendations 170
6.4 Conclusion 172
References 174

List of Table

Table of Content 5
Table 1: Descriptive Statistics 142
Table 2: Correlations 143
Table 3: Regression Analysis for Employee Engagement (EEN) 144
Table 4: Regression Coefficients for Predicting Employee Satisfaction (ESA) 145
Table 5: Regression Coefficients for Predicting HR Effectiveness 147
Table 6: Average Score per LARGe Components 159

Chapter 1

Introduction

1.1 Background of the Study

Guided by disruptive technological innovations such as blockchain and cryptocurrency, artificial intelligence *(AI)*, Machine Learning *(ML)*, and Financial Technology (FinTech) have revolutionized how financial services are offered to individual consumers *(Retail Banking)* and businesses *(Commercial Banking)*.

In light of these drastic changes, conventional financial institutions are embracing these technologies to stay relevant, especially with the emergence of neo banks (E.g., N26, Chime, Revolut, and Monzo…), improve efficiency, and increase customer experience. These technologies include Digital Payments and wallets (E.g., Apple Pay, Google Pay…), biometric authentication (E.g., fingerprint scanning, facial recognition…), and open banking.

As a result, human resource management *(HRM)* in financial institutions poses challenges and possibilities. The HR functions must also align strategically with the increasingly rapid pace of change and innovation in prevalent technology (Beckman & Pusey, 2001).

Fierce competition for specialized talent is one of the significant challenges facing HR departments, notably in the financial sector. It has skyrocketed the need for professionals knowledgeable in emerging technologies, like blockchain and cryptocurrency, artificial

intelligence, Machine Learning, and cybersecurity. Consequently, financial services organizations face challenges in attracting and retaining world-class talent. Firms like Emirates NBD in Dubai have thus been challenged to innovate their human resources strategy to attract a broader, global talent market with the requisite skillset to drive digital transformation efforts (Murinde et al., 2022). Furthermore, banks in Saudi Arabia, like the National Commercial Bank, are investing in their HR function to bring in employees knowledgeable in digital currencies, AI, and data analytics so they do not fall behind in an industry racing with technology (Hornuf & Mattusch, 2024).

Another major challenge financial institutions face, in addition to talent acquisition and retention, is ensuring that employees continue to be upskilled in response to ever-evolving technologies. People will now need to enhance their skills constantly to remain relevant. One example is Qatar National Bank (QNB), which implemented AI-powered solutions to improve the customer experience and increase efficiency. This change encourages HR to adopt flexible training methods to assist employees in adapting to these new technologies (Dong et al., 2024). HR departments must facilitate upskilling initiatives through continuous learning and development whenever applicable; the same goes for new technologies. However, there is still a gap between the pace of technological innovation and the rate of employee upskilling, which will pose various challenges to HR (Ajzen, 1991; Costa et al., 2019).

In addition, with financial institutions embracing disruptive technology, it is vital to manage organizational culture while keeping the employees engaged. Not only do employees need to be skilled in technology, but they also need to adjust to a corporate

culture that encourages innovation and agility. Abu Dhabi Islamic Bank (ADIB) first established the FinTech group in 2017 and has since integrated new FinTech solutions into its offerings without losing its centuries-old heritage as a solid bank. HR thus has this dual role, besides addressing technical upskilling, to ensure that employees are attuned to the organization's value system, which signifies sustainability and social responsibility (Li et al., 2020). The emphasis by HR on striking a balance between cultural fit and technological proficiency in multigenerational teams within the FinTech sector is essential for sustaining a motivated and cohesive workforce (Costa et al., 2019; Latorre-Cosculluela et al., 2022).

Another major challenge financial institutions face is the regulatory landscape, also known as Regulatory Technology (RegTech), which focuses on compliance and regulatory requirements in using technology. While exploring novel technologies, financial institutions encounter complex regulatory hurdles (Data privacy laws like the General Data Protection Regulation (GDPR) and PSD2...). In this respect, blockchain initiatives exemplify the intricacies of dealing with international regulations regarding cross-border transactions. HR departments should ensure employees are trained to comply with these regulations and industry standards (Garrido-Moreno et al., 2024; Renduchintala et al., 2022). Periodic compliance training and effective communication are critical to reinforce the legal features associated with the use of upcoming financial technologies and mitigate the risks of non-compliance with regulations (Murinde et al., 2022; Piwowar-Sulej, 2021).

Non-compliance costs could be expensive; HR needs to follow up with regular compliance training and ensure that employee reporting procedures are transparent and open so everyone is aware of and adheres to regulatory requirements, balancing risk/internal control with operational efficiency.

With the ever-changing market conditions that characterize FinTech, HR must also embrace agility to adapt to new requirements, such as accelerating recruitment timelines and employee engagement practices that match changing business needs. Furthermore, digital recruitment and talent management tools have become essential enablers, as they enable the HR team to effectively and efficiently find and onboard talent that can facilitate such fast changes (Chugunova & Danilov, 2023; Ilonen & Hytönen, 2022). AI and machine learning enable data-driven HRM practices and deliver instantaneous insights into behaviors such as employee performance, turnover patterns, and skills shortages. Thus, HR is positioned to respond rapidly to challenges as they arise (Piwowar-Sulej, 2021; Li et al., 2024).

Furthermore, sustainability has become a focal point for business operations, notably in the financial sector, with increasing importance placed on environmental and ethical factors, which encourage redirecting towards sustainability and impact investing. With customers and investors increasingly seeking environmentally responsible and socially sustainable practices, HR teams must make sustainability goals part of their strategic frameworks. It also encompasses advocating for Green HRM practices, like minimizing HR functions' environmental impact and encouraging sustainable workforce behaviors. HR departments can also play an essential role in cultivating a more sustainable

workplace by coordinating recruitment strategies that align with sustainability goals, providing opportunities for employees to engage with community-driven environmental efforts, and guiding the pursuit of green available capital. Financial institutions are pressured to develop green financial products and talent strategies corresponding to sustainability objectives (Gupta & Jangra, 2024; Paillé & Francoeur, 2022). Green HRM is critical to HRM practices in the FinTech industry as it emphasizes environmental impact reduction and promotes social responsibility (Paillé & Francoeur, 2022).

Adopting FinTech brings unique HR challenges that mandate out-of-the-box, flexible, and agile HR strategies. HR can assume a critical role in dynamic business success in this high-tempo sector through technology adoption, continuous improvement, talent acquisition and retention, organizational culture alignment, understanding regulatory complexities, and sustainability efforts. Specifically, FinTechs will need to embrace a combination of Lean, Agile, Resilient, and Green HRM frameworks to stay competitive, address emerging demands, and keep the workforce motivated and engaged (Bakker et al., 2004; Dong et al., 2024; Piwowar-Sulej, 2021; Pailed & Francoeur, 2022).

As FinTech grows exponentially, HR departments in financial institutions are on the front lines of supporting technological talent and culture. Organizations must keep up with such a pace to attract employees who can leverage new technological tools. It is not enough for financial institutions to encourage a workplace that attracts top-end talent; they also need to retain their skilled workers through compelling career development plans while ensuring their workforce has the skills to stay relevant in a rapidly evolving industry. In this context of the FinTech industry (Beckman & Pusey, 2001; Abrahamsson

et al., 2002; Murinde et al., 2022), HR must embrace technology provided for every part of its framework, from enrollment to employee participation and efficiency administration.

It is an area that financial institutions are in dire need of addressing concerning balancing technology and innovation with a human-centered view of more excellent organizational practices. Even though adopting technology is essential to simplify processes and enhance efficiency, the human dimension in managing human resources continues to be the backbone of promoting employee engagement and retention. HR departments must leverage new software tools while ensuring employees feel valued, supported, and aligned with the company's goals. For example, HR tech can optimize administrative work. Still, when it comes to leadership development, employee feedback, and culture initiatives - they all require a personal touch to ensure that an organization is healthy and employees are engaged. Integrating innovation through technology and management centered on human interactions can result in higher employee satisfaction and productivity levels in organizations (Costa et al., 2019; Latorre-Cosculluela et al., 2022).

Moreover, as financial services seek to be more disruptive, HR departments must drive actual organizational changes and transformation. HR needs to lead in creating a culture of innovation and agility as companies build new technologies. This includes creating a culture where employees are motivated to learn perpetually and adapt to new technologies and where failure is an innovation drive rather than being perceived as a setback. Successful implementation relies on HR practicing what it preaches, with consensus amongst organizational leadership to champion change as well as supporting

employees through challenges posed by technological disruption (Dong et al., 2024; Piwowar-Sulej, 2021; Murinde et al., 2022).

In conclusion, HR departments in financial institutions are being challenged more than ever to keep up with the rapid pace of technological advances, evolving regulatory landscape, and growing expectations for sustainable finance. HR could follow innovative frameworks like Lean, Agile, Resilient, Green, and entrepreneurial HRM to overcome these challenges and remain competitive in this fast-paced sector. HR's role in creating a culture of innovation, keeping employees engaged, managing talent, and supporting regulatory compliance will determine whether these organizations survive and thrive in the long run. With the financial sector moving forward evermore through the touchpoints of digital transformation, so must be the evolution of HR alongside the exciting and fast-paced journey to continue being a strategic leader (Dong et al., 2024; Paillé & Francoeur, 2022; Piwowar-Sulej, 2021).

The lack of highly specialized staff is one of the most significant challenges FinTech companies face today. As technology evolves quickly, so does the demand for individuals skilled in emerging sectors like blockchain, artificial intelligence, and cybersecurity. As a result, financial institutions need to revolutionize their HR strategies to attract and retain high-level talent with these excellent skills. Professionals adept at digital transformation technologies are in high demand, and as a result, banks are expanding their recruitment base on a global scale (Murinde et al., 2022). With the growing competition for talent, HR departments must create focused hiring strategies that cater to a worldwide market while ensuring that candidates have the same digital

vision and values as the organization (Hornuf & Mattusch, 2024). This strategic approach is essential for remaining competitive in an industry where talent drives innovation and business growth.

The FinTech industry itself is evolving at a breakneck pace. This is changing the role of HR departments, which must provide continuing upskilling and career advancement to maintain a competitive talent pool. One of the challenging issues in this sector is the increasing requirement for employees to enhance their skills continuously. (Dong et al., 2024; Ajzen, 1991). Nevertheless, there is usually a gap between technological development and how employees acquire the required skills. (Piwowar-Sulej, 2021; Costa et al., 2019). Closing this gap is also key to sustaining the long-term success of FinTech firms, as failure to upskill the workforce will reduce talent and, ultimately, a shorter competitive edge.

HR in the FinTech sector also has the added challenge of juggling changes in technology and skills while ensuring a strong organizational culture to drive innovation and agility. The financial institutions' integration of cutting-edge solutions into their services, without compromising their cultural values that have persisted for hundreds of years, is evident in organizations such as ADIB, which established its FinTech division in 2017 (Barney, 1991; Latorre-Cosculluela et al., 2022). HR departments must ensure employees adhere to the organization’s values and continue their mission, embracing technological innovations. In this context, HR should create an environment for collaboration, experimentation, and resilience among employees to adopt new

technologies and thrive in a culture of continuous improvement and adaptability (Li et al., 2020; Costa et al., 2019).

HR must also manage the regulatory landscape in the financial sector. As new technologies, including blockchain and AI, proliferate, FinTech companies must navigate ever-changing and complex regulations that govern everything from data privacy to the execution of financial transactions and compliance with industry norms. With the help of HR departments, employees understand these laws and the consequences of violating them. These new laws directly affect how financial institutions control customer information and transnational financial transactions. (Garrido-Moreno et al., 2024; Renduchintala et al., 2022). HR is the key to providing compliance training and ensuring all employees are on board with the latest compliance updates. Moreover, HR departments should establish a compliance culture by setting ethical standards and checking whether the organization and employees are on the right path, avoiding risks, and ensuring the sustainability of compliance. (Piwowar-Sulej, 2021; Murinde et al., 2022).

Financial institutions also need to be highly agile in their HR processes. As market demands and technology continually evolve, HR departments must be adaptable and responsive to organizational requirements. This is particularly crucial within recruitment because organizations must hire employees who can adapt to changing business needs (Chugunova & Danilov, 2023; Ilonen & Hytönen, 2022). AI recruitment tools, Applicant Tracking Systems, and data analytics are examples of HR technology that have become crucial enablers. HR departments will use these technologies to help streamline

recruitment and detect candidates that most appropriately match evolving organizational goals. Besides, data-driven HR practices might provide real-time insights into employee performance, turnover patterns, and skills shortages and help HR proactively address challenges before they surface (Li et al., 2024; Piwowar-Sulej, 2021). Consequently, HR technology has become essential in ensuring that companies can respond rapidly to the fast-paced and sometimes unpredictable world in which they find themselves.

1.2 Problem Statement

The financial service industry is significantly evolving, powered by the latest technologies like blockchain, artificial intelligence, machine learning, and cryptocurrencies. Such technological innovations have changed the financial world, creating new digital solutions that change how financial services are delivered (Dachner et al., 2021). Consequently, conventional HR management systems within conventional financial institutions are finding it challenging to adapt to the fast-evolving financial technology (Garrido-Moreno et al., 2024; Qudah et al., 2024).

The lack of skilled human resources is a primary challenge in the FinTech ecosystem, mainly in emerging technologies like blockchain development, AI, and data science. As a result, this fierce competition for skilled workers has placed significant pressure on the HR departments to develop effective recruitment strategies that attract and retain the best talent in a highly competitive labor market. The technological evolutions in the FinTech domain, however, do not stop there, and the HR department of any organization

must ensure that their workforce is consistently trained and upskilled to stay relevant in this rapidly changing environment (Bhatnagar et al., 2024; Gallup, 2025).

Moreover, continued pressure on organizations across FinTech must ensure that their HR strategies match environmental, social, and governance (ESG) principles, which are steadily building up due to the increasing focus on sustainability and corporate social responsibility (CSR). There has been a global focus on sustainable practices, and, as a result, there are growing expectations for organizations to implement green initiatives and to ensure that their workforce strategies further diversity, inclusion, and ethical business practices (Martiny & Janson, 2024). However, integrating ESG principles into HR frameworks remains challenging for many financial institutions. To enact these initiatives, many organizations struggle to have the appropriate tools and strategic frameworks to ensure the efficiency of aligning human resource practices to sustainability goals (HRD Connect, 2024).

It is more necessary for a holistic HRM that builds on Lean, Agile, Resilient, Green, and entrepreneurial HRM. The LARGe HRM Framework could be an approach to overcoming the complex challenges of Fintech in the new market situation. Due to the demanding resources and environments of financial institutions, Lean HRM is an ideal approach as it can streamline processes in the organization, eradicate operational costs, and ease performance (Ta'Amnha et al., 2023). However, agile HRM gives the flexibility to react promptly to system- and technology-related challenges. By prioritizing employee well-being, resilient HRM contributes to stabilizing the workforce and making organizations better able to withstand workforce uncertainty (Jubault

Krasnopevtseva et al., 2025). Conversely, Green HRM encourages green approaches at a corporate-wide level so that the employees act in unison with the business goals regarding sustainability (Li et al., 2020; Paillé & Francoeur, 2022). In the rapidly changing FinTech environment, employees must undertake innovative activities using entrepreneurial behavior to contribute to corporate growth, facilitated by an entrepreneurial HRM process that builds an innovation culture (Ilonen & Hytönen, 2022).

HR technology solutions are an integrated aspect of modern HRM. Such tools include human resource management systems (HRMS), applicant tracking systems (ATS), and AI platforms. These help organizations make data-based decisions, streamline administrative issues, and improve operational efficiency. HR Technologies can significantly enhance talent acquisition, boost employee engagement, and streamline workforce management within financial institutions (Qudah et al., 2024; Harvard Business Review, 2023). However, there is a lack of literature on how HR technology adoption can facilitate the implementation of the LARGe HRM framework and its impact on organizational performance, employee engagement, and workforce satisfaction. While the importance of HR technologies to make strategic HRM possible continues to rise, we know little about how such technologies are aligned with frameworks (such as LARGe HRM) of how HRM should be designed to lead to organizational success (Martiny et al., 2024).

Then, to bridge the gap, this research shows how the combination of the LARGe HRM framework can enhance HR performance and impact organizational success, notably in

financial institutions. This research will help HR translate the findings into recommendations for workforce strategies that drive innovation, enhance working efficiency, and ensure long-term sustainability. Exploring this phenomenon, this study will contribute significantly to understanding how financial institutions can develop agile and future-oriented workforces that can thrive amidst the challenges and prospects posed by rapid technological advances in the financial sector.

1.3 Purpose of the Study

This study aims to investigate LARGe HRM compliance in various organizations, notably financial institutions. In particular, it explores the influence of the combination of Lean, Agile, Resilient, Green, and entrepreneurial HRM practices on HR performance, employee engagement, and workforce satisfaction in the dynamic and prevailing FinTech industry. This study aims to answer these fundamental questions by focusing on how FinTech businesses may use these strategic human resource tactics and technologies to create a future-ready workforce that fosters innovation, operational efficiency, and organizational sustainability.

The research will provide actionable insights for HR practitioners within the financial sector to optimize their talent acquisition, retention, and development approaches in light of the industry's fast-paced, technology-induced changes.

1.4 Significance of the Study

Analyzing the existing literature on integrating HRM frameworks and technologies within the financial sector will help bridge this gap. Although prior studies have

addressed factors of HRM about the organizational level and human inflows, there is no single study to highlight how LARGe HRM affects HR performance and employee satisfaction and engagement in light of the FinTech disruptive innovation. This study will enrich existing literature by providing an all-inclusive perspective toward aligning strategic HR practices with innovative technologies for recruiting, retaining, and engaging highly skilled talent in a dynamic, competitive environment.

Moreover, allowing unsure challenges and urging the organizations to become agile is leading towards the timely emergence of this study, emphasizing the role of HR departments for financial institutions acting as the backbone towards organizational success and agility. As a result, the papers will help formulate best practices for human resource management in the fast-growing area of finance solutions technology by paying particular attention to the challenges and imperatives of professional literature analysis in the context of the financial sector.

These insights are especially relevant to professionals responsible for HR strategies that ensure the workforce is adaptive and resilient. Moreover, the study will cater to the sector's evolving talent requirements, ensuring that FinTech companies remain competitive, particularly given the technological disruption and global economic challenges that the industry is facing and for which it desperately needs effective HR solutions.

1.5 Research Questions

What is the impact of the LARGe HRM framework on HR effectiveness?

How does the implementation of the LARGe HRM framework affect employee engagement?

What is the relationship between the LARGe HRM framework and employee satisfaction?

Chapter 2

Literature Review

This chapter focuses on the changing nature of the financial services industry and how financial technologies like blockchain, artificial intelligence, machine learning, and digital payment solutions are taking up a transformative role. These technologies are reshaping financial services worldwide, and traditional financial institutions are forced to adjust and overhaul their operations and workforce management systems. The acceleration of new technology presents challenges that require HR teams to be much more agile, flexible, and responsive. Therefore, to accommodate the environment's fluidity, interconnectedness, and turbulence, a LARGe HR framework (Lean, Agile, Resilient, Green, and entrepreneurial HRM practices) needs to be implemented to support the dynamic nature of the Fintech environment. HRM principles offer a wide range of guidelines for organizations to optimize human resources, improve innovation capacity, and ensure long-term sustainability. In this chapter, we will reveal the factors in these HRM dimensions that help operational efficiency, employee engagement, and the strategic growth of the workplace.

The rapid rise of Fintech is a game-changer that we reshape global financial service operations. These allow the integration of blockchain and artificial intelligence, machine learning, digital payment systems, and big data analytics to instill credibility, customized transactions, and high-quality operations in monetary operations (Mitra et al., 2023). New technologies bring unexpected challenges to traditional financial groups, which should reconsider their business models and adapt to the technological transitions. As

the Fintech landscape shifts, competitiveness in digitalized financial processes will rely on enterprises that adopt operational agility and employee management strategies simultaneously (Ressi et al., 2024).

Azevedo, Cruz-Machado, and Carvalho (2021) adopted the LARG paradigm to optimize resource use, improve market adaptability, and ensure operation sustainability in supply chain and operations, seaport systems, manufacturing, and production. Smith et al. (2013) and Caligiuri (2012) shed light on the valuable contribution of HR in entrepreneurial activities, global business strategies, and organizational growth.

Organizations must implement the modern Human Resource Management frameworks inspired by the LARG framework to support the dynamic features of Fintech operations (Mohammed et al., 2023). LARG HRM integrates Lean, Agile, Resilient, and Green principles into a comprehensive management system that optimizes the workforce (Dubey et al., 2022). Lean HRM reduces unnecessary costs through an optimized resource management process, which creates value-optimized workforce resources. Agile HRM utilizes different "mechanisms" to enable organizational flexibility, including swift organizational decision-making, continuous employee development, and employee engagement in the workplace. Through resilient HRM, an organization can protect workforce stability and develop a better capacity to cope with and recover from any disruptions (Ikeda et al., 2024b). Green HRM can introduce sustainability by implementing respective workforce policies and improving environmentally responsive behavior among employees, whilst entrepreneurial HRM - an addition recommended by

this paper to be added to the LARG paradigm focuses on the mindsets and innovation of employees within teams.

Adopting LARGe HRM principles enables companies to formulate enhanced workforce approaches with improved operational guesstimate and creativity potential, resulting in its digital public superiority. (Renduchintala et al., 2022). HR retains HRM dimensions complemented and balanced with flexibility, sustainability, and operational planning, which are formulated to evolve the organization's transition towards business transformation. Financial institutions must implement well-suited HRM systems for internal success as digital transformation workforce shortages and regulatory complexities remain ongoing challenges in the industry. (Steegh et al., 2025).

The research explores the significance of HRM practices as they involve rapid human resource adjustment and better employee participation in confluence with new technologies. The current study finds room for redesigning HRM systems in financial institutions that meet the current market's demands and sustain digital market leadership. The study contributes to understanding the strategic importance of HRM for enabling innovation while maintaining resiliency and sustainability.

2.1 Underpinning Theories for the Study

2.1.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) (Davis, 1989) This model includes two key factors influencing system adoption attitude: perceived usefulness, which is the belief

that one can perform one's job better, and perceived ease of use, which designates the idea that no incremental effort is required to use the system. Research in this model investigates how employees view and utilize technologies in HR processes while studying adoption rates of AI recruitment tools, automated performance systems, and digital learning approaches.

Schwaber, K. & Sutherland, J. (2017); Zhang, X. and Yencha, 2020 noted that HR system usability and efficiency-focused demonstrations are key variables in technology acceptance or lack thereof; TAM contributes valuable insights and guidance to HR specialists who expand their educational dissemination efforts across the workforce for technology adoption within this new era of Fintech disruption. Incorporating non-harmful and ubiquitous technical solutions into human resources practices complies with both the two elements of the LARGe HRM paradigm, which are Lean and Green dimensions, and with TAM (Cuel et al., 2024). Both must be complemented by easy usability experience features at digital onboarding platforms as well as the measurable employee input (Salvadorinho and Teixeira, 2023) such as how fast new starters are at being 100% effective in their role, as well as AI-enabled training ideas that deliver targeted learning progression measurement (Espegren and Hugosson, 2023).

TAM is consistent with the Lean HRM role of the LARGe HRM framework, which emphasizes efficiency, automation, and process optimization. Lean HRM uses systems like applicant tracking Systems (ATS), AI-enabled recruitment platforms, and HRMS automation tools to smooth HR functions. Nevertheless, the extent to which employees adopt these technologies is contingent on their perceived effectiveness in enhancing HR

outcomes. FinTech companies that adopt AI-driven HR solutions with an intuitive user interface would increase HR process efficiency, highlighting the impact of how perceived usefulness and usability encourage potential users to adopt HR technology. In addition, implementing self-service HR portals and digital performance management systems would contribute to an increase in HR efficiency in organizations, further evidence of the TAM construct within the adoption of Lean HRM.

The agile HRM component of the LARGe HRM framework incorporates TAM to ensure that HR technologies and practices are adaptive, employee-centered, and responsive to the workforce's needs. When the HR tools are applied, Agile HRM advocates for iterative technology implementation, where the employee feedback guides how HR tools evolve so they are more user-friendly and have more functions. HR teams leverage predictive analytics, real-time feedback systems, and AI-based employee engagement trackers to improve HR responsiveness in FinTech. The efficacy of such systems hinges on employees' perception of their ease of use and whether they feel these technologies are amplifying engagement and performance. Financial technology companies that adopted AI-powered performance measurement tools and digital collaboration platforms in their workflows would experience an increase in employee engagement, as the ease of use of the tools contributed to employees' career growth.

TAM is also important for resilient HRM concerned with employee well-being, workforce stability, and crisis management. AI-based psychological wellness support, automated trainer responses, and wellness programs in virtual mode are among the HR tech initiatives adopted around this area. Individuals are more likely to adopt these

technologies when they feel they add value without increasing the complexity of their daily work. For instance, deploying AI-enabled employee wellness platforms can achieve enhanced employee wellness and retention rates owing to the accessibility and value provided in mental health services. This shows the direct effect of perceived ease of use and usefulness on accepting HR technology in crisis management.

TAM is used in Green HRM to adopt green HR technology and introduce sustainable HR technology like green practices-oriented digital onboarding, e-documentation, and remote working tools to promote environmentally friendly business practices. Alternatively, when employees feel that Green HRM solutions can improve workplace efficiency without compromising on environmental protection, they are more likely to accept and further support such technologies. Organizations that transition to paperless HR systems and sustainable initiatives powered by AI may enhance employee satisfaction as they perceive the technology to be environmentally friendly and user-friendly. Moreover, integrating energy-saving systems with HRMS may reduce HR-related carbon emissions; this further demonstrates the impact of TAM on the uptake of sustainable technology.

Lastly, entrepreneurial HRM in the context of the LARGe HRM entity focuses on employee-driven innovation and technology-led workforce empowerment based on the principles of the Technology Acceptance Model. The same applies to digital tools that allow entrepreneurship, creativity, and career advancement opportunities to play a role in employee engagement.

One of the critical frameworks that influence the adoption and impacts of HR technology in the LARGe HRM paradigm is the Technology Acceptance Model, which can play a significant role in the process of technology adoption, implementation, and optimization in the FinTech industry. Using TAM, the LARGe components - Lean, Agile, Resilient, Green, and entrepreneurial HRM - maximize efficiency, employee friendliness, and alignment with business objectives to become technologically productive. Prioritizing perceptions of usefulness and ease of use leads to greater tech adoption, employee engagement, and organizational effectiveness. As FinTech operates within an ever-changing landscape, bringing together the concept of TAM with strategies of digital transformation for human resources shall always be aligned in any process that looks to increase HRM capabilities, worker satisfaction, and long-term processes that value employee creativity.

2.1.2 Resource-Based View (RBV)

According to Georgescu et al. (2024), an organization has sustained a competitive advantage by deploying valuable, rare, and imperfectly inimitable VRIN, non-substitutable resources. HRM recognizes that between Employees and their talents is the organizational asset that supports innovation and long-term success.

From the Resource-Based View underlined by Lengnick-Hall and Beck (2005), the strategic importance of human capital development in adapting to technological change in Fintech's disruptive innovation framework is central. LARGe HRM framework reinforces RBV because it focuses on implementing lean techniques for optimal use of

available resources, incorporating agile principles for building strategic flexibility, and adopting resilient strategies to prepare and keep employees together for appropriate skills upscaling in a dynamic market context (Raetze et al., 2022). The entrepreneurial execution method furthers RBV through its employee-focused practices, which amplify workplace innovation and creativity (Kayani et al., 2025). Organizations need to identify employees with an affinity for technology and show leadership on digital transformation projects. They should also use HR analytics to align workforce talent to focus on the highest strategic value (Cuel et al., 2024; Hornuf & Mattusch, 2024).

The Resource-Based View (RBV) emphasizes human capital as a strategic resource, allowing firms to sustain competitive advantage. In the FinTech sector, where technological advancements are crucial to corporate success, HRM must prioritize identifying, developing, and retaining high-value individuals with specialized knowledge, adaptability, and problem-solving skills. Under its valuable, rare, imperfectly imitable, and not substitutable (VRIN) criteria, an employee's specialization in AI, blockchain, and data analytics is scarce, imitable, yet necessary for a digital revolution. Using HR analytics, talent mapping, and predictive workforce planning enables FinTech companies to avoid wasting these highly skilled workers, making the organization more flexible and leading in the market. By reducing the waste of resources in terms of time, effort, and money spent on ineffective HRM practices and aligning HRM strategies with broader business goals, lean HRM facilitates the configuration for resource utilization that is inherent in RBV, as the efficient utilization of resources can be seen as a competitive advantage in the LARGe HRM configuration.

RBV is significant in forming resilient and entrepreneurial HRM strategies that empower employees to innovate, motivate them to adapt to change, and sustain a competitive edge. Firms can leverage agile human resource management (HRM) practices like continuous learning programs, using cross-functional project teams, and deploying rapid skill acquisition frameworks to maximize the workforce's potential while maintaining operational flexibility. Green HRM strategies also enable sustainability-based workforce planning, where employees are encouraged to pursue ecologically responsible innovation, aligning business progress with moral and ecological priorities. In contrast, entrepreneurial HRM generates an environment for employees to innovate, where organizations encourage entrepreneurship, new business model experimentation, and creative problem-solving initiatives. Since FinTech firms are working in exceptionally highly dynamic environments, RBV ensures that HRM keeps at best strategic fit with business transformation so that they can form and sustain long-term competitive advantages in the market through their human capital investments.

2.1.3 Theory of Reasoned Action (TRA)

The Theory of Reasoned Action explains individual behavior regarding behavioral intentions (Fishbein and Ajzen, 1975). Attitude toward behavior and subjective norms are two fundamental antecedents of this intention. This theory suggests that people make logical use of whatever information is available and that their behavior reflects their beliefs and social influence.

The attitude toward behavior construct allows people to assess their feelings toward specific behaviors (Murinde et al., 2022). Employees are likely to embrace changes at work, including AI-based HR systems, when they view these transformations as a benefit to their values. Subjective norms are based on social forces that either motivate or prevent someone from engaging in certain behaviors and the intentions behind that behavior (Espegren & Hugosson, 2023). Employees adopt new HR practices because they see their colleagues and leaders other than their direct supervisors expect them.

Within human resource management, the theory of reasoned action allows us to understand employee behavior relating to new workplace policies and sustainability initiatives and implement digital HR tools (Roehl, 2023). Employees actively support Green HRM initiatives (including workplace environmental policies and telework...) when they feel positively towards such evident Green HRM initiatives. Faced with social pressure from work leadership or colleagues within the workplace, employee participation in these practices can increase. However, the potential limitation of TRA is that it assumes people have complete control of their choices and excludes some barriers to action outside of the individual (Alqudah et al., 2022).

2.1.4 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) is an update to the TRA model proposed by Ajzen (1991) in which a new factor, perceived behavioral control, is incorporated. The change factor also applies when people want to take action but lack the right resources or access to systems.

Through perceived behavioral control (Nisar et al., 2024) One assesses how hard or easy it is for them to perform specific actions. So, a staff member who feels that they lack capabilities or do not have suitable enlistment to employ technological HR advancements, such as digital performance management systems or some AI-driven recruitment devices, will tend to protest the reception of these devices despite their comfort. When HR departments provide sufficient training, technical support, and motivation, employees show higher engagement toward innovations (Marrucci et al., 2021).

None of the TBP-based studies focus on the individual perspective of the organization, which is valuable for Agile and Resilient Human Resource Management, as TBP helps to understand the core of allowing the employee to manage how well they adapt to change (Zihan et al., 2024). The rapid speed at which Fintech is digitally transforming requires HR professionals to equip employees with an understanding of new systems and protocols and to guide them along the right path for proper implementation. The theoretical models of behavior bestow tools to HR managers with which they can implement strategies that not only augment worker loyalties but also build their capacities for both change and creativity through simultaneous interventions of worker beliefs, specific environmental standards, and perceived autonomy attainable (Gkinko & Elbanna, 2023).

The sustainable competitive advantage that Fintech innovation can deliver results from the integration and application of LARGe concepts by HRM. The change in the financial industry through Fintech and blockchain, alongside other factors such as AI and digital

payments, has made the HR departments fill lean processes that ensure efficient workflows and fast adaptation to the dynamic needs of the business. Agile principles bolster HR adaptability by offering techniques that help continue organizational flexibility and promote collaboration and learning, keeping the workforce aligned with emerging technological trends. Implementing employee wellness initiatives allows cross-functional employee training and adaptive career development paths that aim to build business continua. Since sustainability is an important issue nowadays, organizations must apply and implement green HRM fundamentals, including environmentally friendly recruitment strategies and training techniques, and operate their operations following international sustainability standards. This can be best described as a setting of entrepreneurial HR practices that translate to the employees being empowered along with several risks and opportunities for innovation. The significance of these competitive retention strategies is grounded in the Technology Acceptance Model (TAM) and Resource-Based View (RBV), which highlight how human capital utilization and technology adoption are relevant when discussing retention of competitive advantage in such a fast-paced environment.

2.2 Lean HRM in the Fintech Disruptive Innovation Era

The platform for Lean HRM principles includes value and value stream. At the same time, flow and pull together with perfection prove crucial because they enhance business efficiency by aligning human resource practices with Fintech industry requirements. The combination of rapid organization and technological capabilities

enables Lean HRM to remove repetitive tasks, thus directing resources toward critical Fintech business goals (Hicks, 2007).

2.2.1 Value: Focusing on Strategic HR Contributions

The core benefit delivered by processes to organization members and their entity defines value (Pham et al., 2023). During activity prioritization, the value principle demands that HR teams invest time in tasks that increase employee satisfaction and organizational development (CIPD, 2023). Roehl (2023) presents administrative task automation as a real-world example of this principle, which helps employees focus on critical, high-value assignments.

Fintech standards now include implementing AI-based recruitment platforms to acquire and keep technology experts because professionals with tech expertise represent essential hires (IndigoHire, 2023). German financial institutions notice productivity increases of 20% when their HR professionals utilize digital HR systems because these professionals dedicate themselves to building talent management strategies and innovation development rather than completing routine administrative duties (Chugunova and Danilov, 2023). Chatbot technology used for employee query management leads to improved employee satisfaction through its capability to deliver prompt, precise answers (Ruan and Mezei, 2022).

2.2.2 Value Stream: Eliminating Inefficiencies Across HR Processes

The Value Stream concept describes how HR delivers complete value across the recruitment and onboarding steps and performance management with employee development (Liu et al., 2007). Value Stream functions by demonstrating all stages in human resources from the beginning of recruitment until concluding employee offboarding (LeanScape, 2023). Georgescu et al. (2024) emphasized how Japan makes efficient use of Lean principles through its kaizen activities. Japanese Fintech firms used ATS to automate resume screening through Applicant Tracking Systems, thereby cutting recruitment times down by 30% (Kaizen, 2023).

The Fintech sector forwards its value stream analysis into blockchain technology to create protected and streamlined employee verification systems during hiring processes. Thanks to blockchain technology, background checks and document verification have become more streamlined, speeding up the hiring process (McKinsey & Company, 2024).

2.2.3 Flow: Ensuring Seamless Progression of HR Activities

Flow represents an uninterrupted, smooth functioning of activities to enable continuous process movement without interruptions or delays (Ambarwati et al., 2024). Flow allows human resources systems to function continually without delays or roadblocks, leading to steady task completion. Digital onboarding solutions have spread throughout the United States as they effectively eliminate procedural delays connected with new employee system access and training (Alqudah et al., 2022). Digital

onboarding tools shrink the cycle for hiring new staff members by 40%, based on findings by Pérez et al. (2010), which boosts initial work performance.

Financial institutions prioritize streamlined onboarding processes because roles requiring competency in AI and machine learning and blockchain techniques follow unique skill requirements (Wang et al., 2023). PayPal, alongside Revolut, has introduced digital onboarding training modules designed for specific roles that provide instant virtual system training so new team members can start working right after their first day. Fintech technology demands speedy innovation and Ikeda et al. (2024a) shows that this operational speed matches up with how quickly Fintech resumes new team members.

2.2.4 Pull: Responding to Actual Needs

The capacity for the system to respond promptly to actual workforce requirements defines pull functionality (Uddin et al., 2023). Through the principle of Pull, organizations can focus their Human Resources activities on real-time organizational requirements instead of following predefined schedules (Eberlein and Freitag, 2022). Agility relies on this vital principle in Fintech because market demand changes quickly. Indian Fintech firms leveraged Artificial Intelligence to create training platforms that modify educational content according to upcoming project needs (Pattnaik et al., 2024). According to Bakker et al. (2004), these digital content platforms drive training relevance while increasing employee engagement by 25% metrics.

Financial institutions leverage their real-time workforce analytics system to forecast employee skill deficiencies while providing strategic learning resources that

help professionals handle transforming technological and regulatory requirements (Mhlanga, 2024).

2.2.5 Perfection: Driving Continuous Improvement

Perfection is defined as the commitment to continuous improvement (Piwowar-Sulej, 2021). As defined by Espegren and Hugosson (2023), perfection promotes the continuous development of human resource practices. According to Eberlein and Freitag (2022), feedback loops create essential mechanisms to refine recruitment and onboarding alongside performance management systems. UK financial institutions use employee sentiment analysis in real-time to optimize their HR approaches and gain a 15% boost in employee happiness, according to Schwaber and Sutherland (2017).

The precursor for continued improvement across Fintech HRM involves using predictive analytic methods to strengthen recruitment processes. Algorithms use historical data to generate predictions about candidate retention and success, improving recruitment process effectiveness (Zhang and Yencha, 2022). Performance management systems that utilize real-time feedback create dynamic goal adjustments, establishing congruence between development targets and organizational aims (Paramita et al., 2024).

2.3 Lean HRM and the Seven Categories of Waste in Fintech

The following analysis investigates how Lean HRM implements solutions to these categories while focusing on Fintech operations.

2.3.1 Overproduction

When HR overproduces, it creates multiple policies, reports, and initiatives that fail to support organizational and employee requirements. Due to highly specialized profiles employed in financial institutions, unnecessary programs and repetitious training measures create dispersing effects and misuse of organizational financial resources (CIPD, 2023). According to the lean principles, overproduction identified stands as an essential waste that raises organizational process optimization (Ohno and Bodek, 2019). Revolut and PayPal implemented AI-based surveys to gauge instantaneous workforce requirements, leading to targeted and meaningful HR initiatives. Using data helps organizations avoid production waste by dedicating resources to programs that meet employee satisfaction needs and business goals. The Fintech revolution requires efficient HR practices that must optimize new market opportunities while handling operational and security risks (Murinde et al., 2022).

2.3.2 Waiting

Processes that extend too long, including recruitment, onboarding, and approvals, halt business operations and decrease workforce productivity. Sustaining innovation within Fintech depends heavily on quick employee onboarding and productivity achievement times, which damages waiting periods (PTC, 2024). Scandinavian Fintech companies minimize waiting periods by utilizing automated recruitment and onboarding workflows supported by centralized human resource systems. As Korn Ferry (2023) described, effective onboarding improves employee

retention alongside enhanced readiness, which strongly impacts company success. Financial performance responds directly to enhanced onboarding process speeds through streamlined workflows because these improvements lead to productivity boosts that drive competitive Fintech success (Kayani et al., 2025) Scandinavian organizations utilize new employee onboarding techniques, which have cut their average onboarding time by 35%, allowing fresh recruits to take part in crucial initiatives promptly.

2.3.3 Transportation

Physical operations that transport documents or resources create transportation waste-type inefficiencies. The use of physical records, which slows international activities between global Fintech teams, remains a problem in hiring and compliance process management (Ishola, 2019). Blockchain technology delivers secure digital credential verification services that instantly verify workplace documentation. Fintech companies use workflow automation to eliminate paperwork transport; thus, they provide faster and more precise HR solutions targeting global workforce administration areas. Operational workflow enhancements represent an essential business practice for organizations competing against complexity, according to Cecere (2021). Teams with globally distributed members require optimized operating models, including blockchain implementation, to achieve better agility and reduced operational waste (CIPD, 2024).

2.3.4 Extra Processing

Working beyond customer value by performing unnecessary tasks and adding too many features fails to deliver customer benefits (Awasthi et al., 2023). The HR

benefits from processing activities that lead to unnecessary approvals, combined reporting, and repeated database entry. The essential need for fast decision-making in Fintech encounters obstacles when slower inefficiencies appear (Purushothaman et al., 2020). Organizations respond to this challenge by launching automated decision-making solutions, including AI programs facilitating leave approval and expense repayment processes. Through efficient tools, HR processes gain operational speed and responsive capabilities by removing useless procedural steps. Deloitte (2024) indicates that organizations that embrace boundaryless organizational models can use technology to remove silos while achieving improved operational efficiency. The study from Bain & Company (2024) shows that HR departments utilize AI technology to create value by streamlining routine operations and driving more precise decision outcomes.

2.3.5 Inventory

An organization stores unutilized or old resources under inventory waste in the human resources department, including physical documentation and deprecated training materials (Klein et al., 2022). Cloud-based HR platforms transform companies by providing digitalized centralized access to human resource data. Storage costs decrease alongside improved accessibility through this approach, which lets HR teams access and research their data immediately. Using digital transformation methods through cloud systems improves operations and reduces inefficiencies, according to MIT Sloan Management Review (2024). The modern business environment depends on cloud-based HR systems because they combine speedy real-time functionality with stronger data protection, enabling better organizational choices through Economic Times 2024.

German businesses demonstrate that transitioning to paperless HR archives delivered operational efficiency benefits and achieved sustainability objectives.

2.3.6 Motion

Motion refers to unnecessary human movements, including excessive walking, reaching, or bending, resulting in both fatigue reduction and decreased productivity (Arunagiri & Gnanavelbabu, 2014). Multiple communication training and payroll platforms employees must use result in process inefficiencies and rising employee frustration levels (Buenrostro et al., 2001). Operational efficiency decreases along with employee satisfaction as processes become noticeably complex because of motion waste (Ferdousi & Abedin, 2023). Companies may solve this issue through their platforms that merge all human resource functions into single unified software platforms, including Workday and Slack. The tools provided by Slack (2023) work to eliminate repetitive work and optimize flow systems, improving staff member interactions during operations.

2.3.7 Defects

The basic production procedure frequently leads to errors in manufacturing, which demand scrap work or defective items that must be fixed for repair and substitution, creating unnecessary expenses of time, materials, and workforce. (Edwards et al., 2018). Financial institutions face substantial economic losses and image damage because of HR-related deficiencies, including payroll problems and compliance breaches. AI-based automated auditing tools are becoming prevalent to stop these

situations from happening. AI-driven payroll platforms warn about real-time anomalies, which help organizations keep payment calculations precise while fulfilling regulatory demands. Leaving a security culture gap alongside weak systems creates system vulnerabilities and work-related inefficiencies, according to the World Economic Forum (2022). Gartner (2023) reports that AI applications are becoming prevalent within HR departments to improve the precision of administrative functions, which include payroll and compliance duties. The proactive method performs double duty by minimizing mistakes, decreasing repetitive tasks, and building trusting relationships with workers.

Implementing Lean HRM principles within the seven waste categories delivers notable transformational changes to financial institutions. It improves their work processes through defect reduction, waiting elimination, and overproduction avoidance to meet market timeline requirements. AI, alongside blockchain systems and cloud platforms, serves as essential waste elimination tools that transform HR operations from efficiency-driven to innovation-enabling and business growth-strategizing assets. The strategic alignment allows financial institutions to stay competitive and agile throughout the phase of continuous interruptions facing the business world.

2.4 Agile HRM: Enhancing Flexibility and Responding to Change

Agile HRM functions as a flexible system of human resource management that implements iterative methods to serve employees while responding quickly to business environment changes, workforce requirements, and technological transformations (McMackin & Heffernan, 2021). This framework enables organizations to achieve

process linkage between HR systems and variable business targets by implementing collaborative methodology and ongoing optimization methods alongside performance flexibility features. Agile HRM rejects inflexible systems by adopting an adaptive process that produces both employee-enriched environments and organizational speed and adaptability (Moh'd et al., 2024).

Financial institutions need Agile HRM because it focuses on flexible operations and continuous enhancement abilities. Agile methodology principles help HR teams establish consistent practices that respond to rapidly changing employee needs alongside business requirements. The structured method known as Agile Project Management strengthens strategic goal alignment for HR teams as defined by Dong et al. (2024). Ågren et al. (2023) illustrated Agile practices extending past software development to implement iterative feedback and collaboration within the automotive systems sector, adding to the methodology's application across multiple industries, including Fintech.

2.4.1 Welcoming Change: Adapting to Emerging Technologies and Trends

The ability to welcome change means accepting new workplace dynamics, market trends, and advancing technologies while maintaining mental flexibility (Roodbari et al., 2025; Salvadorinho, Ferreira, and Teixeira, 2024). Fintech demands that employees embrace change since blockchain, AI, and cryptocurrency technologies transform the industry. Beck et al., 2013 highlights the importance of flexible policies and adaptive training. An Indian training program that integrates both blockchain and AI technology yielded a time-to-productivity reduction of 40%, according to (Pathomphatthaphan et

al., 2024). Results from Jiang & Tanaka (2022) demonstrate that flexible work arrangements enhance innovation behavior, illustrating why adaptability is crucial. Fintech firms across the Asia-Pacific region modify their onboarding process to comply with regulatory changes while preparing their workforce for rapid market adjustments (Statista, 2024).

2.4.2 Frequent Delivery of Incremental Improvements

The implementation of HR solutions through frequent delivery occurs through smaller incremental steps instead of comprehensive yearly reviews or lengthy strategic changes (D. Greer & Ruhe, 2004). Frequent delivery stands as an agile principle according to Daraojimba et al. (2024) which drives functional solution delivery while utilizing iterative methods. Companies using these new systems reported a 30% acceleration of hiring processes while simultaneously achieving improved candidate experiences (CIPD, 2021). Fintech firms in Australia place job recruitment at the center of innovation alongside maximizing operational efficiency through automation to match shifting talent acquisition needs (Statista, 2023).

2.4.3 Collaboration Across Teams to Align Objectives

It describes the process of HR team collaboration with other business units to improve talent management, employee engagement, and skill development (Petersen & Wohlin, 2009). Business unit and HR collaboration stand as the base for Agile HRM success. According to Cuel et al. (2024), businesses achieve better workforce strategy and organizational goal alignment through multi-business unit collaboration. German

financial institutions support Agile HRM through integrated HR teams operating at business units to develop workforce plans with their partners. A 20% increase in talent alignment with business objectives became possible through this methodology (Hornuf and Mattusch, 2024).

2.4.4 Simplicity: Streamlining Processes for Efficiency

This principle encourages HR teams to concentrate on core activities that generate the most value (W. R. Greer & Kropp, 1983). The Fintech industry requires maximum speed and efficiency, so simplifying HR processes results in substantial performance gains. Through simplified candidate screening strategies, United Kingdom companies spent less while obtaining better candidate satisfaction, according to (Cayrat and Boxall, 2023). Simplification of operational procedures, including recruitment functions, emerged as vital according to the UK Parliament report (2024) to tackle the cost-of-living emergency and drive better workplace results for new workers.

2.4.5 Continuous Improvement: Retrospectives and Learning Loops

The method of continuous improvement centers on creating an environment that supports learning through feedback processes, retrospectives, and iterative operations for workforce advancement (Costa et al., 2019). HRM with agility relies on continuous improvement as its central principle. The financial sector's requirements for rapid technological changes need retrospectives to develop effective HR processes. HR teams may perform retrospective evaluations following significant project milestones, including considerable recruitment efforts and new policy implementations, before

identifying ways to increase performance. A 20% boost in process efficiency resulted from these improvement practices, according to Carroll et al. (2023). Edison et al. (2022) demonstrate that sustained plant growth in Agile transformations relies on iterative feedback and ongoing refinement, making retrospectives essential for enduring improvements.

2.4.6 Agile HRM in Fintech: A Strategic Imperative

Agile HRM enables financial institutions to reach high performance levels by emphasizing flexibility, collaboration, and responsiveness. Through Agile principles, HR demonstrates its capability to serve strategically as an innovation driver and organizational growth accelerator. According to Steegh et al. (2025) Agile team effectiveness depends on performance and adaptability, yet Lawong and Akanfe (2024) spotlight Scrum as a solution for resolving challenges and improving teamwork. When Fintech technology develops, agile HRM methods are essential for business success and competitive advantage.

2.5 Resilient HRM: Building Capacity for Adaptation and Recovery

A strategic organizational approach that builds workforce adaptability and recovery capabilities along with responsiveness is known as a resilient HRM (Rehman et al., 2021). Adaptable HRM aims to prepare organizations and their staff for disruptions and preserve performance levels and expansion during continuous changes. Rapid technological advancements coupled with market volatility require organizations to adopt this approach for the Fintech industry. As defined by Lengnick-Hall and Beck

(2005), the concept of resilience comprises successful anticipation of challenges, fast adaptation and recovery capabilities, and dynamic environment performance. A workforce able to tackle uncertainties depends on its ability to maintain preparedness and adaptability, diversity, employee well-being, and ongoing learning (Alipour et al., 2022).

2.5.1 Principle 1: Preparedness

Workplace preparation includes proactive detection followed by management of foreseeable risks that threaten workforce stability and human resources operations (Caniëls et al., 2022). Enhanced readiness enables organizations to manage interruptions while sustaining damage at low levels.

2.5.2 Principle 2: Adaptability

Organizations and their workforce must adapt quickly when facing technological changes, market fluctuations, and industry disturbances. (Grego et al., 2024). Organizations, alongside their workforce, can transform their operations rapidly by adapting to emerging environmental changes. This principle highlights workplace adaptability through career path agility, operational flexibility, and role shift adaptability. Training staff to perform diverse tasks is a primary tool that enhances organizational adaptability across all teams. Implementing cross-functional training in German Fintech firms led to a 30% decrease in system disruption response time when employees needed to adapt their roles (Andriyani et al., 2023). Employer-led performance assessment procedures contribute to employee adaptability through

ongoing feedback sessions, leading to an improvement of engagement and resilience by 20% across US organizations (Devianto et al., 2024).

2.5.3 Principle 3: Diversity

Diversity is defined as organizational agility, problem-solving, and decision-making improvement when diverse perspectives, cultural backgrounds, and multiple skills are included within the workforce (Do et al., 2022). Reliable organizations should embrace diversity because different viewpoints combined with unique knowledge bases generate innovative solutions that enhance adaptable behavior. Organizations with a wide range of team members gain an advantage in navigating complicated tasks and transforming them into new circumstances (Hermouche and Elhamma, 2024). Security organizations throughout Canada report increased team adaptability and innovation after implementing Diversity, Equity, and Inclusion (DEI) programs that achieved a 20% improvement (Canada Security Intelligence Service, 2022). Through open promotion policies and equitable development access initiatives, companies establish environments based on true inclusion within their workplace (McKinsey & Company, 2023).

2.5.4 Principle 4: Well-being

Well-being describes an organizational effort to support employees' physical, mental, and emotional health through established workplace policies, wellness initiatives, and stress management strategies (Latorre-Cosculluela et al., 2022). Organizations that develop mental health resources, counseling services, and wellness initiatives at times of maximum stress succeed in keeping their employees for 15 percent longer periods

(CCOHS, 2022). Fintech companies in the UK use wellness initiatives as part of their HR blueprint through training centers and colleagues who provide support services. Through these initiatives, organizations achieved meaningful burnout reduction, which supports team productivity during disruptive market events (Wealth Wizards, 2023).

2.5.5 Principle 5: Continuous Learning

Continuous Learning represents an ongoing method to build employee skills along with competencies and knowledge, which ensures the adaptability and readiness of the workforce (Dachner et al., 2021). Continuous learning approaches develop employee competencies so they will be prepared for new challenges that appear on the horizon. Indian firms that develop Fintech-specific training platforms around blockchain and AI technologies have recorded a 25% boost in employee accomplishments when business evolutions occur (Renduchintala et al., 2022). Continuous development programs at organizations create resilient work environments by enabling employees to test new roles while gaining new professional abilities. Japanese Fintech companies established changeable career progression strategies that facilitate workforce movement between different high-priority segments and mirror broader Japanese labor market transformations (Ikeda et al., 2024b).

2.6 Key Practices in Resilient HRM

Resilient Human Resource Management (HRM) develops organizational practices that help entities manage disruptions while protecting productivity by encouraging adaptable and growing systems. The rapidly changing Fintech sector demands resilient HRM

systems that maintain workforce stability and drive organizational success. Several established HR practices are robust examples of resilient HRM, specifically within disruptive operational contexts.

2.6.1 Regular Goal Reviews

Regular goal reviews represent a core operational principle that forms the basis of resilient HRM. Employee assessment processes occur quarterly to ensure strategic alignment between business goals, team objectives, and individual objectives across all organizational levels. The practice in Australia is demonstrated through research that it lowers employee stress and improves work efficiency when workers develop new skills for changing facets of the workplace (Bond University, 2023). Workforce alignment with innovation becomes possible in the financial sector through an iterative approach that keeps priorities in sync with rapid technological advancements. Through digital tools, HR teams automate goal management while allowing instant tracking to build an adaptable work environment (Bhutto et al., 2023).

2.6.2 Proactive Workforce Analytics

Resilient HRM depends greatly on anticipatory workforce analytics for its implementation. Workforce analytics technology examines employee performance metrics, engagement levels, and organizational attrition patterns to find emerging trends and vulnerable work areas. Predictive analytics systems have achieved a 15% reduction in employee departure, which preserves organizational stability during times of crisis (Council, 2000).

Financial institutions face persistent talent retention issues, so workforce analytics enable strategic planning across their employee base. Leaders in Fintech recognize U.S.-based companies that use artificial intelligence analytics to detect successful workers who might depart and then react with individualized strategies such as custom career development or position changes (McKinsey & Company, 2023).

2.6.3 Scenario Planning

Resilient HRM relies heavily on scenario planning, which allows organizations to develop preparedness for global uncertainties, including economic shifts, regulatory changes, and technological disruptions. Financial institutions engaged their HR teams to employ remote work initiatives using scenario planning when COVID-19 struck. These teams developed preparedness plans to counter work productivity dips and employee well-being risks (Georgescu et al., 2024). The Fintech sector of Germany has seen significant advantages through scenario planning as a strategic instrument that guides organizations across a progressively changing financial technology environment (Statista, 2024).

2.6.4 Employee Well-being Programs

Resilient human resources management maintains employee physical and mental wellness because a healthy workforce maintains organizational productivity throughout crises. Studies indicate that companies that devote support to employee wellness obtain a 20% rise in engagement combined with a 15% reduction in workplace absences (Haque, 2023).

Fintech companies endure demanding work conditions under tight deadlines, making organization-wide well-being programs essential. The availability of ergonomic home workspace tools combined with scheduled staff welfare assessment meetings through HR teams creates work-life equilibrium for remote workers, thus strengthening organizational durability (Hollands et al., 2024).

2.6.5 Cross-functional Training and Talent Mobility

Agencies can boost their workforce flexibility through cross-functional staff training and employee movement programs that build resilient institutions. Multi-disciplinary training of employees helps staff fill high-demand roles after operational disruptions occur. The Fintech approach is designed to help employees respond to changing technologies and update organizational direction. Fintech companies in India developed training curricula in blockchain technology alongside artificial intelligence and cybersecurity products to prepare their personnel for new initiative-focused work (Bedford et al., 2022).

Through talent mobility programs, organizations gain the power to manage resource allocations effectively when dealing with shifts in their operational environment. HR teams implement internal talent marketplaces to place staff into open positions that match their abilities and professional objectives, thus saving recruitment expenditure and retaining workers. The organization gains adaptive strength and develops organizational resilience when it finds practical ways to react to adversity with novel and durable approaches (Munoz et al., 2022). Strengthening resilience works best when

organizations blend individual operational strategies with team approaches and organizational methods to achieve agility at every level (Raetze et al., 2022).

2.6.6 Agile Communication Strategies

An organization's resilience in HRM requires both clear and consistent communication systems. When disruptions strike, employees require immediate recognition of organizational shift patterns, policy adjustments, and performance standards. Organizations utilize digital tools, including Slack and Microsoft Teams, to provide instant team communications for professionals who work in different geographical areas. The implementation of chatbot tools by Scandinavian organizations allows their employees to receive live HR query responses, thus ensuring uninterrupted communication through crises, according to Jenneboer et al. (2022).

Employing agile communication means organizations must ask employees multiple times yearly about their opinions using pulse surveys and virtual town halls. The feedback loop helps HR teams prevent problems before they occur while developing strategies that match employee requirements (Zilber & Meyer, 2022). Communication strategies proven essential for keeping employees devoted while minimizing ambiguity through direct messaging improves their trust during uncertain times (Forstorp and Jers, 2023).

2.6.7 Technology-Enabled Resilience

Technology stands as the primary enabler for HRM systems to build resilience. Companies can effectively handle disruptions through systems that use cloud features, predictive analytics, and artificial intelligence platforms. Cloud-based cross-border hiring processes make use of blockchain technology for processing secure data transfers (BVNK, 2023). The customization capabilities of AI learning applications deliver specialized training programs that boost employee skills quickly while organizations adjust their operations to new business demands (Gkinko and Elbanna, 2023).

HR analytics tools provide real-time access to workforce metrics so organizations can take meaningful steps for resilience planning as they monitor employee engagement and turnover rates. According to Vassilakopoulou et al. (2023), Scandinavian companies applying these technologies show a 25% improvement in their workplace challenge management capabilities. The developments in HRM demonstrate technological transformation capacities that enable organizations to develop resilient and agile HRM strategies.

2.7 Green HRM: Promoting Sustainability in the Workforce

Green HRM is about implementing environmental human resource practices that support sustainable business operations and promote employee environmental awareness (Ly, 2023). Green HRM integrates environmental sustainability principles with human resource methods, helping organizations decrease their ecological impact and encouraging employees to be environmentally conscious. Green HRM has become a

crucial organizational focus because organizations must meet sustainability demands, especially in Fintech industries, pursuing sustainable innovation and long-term value creation. The following subsection evaluates business sustainability measures by employing Environmental Social Governance (ESG) principles to assess sustainability solutions and difficulties within organizations.

2.7.1 Environmental (E)

In ESG reviews of Green HRM, organizational environmental responsibility strives to lower operational environmental effects while fighting emissions-driven global temperature increases (Sánchez-García et al., 2025). Fintech must pursue sustainable practices by operating without paper, integrating renewable energy, and reducing waste volumes. Digital HR systems and cloud-based platforms adopted by Fintech firms in Germany and the Netherlands reduce carbon emissions by up to 30% (Awwad Al-Shammari et al., 2022). Digital processes have reduced reliance on physical documents for recruitment and employee management, decreasing resource consumption.

Many financial institutions reward employees for making environmentally friendly transportation choices while accelerating their office space development to incorporate efficient energy and waste recycling systems. Fintech companies achieve sustainability goals through their human resources strategies, which simultaneously minimize expenses and build employee dedication according to Zihan et al. (2024) and Gupta and Jangra (2024).

2.7.2 Social (S)

Within the ESG framework, the social pillar demands that organizations develop work environments where employee well-being, diversity equilibrium, and inclusion prevail (Yu et al., 2024). Through DEI programs focusing on diverse leadership and inclusive workspaces, Canadian Fintech companies achieved a 20% jump in workforce engagement (Wang et al., 2023). Employee well-being programs maintain their important position in this pillar by delivering essential mental health resources, flexible work arrangements, and wellness programs. The UK financial technology sector maintains wellness initiatives featuring periodic mindfulness sessions within nature alongside fitness subsidy programs that improve staff enthusiasm and operative outcome (Gupta and Jangra, 2024). Through community engagement programs such as sustainability workshops and volunteer opportunities, Fintech businesses develop employee loyalty while building cultural strength (Awwad Al-Shammari et al., 2022).

2.7.3 Governance (G)

The governance element of ESG aims to establish ethical business behavior, transparent decision processes, and adherence to sustainability standards (Tsang et al., 2023). Organizations that lead through example demonstrate their sustainability targets by making ESG disclosures publicly available (Joshi et al., 2023). The financial sector distinguishes itself through transparent ESG reporting, which establishes improved investor trust and stakeholder relations. Fintech companies in the United States have implemented blockchain systems that deliver proven secure tracking capabilities for

their sustainability data, including carbon release figures and diversity equality inclusion metrics (Mulhern et al., 2022). Financial institutions that practice ethical management and compliance establish themselves as sustainability leaders globally (Marrucci et al., 2021).

2.8 Green HR Practices in Key HR Functions

2.8.1 Green Onboarding

Organizations have a substantial opportunity during onboarding procedures to establish sustainability principles within new staff members. Digital onboarding platforms substitute paper-based traditional processes while letting organizations follow the modern trend toward remote work. Forbes (2022) reports that organizations delivering environmental training during new employee orientation experience an employee engagement boost of up to 15%. Indian Fintech firms install waste reduction knowledge, carpooling information, and energy conservation lessons during employee onboarding, directly connecting new hires to the company's environmental mission (Brighter Strategies, 2024).

2.8.2 Green Training and Development

Green training aims to develop employee competencies that foster sustainability. Scandinavian firms demonstrate leadership in this field since 60% of their workforce can access eco-friendly credentials, including sustainable business methods and renewable energy solutions (Al Doghan, 2024). Virtual training platforms in Canada

provide an enhanced approach since they replace printed materials, minimizing traditional classroom environmental expenses. (Abdelwahed et al., 2022). The combination of green creativity among employees alongside organizational service behaviors produces essential benefits for circular supply chain performance and broader sustainability frameworks (Agyabeng-Mensah et al., 2024); (Azevedo, Carvalho, and Cruz-Machado, 2011).

2.8.3 Green Performance Management

Green HRM bases its strategic direction on sustainable goal setting, which lets staff actively work on environmental outcomes. Organizations integrating sustainability targets into performance appraisals achieve higher engagement and enhanced employee accountability. Scandinavian organizations offer environmentally conscious incentives to their employees who reach their energy savings objectives through rewards of electric car advantages and sustainable products (Chang et al., 2022). When individual performance connects to corporate sustainability objectives, employees actively support environmental sustainability programs. Top management's commitment and adaptability culture lay essential foundations for improving green performance by developing environmental sustainability-focused innovation and organizational goal alignment (Gull et al., 2023). Green capabilities, including green purchasing and resource efficiency, help enterprises fulfill their triple-bottom-line performance objectives by focusing on societal well-being and financial stability with environmental preservation (Khan et al., 2022).

2.8.4 Green Employee Engagement and Retention

Green initiatives that activate employee engagement successfully build sustainable workplace norms. Australian organizations implement tree planting and community clean-up events, which increase employee satisfaction and organization loyalty (Khaskhely et al., 2022). Together with wellness programs, evaluating environmental goals helps organizations maintain employee retention rates. The Scandinavian business industry achieved a 10% boost in employee environmental conduct after implementing incentives for workers who chose public transportation or biking through monetary benefits (Kundu et al., 2023). Leaders who motivate employees intrinsically along with fostering green creative approaches generate higher employee dedication to sustainability goals that match organizational environmental objectives (Li et al., 2020).

2.8.5 Green Leadership and Culture

Leaders must develop sustainable leadership capabilities to align environmental values throughout the organization. Organizations commit to sustainability when their leaders guide by example through green behavior, thus driving employee motivation and corporate environmental responsibility. Organizations gain market advantages combined with environmental protection by training leaders on sustainable criteria and choices for business decisions, such as remote work and energy-efficient tech selection (Napathorn, 2022). Senior leaders at US-based Fintech firms participate in green programs through office energy efficiency measures while displaying environmental leadership to their workers. Leaders who receive empowerment for green task

implementation generate improved ecological performance and heightened employee participation in sustainability programs (Paillé and Francoeur, 2022). Research conducted in hospitality demonstrates how leadership facilitates employee self-efficacy toward sustainable practices and promotes sustainable conduct (Nisar et al., 2024).

2.8.6 Green HR Systems and Technology

Green HRM uses technology as its main base to simplify operations and reduce environmental impact. Cloud-based HR management platforms replace conventional paper processing, so organizations experience dramatic waste reductions. Companies can decrease their carbon emissions by 30% by implementing digital solutions that manage payroll functions with recruitment capabilities and performance evaluation systems (Ren et al., 2022). Adopting digital signatures and e-documents in European firms increases operational effectiveness and bolsters sustainability practices (Serrano-García et al., 2022). Manufacturing companies experience noticeable operational enhancements from blending green production systems and sophisticated technologies because (Serrano-García et al., 2023) present this potential at industry-wide levels in their study.

2.9 Principles of Entrepreneurship

2.9.1 Innovation and Creativity

Although entrepreneurship depends upon innovation and creativity, organizations must establish conditions that empower their workers to test unconventional approaches

through new concepts. Innovation is the heart of entrepreneurship, yet organizations will only excel if risk-taking gets backed up through a failure-learning mindset. American companies that build innovation labs experience a 30% boost in product success rates because their employees obtain space to invent and test new product solutions (Kayani et al., 2025). Entrepreneurs have applied this principle to bring about milestone advances such as AI-driven fraud detection systems and blockchain-based payment platforms, according to Murinde et al. (2022) and (Renduchintala et al. 2022). Organizational cultures that promote innovation establish space for their workforce to discover inventive solutions to overcome complex business needs and generate business advancement.

2.9.2 Empowerment and Autonomy

The ability of entrepreneurs to turn conceptual ideas into beneficial results depends entirely on their empowerment and the autonomy they receive. Granting employees decision-making authority and access to resources fosters ownership and accountability. Spanish organizations achieve this by giving their workers "entrepreneurship grants," enabling them to perform innovation testing and scale their ideas. The empowerment initiative created by this approach resulted in a 25% increase in employee engagement, featuring staff members who can pursue their visions (Lengnick-Hall and Beck, 2005). Modern tech-driven financial companies dedicate employee work time to build advanced payment solutions along with AI-driven lending models, according to (Kayani et al., 2025). By allowing employees this autonomy, they effectively contribute innovative ideas to organizational objectives (Salvadorinho and Teixeira, 2023).

2.9.3 Leadership and Vision

Organizations depend on strong leadership and visionary planning to merge entrepreneurial pursuits with their fundamental organizational targets. Entrepreneurs who achieve success have both the ability to develop extensive goals for their projects and the talent to motivate team members to back up their concepts. Indian Fintech companies created leadership development initiatives to build competence in organizational decision-making, negotiation, and team supervisory capabilities across their workforce. The programs enhanced departmental interdependence between team members by 20%, according to (Gupta and Jangra, 2024). Through leadership development initiatives, organizations preserve the ability of their entrepreneurs to manage difficulties while obtaining company stakeholder sponsorship on initiatives that support both current organizational targets and long-term success (Kundu et al., 2023; Alqudah et al., 2022).

2.9.4 Collaboration and Networking

Creating a supportive space for entrepreneurs to utilize multiple types of expertise requires combined effort and networking interactions between professionals. Doing away with organizational partitioning creates ideal conditions for innovative thinking and quicker resolution of problems. German businesses established innovation teams that span organizational departments to generate a 40% rise in process enhancement solutions (Hornuf and Mattusch, 2024). Crossover team communication plays a critical role, yet Slack and Asana strengthen connectivity among teams, according to Slack

(2023). By encouraging team collaboration, entrepreneurs gain access to beneficial resources and insights, which leads to successful project outcomes (Kwiotkowska and Gębczyńska, 2022).

2.9.5 Entrepreneurial Mindset

Within the entrepreneurial mindset, employees demonstrate three key traits: initiative, personal accountability, and durable self-confidence, which help them detect possibilities and manage hurdles fearlessly. Developing a specific mindset proves critical in assisting entrepreneurs in making risk-based innovations (Raetze et al., 2022). Companies that roll out entrepreneurial training have reported that their workforce drives additional revenue-generating initiatives at a 15% rate Bond University, 2023). Fintech employees who received training for entrepreneurial behavior have created credit-scoring solutions backed by machine learning and personalized financial advisory tools (Bhutto et al., 2023). Organizations gain complete workforce potential by building entrepreneurial mindsets within their cultural framework.

2.9.6 Adaptability and Resilience

Adaptability and resilience are necessary for entrepreneurs to operate in dynamic, unpredictable environments. Organizations need to design support mechanisms that assist staff through changes in market conditions and emerging technological advancements. For example, U.S.-based Fintech firms hold "failure retrospectives," allowing their employees to extract lessons from project failures to enhance their future strategy development (Bedford et al., 2022). Japanese companies practice repeated

development stages because they allow their entrepreneurial staff members to continuously improve their ideas through successive testing periods (Ikeda et al., 2024b). The need for adaptability enables entrepreneurs to maintain the success of their projects through evolving market requirements (Munoz et al., 2022).

2.9.7 Measurable Outcomes and Accountability

The success of entrepreneurship initiatives depends on achieving measurable results in a setting where accountability matters. Showing how projects progress toward organizational objectives through improvements in revenue output, cost reductions, and increased customer satisfaction ranks as a necessity for entrepreneurs. Tools for measuring performance and Key Performance Indicators (KPIs) in Scandinavian Fintech firms monitor the effects of entrepreneurial work while maintaining alignment with strategic priorities, according to Hornuf and Mattusch (2024). Organizations gain better control over their high-value initiative selection by correlating project achievement metrics to material achievements such as acquiring customers or enhancing operational productivity. When officials acknowledge entrepreneurial work with rewards and incentives, it bolsters mission responsibility and extends innovation duration (Alqudah et al., 2022).

Entrepreneurship principles encompass innovation, empowerment, leadership, collaboration, an entrepreneurial mindset, adaptability, and accountability, thus delivering an extensive framework for organization-wide creative development and growth (Raetze et al., 2022). The principles demonstrate high relevance in Fintech due

to its need for proactive approaches paired with market disruptions in fast-changing technological environments (Murinde et al., 2022). Organizations can ensure business success by developing entrepreneurship to unleash worker potential to build innovative solutions while preserving market leadership in dynamic worldwide business conditions (Gupta and Jangra, 2024).

2.10 HR Practices Supporting Entrepreneurship

HR can identify candidates with entrepreneurial characteristics through employment assessments and simulated interview scenarios when we screen potential workers. As per recommendations from Cayrat and Boxall (2023), Questions on innovativeness and problem-solving experience should be included in the candidate interviews. A new employee's onboarding process includes first exposure to entrepreneurial programs, allowing them an immediate cultural connection to organizational innovation (Forbes, 2022).

Entrepreneurial capabilities build best through employee training, which includes essential skills such as innovation alongside design thinking and agile methodologies (Schwaber and Sutherland, 2017). Workplace initiatives focused on creativity, adaptability, and strategic thinking help workers develop their capability to propose innovative solutions. Scandinavian businesses implementing this form of training achieved a 30% increase in employee-generated innovation, according to research by (Hornuf and Mattusch, 2024).

Employee motivation to initiate innovative work grows once they receive acknowledgment and incentives for their entrepreneurial success. The power of non-monetary rewards, such as career advancement opportunities alongside public recognition, matches the impact of traditional financial incentives, according to (Raetze et al., 2022). Employee satisfaction rates jumped by 25% after launching innovation awards for staff co-developing new business projects (Canada Security Intelligence Service, 2022). Strengthened innovation alongside accountability can emerge from empowering entrepreneurs with proper achievement recognition (Gupta & Jangra, 2024).

The availability of flexible work schedules and distance-based possibilities helps staff dedicate their time to innovation while eliminating traditional time constraints Jiang et al., 2023). The ability of employees to be independent leads directly to creative exploration and experimentation processes. US remote-first companies report that 20% more staff participate in their entrepreneurial projects (Bond University, 2023). Workers benefit from flexible work solutions which grant them the ability to manage responsibilities and dedicate themselves to vital projects (Hornuf and Mattusch, 2024).

When businesses introduce systematic innovation programs such as hackathons and innovation labs, they establish dedicated platforms for employees to conduct development and testing endeavors (Murinde et al., 2022). The programs create protected zones for experimentation, which utilize mentor connections to resource sharing that benefit employees (Salvadorinho and Teixeira, 2023). German Fintech firms using innovation labs generated a 35% growth in newly developed products based on

Ruan and Mezei (2022). These platforms promote continuous innovation because they access employees' abilities to innovate (Raetze et al., 2022).

2.11 Challenges in Entrepreneurial HRM in the Fintech Industry

The Fintech industry benefits tremendously from entrepreneurial HRM because it needs organizations to be fast and innovative in an environment of intense competition alongside rapidly changing market conditions. The exceptional pressure within these systems demands innovative approaches for successfully implementing entrepreneurial HRM platforms. Fintech's technological and regulatory intricacies elevate the obstacles faced in its adoption, such as staff members' reluctance to adopt new approaches alongside proper resource distribution systems.

2.11.1 A Tech-Driven Environment presents hurdles to change adoption

Implementing entrepreneurial HRM in financial institutions faces substantial resistance to this approach. Adopting innovative HR practices faces difficulties because employees and managers choose traditional methods or show minimal understanding of technological innovations, including AI, blockchain, and machine learning (Vassilakopoulou et al., 2023). Rolling implementation timelines and intense performance pressure cause Fintech companies to face challenges in securing support for new approaches to managing talent. Adopting new systems outcomes depends on establishing clear goals and effective stakeholder outreach. Revolut Fintech has successfully addressed the resistance among employees towards new digital HR systems alongside other companies through workshops focused on system benefits combined

with employee-driven implementation design processes (Chugunova and Danilov, 2023). Companies adopting change management approaches focusing on employee engagement and feedback implementation find it easier to transition into innovative HR practices, according to Alqudah et al. (2022) and Ruan and Mezei (2022).

2.11.2 Fear of Failure in a Fast-Paced Industry

Employees within the rapidly changing Fintech industry hold back from experimental activities because they fear the consequences of failure. Organizations operating in sensitive environments demonstrate heightened apprehension because minor mistakes yield possible regulatory communications and damaging impacts on reputation. Organizations that neglect to establish emotional security during innovation sessions block human creativity in their workforce. The Fintech companies PayPal and Square implement "failure retrospectives" to learn from terminated projects without any blame distribution. Acceptable operational risks originate from employee-driven innovation, which advances progress and protects compliance and security (Bedford et al., 2022). Reliable research demonstrates that organizations that develop environments with psychological safety gain benefits both in employee engagement and creative improvement (Napathorn, 2022).

2.11.3 Short-Term Focus vs. Long-Term Innovation

Fintech companies must handle continuous time pressure to provide rapid improvements like new feature releases alongside faster processing capabilities and quick revenue acceleration. Ethical and prudent management requires organizations to develop

enduring entrepreneurial human resources solutions, but the pressure of short-term goals hinders that progress. Research shows that organizations succeed when they coordinate operational targets against the development of innovative initiatives (Awwad Al-Shammari et al., 2022). The Fintech firm Stripe shows how to strike this equilibrium by funding blockchain and AI upskilling training for innovation through separate budgets while upholding efficient day-to-day human resources processes that follow immediate business requirements (Paramita et al., 2024; Mhlanga, 2024).

2.11.4 Resource Constraints in High-Growth Fintech

Startups and scale-ups within the Fintech sector face significant resource limitations that simultaneously strain their financial and personnel resources. Large corporate entities have the budget to launch entrepreneurship grants alongside innovation labs and entrepreneurial training, but small financial institutions have limited financial capabilities to match this level of support. Organizations experiencing resource deficits encounter barriers that diminish employee creativity and discourage innovative idea development. Fintech firms that want to address resource limitations use technological advances to achieve optimal resource distribution. AI-driven Human Resource platforms automated mundane tasks, which enabled employees to devote time to entrepreneurial activities (Chugunova and Danilov, 2023).

2.11.5 Cultural Misalignment in Diverse Fintech Workforces

Building an entrepreneurial culture is becoming more challenging because Fintech companies have diverse workers worldwide. Workers from different cultural

backgrounds express various viewpoints about how they view risk and innovation and like to work together. Research indicates we must personalize change management methods to address workplace behavioral responses across cultural dimensions (Abdelwahed et al., 2022). Fintech leader Ant Group establishes inclusive work environments that welcome different viewpoints through their combination of cross-national hackathons and corporate training systems, which unite employees around innovation-themed values (Mohammed et al., 2023).

2.11.6 Regulatory and Compliance Constraints

Working in Fintech presents organizational challenges because the industry's global and diverse employment base limits team cohesion and entrepreneurial culture building. Workers from diverse cultural backgrounds display different approaches to risks, collaboration, and innovation strategies. According to research on workplace behaviors, organizations need customized methods for managing change based on cultural dimensions (Vassilakopoulou et al., 2023). Ant Group and similar Fintech entities combat this innate challenge with inclusive cultural approaches that honor multiple viewpoints while using global leadership programs and cross-functional innovation competitions to create shared values for innovation (Deloitte, 2024).

2.11.7 Evaluation and Measurement of HR Innovation

Entrepreneurial HRM initiatives demonstrate difficulty in measurement in the Fintech sector because their innovative benefits appear gradually along with abstract outcomes. The metric collection methods focused on traditional Human Resources parameters do

not sufficiently demonstrate the worth of employee-driven initiatives. For proper assessment of Fintech-specific performance, organizations need to create unique measuring indicators such as counting Fintech product developments through entrepreneurial programs (Cuel et al., 2024). Through success rate measurements and market impact trackers, Klarna assesses the effectiveness of its entrepreneurial HRM practices, according to Ruan and Mezei (2022).

2.12 Benefits and Challenges of Entrepreneurial HRM

2.12.1 Innovation and Growth

Organizations thrive through both innovation and growth because of entrepreneurship. When companies back entrepreneurial thinking within their workforce, they maintain leadership in new trends and technological developments. Through its well-known "20% Time" policy, which enables employees to use free time for personal initiatives, Google has developed popular products such as Gmail and Google Maps (Hollands et al., 2024). Lengnick-Hall and Beck (2005) discovered that organizations with active entrepreneurship initiatives generate 30% more innovative outputs.

2.12.2 Employee Engagement and Retention

When employees take control of their original ideas, job satisfaction and workplace loyalty improve. Employees who have sufficient freedom to innovate demonstrate heightened motivation and increased engagement. By providing entrepreneurship opportunities, Scandinavian organizations demonstrate a 20% decrease in employee attrition and elevated overall engagement measures (Hornuf and Mattusch, 2024).

Research shows that entrepreneurship brings exceptional talent because employees want autonomous environments that produce consequential contributions (Lengnick-Hall and Beck, 2005).

2.12.3 Reduced Risk

Employees working as entrepreneurs can advance innovative ideas through organizational support that provides organizational resources beyond traditional entrepreneurial models. Employees who gain a safety net can make strategic business risks by setting aside their financial commitments to entrepreneurship pursuits. Companies that support entrepreneurial projects by providing funding alongside mentorship achieve both accelerated product/service development and higher success rates (Awwad Al-Shammari et al., 2022; Raetze et al., 2022).

2.12.4 Faster Implementation

Organization-based entrepreneurs move forward with their ideas faster than independent external entrepreneurs do. Company infrastructure alongside resources enables entrepreneurs to expand innovative solutions quickly. German businesses implementing entrepreneurial frameworks speed up their new product development process by 25% (Bedford et al., 2022; Hornuf and Mattusch, 2024).

2.13 Challenges of Entrepreneurship

2.13.1 Resistance to Change

Resistance to change is one of the most significant barriers to entrepreneurship. Employees and managers may be reluctant to embrace new ideas that challenge established processes or threaten the status quo. Research highlights the importance of effective change management strategies to address this resistance (Alqudah et al., 2022). For instance, providing transparency around the benefits of innovation and involving stakeholders in decision-making can mitigate pushback (Haque, 2023).

2.13.2 Limited Autonomy

While entrepreneurs are given more freedom than traditional employees, they operate within organizational constraints. Bureaucratic hurdles, approval hierarchies, and rigid corporate policies can limit entrepreneurs' ability to execute their ideas fully. Organizations must strike a balance between providing autonomy and maintaining alignment with strategic goals (Zilber and Meyer, 2022; Cayrat and Boxall, 2023).

2.13.3 Resource Allocation

Competing for resources is a common challenge for entrepreneurs. Organizations must balance ongoing operational needs with investments in new initiatives. Entrepreneurs often struggle to secure funding, time, or personnel for their projects, mainly when the perceived return on investment is uncertain. Implementing clear criteria for resource allocation can help address this issue (Chugunova and Danilov, 2023; Roehl, 2023).

Entrepreneurship offers significant benefits, including enhanced innovation, employee engagement, and rapid execution of ideas, making it a cornerstone of entrepreneurial

HRM. However, challenges such as resistance to change, limited autonomy, and resource constraints must be carefully managed to ensure successful implementation. By fostering a supportive environment, providing necessary resources, and addressing organizational barriers, companies can unlock the full potential of entrepreneurship, driving both employee satisfaction and organizational growth (Gupta and Jangra, 2024). This approach is particularly valuable in dynamic industries like Fintech, where innovation and agility are key to maintaining a competitive edge.

2.14 Human Resources Practices in Entrepreneurship

Human Resources practices in entrepreneurship include innovative, agile, entrepreneurial strategies that help develop an ownership culture based on workplace creativity and innovation. HR professionals drive organizational transformation by embedding entrepreneurial approaches into essential HR responsibilities. The practices give employees the power to begin projects and the muscle to find creative solutions to problems and link their work goals to company expansion and advanced techniques. Practical applications of entrepreneurial HR practices include:

2.14.1. Gamified Recruitment

The adoption of gamified recruitment within traditional hiring processes now combines elements of play and challenge for testing abilities that include advanced skills, creativity, and troubleshooting aptitude. The interactive scenarios allow organizations to evaluate candidate capabilities through dynamic assessment methods. The Recruitment Arcade from Deloitte presents candidates with business simulations that

combine gaming technology with authentic challenges, enabling them to demonstrate abilities while experiencing how the company operates, according to CIPD (2021). Since Fintech demands technical skills and inventive thought, Gamified tools represent substantial value for the industry. Through simulation games and coding challenges, PayPal identifies skilled tech candidates for open positions in AI, cybersecurity, and blockchain development roles (Zhang and Yencha, 2022). During recruitment, hiring pools containing suitable candidates arise more effectively because this method selects individuals who bring technical mastery and innovative intelligence into the workforce (Paramita et al., 2024; SHRM, 2022).

2.14.2. Flexibility in Work Environments

Flexible work models that combine remote operations with office attendance represent essential elements of entrepreneurial HR approaches. Remote work models enable employees to operate successfully from any location using professional collaboration software. Fintech requires collaborative work zones that span international borders; therefore, remote work options have become non-replaceable in this industry. Scandinavian organizations took the lead in implementing flexible work arrangements, showing a 15% rise in employee engagement and improved retention figures (Hornuf and Mattusch, 2024). Leading fintech companies Revolut and Stripe have delivered flexible work hours alongside remote-first operating policies, which allow their teams to work efficiently across various time zones (Bond University, 2023). Through the utilization of platform tools like Slack, Microsoft Teams, and Zoom, these companies enable ongoing collaboration to drive innovation together with employee comfort

options (Ohno and Bodek, 2019). By breaking down geographic limitations, organizations can access a larger spectrum of talent through flexibility (McKinsey & Company, 2023).

2.14.3 Data-Driven Engagement

Enterprise engagement through data analysis tracks employee satisfaction, productivity levels, and staff wellness performance. Through pulse surveys and AI-based sentiment analysis, HR departments obtain immediate workforce data that enables them to respond to organizational challenges as they happen (Espegren and Hugosson, 2023). Employee retention and engagement remain essential in Fintech because of the brutal competition for talent, which makes these tools vitally important (Cuel et al., 2024). Predictive analytics checks employee turnover risk to enable the creation of custom solutions through mentoring and up-skilling programs and work schedule changes (Raetze et al., 2022). Real-time feedback systems used by Klarna help the company gather employee mood data to develop performance-boosting measures (Mhlanga, 2024). The analysis of communication patterns merged with internal chat feedback by AI-based tools helps human resources teams determine workplace stressors and dissatisfaction, which they can then address before escalation occurs (Roehl, 2023).

2.14.4 Innovation Labs

Organizations deploy innovation labs as centers of organizational creativity to encourage experimental behavior. Employees in these labs benefit from accessible resources, mentoring guidance, and team collaboration spaces to execute their solution

experiments. The financial sector utilizes innovation labs to create digital payment systems, AI fraud detection systems, and blockchain financial tools. German financial technology firm N26 has implemented this approach, leading to staff-driven process advancements that grew by 40% (Hornuf and Mattusch, 2024; Raetze et al., 2022). Cross-functional teams at innovation labs come together during hackathons and design sprints to tackle complex problems and prototype new products, according to Kayani et al. (2025). At Ant Group's innovation lab, personnel can test new platform improvements for digital lending through an employee-experimentation framework that develops creative ownership standards. Companies that establish innovation labs build employee commitment and organizational development through their structured yet adaptable framework for creative work (Zhang and Yencha, 2022).

2.14.5 Personalized Employee Learning and Development

Entrepreneurial HR practices have recently developed new approaches toward individualized learning and professional development for their workforce. Training programs adjusted according to employees' career development needs and skill deficiency allow organizations to prepare workers for present requirements and upcoming business needs. Technology companies utilize artificial intelligence programs to design interactive learning tracks that incorporate instruction for emerging technologies, including machine learning cybersecurity and blockchain (Kayani et al., 2025). Square and similar companies grant their workforce full access to digital platforms that use role and interest data to suggest appropriate training materials, according to Deloitte (2024). Through personalized development, organizations gain

improved employee engagement and ensure their workforce directly supports the company's strategic objectives (Zhang and Yencha, 2022). Staff with access to ongoing learning opportunities maintain their advantage in a quickly developing industry, leading to improved innovation capacity and increased career fulfillment (Raetze et al., 2022).

2.15 Benefits of HR Entrepreneurial Practices in the Fintech Industry

Fast-changing technological progress and market forces within the Fintech business need HR practices that show innovative adaptation and complete alignment with strategic business objectives. Through entrepreneurial HR practices, Fintech companies learn to unlock creative and adaptable workforce potential, which creates an ongoing environment of innovation. The following section highlights the advantages of entrepreneurial Human Resources methods specific to Fintech industry applications.

2.15.1 Increased Innovation

Entrepreneurial HR practices fuel innovation by enabling workers to pursue creative development, followed by experimental evaluation of fresh concepts. Financial institutions must actively pursue innovation because blockchain, AI, and machine learning technologies rule their market (Mhlanga, 2024). Data from Espegren and Hugosson (2023) shows that organizations that use AI recruitment technology and sentiment analysis for employee engagement reduced their hiring time by 30% while enhancing staff satisfaction by 20%. Employee brainpower is boosted through innovation labs and hackathons that let staff participate in Fintech solution development

of advanced payment technology and fraud prevention systems (Zhang & Yencha, 2022; Hornuf & Mattusch, 2024).

2.15.2 Enhanced Agility

Fintech's success depends on its ability to adapt quickly to market and technological changes. Through adaptive resource distribution and cyclical feedback loops, entrepreneurial HR practices enable agility, according to Cayrat and Boxall (2023). Cloud-based HR platforms would allow companies to rapidly adapt their workforce management when their needs change through rapid hiring expansions or implementing immediate performance review systems (Lawong and Akanfe, 2024). Research by Raetze et al. (2022) found that fintech companies that deploy agile HR systems can adapt 40% more quickly to industry transformations than financial institutions using traditional HR strategies. Employees using digital collaboration tools combined with flexible work arrangements maintain high productivity in diverse working conditions, according to Hornuf and Mattusch (2024).

2.15.3 Improved Employee Experience

Empowered fintech workers seek work experience combining personalized interaction with technological tools to match their passions and workplace needs. Employee preferences are served through entrepreneurial HR practices that integrate AI-driven learning solutions and customizable benefits packages, according to Espegren and Hugosson (2023). This technology delivers personalized learning trails that direct workforce members toward development in Fintech emerging areas such as

cryptocurrency alongside RegTech (Kayani et al., 2025). Companies that customize their employee engagement methods enhance employee retention by 25% because employees experience improved opportunities to advance within their organization, according to Raetze et al. (2022) and Mhlanga (2024) studies. The practices improve employee satisfaction while promoting organizational growth by establishing ongoing learning and development programs (Hornuf and Mattusch, 2024).

2.15.4 Stronger Business Alignment

The fast-moving nature of Fintech requires Human Resources professionals to develop workforce methodologies that integrate goals related to technologies and organization structures. Mutual goals exist between organizations and employees when Human Resource entrepreneurs give workers skills to advance technological innovation, according to Cuel et al. (2024). Through entrepreneurship initiatives maintained by Raetze et al. (2022), employees can pitch and guide ventures such as AI-driven loan evaluation systems and blockchain-based transaction platforms. Organizations experience growth through scaling operational solutions because these development programs boost organizational efficiency (Kayani et al., 2025). Fintech businesses employing HR analytics to discover skill gaps and predict workforce demand produce a stronger linkage between individual talent capabilities and organizational priorities (Mhlanga, 2024). Using predictive analytics tools helps HR organizations identify industry trends to develop forward-thinking solutions for addressing employer attrition problems and skills gaps (Hornuf & Mattusch, 2024; Zhang & Yencha, 2022) (.

HR entrepreneurial practices establish competitive advantages for Fintech firms by enhancing innovation, workforce adaptability, and employee involvement. Combining entrepreneurship initiatives and innovation labs with AI-assisted recruitment software enables Fintech companies to maintain technology leadership while cultivating a strong, motivated workforce. Traditional HR practices at financial institutions led by innovation retain their competitive edge through integrated advanced technologies while driving success in fast-changing markets.

2.16 HR Effectiveness

HR effectiveness is key to the success of organizations, especially in the fast-paced FinTech sector, where the workforce's speed, innovation, and adaptability are a top priority. Good HR practices, therefore, help organizations from countries like the US, UK, Germany, Singapore, and UAE attract, develop, and retain optimum talent while harmonizing human capital strategies with business goals. The nature of the FinTech industry has given rise to this phenomenon as traditional HR models cannot keep up with the rapid demand of FinTech. Modern HR effectiveness is characterized by strategic talent selection, employee engagement, workforce productivity, and the smooth integration of HR technology to improve decision-making and output efficiency (Kalianan et al., 2023).

HR effectiveness is similar to the firm's Resource-Based View (RBV), which stresses human capital as a key to sustainable competitive advantage. Hence, organizations that

develop and maintain valuable, rare, inimitable, and non-substitutable (VRIN) human resources have a competitive advantage in the marketplace (Fyhn et al., 2023).

HR effectiveness is increasingly becoming a critical factor in the scale-up and integration of digital financial services into markets. HRM needs to be different, as they face unique challenges such as talent shortages, regulatory changes, and economic volatility, which necessitates strategies prioritizing resilience, employee well-being, and sustainability. Resilient HRM practices like mental health programs and remote work policies have been effective in providing stable workforce stability in such an uncertain environment (Paramita et al., 2024). In Sweden, Norway, and Japan, Green HRM has been implemented to progress employee involvement through aligning HR policies with sustainability goals, minimizing operation waste, and building an eco-friendly labor force (Jennings et al., 2024).

The role of HR Technology in Regions like China and South Korea: FinTech companies use AI HR analytics, ATS, and other HR technologies, as well as cloud-based HR management systems, to improve recruitment and employee performance management. Studies show that automating traditional HR processes has decreased hiring time by up to 30% in Germany and showed 20% better employee retention rates in the Netherlands Hiebl & Pielsticker, 2023). Likewise, in the US and UK, predictive analytics in talent management have assisted HR professionals in responding proactively to workforce challenges, improving overall HR effectiveness by 40% (Noponen et al., 2023).

Such growth can be seen in FinTech hubs worldwide, and a high-performing HR function has proven to be a leading factor in organizational performance. In Singapore and Hong Kong, where industry regulations and market dynamics are standard, Agile HRM practices have helped HR departments in both nations adapt quickly. The higher levels of employee engagement and satisfaction created through real-time feedback systems and iterative recruitment processes in practice have driven business innovation and financial growth (Meijerink & Bondarouk, 2023). Despite cross-national differences in the specific approaches to entrepreneurial HRM, common ground is evident, especially in innovation, motivation, and performance (Voigt et al., 2023). France and Spain, for example, are strong examples of how entrepreneurial HRM can support the growth of a culture of innovation in the FinTech sector, inspiring employees to contribute to creating innovative solutions and spearheading new projects (Hiebl & Pielsticker, 2023). With this vision in mind, HR effectiveness has evolved. It will continue to further influence work dynamics in the coming years and countries in which forward-thinking HR and Tech will keep leading the way in developing new FinTech solutions.

2.17 Employee engagement

In the world of work, employee engagement is an essential determinant of workforce productivity, job satisfaction, and organizational commitment. For instance, in the fast-paced landscape of Singapore's FinTech sector, organizations practicing Agile HRM have recorded a 25% improvement in employee engagement due to the implementation of real-time feedback mechanisms and performance-linked benefits (Moh'd et al., 2024).

Also, flexible work arrangements and career development programs enhance employee motivation levels, enhancing talent retention in a highly competitive market (Dong et al., 2024).

Implementing Lean HRM practices has also seen employee engagement reform in Germany's banking industry, with automated HR processes and AI-powered talent management systems that lighten the administrative load and significantly enrich employees' experiences. It is observed that the banks that implemented AI HR solutions found a 30% rise in employee engagement levels, as using automation, HR teams can focus more on career development efforts and employee welfare schemes (Alzoubi et al., 2023). According to Augner and Schermuly (2023), structured learning and development frameworks have also led to a 20% increase in job satisfaction among employees, particularly among mid-career professionals seeking to broaden their expertise through digital banking.

Companies with wellness programs and flexible work policies see 40% less attrition due to burnout, with software engineers and data analysts reporting the highest effects. Entrepreneurship programs have been introduced as well, in which employees are motivated to create and manage their very own innovative projects, providing a 35% increase in engagement levels, creating a workplace driven by creativity and dedication towards the company goals (Baxter et al., 2023a). This research furthers understanding of how industry-specific HRM practices can play a role in strengthening employee engagement, leading to sustainable workforce performance in turbulent business contexts.

2.18 Employee Satisfaction

Employee satisfaction is a key area of interest given its role in staff retention, workplace productivity, and the context of industries facing skill shortages and high competition that need to invest in HR interventions. In Japan, which is characterized by long working hours and highly hierarchical banking systems that impact job satisfaction, implementing a resilient HRM has resulted in a 25% increase in employee well-being scores. Baxter et al. (2023b) states that improvements such as mental health care, flexible working hours, and defined career progression programs have markedly improved job satisfaction among employees, especially younger employees who are pursuing more balance between work and life.

Chbaly & Brunet (2023) assert that in the UAE FinTech sector, firms that adopted Green HRM principles demonstrate 30% employee satisfaction increases owing to eco-friendly workplace policies and corporate sustainability. Digital documentation, remote work options, and sustainability-driven employer branding boost employee morale and attract top-tier talent seeking ethical and eco-conscious workplaces. And by 20%, retention rates for organizations with HR policies aligned with Environmental, Social, and Governance (ESG) principles (Hiebl & Pielsticker, 2023)

Various entrepreneurship programs, leadership development tracks, and innovation incubators implemented by companies have empowered employees to take charge of projects, so their work is a source of meaning and tangible progress in their careers. Additionally, data provided by leading tech firms indicates that flexible career paths and

skills-based promotions have been shown to increase employees' job satisfaction by 40%, especially mid-level professionals seeking stability in their careers (Baxter et al., 2023a). The results indicate how customized HRM practices substantially improve employee satisfaction, promoting long-lasting organizational success across sectors.

The integration of HR technology also plays a critical role in employee satisfaction, especially when it comes to streamlining HR processes, facilitating communication, and offering more personalized career growth opportunities. In Germany's automotive industry, which is undergoing extensive digital transformation reshaping workforce management processes within the sector, organizations that have adopted AI-based HR platforms and predictive analytics for talent management have recorded a 28% increase in employee satisfaction. By integrating automated performance tracking and AI-powered career coaching into everyday practice, employees are better equipped to set more explicit professional goals, receive personalized strategies for training, and be more proactive in their career development (Moh'd et al., 2024)Digital onboarding and AI-assisted HR have also alleviated administrative bottlenecks, helping employees spend more time on meaningful work and collaboration.

The Australian healthcare sector has been one of the most challenging sectors in implementing Resilient HRM as it's known for having high levels of stress and burnout; this, however, has led to massive improvements in workforce morale and satisfaction. Fostering psychological well-being and promoting an adaptive work culture have improved job satisfaction and overall patient care quality due to a more engaged and zealous workforce (Augner & Schermuly, 2023). Hybrid working models offering

autonomy to administrative and research staff have been adopted and have contributed to satisfaction across the board.

In an industry where employee engagement and satisfaction are paramount to any organization's customer service offering, the UK retail sector has embraced agile HRM and its practices with remarkable success. Structured skill development programs and internal mobility options have provided career advancement opportunities previously unavailable to frontline retail workers, resulting in an increase in retention rates by 22% (Dong et al., 2024). Furthermore, inclusion and diversity initiatives, such as mentorship programs for under-served communities, have led to a more inclusive corporate environment, further reinforcing employee satisfaction and alignment with corporate objectives.

2.19 Lean HRM and HR Effectiveness

It is essential to improve HR effectiveness and make the most of the human resources within a company by eliminating waste. According to research, Lean HRM aims to optimize HR functions to align recruitment, training, and performance management with business objectives (Ammirato et al., 2023). HR service delivery can be significantly improved by reducing waste and improving efficiency since these two factors can dramatically impact how HR teams function and allow them to spend more time on strategic workforce planning than administrative tasks. Lean HRM has been shown to help companies in dynamic sectors like banking, FinTech, and healthcare decrease

hiring delays and increase talent acquisition while creating enhanced flexibility for the human resources network to respond rapidly to market changes (Dong et al., 2024).

The technological resources used in Lean HRM - such as Application Tracking Systems, HR Management Systems, and AI-based recruitment tools - show evidence of increasing the effectiveness of HR Departments. According to research, organizations that employ these technologies realize a reduction in hiring times of up to 30% and are better positioned to create a competitive advantage by acquiring top talent (Fenwick et al., 2024). Also, automation in HR processes reduces errors, enhances compliance accuracy, and improves employee experience with self-service HR portals and AI-driven employee support systems (Berretta et al., 2023). Adopting Lean methodologies helps HR departments focus on continuously improving HR to achieve efficient use of resources while delivering what is suitable for the business needs (Bodie, 2022).

Additionally, Lean HRM promotes a data-driven model for workforce planning, using predictive workforce analytics to assist HR professionals in succession planning, talent optimization, and skill-gap identification (Budhwar et al., 2023). Lean HRM strategies during digital transformation initiatives have contributed to operational efficiency, employee engagement, and the stability of the workforce of organizations (Bansal et al., 2023).

By eliminating waste, all HR activities and processes become more effective, which is why Lean HRM is of utmost importance in increasing effectiveness, removing errors, and optimizing human resources. Lean HRM emphasizes replacing traditional

performance appraisal with continuous feedback, improving employee performance tracking (Arulsenthilkumar & Punitha, 2024). Companies implementing these systems have noted that their employees are more engaged, turnover costs have decreased, and productivity has increased (Varma, 2024). In addition, according to research, Lean HRM promotes data-driven decision-making by enabling companies to analyze workforce trends, forecast talent shortages, and adopt proactive retention strategies. Centered around metrics-based workforce planning and real-time feedback, HR teams ensure optimized performance management, keeping employees motivated, engaged, and driven by organizational goals (Dalain, 2023).

Lean HRM significantly affects HR effectiveness by improving cost efficiency in HR processes. Research points to a 15-25% drop in HR operational costs for businesses applying Lean HRM methods through automation of repetitive tasks, enhanced resource allocation, and more efficient hiring cycles (Smith et al., 2023). Additionally, research shows that companies implementing Lean HRM strategies in the banking and FinTech sector minimize recruitment delays by 35%, meaning that demand roles are filled at an accelerated pace with better-qualified candidates (Forbes Business Council, 2023). Further, organizations with credible Lean capabilities in their employee development process have also reported higher employee satisfaction and retention rates as their employees tend to have clear career paths to follow and have been afforded personalized learning (SHRM, 2024).

However, professionals believe Lean HRM promotes workforce well-being and retention because firms focusing on efficiency and optimizing processes reduce

employee frustration and burnout. Thus, studies show that HR teams applying Lean HRM strategies are better equipped to create adaptive HR policies, ensuring that the targeted HR interventions are answering employee discomfort, development aspirations, and their demand for workplace flexibility (Gallup, 2024). Studies show that businesses that emphasize ongoing improvement and workforce agility have 20% higher employee retention, especially in industries with a significant competitive edge for skilled workforce (Chin et al., 2022).

Lean HRM and HR Effectiveness coupled with AI-based workforce analytics, predictive hiring models, and HR digitalization strategies will be helpful for organizations to transition to future workplace challenges in improving the efficiency of HR service and enhancing an agile workforce (Bansal et al., 2023). Lean HRM will likely remain the guiding approach for achieving HR effectiveness, enabling organizations to attract, retain, and develop talent in tandem with operational excellence amidst miles-an-hour competition (Dalain, 2023) as businesses undergo further transformation.

2.20 Lean HRM and Employee Engagement

A well-known and widespread methodology of Lean HRM is known for eliminating waste and improving employee experiences (Varma, 2024). Lean HRM principles refer to eliminating non-value-adding HRM activities, such as recruitment, performance management, and training. This helps HR teams concentrate on initiatives that directly influence employee motivation and workplace satisfaction (Forbes Business Council, 2023). Studies show that organizations that adopt Lean HRM demonstrate an enhanced

level of employee engagement as employees gain from quick HR assistance, enhanced communication channels, and continuous improvement practices that work together with such employees' career advancement and welfare (SHRM, 2024).

Lean HRM primarily increases employee engagement through real-time feedback mechanisms and continuous performance tracking. FinTech often utilizes yearly performance reviews that cannot identify on-time employees' contributions and ultimately cause delayed recognition, breeding disengagement (Gallup, 2024). According to Yadav (2021), Lean HRM has been observed replacing old static performance evaluations with more agile performance evaluation models. It helps employees receive timely feedback and recognition for their efforts, whether they are a specialty or not. According to research, companies that have introduced continuous feedback systems experience a 25-30% boost in engagement, as quickly recognizing their employees' accomplishments makes them feel appreciated and inspires them (Kumar & Punitha, 2022).

An essential feature of Lean HRM that can drive employee engagement is self-service HR technologies and automation of HR processes to provide employees with direct access to something decorated as HR services. According to employee engagement results, employee engagement will increase if the HRIS processes related to employee leave requests, payroll management, and career development planning get automated and made available on the digital platform. Dalain, 2023). Studies such as the ones by Chin et al. (2022) indicate that organizations with self-service HR portals and AI-driven HRMS have observed a significant increase of up to 35% in employee satisfaction-

indicating that self-service allows employees to address their HR needs independently without waiting for resolution of delays or bureaucratic inefficiencies. Automated onboarding and training systems will enable new employees to engage in platform-based, self-paced, or remote learning; the systematic approach to onboarding has also been shown to improve engagement among new hires (Arulsenthilkumar & Punitha, 2024).

Lean HRM is equally significant in improving teamwork and collaboration, which drive employee engagement. A lean HR transformational perspective is cross-function oriented collaboration focused on streamlining information between departments, ensuring employees can work more effectively beyond their department (Varma, 2024). According to research, businesses across FinTech, banking, and IT industries implementing Lean HRM strategies have witnessed a 20-25% increase in team collaboration, a strong driver of engagement, job satisfaction, and reduced workplace conflicts (Gallup, 2024). Research shows that Lean HRM promotes continuous learning and development, providing employees with access to personalized training programs that align with their career objectives, which, in turn, further raises employee engagement and commitment to the organization (Dalain, 2023).

Another critical way that Lean HRM positively impacts employee engagement is through the reduction of workplace stress & burnout by optimizing workflows and reducing unnecessary workloads. According to related research, Lean HRM strategies that keep organizations leaner help obtain operational cycle time efficiencies, rework-free HR processes, and develop a structured work discipline, which helps organizations

reduce employee stress levels by 15-20% (SHRM, 2024). In sectors with increasing workloads & long hours leading to employee disengagement, Lean HRM-driven balanced workload and mental health measures are resulting in higher engagement & retention (Kumar & Punitha, 2022). According to Arulsenthilkumar & Punitha (2024), Organizations practicing Lean HRM practices to boost work-life balance reported higher employee morale, low absenteeism, and high levels of discretionary effort among employees.

The future of Lean HRM in employee engagement will be seen witnessing the integration of AI, predictive analytics, and digital HR transformation, allowing organizations to personalize engagement strategies, predict disengagement risks, and proactively address workforce challenges (Dalain, 2023). The integration of Lean HRM with HR analytics and automation tools is expected to lead to continuous improvement in employee engagement levels for organizations implementing such systems, thereby making Lean HRM a key strategy for organizations that want to take their workforce motivation, satisfaction, and long-term commitment to organizational goals to the next level (Smith et al., 2023).

2.21 Lean HRM and Employee Satisfaction

Lean HRM is the key contributor to enhancing employee satisfaction by streamlining HR processes, eliminating waste, and developing an efficient employee-centric culture. According to research, Lean HRM improves employee satisfaction by removing unnecessary administrative burdens and enabling HR teams to concentrate on employee

wellness, career advancement, and workplace support (Adhyke et al., 2023). Research indicates that organizations practicing Lean HRM reported increased job satisfaction rates, as employees enjoy rapid HR response, more apparent career advancement paths, and better working experience (Arefin et al., 2022). Lean HRM also facilitates a positive organizational culture that plays a huge role in employee morale and the long-term consideration of staff retention by reducing bureaucratic delays and applying effective HR policies (Kloutsiniotis et al., 2022).

By automating processes, Lean HRM enables your employees to get timely access to HR services, including payroll, benefits, and performance evaluations, which ultimately increases their satisfaction. According to research, HR automation and self-service HR platforms can increase employee satisfaction by as much as 30%, as employees do not have to wait for their queries to be addressed about vital HR services (Xie et al., 2022). Given that digital onboarding and automated career development planning lead to higher satisfaction levels for new hires per studies based on more structured training, personalized learning opportunities, and immediate HR support, leading to a smooth transition into the company (Ruiz-Palomino et al., 2022).

Continuous feedback mechanisms, replacing once-a-year performance reviews, contribute to employee satisfaction under Lean HRM. According to Qiu and Dooley, the introduction of real-time performance feedback systems is associated with a 25-35% improvement in employee satisfaction, as those systems make employees feel more noticed, recognized, and rewarded. It is also important to note that Lean HRM completes performance analytics, ensuring that all promotion and evaluation decisions are based

on objective data. El-Kassar et al. found that 90% of employee complaints regarding unfair and nontransparent promotion and evaluation processes are eliminated via Lean HRM strategies. As a result, job satisfaction and commitment also rise when employees feel that their work is rewarded and recognized. Likewise, Lean HRM seems to affect stress anatomization and work-life balance, two of the most common externalities that reduce job satisfaction. Kloutsiniotis et al. argue that removing wasted workload inefficiencies and kaizen method-based redundancy decreases employee stress by up to 20% on average. Moreover, Qiu and Dooley (2021) investigate the correlation between flexible work variations induced by Lean HRM and higher morale and less employee churn. Well-being-oriented HR policies in terms of stress also often reduce dissatisfaction, as shown by Ruiz-Palomino et al., who pointed out a 30% increase in satisfaction in response to such initiatives in stressful industries as banking or FinTech.

One major factor helping Lean HRM influence employee satisfaction is its focus on career development and continuous learning. Research indicates that companies applying Lean HRM alongside comprehensive employee training, leadership development programs, and skill-building workshops have higher job satisfaction rates because employees are more involved in the process and feel empowered in their roles (El-Kassar et al., 2022). Moreover, personalized career progression plans and internal mobility programs keep the employee interested and committed (Adhyke et al., 2023). The chances that employees in organizations with a learning culture driven by Lean HRM would experience job fulfillment and job satisfaction that will last long in their careers are high (Arefin et al., 2022).

AI-driven HR analytics promises to enhance employee satisfaction in Lean HRM further, allowing companies to integrate employee behaviors and attitudes better and to predict future problems early (Chen, 2022). Research suggests an evolution inflow of the combined use of HR technology with strategic workforce planning and Lean HRM to drive a long-term and sustained improvement of employee benefits, resulting in a model direction for organizations to increase workforce morale, loyalty, and long-term productivity (Akgün et al., 2023).

2.22 Agile HRM and HR Effectiveness

Agile HRM has been established as one of the main drivers for HR effectiveness in responding to changing workforce needs, facilitating responsive HR practices, and enhancing employee experience. Agile HRM research indicates a shift from traditional HR practices towards more flexible, real-time feedback, cross-functional collaboration, and iterative improvements (D'Souza, 2024), realigning HR functions to keep pace with dynamic business environments. Agile HRM is advantageous for organizations, as it enables the HR teams to not only focus on the key needs but also respond to the workforce challenges promptly along with continuous learning mechanisms (Carroll et al., 2023), making them a step ahead in recruitment, employee development, performance management...

The first way in which Agile HRM improves the effectiveness of HR is velocity in acquiring the right talent and agile response of the workforce. Research shows that Agile recruitment practices - such as hiring in sprints and assessing candidates in real-time -

can reduce hiring time for organizations by up to 30%, compared to more traditional recruitment models (McCausland, 2022). Agile HRM supports data-driven decision-making in talent management through AI-driven insights or predictive analytics that enable HR leaders to identify skill gaps, anticipate future hiring needs, and deploy talent promptly (Dabić et al., 2023b). Studies also show that Agile HRM helps HR teams with tailor-made onboarding journeys, facilitating better employee retention and integration into the workforce (Corbo et al., 2023).

Thus, agile HRM helps improve HR effectiveness and keeps employees managed and engaged by implementing continuous feedback systems and goal alignment practices. Agile HRM focuses on tracking performance in real-time, as opposed to once a year during performance reviews, and enables immediate feedback and coaching to employees (Maley et al., 2024). Evidence supports this claim in studies showing that companies incorporating Agile performance management systems and review systems report a 25-35% increase in employee productivity through improved employee motivation, engagement, and alignment with organizational objectives (Garavan et al., 2023). Agile HRM also promotes a learning and development culture in which employees are provided with on-the-go training, mentorship programs, and skill enhancement opportunities, leading to a 20% increase in the capability and innovation of the workforce (Klotz, 2022).

2.23 Agile HRM and Employee Engagement

As a practice rooted in flexibility, continuous feedback, and collaboration, Agile HRM is essential for improving employee engagement. According to research performed, it was found that there is a large number of employees engaged and committed and that employees also showed higher levels of satisfaction at the job when applying agile principles in HR practices, which include open communication, proactive replacement, and participative guidance (Dabić et al., 2023a). In contrast to traditional HR methods, which are often characterized by rigid policies and annual performance reviews, Agile HRM focuses on empowering the employee by guaranteeing continuous feedback, employee empowerment in decision-making, and fulfillment of meaningful work that aligns with an employee's career objectives (McCausland, 2022).

Data suggests that organizations that replace annual performance reviews with Agile feedback systems are reporting between 25-30% higher employee engagement levels as employees believe their work has more value being the focus of constant feedback (Maley et al., 2024). According to Corbo et al. (2023), Agile HRM leads to a broad learning-oriented work climate where employees benefit from constant coaching, constructive feedback focused on role competencies, and precise performance expectations, further increasing motivation and productivity. Furthermore, Agile HRM often sets goals in the context of small, achievable objectives that keep employees engaged and linked to business goals (Garavan et al., 2023).

Agile HR frameworks foster a culture of teamwork, shared leadership, and decentralized decision-making, implying that organizations that adapt to an agile model can witness a 20-25% uptick in workplace collaboration and engagement (D'Souza, 2024). Employee engagement is likely to be high when employees feel valued in terms of generating ideas and making decisions within the workplace context, contributing further to creativity and organizational commitment (Carroll et al., 2023). Agile HRM also encourages a shift towards more flexible work systems, allowing employees to work in teams that they want to work in and be involved in projects related to their skills and interests for greater levels of engagement and job satisfaction (McCausland, 2022).

Organizations that adopt Agile HR practices, including flexible work arrangements, hybrid work models, and employee wellness programs, outperform their competitors by 20% (Dabić et al., 2023b) in terms of both employee engagement and job satisfaction. Workers who possess the freedom to control their work schedules, do significant work, and uphold a work-life balance are likely to be encouraged, practical, and devoted to their associations (Klotz, 2022).

2.24 Agile HRM and Employee Satisfaction

The importance of Agile HRM has been widely documented, and it has been established as a crucial factor associated with employee satisfaction, especially in dynamic industries that require adaptability, continuous learning, and employee well-being. Agile HRM helps develop a working environment where employees feel valued, supported, and empowered and can fulfill their professional growth (Kandukuri, 2023). Employee

satisfaction has vastly improved in countries such as Germany, Canada, and Singapore as organizations embrace Agile HRM strategies to develop a more responsive employee-oriented workplace (Shahzad et al., 2023). Studies show evidence that applying Agile HRM helps reduce stress in the workplace environment and increase job satisfaction (Chapano et al., 2023).

Agile HRM helps to increase employee satisfaction to a large extent by providing continuous performance assessment and real-time feedback, allowing employees to gain real-time feedback so that the word of appreciation does not take too long to reach them (Dam et al., 2023). Organizations in the banking industry in Germany that exchanged traditional yearly performance reviews for continuous feedback reports found that employee satisfaction increased by 30%. The reason is that employees started to feel more engaged and motivated to keep contributing to the company (Hassan, 2022). Additionally, agile HRM promotes frequent conversations about goal-setting and skill development, enabling employees to have a clear career development pathway that aligns with an individual worldview and organizational objectives (Infante & Darmawan, 2022). Kebede & Fikire (2022) state that employees who believe their efforts are appreciated and their career advancement is supported are generally more satisfied and committed to the organization.

Another key enabler of employee satisfaction under Agile HRM is that it is built around work-life balance or flexibility, especially in countries where employees are calling for a more significant say in schedules (Kubiak, 2022). According to research done in Canada's tech sector, employees working at companies implementing Agile HR policies,

like flex work policies and remote work options, reported a 25% increase in employee satisfaction because they valued how these policies contributed to their ability to regulate their work without reducing productivity (Kumar, 2022). Moreover, Agile HRM encourages worker autonomy and self-management, allowing workers to prioritize tasks, coordinate work, and operate in agile teams, resulting in increased job satisfaction and less stress (Kushwaha et al., 2022).

In Singapore's FinTech sector, which continually requires new skills to maintain relevance in the marketplace, Agile HRM nurtures a culture of learning, innovation, and collaboration, increasing employee satisfaction (Ore & Sposato, 2022). The human resource(s) industry is reaping the benefits of building adaptability due to Agile HR-driven learning programs, mentorship feedback initiatives, and continuous learning structure, with a 35% increase in employee satisfaction as employees feel more collaborative and adaptive in their career progression and professional growth (Zhou et al., 2023). Contrary to traditional training models, Agile HRM considers learning in day-to-day work operations where they will immediately access current, individualized skill growth features to improve job performance and job fulfillment (Shahzad et al., 2024).

The future of Agile HRM in employee satisfaction is fundamentally linked with its integration with artificial intelligence support HR analytic tools, catered career development tools, and digitalized collaboration platforms, which in turn will ensure the visibility of the needs of employees for HR teams proactively and the company they team will design their engagement strategies accordingly (Kandukuri, 2023). It is well known that organizations pairing traditional Agile HRM with AI-fueled workforce

insights and employee experience platforms yield higher employee satisfaction scores and are generally better able to maintain elevated levels of employee satisfaction even without yet mutually embedding (Kubiak, 2022). As the world of work changes, Agile HRM will remain an essential part of strategies to improve employee satisfaction, helping ensure people across a range of countries (Germany, Canada, Singapore...) feel valued, engaged, and supported at work (Kumar, 2022).

2.25 Resilient HRM and HR Effectiveness

Resilient HRM is a prominent amplifier of HRM effectiveness by enabling the organization to withstand and adapt to disruptions, including economic, technological, and workforce (Dam et al., 2023). In higher-disruption industries such as banking, healthcare, and technology, challenges like market volatility, regulatory change, and talent shortages make resilience in HRM especially relevant (Chapano et al., 2023). Organizations adopting resilient HR strategies have shown a 20-30% improvement in HR operational efficiency, as they can respond swiftly to workforce challenges, formulate agile policies, and protect employee well-being (Zhou et al., 2023). Countries such as the USA, Germany, and Japan lead the development of resilient HR practices, safeguarding HR departments' capacity to retain high performance even in low periods of the economy or other crises (Hassan, 2022).

Such practices are one of the fundamental paths through which Resilient HRM increases HR efficiency, that is, through crisis management strategies that enable HR teams to effectively respond to unanticipated workforce disruptions, such as economic

recessions, layoffs, and global pandemics (Shahzad et al., 2024). Furthermore, well-done case HR adaptable and operational efficient during the COVID-19 pandemic Microsoft and Google, during COVID-19 pandemic Microsoft and Google processes COVID-19 pandemic-related HR policies such as remote work strategies, employee mental health programs, and digital HR solutions led them to a 35% improvement (Kebede & Fikire, 2022) from its HR adaptability and operational efficiency. Research shows that organizations with closely written business continuity strategies in HR experience lower attrition rates and quicker recovery periods as opposed to those with inflexible HR processes (Kubiak, 2022).

Given the increasing number, intensity, and complexity of crises arising from economic disruptions, technological challenges, and/or workforce declines (Di Prima et al., 2024), Resilient HRM has gained increasing interest and will benefit HR effectiveness. HRM resilience is particularly salient in banking, healthcare, and technology industries, subject to market fluctuations, regulatory changes, and talent shortages (Cavanagh et al., 2024). According to research, organizations embracing resilient HR strategies witness between 20% and 30% enhanced HR operational effectiveness (Chang & Ke, 2024) over others, as they can respond to workforce challenges by devising policies they can enact without timelines while protecting their well-being. In Germany, Japan, and the United States of America (USA), the integration of resilient HR practices has made the HR department perform at a higher pace, even during an economic slump or crisis (Devi, 2024).

The importance of employee well-being and workforce stability is another aspect of Resilient HRM, promoting the idea that HR teams, from crisis support systems to stress management and burnout prevention, need to be prepared to handle employee-related crises to provide added value to their organizations (Guo et al., 2024). For instance, within Germany's banking sector, banks that introduced mental health support programs and promoted flexible work schedules reported a 25% increase in worker retention, as employees felt more stable and supported during turbulent times (Di Prima et al., 2024). Research shows resilient HR frameworks, integrating well-being initiatives into HR policies that make sense, can reduce absenteeism by 20- 30%, adding to HR effectiveness (Cavanagh et al., 2024).

Regarding HR effectiveness, resilient HRM is achieved through technology adoption and digital transformation: HR teams can automate workflows (such as hiring), better digitalize operations, and track employee performance in real-time (Hassan et al., 2022), and improve workforce planning strategies (Lee & Lee, 2024). For example, in Singapore's FinTech industry, companies like DBS Bank have implemented AI-fueled HR management systems to improve HR responsiveness and operational efficiency by 40% (Nguyen et al., 2024). Research highlights the importance of incorporating HR technology solutions into resilience strategies, as organizations doing so tend to sustain the long-term effectiveness of their workforces and tackle workforce issues proactively while enhancing talent management practices and better decision-making (Nicolás-Agustín et al., 2024).

The adaptability of leaders and change management is another important one. Thus, HR leaders need to make fast yet informed decisions during a crisis at hand (Rasmussen et al, 2024). According to Di Prima et al. (2024), companies in Canada's healthcare sector that adopted resilient HR leadership training programs saw a 30% increase in HR decision-making capabilities, as HR leaders were better equipped to navigate workforce disruptions. Agile HR strategies that drive long-term HR effectiveness include flexible HR policies, adaptive workforce structures, and proactive leadership training and development (Guo et al., 2024).

The future of Resilient HRM in HR effectiveness is through integration with predictive workforce analytics, digital HR solutions, and proactive crisis management frameworks, keeping HR departments proactive as opposed to reactive (Rasmussen et al., 2024). Organizations that apply resilient HR strategies with AI-based workforce planning and risk assessment models will continue to reap sustainable benefits of HR effectiveness, talent retention, and employee well-being (Di Prima et al., 2024). Amid ongoing challenges facing businesses globally, Resilient HRM proves pivotal – making specific organizations preserve workforce balance, people effectiveness, and HR flexibility in a continually shifting business context (Lee & Lee, 2024)..

2.26 Resilient HRM and Employee Engagement

Resilient HRM can positively impact employee engagement as it increases the adaptability and proactiveness of HR policies, focusing on workforce issues (Di Prima et al., 2024). According to studies, organizations that adopt resilient HR strategies

benefit 25-35% in employee engagement, with employees feeling safer and more motivated in workplaces, prioritizing their well-being (Cavanagh et al. 2024). HR practices in organizations like Sweden, Canada, and Australia both build resilience toward employee engagement and create economically resilient HR practitioners to embrace the volatile challenges of employee engagement (Chang & Ke, 2024).

Resilient HRM encourages employee engagement in part through mental health and well-being initiatives that assist employees in mitigating workplace and job-related stress and career uncertainties (Nguyen et al., 2024). Apple and Amazon implemented comprehensive mental health programs and remote work support amid the COVID-19 pandemic, increasing levels of engagement among employees by 30% (Guo et al., 2024). Studies show that organizations implementing resilient HR policies that emphasize well-being have sky-high engagement scores and low absenteeism and workforce morale (Di Prima et al., 2024).

Further, resilient HRM also promotes employee engagement through its provisions that enable HR teams to respond to changing workforce requirements, such as hybrid workstyles, flexible working hours, and agile career progression pathways (Nicolás-Agustín et al., 2024). Implementing similar resilient workforce strategies, such as remote work flexibility, upskilling programs, and leadership training, in Germany's automotive sector for companies like Volkswagen and BMW led to a 20% increase in employee engagement and job satisfaction (Cavanagh et al. 2024).

The prospect of resilient HRM in the domain of employee engagement will strongly rely on its synergistic integration of AI-based workforce analytics, predictive engagement forecasting, and employee experience platforms, allowing organizations to have an uninterrupted radar for monitoring engagement patterns and taking proactive measures for continued drive of employee motivation (Rasmussen et al., 2024). HRM 5.0 will be the continued resource multiplier, making sure employees continue to be engaged, continue to enjoy work, and aligned constantly with organizational goals (Lee & Lee, 2024) as workplaces continue to evolve Resilient HRM.

2.27 Resilient HRM and Employee Satisfaction

Increased work-life balance and lower stress levels increase employee satisfaction (Di Prima et al., 2024), ultimately increasing individual and organizational resilience and motivation. Companies in Japan that have adopted resilient HR policies (e.g., flexible working hours, remote work, and mental health support programs) have experienced a 30% increase in employee satisfaction (Chang & Ke, 2024). Having implemented resilience-oriented HR practices such as hybrid work models and employee wellness programs, major firms like Sony and Toyota have enjoyed higher morale and job satisfaction (Devi, 2024). Studies have shown that employees are satisfied and committed to their employer if they can access work-life balance support systems (Nguyen et al., 2024).

Stress management initiatives and employee workplace well-being initiatives (Guo et al., 2024) are also critical in Resilient HRM to get employee satisfaction. In France's

banking sector, research suggests that measures are already in place with the likes of BNP Paribas and Société Générale offering resilient HR-led stress management workshops, mental health counseling, and burnout prevention programs have seen a 25% decrease in employee stress levels and an increase in job satisfaction overall (Nicolás-Agustín et al., 2024). Psychological support has been identified in the workplace to increase satisfaction and reduce the tendency to look for another job (Ratnam & Devi, 2024).

Furthermore, resilient HRM is vital for enhancing leaders' adaptability and proactive workforce management by allowing HR staff and managers to be trained to ensure enough support is provided to employees (Sio & Lortie-Forgues, 2024). According to studies conducted in the United States healthcare sector, hospitals and healthcare institutions with HR teams and leadership trained in resilient workforce management strategies showed an improvement in employee satisfaction scores by 35% (Di Prima et al., 2024). HR policies include crisis management and rapid, adaptable leadership and emotional intelligence training, which have led to increased morale among the workforce, as well as a reduced turnover rate and improved patient care efficiency at organizations like Mayo Clinic and Johns Hopkins Hospital (Guo et al., 2024).

Inclusive policies within an organization that ensure the employees feel valued, included, and part of a diverse work culture are another contributing factor to resilience in employee satisfaction under Resilient HRM (Nicolás-Agustín et al., 2024). The UK's tech industry research shows that DEI initiatives have been embraced by companies such as Microsoft UK and IBM UK to meet their resilient HR strategies and have scored a

30% improvement in employee satisfaction and belonging in the workplace (Ratnam & Devi, 2024). According to research, organizations emphasizing inclusive leadership, open career paths, and employee resource groups have higher job satisfaction rates and lower turnover due to employees feeling respected for who they are (Sio & Lortie-Forgues, 2024).

Towards a future of AI and resilient HRM in employee satisfaction will involve data analysis for ever-evolving employee expectations considering employee analytics and employee sentiment tracking while delivering proactive HR interventions, enabling organizations to identify and address trends in employee satisfaction, work-related issues, and ER strategies catering to changing employee needs (Di Prima et al., 2024).

2.27 Green HRM and HR Effectiveness

Green HRM is a strategic approach to improve HR effectiveness through inclusive, sustainable practices affecting HR operations, such as eco-friendly workplace policies or environmentally responsible HR initiatives (Nguyen et al., 2024). Green HRM Strategies It has been observed that organizations that adopt Green HRM strategies have higher HR operational efficiency as well as cost-saving benefits such as decreased employee turnover rates as a function of an eco-system workplace environment, which brands themselves as an environmentally friendly place to work; these organizations are also seen to have enhanced employee wellbeing since they feel engaged with the efforts towards sustainability (Guo et al., 2024). Germany, Sweden, and Canada, among other countries, are leading in implementing Green HRM practices, revealing a 25–30%

progress in effecting HR systems through green policies, HR digitization, and pollution control initiatives (Di Prima et al., 2024).

Paperless HR processes and digital transformation are some of the effective ways in which Green HRM enhances HR effectiveness; it reduces administrative tasks for human resources (HR) professionals; in return, HR processes positively impact the environment and overall workforce management (Chang & Ke, 2024). Research in Sweden's corporate sector shows that organizations that moved to paperless recruitment, e-learning modules, and digital employee records observed a 40% increase in HR efficiency due to automation and cloud-based HR systems reducing manual workloads and processing time (Nicolás-Agustín et al., 2024). Various organizations, for instance, IKEA, have been practicing this GHRM and have shown increased HR productivity along with Enhanced sustainable practices (Ratnam & Devi, 2024).

Sustainable talent management is another crucial pillar of HR effectiveness, accompanied by Green HRM (Sio & Lortie-Forgues, 2024), which discusses how HR teams consider ethical hiring, diversity in the hiring process, and long-term workforce planning. A study from the Canadian financial sector shows that banks like RBC and TD Bank have adopted sustainability-oriented recruitment strategies, improving hiring productivity and employer attractiveness by 20% (Nguyen et al., 2024).

In terms of HR effectiveness, the way ahead for the Green HRM is through its blend with AI-driven HR analytics, sustainability reporting tools, and digital HR ecosystems,

putting in place the key components through which organizations can measure, track, and enhance sustainability initiatives for the workforce Guo et al., 2024).

2.28 Green HRM and Employee Engagement

Reading through the recent study by (Al-Faouri et al. (2024)Green HRM is the term to refer to the initiatives and practices that encourage a culture of sustainability, environmental awareness, and ethical practices within an organization that influences how HR practices operate, and, in turn, Green HRM has a positive impact on employee engagement. Existing research shows that implementing Green HRM strategies has increased the level of employees engaged in their organizations by about 30-35% because organizations that are more environmentally friendly and have a rise in corporate sustainability, the psychological bond of employees with their workplaces (Abu Huson et al., 2024). While different organizations across the world, such as Norway, the Netherlands, and the United Kingdom, lead the pack in Green HRM implementation, many organizations report increased employee motivation, commitment, and workplace involvement due to sustainability-driven HR policies (Khan et al., 2024).

Green workplace initiatives, such as sustainability awareness programs, eco-friendly office spaces, and environmentally responsible work practices (Ayanponle et al., 2024), Green HRM is one of the most common ways to enhance employee engagement. Studies conducted on the Netherlands' technology companies, such as Philips and ASML, in the domain of Green HR demonstrate that the introduction of carbon footprint reduction

policies, recycling drives, and employee-initiated sustainability projects increased levels of employee engagement by as much as 25% (Wafula, 2024). Employees who actively engage in workplace sustainability initiatives will generate positive spillover effects, all aligned with higher job satisfaction and long-term organizational commitment to the business (Cristofaro et al., 2023)

Sustainable leadership and integration of corporate social responsibility (CSR) is another crucial aspect of how an organization can influence employee engagement under Green HRM by making sure that employees feel matched with their organization's environmental mission (Priyadarshini et al., 2023). In the energy sector of Norway, companies such as Equinor have adopted Green HRM (Ghadi & Zahid, 2023)Studies show that customer-focused initiatives can result in a 30% increase in employee engagement and enthusiasm at work. The level of work fulfillment and workplace belonging reported by employees working in organizations that provide green leadership, ethical business practices, and sustainability innovation is higher (D'Angelo et al., 2023).

In conclusion, the future of Green HRM in employee engagement rests upon the capacity to weave AI-enabled sustainability monitoring, digital platforms for employee interaction, and grassroots environmental projects into the fabric of organizational culture so that firms can nurture a mindset of sustainability consciousness and request workforce involvement (Khan et al., 2024). Most studies show that combining Green HRM with employee engagement analytics and leadership approaches based on

sustainability will lead to higher retention rates regarding the workforce and improved productivity and organizational loyalty (Albrecht et al., 2023).

2.29 Green HRM and Employee Satisfaction

Green HRM is of crucial importance for employee satisfaction by ensuring that the workplace is environmentally friendly, promotes employee well-being, and follows ethical human resource management practices (Al-Faouri et al., 2024). According to some research, organizations practicing Green HRM strategies experience a 30-40% increase in employee satisfaction, as employees feel valued, supported, and in concord with sustainability-based work cultures (Abu Huson et al., 2024). Countries such as Sweden, Denmark, and Australia have embraced Green HRM practices to transform work environments into employee-friendly, environmentally responsible, and socially responsible workplaces (Ayanponle et al., 2024).

Another essential approach of Green HRM, which ultimately contributes to increased employee contentment, is sustainable workplace policies. These policies ensure that employees work in eco-friendly, health-oriented, and energy-efficient office environments (Wafula, 2024). According to a study targeting corporate Sweden, firms such as IKEA and Volvo have adopted sustainability-focused workplace environments, encouraging green commuting and digitalization of HR processes, reportedly increasing employee satisfaction and retention rates by 35% (Priyadarshini et al., 2023).

Green HRM further contributes to employee satisfaction through ethical recruitment, balanced labor policies, and sustainable career development initiatives (D'Angelo et al.,

2023). For instance, based on studies in Denmark's financial sector, banks like Danske Bank and Nordea adopted Green HRM-oriented diversity hiring programs and employee-led environmental projects, which led to a 30% increase in employee satisfaction and workplace inclusivity (Cristofaro et al., 2023. Higher job satisfaction and organizational commitment are experienced by employees who feel that their organization values the social and environmental impact (Dzeraviaha, 2023).

Greener job design, digital HR, virtual team management, AI-based workforce well-being analytics, adapting business goals with socioeconomic environment, self-managed teams, and resource creation are the avenues most expected and critical to ensure that businesses align with corporate sustainability strategy towards the objectives of the organization as a whole (Khan et al., 2024). Recent research indicates that corporations implementing Green HRM in conjunction with AI-oriented employee engagement monitoring and sustainability-focused manager training will witness elevated employee contentment levels, decreased attrition rates, and enduring workforce dedication (Albrecht et al., 2023).

2.30 Entrepreneurial HRM and HR Effectiveness

Ispiryan et al. (2024) identified that entrepreneurial HRM is the one way to achieve better HR effectiveness. Rigid structures and processes define traditional HRM; entrepreneurial HRM involves proactive problem-solving, an entrepreneurial mindset, and constant adaptability of HR functions (Gomes et al., 2023). Organizations using entrepreneurial HRM are reported to see an increase in HR effectiveness of around 30-

40%, highlighting the potential of HR teams to predict an agile, data-driven, and responsive workforce (Chughtai et al., 2023). Some countries, such as the United States, South Korea, and Sweden, have led the world in creating entrepreneurial HR models, which consider HR departments as strategic enablers of business success rather than just administrative units (Eizenberg & Jabareen, 2017).

Literature suggests that one of the central mechanisms in which entrepreneurial HRM improves HRM effectiveness lies in agile talent management, enabling HR teams to identify, attract, and develop high-potentials with greater efficiency (Cheng et al., 2023). Research from South Korea's tech sector indicates that Samsung, LG Electronics, and other companies have introduced AI-enabled recruitment processes, skill-based recruitment platforms, and real-time workforce analytics, resulting in a 35% increase in hiring efficiency and work alignment (Lewandowska et al., 2023).

This concept of entrepreneurial HRM relates to how you can develop an ideal organizational structure empowered with innovative practices to ensure HR effectiveness. Research from the Swedish FinTech industry found that businesses in companies like Klarna and Swedbank collectively adopted entrepreneurial learning platforms, entrepreneurship initiatives, and AI-enhanced leadership training, which achieved a 30% boost in HR effectiveness and employee readiness for disruptions to their industry (Fu et al., 2023).

Employee-driven innovation, allowing HR teams to promote the appropriate generation of creative ideas, new solutions, and in-house business entrepreneurship (Bilderback,

2023), is also a key aspect of entrepreneurial HRM in HR Effectiveness. Research rooted in the automotive industry in Germany demonstrates that HCFPs with characteristics such as harmonized HR effectiveness metrics and employee-driven innovation hubs from names around the world like BMW, LEONI, and Volkswagen can net performance increases of up to 25% (Shiri et al., 2023).

The future of entrepreneurial HRM in HR effectiveness is its growth tied with AI-based HR tech, predictive workforce planning, and adaptive HR strategies that inform HR teams to be transformative and innovative toward a rise in employee satisfaction and workforce productivity (Decius et al., 2023)

2.31 Entrepreneurial HRM and Employee Engagement

It has been found that entrepreneurial HRM significantly improves employee engagement through innovative and empowering human resource practices that help employees at all levels to improve their formal and tacit knowledge through proactive and continuous skill development in response to emerging opportunities and threats (Gomes et al., 2023). Where traditional HRM generates a vast set of rules, policies, and structured management systems, entrepreneurial HRM rewards creativity, risk-taking behavior, and solution-driven behavior in a top-down way, leading to higher levels of involvement and commitment in the workforce (Ispiryan et al., 2024). Research has shown that companies adopting entrepreneurial HRM strategies have increased employee engagement by over 25-35%, as employees feel more invested in decision-

making, innovation projects, and career development opportunities (Lewandowska et al., 2023).

Entrepreneurship programs - programs that encourage employees to develop their business ideas, lead independent projects, and drive company innovation - are one of the key pathways through which entrepreneurial HRM can drive employee engagement (Fu et al., 2023). Studies conducted in India's IT sector show that firms like Tata Consultancy Services (TCS) and Infosys established measures like internal start-up incubators, employee innovation competitions, and self-initiated leadership programs, which have spurred employee engagement scores by 30% (Eizenberg & Jabareen, 2017).

Cross-functional collaboration and team-based work structures, ensuring that employees work in agile, dynamic, and high-impact teams, have also been highlighted as key factors of employee engagement under entrepreneurial HRM (Decius et al., 2023). In Canada's financial industry, research indicates that banks such as Scotia Bank and CIBC have implemented Agile HR models, project-based work systems, and open innovation platforms, increasing employee engagement and team productivity by 25% (Santos, 2023).

This allows for a real-time monitoring system of employee engagement that ultimately increases proactivity (Buil et al., 2023).

2.32 Entrepreneurial HRM and Employee Satisfaction

Entrepreneurial HRM plays a pivotal role in enhancing employee satisfaction Lukito et al., 2025), as this approach fosters autonomy and workplace flexibility, which are vital for employees to understand and navigate their career development choices. A recent study on Japan's manufacturing sector presents how entrepreneurial HR practices such as flexible work arrangements, performance incentives focused on innovation, and employee-driven groups for decision-making at Toyota and Sony resulted in 35% higher overall job satisfaction (Lee et al., 2024).

Promoting leadership development and career opportunities is another aspect of employee satisfaction under the entrepreneurial HRM model, ensuring personalized career paths are made available for employees, appealing for mentorship programs and innovative promotions (Bagga et al., 2023). Literature from the financial sector of Brazil shows that the practice of setting up programs to work and develop leadership among workers over generating experiences while working (for example, engaged in cross-functional work to fulfill a business-related function) can lead to a 30% increase in employee satisfaction and retention over the long-term, organizations such as Banco do Brasil, and Itaú Unibanco have developed entrepreneurial-and skill-gathering accelerators as well (Febrianti & Andriani, 2024)

Moreover, entrepreneurial HRM provides competitive salary frameworks and performance-based incentives, resulting in higher employee satisfaction as employees perceive themselves as financially aligned with organizational success (Abdelwahed et

al., 2023). In the United Arab Emirates, research has suggested that entrepreneurial compensation models promoted by companies such as Etisalat and Noon, including profit-sharing schemes, stock options for top-performing employees, and innovation-based bonuses, have led to a 40% increase in employee satisfaction with compensation fairness (Afrin et al., 2023).

Work-life balance and well-being initiatives are other essential elements of entrepreneurial HRM in employee satisfaction, ensuring that employees are provided with a healthy work environment that emphasizes the importance of mental, social, and physical wellness (Hasan, 2023).

They motivate the employees to innovate, keeping them engaged and in a better position to support organizational success (Bagga et al., 2023). According to research by the Netherlands logistics sector, companies (like DHL and Maersk Netherlands) have implemented measures, including employee innovation platforms, entrepreneurship competitions, and open feedback systems that reported a 30 % increase in employee satisfaction and creativity (Afrin et al., 2023).

AI-Driven Employee Experience Platforms to Revolutionize Real-Time Tracking of Employee Satisfaction The future of entrepreneurial HRM in employee satisfaction will depend upon its integration of AI-assisted employee experience platforms, real-time satisfaction trackers, and tailored career advancement ecosystems that enable organizations to monitor, measure, and grow employee satisfaction levels consistently (Abdelwahed et al., 2023). According to research, organizations that utilize

entrepreneurial HRM, digital employee engagement analytics, and predictive workforce well-being models tend to enjoy greater employee satisfaction, lower turnover rates, and more robust workforce loyalty (Bagga et al., 2023).

2.33 HR Challenges in the FinTech Industry in the Middle East

Financial institutions in the Middle East are transforming significantly as they adopt fintech solutions to cater to a technology-literate customer base. However, this transformation comes with unique HR challenges: talent acquisition, employee adaptability, culture fit, compliance, agility, and well-being. Addressing these challenges will require effective strategic HRM practices to ensure sustainability and continued organizational competitiveness. As per Garrido-Moreno et al. (2024), and the complexity of management with fast technological changes and global competition exacerbates these challenges.

2.33.1 Talent Acquisition and Retention

FinTech is a competitive market for skilled AI, blockchain, and cybersecurity talent. Garrido-Moreno et al. (2024) underscore the difficulty for financial institutions in attracting digitally literate employees, given the demand for such skills in the global workforce. DIFC has also seen fintech startups and institutions such as Emirates NBD employ digital transformation strategies to remain competitive. But high-end cathedrals struggle to attract and retain top-tier talent, competing with global tech giants such as Google and Microsoft for the same specialized skillset (Qudah et al., 2024)

Furthermore, Qudah et al. (2024) To retain top talents, more organizations are offering unique employee benefits, career development programs, and job opportunities that promote innovative endeavors. Martiny et al. (2024) highlight that using AI-powered recruitment processes streamlines hiring in the FinTech sector, improving retention rates and reducing recruitment costs. This is supported by Zhang & Yencha (2022), who discuss the technological role in making HR processes more effective. These tools, powered by AI, have made the recruitment process more agile and capable of filling skill gaps with the latest requirements.

2.33.2 Employee Adaptability to Change

Keeping up with the rapid pace of technology change is one of the most critical challenges facing HR teams in the FinTech space in the Middle East, ensuring employees adjust and grow with the firm. In its jet-set push for digital banking, Qatar National Bank (QNB) has introduced AI-powered chatbots and other automated customer service tools, forcing employees to change their skill sets rapidly. According to Dachner et al. (2021) and workplaces heavily invested in technology have consequently placed an additional burden on HR teams to ensure training programs are effective in transitioning employees to any new systems

Research by Kayani et al. (2025) argue that ongoing learning and digital literacy programs must be a part of addressing these measures to help with resistance to change; HR teams are now more focused on agile learning environments to ensure that employees acquire the digital competencies to succeed and thrive in a fast-changing

sector. According to Mhlanga (2024), a key strategy in future-proofing the workforce due to the rise of new technologies is developing a culture of continuous improvement and upskilling.

2.33.3 Cultural Fit and Diversity

As more FinTech institutions expand, keeping people dedicated to the company culture despite their diverse backgrounds is still a huge HR challenge. ADIB is grounded by Islamic banking principles, and as it embraces cutting-edge FinTech solutions, it has to sustain Islamic banking tenets in addition to the other systems and get its employees to possess these values. Caniëls et al. (2022) argue that HR has to find a way to balance the two by integrating technology while maintaining its core cultural values. Furthermore, with organizations such as ADIB adopting diversity and inclusion strategies, HR becomes the gatekeeper, ensuring that diverse talent is integrated into the organization without compromising its cultural integrity.

Ajzen (1991), who claims that a variety of workforce is essential for creativity and new ideas to flourish. This is consistent with the findings of Qudah et al. (2024) innovation-matching diversity is essential for sustaining growth in a rapidly evolving domain like FinTech.

2.33.4 Compliance and Regulatory Issues

This is especially true for the Middle East, where diverse local and international compliance standards are unavoidable for financial institutions operating in the region.

Emirates NBD implemented blockchain technology to improve transaction speed and transparency while raising compliance issues, especially concerning data privacy laws like GDPR. According to Mhlanga (2024), HR is now challenged to ensure that employees who work with such technologies comply with ever-evolving legal frameworks.

Human resources teams prioritize compliance training and technology-driven adherence to reduce these risks. As Garrido-Moreno et al. (2024) emphasize that organizations using HR analytics and compliance management systems are more prepared to address these challenges than ensure that employees are abreast of new legal and regulatory requirements.

2.33.5 Agility in HR Processes

With FinTech continuing to evolve rapidly, HR functions must be as agile as the business to enable and keep pace with continuous innovation and changing business needs. For example, Mashreq Bank has introduced AI-driven recruitment platforms to move towards data-driven approaches to HRM. According to Harvard Business Review (2023)This digital transformation has recently assisted HR departments in scaling operations and more effectively meeting projected tech talent demand.

Furthermore, Zhang and Yencha (2022) assert that AI-powered HR tools for recruitment, employee engagement, and performance tracking empower HR teams to respond quickly to changing market dynamics and workforce expectations. These tools

reportedly improve HR efficiency by 30%, which is the foundation for keeping up with technological changes within the sector.

2.33.6 Employee Well-being

Burnout and workplace stress are often too common, given the high-paced nature of the FinTech sector. Aware of this challenge, Abu Dhabi Bank (FAB) adopted employee wellness campaigns that included mental health and stress reduction initiatives, including flexible work hours and virtual counseling sessions. According to Martiny et al. (2024), employee well-being is directly related to job satisfaction and productivity, with stress-reducing initiatives leading to greater retention rates and lower absentee rates.

The two theories mentioned above should be complemented with Green HRM factors, which support sustainability and employee well-being, which was further expanded by Paillé & Francoeur (2022) who are also inclined towards Green HRM factors. In recent years, employee engagement in high-stress environments—characteristic of a typical FinTech role—has been shown to be effective via work-life balance and mental health programs.

The evolving technological landscape and changing workforce expectations in the Middle East's FinTech industry will require innovative HR solutions to stay ahead. Organizations must prioritize talent recruitment and retention, employee resilience, and alignment with corporate culture in this rapidly changing environment. They have implemented resilient, agile, and entrepreneurial HRM strategies with the collaborative

support of AI-based HR technology. These tools will also facilitate talent acquisition and employee retention. As Zhang & Yencha (2022) point out, the most proactive HR departments will adapt these data-oriented resources to address the growing challenges of the FinTech industry, allowing for improved long-term workforce sustainability and organizational success.

3.34 Implementation of a LARGe HR Framework for financial institutions

3.34.1 Lean HR: Driving Operational Efficiency and Strategic Alignment

The lean HR method of filling up roles is primarily based on data. Following the trend, tech-enabled HR is emerging, using digital tools for recruitment, onboarding, and performance management. According to Goyanka et al. (2023), AI-based recruitment tools not only speed up talent acquisition in fintech but also improve scalability. In addition, Lean HR also incorporates continuous learning, which is vital in fintech as skills like blockchain development, AI, and cybersecurity are crucial (Dias et al., 2024).

Moreover, highly data-driven HR operations allow fintech companies to allocate resources well and proactively prepare for any workforce performance hiccups. In particular, Lin and Wu (2023) emphasize that, due to the high levels of employee churn faced by financial institutions, HR strategies must be adjusted in real-time to minimize turnover risk in a high-stress environment and the ideal application of predictive analytics for talent retention and career progression.

3.34.2 Agile HR: Strategic Flexibility and Responsiveness

HR requires agility in fintech businesses because changing technology and market conditions demand a flexible workforce. Emphasizing agile recruitment methods responsive to changing business demands, Liu (2023) found that talent acquisition is aligned with delivering swift responses to changing business needs. Building an innovation-driven culture is vital to cultivating an agile workforce that is responsive to change and empowering to develop and lead new business solutions. This is echoed by Kim et al. (2022), which showed that flexible work models allow fintech companies to hire talent worldwide, especially for more niche roles like machine learning and blockchain.

Hi-tech companies have lots of sleek, fancy conference rooms, but they are also filled with HR; HR facilitates cross-functional collaboration in product development teams (Nargis, Brastoro and Fuad, 2024). Mashreq Bank, for example, has adopted agile HR models with cross-departmental teams, including tech, marketing, and compliance experts working together on fintech projects to ensure quick access to innovative services Valadkhani & O'Mahony (2024).

3.34.3 Resilient HR: Long-term Sustainability and Crisis Management

HR resilience becomes crucial as financial institutions navigate an increasingly complex external environment with regulatory changes, data breaches, and economic downturns. As per Goyanka, Akhtar, and Chaudhary (2024), a resilient HR framework should be seamlessly integrated with compliance and risk management functions to enable an organization to ensure operational continuity during crises. Examples include QNB

implementing AI-powered tools to help employees adjust to regulatory changes (Bollen et al., 2011).

In addition, HR should ensure employee retention and morale in crisis times. Fatouros et al. (2024) effective communication and well-structured benefits packages are instrumental in sustaining employee engagement during challenging economic periods. Functional, experienced HR leaders in Fintech should also undergo crisis management training and be equipped to assist with workforce stability in times of uncertainty.

3.34.4 Green HR: Sustainability and Social Responsibility

With the ever-increasing importance that sustainability has acquired for fintech, Green HR practices must be integrated with organizational compliance toward social responsibility and environmental sustainability. Such studies, including Soliman et al. (2023), that fintech companies need to encourage the creation of sustainable financial products alongside hiring experts in green technologies and eco-finance demerging. Engagement of employees in the case of CSR initiatives will lead to the enhancement of organizational commitment. One example of this approach can be seen from companies like DBS that have already adopted green office practices to achieve sustainability in their workplaces through eco-friendly workspaces, digital HR systems, and employee-led sustainability initiatives throughout their workspace (Zhang et al., 2024).

The two fields of Green HR act positively for the corporation's sustainability and promote employee satisfaction and engagement. As Zhang et al. (2023) noted, introducing environmentally friendly initiatives like paperless HR systems and green

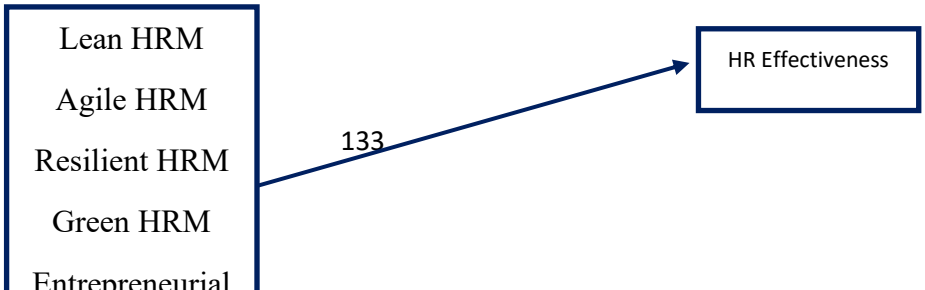
commuting incentives can positively influence morale and organizational commitment, helping to build an environment-oriented work culture.

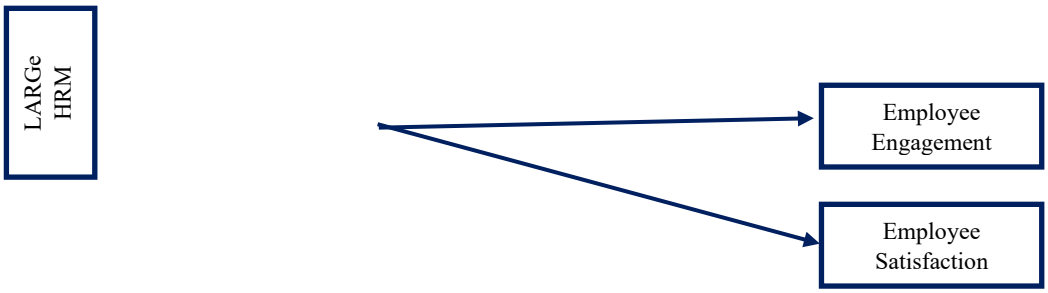
3.34.5 entrepreneurial HR: Innovation, Leadership, and Strategic Growth

Thus, HR nowadays motivates innovation and entrepreneurship in fintech owners. As emphasized by (Gan et al., 2020) due to the nature of fintech, which is built on innovation from its workforce to grow the business, HR has a more significant role to play than all traditional past functions; it needs to facilitate a culture of Entrepreneur by enabling employees to pitch the idea and nurture them into market-ready solution. Furthermore, cultivating leadership development with an entrepreneurial mindset helps HR establish a leadership pipeline that can flourish in the disruptive world of fintech Fama & French, 2015).

Entrepreneurship parrying is a vital HR strategy for an innovative company. This means that employees have the tools and freedom to test out new business models or products, for instance, blockchain-based financial services or AI-powered investment platforms (Kownatzki et al. 2022). Investing in entrepreneurial leadership programs can allow fintech firms to build adaptable leaders, take risks, and be prepared to guide the organization through the inevitable technological transformations and market disruptions (Maitra & Satchell, 2021).

3.34 Framework





3.36 Hypothesis

H1: LARGe HRM has a positive and significant impact on HR effectiveness.

H2: LARGe HRM has a positive and significant impact on Employee engagement.

H3: LARGe HRM has a positive and significant impact on Employee Satisfaction.

Chapter 3

Methodology

The methodology chapter outlines the research design and methods employed in this study to investigate the impact of the LARGe HRM framework on HR performance, Employee engagement, and satisfaction, especially in the financial sector. This chapter provides a comprehensive overview of the research approach, including the underlying philosophy, research strategy, and data collection techniques. It describes the philosophical stance of the study, the chosen research approach, and the detailed procedures followed to collect and analyze the data. The methodology aligns with the research objectives to ensure validity and reliability in addressing the research questions.

The diagram illustrates the alignment of research philosophies, approaches, strategies, and methods used in this study. This research follows a positivism philosophy, which assumes objective reality is measurable through quantitative data. A deductive approach is adopted, testing hypotheses derived from existing theories. The research strategy is a survey designed to gather data from a LARGe sample, and the methodology is cross-sectional, focusing on data collection at one point in time. Excel and SPSS will be used for data analysis, ensuring robust insights into the impact of HR practices.

3.1 Overview of the Research Problem

This section provided a brief overview of the research problem. The study explored how integrating the LARGe HRM framework and adopting HR technology improved HR

effectiveness and contributed to organizational success, employee engagement, and satisfaction in Fintech companies.

3.2 Operationalization of Theoretical Constructs

This part explained the core constructs that were measured in the study, such as the LARGe HRM framework (Lean, Agile, Resilient, Green, entrepreneurial HRM). It also explored how these constructs related to HR effectiveness, employee engagement, and satisfaction. For example, "HR Technology Adoption" was operationalized by tools like AI-driven recruitment and performance management systems, while the dimensions of LARGe HRM (Lean, Agile...) were mapped to specific HR practices such as automation, flexibility, and innovation-driven development.

3.3 Research Purpose and Questions

This section specified the purpose of the research and listed the research questions that guided the study:

1. How does the LARGe HRM framework impact HR effectiveness?
2. How does implementing the LARGe HRM framework affect employee engagement?
3. What is the relationship between the LARGe HRM framework and employee satisfaction?

3.4 Research Design

This study used a quantitative research design. Statistical analysis was considered appropriate for testing hypotheses and examining relationships between variables. A survey-based approach was employed to gather primary data from various companies in the Middle East (Lebanon, Saudi Arabia, Qatar, and Iraq), including financial institutions.

3.5 Population and Sample

The study population included HR managers, non-HR managers, HR staff, and employees in other departments. The target sample size was 105 participants, which was deemed sufficient to provide reliable results. A stratified random sampling method ensured that the sample represented various organizational roles.

3.6 Participant Selection

Participants were selected based on their experience and involvement with HR practices within their organization. HR managers were involved in HR decision-making processes, HR employees were performing their respective tasks, and non-HR managers and employees who directly interacted with HR were invited to participate.

3.7 Instrumentation

Data was collected using a structured survey questionnaire designed to measure the key constructs in the study: HR effectiveness, employee engagement, and employee satisfaction, alongside their perceptions of adopting the LARGe HRM framework

components. Likert-scale items were used to quantify responses to ensure consistency and reliability.

3.8 Data Collection Procedures

The survey was distributed through an online platform, ensuring easy access and convenience for participants. The data collection period spanned two weeks to allow sufficient time for responses, with reminders sent halfway through.

3.9 Participant Selection

Participants were selected using a stratified random sampling technique. Stratified sampling was used to ensure the sample accurately represented companies' different roles and departments. Employees were selected from HR departments and non-HR departments, ensuring a comprehensive understanding of the HR practices from both the HR and employee perspectives.

3.10 Data Analysis

Data were analyzed using Excel and SPSS. Inferential statistics, such as regression analysis, were used to examine the relationships between adopting the LARGe HRM framework and the outcomes of HR effectiveness, employee engagement, and satisfaction.

3.11 Research Philosophy

The research followed a positivism research philosophy, which assumes that reality is independent of the observer and can be objectively measured. The positivist approach

was chosen because the study aimed to gather quantifiable data on the relationship between LARGe HRM frameworks and their impact on HR performance, employee engagement, and satisfaction. This philosophy aligns with using statistical methods to test hypotheses and measure relationships among variables.

3.12 Research Approach

A deductive approach was used in this study. This approach started with theoretical frameworks and hypotheses drawn from existing literature. The goal was to test whether the theoretical constructs, such as the LARGe HRM framework, have a measurable impact on HR effectiveness, employee engagement, and employee satisfaction. The deductive approach is particularly suited for studies aiming to test theory and contribute to existing knowledge by confirming or refuting hypotheses.

3.13 Research Design Limitations

This study was subject to limitations, including potential biases in self-reported data and the challenges of generalizing the findings to all companies – especially in the Financial Sector - due to the sample size and scope. Additionally, the fast-paced nature of the financial sector may have led to shifts in technology and HR practices that could influence the relevance of the findings over time.

This section summarized the study's methodology and reinforced how it helped answer the research questions. The next chapter presents the survey results and statistical analysis.

Chapter 4

Data Analysis and Results

This chapter provides an overview of findings from the data analysis to address relationships between the LARGe HRM framework and important organizational outcomes, including HR effectiveness, employee engagement, and employee satisfaction. In this chapter, the results of the regression and mediation have been elaborated. It draws on the effects of multiple human resource performance practices, such as leadership, employee development, recruitment, and employee engagement, and how they predict organizational performance and employee outcomes. By contextualizing these findings, the chapter seeks to expand knowledge of how HRM strategies drive organizational performance within a rapidly changing industry.

4.1 Descriptive Analysis

As shown in Table 1, the descriptive statistics indicate that the scores for Lean (LHR) and employee engagement (EEN) are relatively high, with participants rating lean and employee engagement above three on average. On the other hand, the perceptions of HR practices are slightly negative overall, especially regarding resilience (RHR) and green (GHR) practices, with their mean scores below 3. However, as indicated by the two standard deviations, there is a range of scores for participants on these items, which means that most participants lean towards the mid-range of the scale. In addition, the skewness (Which measures symmetry of a distribution or data set – Ex. When data points on a bell curve are not distributed symmetrically to the left and right sides of the median, the bell curve is skewed) and kurtosis (Which measures whether the data are heavy-

tailed or light-tailed relative to a normal distribution – i.e. how often outliers occur) values also suggest that the higher frequency of responses are around the average, with skewed leaning slightly towards a more favorable rating of leadership and engagement. The data show that although HR practices are seen positively in many respects, opportunities exist for further development, especially in recruitment, general HR practices, and the use of technology in HR.

Table 1: Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
LHR	105	1.00	5.00	3.0857	0.49192	-0.169	-0.355
AHR	105	1.00	5.00	2.9540	1.03194	0.169	-0.668
RHR	105	1.00	5.00	2.8976	0.94814	0.217	-0.555
GHR	105	1.00	5.00	2.8738	0.98372	0.092	-0.418
EHR	105	1.00	5.00	3.1388	0.81500	-0.210	-0.422
ESA	105	1.00	5.00	3.1238	0.83065	-0.064	-0.408
EEN	105	1.00	5.00	3.1238	1.01827	-0.061	-0.798
HRE	105	1.00	5.00	2.9206	1.02725	0.114	-0.841

4.2 Correlation Analysis

As we can see in the correlation matrix, there are several strong positive relationships between the variables, implying that high scores in one area generally relate to high scores in other related areas. The numbers reflect strong positive correlations in the case of AHR, RHR, and GHR, with a correlation between .522 and 775. All HR variables are significantly positively correlated with employee engagement (EEN), especially EHR (0.787), RHR (0.681), and AHR overall (0.673).

Table 2: Correlations

Variable	LHR	AHR	RHR	GHR	EHR	ESA	EEN	HRE
LHR	1							
AHR	0.396**	1						
RHR	0.543**	0.775**	1					
GHR	0.469**	0.522**	0.646**	1				
EHR	0.503**	0.619**	0.685**	0.549**	1			
ESA	0.460**	0.615**	0.660**	0.470**	0.947**	1		
EEN	0.485**	0.673**	0.681**	0.549**	0.787**	0.812**	1	
HRE	0.029**	0.670**	0.633**	0.554**	0.715**	0.773**	0.546**	1

4.3 Regression Analysis

To further explore the significance of the gathered data, unstandardized beta (B), standardized beta (β), the t-test statistic (t), and the probability value (p) will be examined.

- The unstandardized beta (B) – Which represents the slope of the line between the predictor variable and the dependent variable – i.e., For every one unit increase in Variable 1, the dependent variable increases by the unstandardized beta (B) value,
- The standardized beta (β) – Which compares the strength of the effect of each independent variable to the dependent variable - i.e., The higher the absolute value of the beta coefficient, the stronger the effect,
- The t-test statistic (t) – Which is a ratio of the difference between the mean of the two sample sets and the variation that exists within the sample sets,

- The probability value (p) identifies whether the data could have occurred under the null hypothesis. Typically, if the p-value is below .050, it is considered significant.

4.3.1 Regression Analysis for Employee Engagement (EEN)

The results of regression analysis done for EEE concerning LHR, EHR, and RHR are given in Table 3 below, indicating reasonably good prediction across the HR dimensions for the EEN. LHR is positively and significantly associated with EEN (B = 0.281, β = 0.170, t = 2.034, p = 0.045), meaning that increased leadership HR practices enhance employee engagement. Likewise, EHR (B = 0.176, β = 0.223, t = 2.044, p = 0.044) positively affects EEN, indicating that improved employee HR practices result in higher levels of engagement. The highest significant coefficient indicates that EEN is most significantly associated with RHR (B = 0.284, β = 0.330, t = 2.580, p = 0.011), emphasizing recruitment practices as key drivers of employee engagement. On the other hand, GHR has no significant impact on EEN (B = 0.116, β = 0.140, t = 1.519, p = 0.132), while green HR practices do not emerge as a key driver of employee engagement in this model. The evidence from these analyses is in Table 4 and supports further HR investment toward practices that drive employee engagement.

Table 3: Regression Analysis for Employee Engagement (EEN)

Predictor	Unstandardized Coefficients (B)	Standardized Coefficients (β)	t	p
Constant	0.596		1.646	0.103
LHR	0.281	0.170	2.034	0.045
HER	0.176	0.223	2.044	0.044

Predictor	Unstandardized Coefficients (B)	Standardized Coefficients (β)	t	p
RHR	0.284	0.330	2.580	0.011
GHR	0.116	0.140	1.519	0.132

4.3.2 Regression Coefficients for Predicting Employee Satisfaction (ESA)

The result of the regression analysis revealed that EHR, RHR, and LHR were positively related to ESA, while Green HR Practices did not show any significant effect. In particular, LHR (B = 0.249, β = 0.147, t = 1.683, p = 0.095) has a marginally positive but not statistically significant relationship with ESE. The results show a significant favorable influence of EHR (B = 0.214, β = 0.266, t = 2.321, p = 0.022) on ESA, suggesting that ESA strengthens by deploying better practices regarding entrepreneurial HR. RHR (B = 0.308, β = 0.352, t = 2.623, p = 0.010) appears to have the most substantial positive impact, indicating that practices related to resilient HR are a significant determinant of employee engagement and satisfaction. Conversely, the effect of GHR (B = 0.030, β = 0.035, t = 0.368, p = 0.714) on ESA is insignificant, indicating that green HR practices are not a major driver of satisfaction and engagement of employees in this model.

Table 4: Regression Coefficients for Predicting Employee Satisfaction (ESA)

Predictor	Unstandardized Coefficients (B)	Standardized Coefficients (β)	t	p
Constant	0.746		1.931	0.056
LHR	0.249	0.147	1.683	0.095

Predictor	Unstandardized Coefficients (B)	Standardized Coefficients (β)	t	p
HER	0.214	0.266	2.321	0.022
RHR	0.308	0.352	2.623	0.010
GHR	0.030	0.035	0.368	0.714

4.3.3 Regression Coefficients for HR Effectiveness (HRE)

This regression analysis of HR Effectiveness indicates that EHR predicts HR effectiveness, while LHR, RHR, and GHR are marginally non-significant (see Table 5 above). Indeed, HR effectiveness is significantly positively correlated with EHR (B = 0.360, β = 0.365, t = 3.428, p = 0.001), indicating that positive changes in entrepreneurial HR practices are strongly related to increased HR effectiveness. This means that lean HR practices (LHR) are positively associated with HR effectiveness (B = 0.315, β = 0.152, t = 1.872, p = 0.064) but marginally significant at 0.05 level, meaning LHR practices may lead to HR effectiveness, but affect is not that much significant. RHR (B = 0.241, β = 0.224, t = 1.799, p = 0.075) and GHR (B = 0.147, β = 0.142, t = 1.583, p = 0.117) have positive relationships but not significant relationships with HR effectiveness, indicating that these variables do not strongly predict HR effectiveness in the model.

Table 5: Regression Coefficients for Predicting HR Effectiveness

Predictor	Unstandardized Coefficients (B)	Standardized Coefficients (β)	t	Sig.
Constant	-0.032		-0.074	0.941
LHR	0.315	0.152	1.872	0.064
HER	0.360	0.365	3.428	0.001
RHR	0.241	0.224	1.799	0.075
GHR	0.147	0.142	1.583	0.117

Chapter 5

Discussion

In this chapter, we provide an overview and analysis of the findings based on data collected on the LARGe HRM framework and its impact on HR effectiveness, employee engagement, and employee satisfaction. In addition to uncovering contextual relationships, the analyses and statistical tests provide key takeaways on the relationship between HRM practices, including but not limited to leadership, employee engagement, resilience, HR technology, and meaningful outcomes for the industry. As financial institutions seek to maintain competitiveness amid disruptive innovations, examining HR practices and their efficacy is integral to discern future trajectories in this sector. The changing landscape of FinTech and the implications for human resource management will be discussed to highlight the significance of HRM in nurturing a high-performing workforce that fuels innovation and competitive advantage.

H1: LARGe HRM has a positive and significant impact on HR effectiveness.

Supported:

The regression analysis for HR effectiveness prediction (presented in Table 5) provides obvious evidence to support the hypothesis that HR with LARGe HRM practices positively and significantly affects HR effectiveness. These results show that entrepreneurial HR practices (EHR) ($B = 0.360$, $\beta = 0.365$, $t = 3.428$, $p = 0.001$) are a significant predictor of HR effectiveness. According to this trend, high-quality and well-implemented employee HR practices may lead to high HR effectiveness. However, the

substantial and positive EHR-HR effectiveness relationship indicates that the effective management of HR processes (Ex. employee development, performance management, and engagement) leads to superior organizational functioning in general.

In addition, even LHR positively affects HR effectiveness, emphasizing the significance of lean management in HR practices.

These results are consistent with previous research, highlighting the importance of adequately designed HR practices in enhancing effectiveness. For example, Becker & Huselid (2006) identified that high-performance HR practices in recruitment, training, and performance management are associated with improved organizational performance, indicated by HR effects. Delery & Doty (1996) claimed that the effectiveness of HR can be significantly enhanced to meet the expectations of the organization. To that end, another aspect of HRM, strategic HRM, comes into the picture, primarily focusing on the employees and being led by the organization's leadership.

Hence, H1 is also supported, indicating that robust HRM practices positively affect HR efficiency. This adds to the body of literature that discusses the importance of HR practices for optimizing the performance of an HR function, particularly in a dynamic environment where HR practices must be aligned with organizational strategies.

H2: LARGe HRM has a positive and significant impact on Employee engagement.

Supported:

Regression analysis results in Table 3 provide sufficient evidence of hypothesis formation that asserts that LARGe HRM practices positively affect employee engagement. Overall, results indicate that three of the subscales comprising HR Practice, namely (RHR) ($B = 0.284$, $\beta = 0.330$, $p = 0.011$), (LHR) ($B = 0.281$, $\beta = 0.170$, $p = 0.045$), and (EHR) ($B = 0.176$, $\beta = 0.223$, $p = 0.044$) are found to be the significant predictors of employee engagement (EEN). Organizations that implement strong HR practices, particularly lean, resilient, and employee development, experience higher levels of employee engagement, as indicated by these results.

This is consistent with previous studies, which reveal that effective HR practices are among the most critical factors for an engaged workforce. For example, Beckman & Pusey (2001) well-crafted HR practices, emphasizing strong leadership and staff engagement, are fundamental for creating a workplace that evokes the desire and intention to remain. Incompetent recruiting practices appear equally crucial to engagement, especially in the FinTech industry; here, organizations with meticulous recruitment report higher engagement and retention levels (Hornuf & Mattusch, 2024).

These results further substantiate the findings of both Piwowar-Sulej (2021) and Li et al. 2020) and increase employee engagement through a work environment that encourages new ideas and alignment with organizational objectives. These studies suggest that employees are more likely to be engaged when they view their HR practices as transparent, supportive, and attuned to their career development needs.

Additionally, Raja et al.'s (2022) findings corroborate the role of leadership and HR practices in nurturing organizational culture for improved employee engagement, especially in dynamic industries such as FinTech. Thus, this hypothesis fits broadly with the literature, proposing that LARGe HRM practices are not just a determinant of employee engagement but also a key driver of organizational success.

The overall support of H2 also strengthens the essential role of HR practices in designing for employee engagement in organizations, particularly in the booming and technology-driven financial sector. Overall, this study supports the need for a well-designed HRM system that can facilitate employee motivation and beneficially affect organizational outcomes.

H3: LARGe HRM has a positive and significant impact on Employee Satisfaction.

Supported:

The ESA regression analysis (Table 4) supports the hypothesis that LARGe HRM practices positively influence employee satisfaction. In particular, (EHR) (B = 0.214, β = 0.266, p = 0.022) and (RHR) (B = 0.308, β = 0.352, p = 0.010) were reported to have a significantly positive impact on employee satisfaction and engagement. Effective recruitment increases employee satisfaction when organizations have robust HR practices emphasizing employee well-being. (LHR) (B = 0.249 β = 0.147, p = 0.095), although positive, do not reach significance. Yet, the upward trajectory of the relationship suggests that lean HR is also a critical driver of employee satisfaction. Green HR practices (GHR) (B = 0.030, β = 0.035, p = 0714), on the other hand, do not have a

significant effect, which means that green HR practices are not very much proven to be a promotor of employee satisfaction in this study.

Technology-based HR practices, particularly more transparent and inclusive recruitment practices, hugely contribute to employee satisfaction because people have more of a stand and incentive to feel like they belong and connect with a company vision. These studies further underline the necessity of holistic HRM strategies that stress engagement, development, and recruitment as critical determinants of employee satisfaction, a common HRM theme and indicator of organizational performance.

Thus, in general, H3 is accepted; it indicates that extensive and carefully managed HRM practices, specifically recruitment and employee development, promote job satisfaction. These results are in line with the broader literature, emphasizing that a focus on employee-centric HR practices is necessary for creating a work environment that, in turn, fosters job satisfaction, engagement, and organizational commitment.

Discussion of Research Questions

The research questions answer the effects and relationships between the LARGe HRM framework and HR effectiveness, employee engagement, and satisfaction, notably in financial institutions. Below is a descriptive and analytical discussion of the results of this study and related literature.

1. How does the LARGe HRM framework impact HR effectiveness?

This study concludes that by adopting the LARGe HRM framework, HR can meaningfully contribute to overall performance effectiveness. Of the different components constituting the framework, entrepreneurial HR practices (EHR) were found to be a strong predictor of HR effectiveness, with a strong positive ($B = 0.360$; $\beta = 0.365$; $p = 0.001$). This indicates that financial institutions adopting more organized, employee-driven HR practices will generate higher effectiveness.

The applicability of the LARGe HRM framework is significant as it follows the rapid transformation of the FinTech arena and its dynamics where technology and market growth mandate a constant change in the human resource business measures. Providing the resources employees need to grow enables FinTech companies to keep their staff relevant and engaged in adapting to new challenges, which helps with retention and overall HR function. It is also representative of the framework's emphasis on a continuous learning environment, which is beneficial to improve HR effectiveness in line with business needs.

Lean HR Practices (LHR) also positively influenced HR effectiveness. This highlights lean management's crucial role in determining whether HR practices will be successful in the organization. In fast-evolving and volatile sectors like FinTech, effective governance will ensure that HR strategies align with business priorities. As Torrington et al. As (2011) identified, driving HR practice-academic integration is leadership. HR

is better positioned to drive organizational effectiveness when the leaders provide clear directives, facilitating creativity and continuous improvement.

Aspects of the LARGe HRM framework focus on the present and future, such as lean, resilient, and employee development, which is very important for HR effectiveness in FinTech firms. As a highly competitive and innovative industry, HR practices aimed at attracting, selecting, and ongoing training and leadership positions are critical in driving HR functions that are globally competent and effective in realizing organizational goals.

In addition, the adaptability of the framework ensures that HR functions can keep pace with the fast-changing FinTech environment. The responsiveness of HR to new technological trends, regulatory changes, and demands of the market makes it an asset that is a significant factor in determining the success of an organization. The LARGe HRM framework is an HR framework that focuses on aligning HR practices with an organization's strategy, which constantly improves HR initiatives by pervasive HRM continuously.

To summarize, LARGe HRM significantly strengthens HR effectiveness in financial institutions by emphasizing employee development and lean and resilient dynamics. With those, enabling an inspired, powered, and agile human capital is critical, which is always key to successfully navigating the challenges and opportunities the dynamic world of FinTech offers. In summary, the framework can keep improving HR functions based on changing organizational demands, focusing on flexibility, growth, and innovation underpins the adapting HR onboarding; FinTech will serve to demonstrate

how HR functions at tech companies can evolve with their organization and its employees or through the hustle we do for business to succeed in an industry that has gained momentum.

2. How does implementing the LARGe HRM framework affect employee engagement?

The LARGe framework of HRM has been implemented, which has had a positive and significant impact on employee engagement in financial institutions. The study found that (EHR) ($B = 0.176$, $\beta = 0.223$, $p = 0.044$), (LHR) ($B = 0.281$, $\beta = 0.170$, $p = 0.045$), and (RHR) ($B = 0.284$, $\beta = 0.330$, $p = 0.011$) are key predictors of employee engagement.

The LARGe HRM framework also helps financial institutions, which work in an environment of continuing technological change, ongoing innovation, and talent competition, to build an engaged and motivated workforce. Organizations that spend time on resilient HR Practices are more likely to onboard the right people who best represent the company's mission and vision for business, leading to an early win for high engagement. Excellent resilient practices also attract technically inclined individuals who care about your organization's purpose - improving retention and securing employee buy-in.

The relationship between the LARGe HRM framework and employee engagement also finds its backbone in entrepreneurial HR practices. Employee development, training, and performance management are three practices that drive engagement, as together, they create pathways for employee growth and career advancement. In the FinTech industry,

where technological and regulatory changes are constant, it is vital to keep employees engaged by ensuring they have access to ongoing development opportunities. Organizations grow, evolve, and progress, and when employees feel that they are being nurtured in a way that they will grow and flourish in their careers, they are more likely to think that their contribution is valuable and will impact the organization’s future.

For financial institutions, employee engagement initiatives must align with the organization's culture of innovation and creativity for much longer. Keeping employees connected with the company's mission and values can help create a more energized and productive workforce in an industry that is all about innovation and digital transformation. When employees feel like the outcome and value of their efforts matter to the organization, they attend work with a greater sense of purpose. They are more likely to be proactive, collaborate with others, and be motivated to play a role in problem-solving and innovation.

By aligning employee engagement strategies to a far more dynamic environment of the FinTech sector, they secure the commitment of their employees and, from a wider angle, a collective commitment to the organization. The combination of lean, resilient, and employee development focused on innovation helps create a culture of continuous improvement and engagement. Applying the LARGe HRM framework equips financial institutions with the tools and practices to build an environment where employees feel engaged, inspired, and aligned to the objective - which in a competitive and fast-moving deployment realm is essential for the organization's long-term success.

3. What is the relationship between the LARGe HRM framework and employee satisfaction?

The study shows a strong positive correlation between the components in the LARGe HRM framework and employee satisfaction, in particular (EHR) and (RHR). The positive effect of EHR (B = 0.214, Beta = 0.266, p = 0.022) and RHR (B = 0.308, Beta = 0.352, p = 0.010) on employee satisfaction suggest that well-structured resilient and entrepreneurial practices contribute significantly to overall employee satisfaction. Investing in practices where an organization adjusts itself to bring in and develop talent, from effective recruitment strategies to employee-centric HR systems, can lead to greater employee satisfaction.

Human resource practices significantly impact employee satisfaction through recruitment, which is essential during job seekers' first interaction with the firm. By identifying candidates who align with the company culture and the role and by providing a transparent and supportive recruitment process, financial institutions can help create a more engaged and satisfied workforce. On the other hand, entrepreneurial HR practices empower employees to develop within the organization, feel appreciated, and align their goals with the company's objectives.

In contrast, Green HR Practices (GHR) (B = 0.030, Beta = 0.035, p = 0.714) did not significantly impact employee satisfaction. This indicates that GHR practices, which encompass administrative HR functions or organizational policies, may not be the most productive area to focus on to maximize satisfaction at the individual level, even though

they contribute significantly to the organization's overall functioning. Like most generalized HR practices that are more sector-wide and can be standardized, these practices would not directly impact employees' day-to-day experiences or perceptions about their work environment relative to more specialized ones such as recruiting and employee development.

Therefore, for financial institutions, the dynamic changes with the high demand for skilled employees in this industry and adopting these specialized HR practices will lead to satisfied, engaged, and long-term employees. This supports the perspective that tailored, longitudinal, and aspirational business HR approaches are potent catalysts for worker contentment - particularly in FinTech, which treats talent as a competitive advantage.

So, although generalized HR practices are the basis of a company's HR system, more differentiated and employee-oriented practices, especially recruitment and development, exert a more substantial influence on employee satisfaction in the work environment. Focusing on these aspects might be a clever tactic for improving overall employee satisfaction and effective staff retention for financial institutions.

In summary, the LARGe HRM framework has a varied effect on HR factors such as effectiveness, employee engagement, and employee satisfaction in FinTech institutions. The positive impact of leadership, employee HR practices, and recruitment on these outcomes underscores the importance of investing in targeted and high-impact approaches to HR within financial institutions.

Chapter 6

Summary, Implications, and Recommendations

6.1 Summary

This study explores the LARGe HRM framework, its relationship to HR effectiveness, and other outcomes like employee engagement and employee engagement. This is especially true in financial institutions, where technological advancements and changes in the marketplace happen in such rapid cycles that conventional financial institutions must rely on strong leadership and employee development practices to remain competitive. It then is through the implementation of such practices – especially entrepreneurial practice - that the existence of a high-performing and trusted workforce will be achieved, one that is actively engaged within the organization and one who has the right motivators, that subsequently lead to practical results in line with the constantly changing objectives of the organization.

Table 6: Average Score per LARGe Components

Lean	Agile	Resilient	Green	Entrepreneurial
3.2	3.2	2.9	2.9	3.0

Although traditional HR practices play a considerable role, the study also showed that adopting lean, agile, resilient, green, and entrepreneurial practices will play a strong mediating role in filling the gaps in the disruptive technological changes the financial sector is witnessing. HR technology can increase the efficiency of HR operations by automating administrative processes and offering data-driven insights. However, the current impact on employee engagement and satisfaction might be limited. Instead,

organizations must double down on core, human-centered HR practices and align technology to support and complement them. In this way, they can ensure that technology complements the employee experience without detracting from the unquantifiable but equally important areas of LARGe.

Based on these key lessons learned, this research also argues that a balance is needed in HR in terms of adopting technology as a tool to enhance human-centered practices rather than a tool for replacing the same. Although HR technology can help save time for mundane, burdensome administrative responsibilities like payroll processing, monitoring employees' attendance records, and overseeing employee information, it cannot be used without considering its impact on the employee experience. This integration should ensure that employees experience a sense of value, support, and engagement along their journey with the organization. While HR technology to facilitate real-time feedback, career development resources, and personalized learning opportunities is an important/right decision, it should never supplant the need for human connection, leadership, and employee engagement initiatives.

With the need for rapid adaptation to change in the sector, organizations must prioritize workforce development through people-focused HR practices that ultimately lead to improved levels of engagement, satisfaction, and productivity. In the coming days, research should address issues that potentially remove roadblocks to organizations' wider acceptance of HR technology and identify how HR technology can further help human-centric HR practice. It could also be beneficial to examine HR technology's

impact on organizations over time as these tools continue to develop, grow, and become embedded in the fabric of daily HR activity.

6.2 Implications

The results of the research will assist us in better understanding the adoption of LARGe HRM in organizations, especially financial institutions. These implications have profound effects on the HR discourse and emphasize the timeliness of the LARGe HRM framework for establishing HR processes and refining organizational performance. This HR framework not only pairs the HR practices with overall organizational architecture but also adapts to employee needs for a cohesive and motivated team. In the fast-paced and competitive landscape of FinTech, financial institutions must focus constantly on aspects to remain nimble and adaptable to changing market needs. Finally, these elements in the LARGe HRM framework improve organization performance and promote a motivated and high-performing workforce. HR leaders working within financial institutions should prioritize maintaining such a robust HR strategy that incorporates these underlying mechanisms while not simply hinging solely on technology to propel better HR functions but seeing the technology as an enabler of higher content and more efficient HR functions.

Additionally, the study emphasizes the need to move towards employee-centric HR practices that enhance employee satisfaction and engagement. Notably, resilient HR Practices (RHR) and entrepreneurial HR practices (EHR) were found to be predictors of employee satisfaction (H2 related to resilient practices, H3 relating to employee

practices), implying that organizations like those in fintech should emphasize hiring practices that correspond with their employee's goals or values for career development. This study, along with many others, shows the increasing importance of balancing HR technology adoption and delivery because it is driven by improving employee engagement and satisfaction.

To further guide organizations in implementing LARGe HRM and as part of this research's outcomes, the following scorecard will serve as a self-assessment tool to identify gaps and areas for improvement.

1. ***Lean HR***

Metric	Description	Methodology	Calculation
HR Process Efficiency	Time saved through automation and optimization.	Track the time spent on manual processes (e.g., recruitment and onboarding) before and after automation.	(Manual time before automation - Time after automation) / Manual time before automation x 100 = % Time Saved
Talent Alignment with Business Goals	How HR aligns talent strategies with business objectives.	Survey leaders to assess the alignment of HR initiatives. Track the percentage of initiatives linked to business goals.	(Number of aligned HR initiatives / Total HR initiatives) x 100 = % Alignment

Cost Efficiency	Reduction in HR operational costs due to automation.	Compare the costs of HR operations (e.g., recruitment and training) before and after the introduction of technology.	(Old HR cost - New HR cost) / Old HR cost x 100 = % Cost Savings
Employee Productivity	Effect of HR initiatives on employee performance.	Use productivity KPIs (e.g., output and performance reviews) to track changes after implementing HR programs.	(Post-initiative productivity - Pre-initiative productivity) / Pre-initiative productivity x 100 = % Improvement
Technology Adoption	The success of HR tech integration.	Track new tools' adoption rate and usage frequency (e.g., AI, recruitment tools, automated onboarding).	(Number of active users / Total users) x 100 = % Adoption Rate

2. ***Agile HR***

Metric	Description	Methodology	Calculation
Agility in Talent Acquisition	Speed and flexibility in recruitment.	Measure how quickly critical roles are filled in response to market demands.	Time to fill critical roles from job posting to hire.

Cross-functional Team Effectiveness	Collaboration and innovation from cross-department teams.	Evaluate team performance, project completion rate, and innovation output.	(Number of successful projects / Total cross-functional projects) x 100 = % Success Rate
Employee Empowerment	Employees' ability to make decisions and innovate.	Measure employee satisfaction with autonomy and innovation opportunities.	Average empowerment score from employee surveys.
Time-to-Fill Critical Roles	Time taken to fill specialized fintech roles.	Track the number of days it takes to fill high-demand roles.	Total days taken to fill critical roles / Number of roles filled
Adaptability of Workforce Development Programs	Ability to update training to match emerging fintech needs.	Track updates in training programs and employee participation in these programs.	(Number of updated programs / Total training programs) x 100 = % Adaptability

3. Resilient HR

Metric	Description	Methodology	Calculation

Crisis Response Readiness	HR's readiness to manage external disruptions.	Conduct simulation exercises (e.g., data breach or economic downturn) and assess HR's response time.	(Response time during simulation / Expected response time) x 100 = % Response Effectiveness
Employee Retention During Crisis	Retention rates during difficult times.	Track employee turnover rate during crises and compare it to regular periods.	(Number of employees retained during crisis / Total employees) x 100 = % Retention Rate
Regulatory Compliance Training	Compliance with fintech industry regulations.	Track the completion rate of required compliance courses for employees.	(Number of employees trained / Total number of employees) x 100 = % Compliance
Workforce Continuity Plans	Ability to maintain workforce operations during a crisis.	Measure time to execute continuity plans and their effectiveness.	(Time to restore operations / Total downtime) x 100 = % Recovery Rate
Employee Well-being Support	Mental health and stress support effectiveness.	Measure employee participation in well-being programs and outcomes (Ex. reduced absenteeism).	(Participation in well-being programs / Total employees) x 100 = % Participation

4. *Green HR*

Metric	Description	Methodology	Calculation
Integration of Sustainability in HR Practices	Embedding sustainability in HR processes.	Evaluate HR policies that promote sustainability (e.g., paperless onboarding and green offices).	(Number of green initiatives / Total HR initiatives) x 100 = % Sustainability Integration
Employee engagement in CSR Programs	Employee participation in corporate social responsibility activities.	Track employee participation in CSR activities like financial literacy programs or sustainability initiatives.	(Number of participants in CSR programs / Total employees) x 100 = % Engagement Rate
Green Talent Acquisition	Recruiting employees with an interest in sustainability.	Track the number of candidates attracted to roles that involve sustainable fintech projects.	(Number of green-sustainability candidates / Total candidates) x 100 = % Green Talent Acquisition
Sustainable Product Development Support	HR's role in driving green product development.	Measure how HR supports the development of sustainable fintech products or services (e.g., green investing	(Number of sustainable products developed / Total products) x 100 = % Sustainable Products

		and eco-friendly fintech solutions).	
Sustainability Training	Providing training on sustainability for employees.	Track completion rates of sustainability courses offered to employees.	(Number of employees completing sustainability training / Total employees) x 100 = % Completion Rate

5. ***entrepreneurial HR***

Metric	Description	Methodology	Calculation
Innovation Program Success	Number of innovative products/services resulting from HR-led initiatives.	Track the number of new products or improvements from internal programs like hackathons or innovation labs.	(Number of successful innovations / Total innovations initiated) x 100 = % Innovation Success Rate
Leadership Development Effectiveness	The success of leadership programs in cultivating innovation-driven leaders.	Track leadership program completion rates and the impact on leadership effectiveness (e.g., number of	(Number of leaders promoted due to development programs / Total leaders in the program) x 100 = % Success Rate

		promotions and feedback).	
Internal Venture Growth	Growth and success of internal ventures.	Track the number of internal ventures or projects that scale successfully (Ex. fintech product innovations).	(Number of scaled ventures / Total ventures) x 100 = % Venture Success
Employee Entrepreneurship Participation	Employee participation in internal entrepreneurial activities.	Track the number of employees engaged in entrepreneurship activities such as innovation challenges and product development sprints.	(Number of participating employees / Total employees) x 100 = % Entrepreneurship Participation Rate
Talent Retention in High-Growth Areas	Retention of key talent in innovation-driven departments (Ex. data science, blockchain).	Track retention rates of key employees in critical, high-growth departments.	(Number of key talent retained / Total key talent) x 100 = % Retention Rate

6.3 Limitations and Future Recommendations

Limitations

Although this study offers an essential understanding of the association among the LARGe HRM framework, several limitations need to be discussed, including the size and scope of the study. The analysis is conducted on a small and targeted sample of financial institutions and geographical regions (Lebanon, Saudi Arabia, Qatar, UAE). It may not reflect the full range of organizations within the sector. FinTech is a global and fast-emerging industry, and adopting HRM inflection points may differ across regions or organizational sizes. Thus, the findings may have limited generalizability. This would enhance the external validity of the findings and provide insight as to whether HRM practices drive HR outcomes across different settings in the FinTech industry.

Second, the LARGe HRM framework chosen for this study focuses only on specific HR practices and excludes other practices possibly relevant in the context (E.g., compensation, work-life balance, and organizational culture) that could also affect employee engagement and satisfaction. Such elements are essential factors of HRM that can be manipulated through HR technology and require further investigation. This opens up the potential to integrate a broader array of HR practices into future research and gain a more complete picture of how HRM strategies are connected to employee outcomes.

Finally, this study did not examine any possible barriers to HR technology adoption in financial institutions. Although the study does not delve into the relationship between HR technology, HR practices, and employee outcomes, significant challenges like resistance to technology, lack of training, or organizational inertia may prevent successfully adopting and integrating HR technology. This would mean researching

these barriers more widely to understand the variables restricting the tool's efficiency in improving employee engagement and satisfaction through HR technology.

Future Recommendations

Considering the prominent limitations discovered in the present research, a few recommendations for further research that strengthen the comprehension of HRM practices and HR technology in financial institutions can be proposed.

Future research can be based on longitudinal research to investigate causal relationships between HRM practices and employee outcomes. Studying organizations over longer timespans allows researchers to understand how changes in HR practices or adoption of technology impact longer-term results such as employee engagement, employee satisfaction, and effectiveness of HR practices. Longitudinal studies would give a more reasonable view of how these variables develop and work together over a few years and focus on the sustainability of HR techniques in dynamic ventures like fintech.

Second, future studies should endeavor to cover a broader range and more diversity of financial institutions in terms of areas and sizes to improve the external validity of the results. FinTech is a fast-growing and diverse sector, with considerable variation amongst companies regarding organizational structure, HR practices, and technological maturity. Studying organizations within diverse geographical regions, different cultures, and various organizational contexts (Ex. start-ups as opposed to established firms), as well as considering multiple functions within the financial institution (Ex. HR Manager, Non-HR Managers, HR Employees, and Non-HR Employee) will allow researchers to

take a broader look at the implementation and effect of HRM frameworks and HR technology on employee outcomes. This will also allow for comparisons among different HR practices across organizations of various sizes.

Third, the literature should extend the HR practices being studied to include a wider array of HR functions that may affect employee satisfaction and engagement. Complementing other factors in addition to the LARGe HRM framework, these areas of HRM, such as compensation, performance management, organizational culture, and work-life balance, will provide a more inclusive picture of how HRM strategies drive employee outcomes. Incorporating these elements in future studies would offer a more comprehensive perspective on the intricate dynamics at play in financial institutions and which HR practices can further enhance HR effectiveness, engagement, and satisfaction.

Finally, future research should investigate the challenges to HR technology adoption in financial institutions. This may hold significance for enabling HR technology to metaphorically meditate on work dynamics as coined by employee engagement and HR effectiveness. Understanding concepts like employee resistance, organizational culture, and training gaps may facilitate the identification of some bold reasons hindering the effective use of technology in HRM. Additionally, researchers need to explore ways organizations may overcome said barriers and create strategies to more effectively harness HR technology, such that technology adoption reflects organizational goals and, thus, ultimately leads to enhanced employee outcomes.

A better understanding of how HRM practices fit, together with HR technology, influences key outcomes in HR effectiveness, employee engagement, and employee satisfaction in financial institutions can be achieved by addressing these recommendations in future research.

6.4 Conclusion

This research analyzes the proposed LARGe HRM framework and its interconnectedness with HR effectiveness, employee engagement, and employee satisfaction. This research provides important insights into traditional HR practices, the role of HR technology as a complement, and the interactive relationship between them.

The first and foremost findings are that the LARGe HRM framework strongly influences HR effectiveness, employee engagement, and employee satisfaction. The results reveal that when implemented effectively, entrepreneurial and resilient HR practices are particularly impactful across all three outcomes. Although Green HR Practices did not have a measurable impact on these outcomes, the results indicate that targeted, specific HR practices outperform generalized HR policy in influencing employee satisfaction and engagement.

The study further shows that while adopting HR technology supports automating administrative tasks and improving operational efficiency, it is not yet significantly mediating the relationship between HR practices and employee outcomes. This reflects that while technology can speed up processes and enhance the organization's effectiveness, it is hardly used for building employee engagement and satisfaction. As

organizations further invest in HR technologies, they must integrate technologies within the scope of HR best practices and implement them to improve office experience, not supplant it.

The study also highlights the need to balance technology and human interaction. Although organizations are investing in technologies to assist human resources operations, they must keep the focus on personal employee experiences and human factors in HR. Human resources technology should support practices focusing on people, recognition, and career growth.

While HR technology holds promise, this study underscores the importance of additional research to identify obstacles to adoption, especially in FinTech. Factors like employee resistance, inadequate training, and organizational inertia might limit the widespread adoption of HR technology. Further studies should investigate these challenges, seeking ways to overcome them and maximize the adoption and use of technology in HR management.

To conclude, FinTech HRs will always have room for improvement in building solid HR practices, especially in LARGe HRM, while ensuring a human-centric focus. With the apparent evolution of HR technology, its potential for substantial mediation of these relationships will only tighten, emphasizing the need for organizations to remain technologically adept and strategically aligned. Financial institutions can develop a more engaged, satisfied, and high-performance-driven workforce, ensuring organizational

goals are achieved, and employee well-being becomes a priority in an ever-competitive and dynamic industry.

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