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Virtual Human Resource Management and AI in Supporting IT Entrepreneurship and Innovation: A Bibliometric Analysis

Anandha Bapu¹, Dr. P. Thirumoorthi²

¹Ph.D Research Scholar, Junior Research Fellow (UGC), Department of Management Studies, Periyar University.

²Professor and Research Supervisor, Department of Management Studies, Periyar University.

Abstract

The expanding realm of entrepreneurship necessitates effective management strategies to navigate the challenges encountered by new ventures.

VHRM entails the supervision and coordination of geographically dispersed employees, often leveraging technology-driven tools for communication and collaboration. By adopting VHRM practices, entrepreneurs can potentially access a wider talent pool, reduce overhead costs, and foster a moderate to completely flexible work environment.

AI has become a transformative force in numerous areas and entrepreneurship is no exception. It equips entrepreneurs with novel tools and solutions to optimize operations, facilitate data-driven decision-making and aids in fostering key entrepreneurial competencies, such as innovation, resilience, and agility, within the organization.

The research paper employs bibliometric analysis on 228 articles from Scopus and Web of Science database. This approach provides a wide understanding of the interplay between VHRM practices, AI concepts and Entrepreneurship. This research paper holds significant implications for entrepreneurs, virtual employees, and HRM scholars.

Keywords: Artificial Intelligence, Emerging AI Trends, Entrepreneurship, Innovation, Remote work, Technology.

1. Introduction

The world of entrepreneurship is a thrilling yet demanding landscape. Aspiring business owners shoulder a multitude of responsibilities, from honing groundbreaking ideas to navigating the intricacies of HR, marketing and finance. Fortunately, the tides are turning in favor with the emergence of artificial intelligence (AI) and virtual human resource management (VHRM) tools are empowering entrepreneurs to streamline operations, optimize workflows, and unlock new avenues for growth.

In the realm of ideation, AI acts as a potent brainstorming partner. By analyzing vast datasets of consumer behavior, market trends, and competitor insights, AI can unveil hidden opportunities and validate the viability of business concepts. This allows entrepreneurs to move beyond gut instinct and make data-driven decisions when venturing into uncharted territory.



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Al's analytical prowess extends to financial management as well. By meticulously scrutinizing financial data, Al can identify spending patterns, predict future trends, and offer valuable insights for budgeting and forecasting. This empowers entrepreneurs to make informed financial decisions and allocate resources strategically.

The Virtual Workforce: A Scalable and Cost-Effective Solution

The concept of a physical office space is no longer a prerequisite for success in today's entrepreneurial landscape. Virtual human resource management platforms allow entrepreneurs to tap into a global talent pool, assembling a remote team with diverse expertise. This eliminates geographical limitations and opens doors to highly skilled virtual assistants, freelancers, or even full-time employees who perfectly complement the entrepreneur's vision.

The benefits of a virtual workforce extend beyond talent acquisition. Overhead costs such as the traditional office setup rent, utilities, and equipment expenses, are significantly reduced with a virtual team. This translates to increased financial flexibility for entrepreneurs, allowing them to invest their resources more strategically in core business functions.

Furthermore, virtual teams offer exceptional scalability. As the business grows and demands evolve, the team can be easily scaled up or down, ensuring optimal resource allocation and cost-effectiveness. This flexibility is a boon for entrepreneurs navigating the initial stages of growth, prompting them to adapt their workforce to cater the dynamic needs and wants of their venture.

The Synergy of AI and Virtual Teams

The true strength and the edge over competitors can be obtained in the synergy between AI and virtual human resource management. AI-powered project management tools helps streamline collaboration, coordination and task delegation within virtual teams, keeping everyone on track and productive. Additionally, AI-powered virtual assistants can handle basic HR tasks like scheduling and performance tracking, freeing up the entrepreneur's time for core people management and team motivation.

The marriage of AI and virtual teams fosters data-driven decision making. Insights gleaned from AI analysis can be combined with the expertise of virtual team members to make informed choices regarding marketing campaigns, product development, and resource allocation. This collaborative approach leads to a highly holistic and well-rounded decision-making process.

The Human Touch: A Vital Ingredient

AI and virtual human resource management can revolutionize the entrepreneurial landscape. By harnessing the power of these tools, entrepreneurs can unlock a world of possibilities, optimize workflows, and navigate the path to success with greater efficiency and agility. Remember, the essential factor is achieving equilibrium between technological innovation and the indispensable human touch. By embracing this synergy, entrepreneurs can cultivate a thriving virtual workforce and propel their ventures towards achieving remarkable feats.

The entrepreneurial journey is exhilarating yet demanding. From crafting innovative ideas to juggling marketing, finance, and team management, solopreneurs and small business owners wear many hats. Thankfully, the landscape is shifting with the emergence and rise of Artificial Intelligence (AI) and Virtual Human Resource Management (VHRM) catering to the digitally oriented workforce. These potent tools empower entrepreneurs to enhance operations, refine workflows, and rediscover new avenues for growth.

AI acts as a strategic brainstorming partner, strategic collaborator, analyzing vast datasets of employee behavior, market dynamics, and complex business insights. This data based approach and empirical



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methodology assists entrepreneurs to move beyond intuition and validate business concepts. Imagine AI uncovering a hidden niche market perfectly suited for your product or service! Necessity is the mother of all inventions.

But AI's value extends beyond ideation. Repetitive tasks that often bog down an entrepreneur's schedule can be automated with AI-powered tools. Marketing campaigns, social media engagement, and even customer service interactions can be significantly enhanced. Chatbots offer round-the-clock assistance, customize conversations, and address fundamental inquiries, allowing you to concentrate on key endeavors.

AI's analytical prowess extends to financial management as well. By meticulously analyzing financial data, AI can identify spending patterns, predict future trends, and offer valuable insights for budgeting and forecasting. This empowers you to make informed financial decisions and allocate resources strategically. AI can predict a potential cash flow crunch, allowing you to take proactive measures.

While AI and virtual human resource management offer a plethora of advantages, it's crucial to remember that they are tools, not replacements. The human element remains irreplaceable in fostering a robust corporate culture, delivering motivational leadership, and driving innovation within a virtual team. Entrepreneurs must leverage their interpersonal skills to build solid relationships with virtual team members, promoting a feeling of community and collective purpose despite geographical distances.

1.1 Objectives of the study

- Identify and examine key emerging trends in AI and Virtual Human Resource Management that are shaping the entrepreneurial landscape from Scopus and WOS publications.
- Derive the thematic structure with co-occurrence analysis of keywords and bring out research hotspots illustrating AI concepts that are particularly relevant to Virtual Human Resource Management in supporting entrepreneurs.
- Emphasize on systematic literature associated with significant areas of AI and Virtual Human Resource Management for the future trajectory of entrepreneurs.

1.2 Scope of the study

- This study analyses knowledge on advancements in AI, and virtual management practices and their combined potential impact on entrepreneurship.
- As this study will involve reviewing of past, present and trending topics on AI and Virtual Human Resource Management, it provides the opportunity to better understand how it can be leveraged to streamline operations, manage employee in virtual mode, enhance employee experiences, develop innovation, and suggests on how to gain a competitive edge in the future.
- As this study explores the current trends and developments through bibliometric methods by
 exporting the suitable records of the publications on the topic, this helps in understanding the need
 for continuous adaptation in a rapidly evolving technological landscape among all stakeholders in
 entrepreneurship.

2. Literature Background

The intersection of Virtual Human Resource Management (VHRM) and Artificial Intelligence (AI) presents a dynamic landscape for Entrepreneurship to rife with opportunity. This paper reviews available literature to explore emerging trends in VHRM and AI applications relevant to entrepreneurs, highlighting key areas of growth and potential challenges.



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AI possesses the capacity to be a pivotal tool for creating, capturing, and delivering value. Research shows that creating and delivering value is the main way that AI affects the world through the business model. Most of the companies use both the value generation and proposition channels. The other companies depend on value creation as their main channel. AI takes up multiple role in shaping a business model, playing out as the accelerators, auto bots, effective monitors, predictors and thus they all work together to make AI have an effect on the environment. This makes them the super tool which every company desires to employ in their daily operations by combining the value proposition with the channels for creating and delivering value. Organizer, Balancer, Optimizer, Forecaster, Predictor and Stability provider, on the other hand, mostly use the value generation channel to have the significant positive effect on the environment (Jorzik et al., 2024).

Innovative educational approach using AI that emphasizes business ideation while prioritizing the development of systems thinking is advocated. Study indicates that fostering systematic approach in the development of socially and environmentally sustainable business concepts is effectively achieved through an approach to project-based learning centered on innovation education and entrepreneurship. This method bolstered by authentic business idea development resources and processes, empowered students to explore various systems and their components while engaging with their creativity. The ideation and materializing a technological system and making it lie within larger systems and ecosystems; placing the value generation for diverse stakeholders within these systems; they identified multiple alliances and partnerships for collective efforts related to their business ideas; and they made key observations of the existing services and products, connecting them to their own innovations. They were capable of analyzing the internal mechanisms of a technological system, its interactions and effects on natural environment, as well as its relationships with the current business ecosystem (Kinnula et al., 2024).

The application of AI in production, albeit significantly differing among industries, was identified in every economic sector and was associated with rising technologies like cloud computing and robotics. In dynamic young enterprises, the utilization of AI was more prevalent among owners who were better educated, more experienced, and younger, particularly those driven by the desire to introduce innovative concepts to the market or assist the community. The use of AI was more prevalent in the organizations who don't want to get lost in the technological race and is prominent in businesses exhibiting characteristics of high growth aspiring entrepreneurship, such as venture capital investment, recent innovations in products and processes, and growth-focused company strategies. The first adoption of AI was markedly uneven, with a select group of "superstar" cities and growing hubs spearheading the integration of AI by startup (McElheran et al., 2024).

In the swiftly changing landscape of entrepreneurship, the usage of artificial intelligence (AI) tools, such as Chats bots like ChatGPT, voice assistants like Alexa, Cortana and Siri which gained significant importance among the masses. Nonetheless, There is a lack of comprehension that persists concerning the matters linking ChatGPT utilization in entrepreneurship and individuals' use of intellectual career trajectories in the digital landscape of entrepreneurship. Research indicates that the adoption of ChatGPT positively influences digital entrepreneurial optimism and goals. Furthermore, digital entrepreneurial knowledge immensely mediates the influence of ChatGPT usage in entrepreneurship. Moreover, technological stress and lack of training acts as a substantial negative influencer, affecting the influence of ChatGPT or other similar generative AI adoption in entrepreneurship on both digital entrepreneurial optimism and intentions (Bui & Duong, 2024).



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AI in service marketing has garnered profound attraction and has influence the marketing tactics resulting in better economic condition. The customized, curated, automated, predictive analytics offered by generative AI and Chatbots has significantly improved customer perception and brand preference, thus leading to higher sales and profits. The marketing process being automated improves the operational efficiency and at large promote the corporate growth. The predictive analysis and the generative capabilities of AI will lead an organization in making insightful judgements pertaining to their marketing strategy, especially in a diverse market like India. AI chatbots will improve customer satisfaction and loyalty, fostering a favorable brand equity. There is a constant fear over AI replacing and displacing humas in repetitive jobs. This fear tends to get increased in the due course when AI outperforms humans in multi-dimensional aspects. The much-widened usage of AI driven service marketing can facilitate the incorporation of a tech-oriented ecosystem in India. This helps attracting investments, promoting businesses, adopting and nurturing new ideas and keep innovating (R. et al., 2024).

Human Resources professionals must formulate policies and activities that support the professional advancement and welfare of employees, irrespective of their place of employment. "This involves the implementation of virtual education programs, mentorship and leadership initiatives, and performance evaluation methods that surpass geographical constraints. Furthermore, compliance with national and international labor rules complicates human resource management in global health companies. Effectively navigating the legal landscape and ensuring compliance with regulatory frameworks necessitates a strategic strategy and ongoing vigilance". Human Resources encounters numerous obstacles in global health firms, including promoting diversity and inclusion and managing the intricacies of a geographically distributed workforce. Effectively tackling these difficulties requires a smart and adaptable HR methodology, utilizing technology, cultural awareness, and new approaches to establish a cohesive and flourishing global health workforce (Olatoye et al., 2024).

A substantial positive correlation exists between remote work and team effectiveness, including enhancements in Information management procedures in remote working environments. Knowledge management practices encompass systematic actions for collection, arrangement, dissemination, and utilization of knowledge resources. The significance of proficient knowledge management procedures is evident in distant environments, chiefly via enhanced team efficiency and production. The results are considered significant underscoring the necessity of good remote and virtual teamwork and collaboration in knowledge management (Abousweilem, 2024).

The research results demonstrate that supervisor support reduces employees' propensity to resign from their positions. Findings indicate that workplace engagement serves as an intermediary in the relationship between managerial support and employee engagement. Findings indicate that older employees exhibit more work engagement, while those with extended tenure perceive diminished supervisor support (Mosquera & Branco, 2024).

To put Total Quality Management (TQM) into the place in the company, standard process tools like desktop procedures, expert teams, service agreements were necessary. For these things to happen, the right kind of leadership is needed. But outsiders can also have a big impact, acting as drivers for small businesses to adopt and use management principles. Critical success factors such as training, employee participations and right project management tools are necessary for TQM to work in virtual companies that want to follow best practices in the industry (Norberto Carneiro et al., 2024).



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The determinants influencing the perception, domain knowledge, technological acquaintance, system excellence, training and help, interaction convenience, and humanity are the determinants affecting the pre-perception and understanding phases of adoption. These factors encourage entrepreneurs to engage more with the technology, so shaping views of its usage and enjoyment, simplicity of use, and perceived enjoyment—three elements that subsequently influence feelings regarding the technology and ultimately effect shifting intentions. Control variables such as demography and educational achievement exert no significant influence on the intention to move to alternatives of Generative AI technology. The experience component in corporate operations proves to be essential. The findings possess practical significance for entrepreneurs and many stakeholders within the innovation ecosystem, such as technology suppliers, libraries, and policymakers (Gupta, 2024).

The swift advancement of artificial intelligence has led to a growing demand for professionals possessing pertinent technical and theoretical expertise, which is crucial for fostering scientific and technological progress as well as societal development (Lin et al., 2024).

Artificial intelligence refers to the monitoring of machines or software, rather than the cognitive abilities of humans or other animals. It is a domain of study in mainframe science that cultivates and obtains expertise in intelligent machines. These devices may be referred to as AIs. These are extensively utilized across industry, government, and scientific fields. It is the stimulation of human intelligence by machines, specifically facilitated by machines. These utilize computers and machinery to replicate the problem-solving and decision-making abilities of the human intellect. This refers to a computer-controlled robot's capacity to execute tasks typically associated with intelligent entities. Artificial intelligence permeates all domains, facilitating activities more efficiently than previously. This is beneficial in the entrepreneurial realm and augmenting all jobs or activities associated with entrepreneurship. Entrepreneurs are diminishing staff demands, curtailing operational expenses, and improving overall efficiency (Wadhwa & Bansal, 2024).

Research indicates that a leader who cultivates an atmosphere of trust and enhances employee wellbeing by offering support and facilitating work-life balance can significantly elevate job satisfaction, yielding psychological benefits that extend beyond the workplace. The study demonstrates the crucial importance of trust in leadership in enhancing job happiness (Al Dilby & Farmanesh, 2023).

The primary problems that managers must address in designing and modifying Managerial Control systems during the fulfilment of remote work is given more emphasis. Managers must contend with the diminished capacity to utilize cultural controls. Managers must intervene by implementing or eliminating traditional and informal controls while managing the interactions and conflicts involving these systems (Noto et al., 2023).

Organizational measures and team-level actions, such as work tools, finance aid, and wellness initiatives, can improve work-life balance and productivity in a mixed environment. Unhelpful actions include insufficient technology, ineffective interactions, lack of training, poor leadership, and inactive associates. They face unclear boundaries and an inability to detach from work, similar to the remote working situation, while attempting to sustain progress among other workers (Teng-Calleja et al., 2023) Nowadays, most companies use some form of flexible work schedule. Employees' social learning suffers, management equity takes a hit, and company culture takes a nosedive when face to face interactions are nonexistent. In order to stay ahead of the competition and hold on talented employees, Management need to rethink their current employee development strategies and incorporate new ones that are in line with the characteristics of flexible work arrangements (Seo & Kim, 2023).



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In a virtual work environment, diffuse social distance interacts with the targeted social distance caused by dissimilarity, subsequently predicting the sensation of inclusion. We propose that dispersed social distance exacerbates the adverse effects of outsider status on socio-emotional group-oriented inclusion. Nonetheless, for the other characteristics of inclusivity, we anticipate that diffuse social distance may exert opposing effects, resulting in dissimilar individuals with outsider status experiencing greater inclusion in the virtual workplace than in the physical workplace. It is essential to acknowledge that the various characteristics of inclusion are influenced differently in the virtual setting for future research (Lauring & Jonasson, 2023).

Digital entrepreneurship should look into how core and outlying members of a new technology field shape the field's social and symbolic borders. This is an important but understudied topic. This is a big problem because both types of people bring different skills to the field and help it grow. It is found that core members in the new field of AI were better at getting investors to give money than outlying members. The author also finds that the size of the team of founders, the number of prominent investors, the number of patents, and the approval of the CEO were all linked to funding in a good way (Truong, 2023).

Organizations must not only permit their team members to participate in virtual or remote working but also cultivate an environment that facilitates the adoption of virtual practices, especially for those with diminished self-confidence in this domain. Organizations must provide technical training, suitable technology, and effective communication to enhance impressions of the virtual work environment. The promotion of virtual/remote work should involve promoted by motivating leaders and employees, alongside company norms that recognize these working arrangements as beneficial for workers career advancement (Adamovic et al., 2022).

The study examines the views of virtual and in-house employees in the informational technology sector, emphasizing the notion of collective responsibility for managing their careers and the vital functioning of line management in this context. It is demonstrated that virtuality does not significantly impact employees' stated proactive career-influencing initiatives (Gazit et al., 2021).

It is been identified that certain team actions coincided and began to analyze their intersection. To enhance alignment and task planning, huddle engagements occasionally coincided with process interactions. Relationship interactions and Task interactions coincided with content exchanges as managers and workers engaged spontaneously while collaborating on tasks. Teams frequently expressed irritation when process and content interactions transpired concurrently (Whillans et al., 2021).

Occupational health prevention must be prioritized strategically and integrated into modifications of working conditions to guarantee employee satisfaction and well-being. Attention must be directed towards the operational efficacy of ICT and the ergonomic design setting of equipment in workplaces. Periodic and adequate personal team gatherings ought to be strategically organized to ensure financial and organizational viability in remote teams to promote effective and trustworthy collaboration, while enhancing social bonds and team cohesiveness. Advanced training programs tailored specially for leadership, emphasizing health specific and holistic wellbeing-oriented communication as well as boundary and threshold limit management in virtual teams can provide valuable support for modern leaders. Proposed hybrid learning methods of training about health focused self and employee leadership aim to augment knowledge regarding preventive health maintenance among all team members particularly involved in virtual working (Efimov et al., 2020).



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The decentralization of conventional HR functions is a crucial aspect of this idea, as it appears to assign HR responsibilities to line managers. In other words, e-HRM appears to assign Midlevel managers the crucial responsibility of managing HR, hence allowing HR professionals to focus more on strategic organizational planning. Furthermore, timely and precise data provided through information technology will assist in formulating effective plans for enhancing customer service. These variables will promote organizational effectiveness, hence facilitating the achievement of organizational objectives. To address these challenges, the current study recommends that organizational management develop a robust e-HRM strategy, with a specific emphasis on the organization's direction and the means to achieve it. A superior e-HRM approach leads to more effective implementation. To surmount technological obstacles, management must ensure that the requisite infrastructure for implementing e-HRM is present within the organization; if absent, immediate measures should be undertaken to establish the necessary provisions in advance. Furthermore, management must guarantee the accessibility of proficient personnel to implement e-HRM technologies and approaches effectively (Majeed, 2020).

Virtual leaders placed significant importance on health and shown substantial understanding in health-oriented self- and staff leadership. Regular physical activity and establishing boundaries were specifically identified as health-focused leadership practices. The predominant stakeholders characterized communication, trust-building, boundary management assistance, and the execution of personal interactions as health and wellness-oriented employee leadership practices. Besides social, technological, and human variables, organizational issues were predominantly cited as influential in this context. To achieve a more thorough understanding of health-oriented leadership, it is imperative to include virtual team members in subsequent research projects (Efimov et al., 2020).

Employees who receive enhanced trust, cooperation, encouragement, inventiveness, and friendliness from the organization generally have a heightened sense of well-being, which subsequently stimulates their willingness to disseminate their expertise. Employees with a higher degree of well-being are likely to disclose both their tacit and explicit knowledge compared to those with a diminished sense of well-being. They appear more inclined to embrace behaviors that assist others. Top managers must cultivate a congenial atmosphere of warmth, support, and trust within the virtual organization to enhance employee satisfaction, hence fostering improved knowledge-sharing behavior. This is due to the fact that each category of emotion appears to serve a distinct purpose (Chumg et al., 2016).

As firms increasingly globalize their operations, it will become apparent that the majority lack the resources to adequately staff operations worldwide. Consequently, management will evaluate organizational alternatives that alleviate the strain on a reduced pool of global managers. Companies are considering the global virtual team (GVT) as one of their choices. These intricate teams are regarded as a bridging device that enable multinational firms to expand swiftly without overburdening existing worldwide managerial capabilities. This research employs a theoretical framework grounded in competency theory to elucidate the genesis and functioning of GVTs. The paper examines four fundamental capitals—human, social, political, and cross-cultural—essential for the efficacy of Global Virtual Teams (GVT). The study also establishes a methodology for assessing the capital stock inside a GVT team. (Harvey et al., 2005).

It is asserted that striking the proper balance of scientific, technological, and social abilities is ensured by the use of cognitive interviewing/ screening techniques and modeling during the selection process, as well as the use of expert members of prevailing virtual/remote team members to aid in the selection of fresh teammates. Building support and assisting the newly chosen virtual team member in socializing are



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two further advantages of the panel approach. According to authors, applying a thorough "balanced scorecard" technique yields useful quantitative information about team performance. Analyzing group communication archives facilitates the evaluation of subjective elements such as creativity, initiative, and problem-solving abilities (Kirkman et al., 2002).

3. Research Methodology

Bibliometric Analysis is performed and data is sourced from Scopus and Web of Science. Science mapping is done to provide the evidence for the impact of Virtual human resource management and Artificial Intelligence on Entrepreneurship.

4. Research Software and Analysis

For the extraction of data, it is significant to use appropriate source of data, so for this study Scopus and Web of Science database were used with two software(s) for bibliometrics, which are VOSviewer and Biblioshiny. After applying appropriate filters, 228 articles were selected for this analysis. The bibliometrix package offers a collection of tools for quantitative analysis in bibliometrics and scientometrics. Bibliometrics is the quantitative examination and statistical evaluation of publications, including journal articles and their citation frequencies. Quantitative assessment of publishing and citation metrics is now employed across nearly all scientific disciplines to measure development, maturity, prominent authors, conceptual and intellectual frameworks, and trends within a scientific community (Aria & Cuccurullo, 2017). These software helped convert the data file into graphs, network and other pictorial representations to infer trends over time. It helps to carry out analyses of the scientific mapping of the topic. The keywords used to search were "Artificial Intelligence" and "Virtual Human Resource Management" with "Entrepreneurship" in the search field.

It allows researchers to perform bibliometric analysis without requiring extensive coding or complex methods of interpretation. It offers visualizations and indicators for research evaluation. It supports data from databases like Web of Science, Scopus, Dimensions and OpenAlex. It provides graphical user interface for easy navigation. It helps in understand the publication trends, Collaboration networks, and keyword co-occurrence graphs. It allows for analyzing trends, identifying influential authors, documents and exploring relationship between research topics.

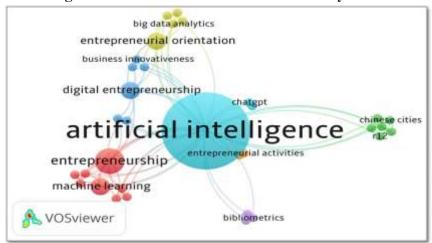


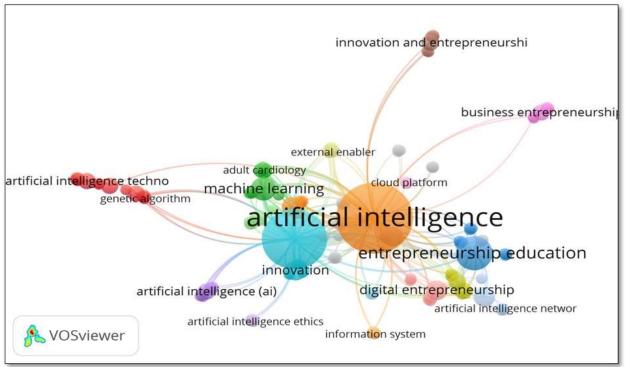
Figure 1: Web of Science – Network of Keywords

Source: VOSviewer Software



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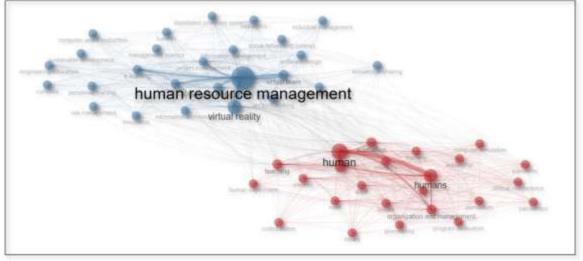
Figure 2: Scopus – Network of Keywords



Source: VOSviewer Software

The above network diagram indicates that the keywords used in the article by the author are Artificial Intelligence and Entrepreneurship with big circles and many more which are in small circle directing those other keywords are directly as well as indirectly connected with each other for evaluating the effect of AI in Entrepreneurship. AI tools like generative design and AI-machine learning are making sophisticated problem-solving and ideation accessible to a wider range of entrepreneurs. AI algorithms can analyze vast datasets to identify trends, predict outcomes, and automate tasks, leading to streamlined operations and data-driven decision-making.

Figure 3: Co-Occurrence Network:

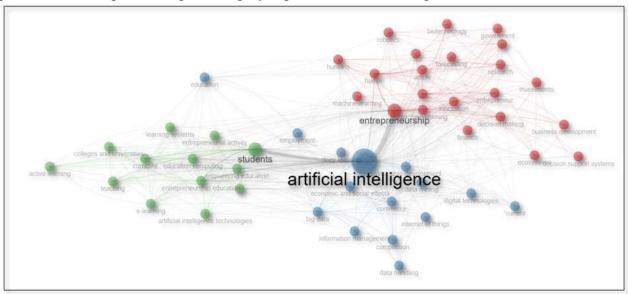


Source: Biblioshiny Software



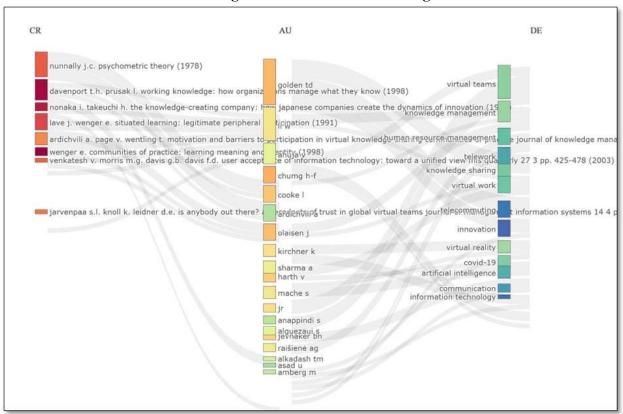
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The Co-occurrence network in Biblioshiny indicate that Artificial Intelligence, Virtual Management, Information Technology, Virtual Corporation, E-learning are connected with many factors which are responsible for entrepreneurship and employee performance in the organization.



Three Field Plot:

Figure 4: Three Field Plot Diagram



Source: Biblioshiny Software



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In the three-filed plot analysis at the left- CR (References) of the articles which is used in this bibliometrics, Middle- AU (Authors) and right- DE (Author Keywords). In the left side in Cited References shows that Nunally J.C and Davenport T.H Prusak are the biggest references of Virtual Management. In the Middle of the Plot, Golden T. D. is the major author followed by Li.W. and the right side are the major key words used in the articles used.

Artificial intelligence significantly influences the decision-making processes of startups and incubators. Successful entrepreneurs exhibit confidence without arrogance, communicate rapidly yet clearly, and have emotional intelligence without excessive sentimentality. The research presents an innovative technique for analyzing and interpreting video pitches from business startups and incubators. Entrepreneurs that leverage this expertise to effectively promote themselves and their investment prospects are more probable to excel in raising funds and investments, while investors who utilize AI in their decision-making processes are more inclined to identify the most promising incubators. This work significantly contributes by connecting theoretical research with the practical application of AI in entrepreneurial financing. It provides a novel perspective and a pragmatic framework for entrepreneurs and investors to navigate the fundraising process, signifying a significant progression in this domain (Giuggioli et al., 2024).

5. Conclusion

The pandemic has irrevocably altered the dynamics and the nature of traditional work, giving way to virtual or remote modes of work within entire employment system where all it was found deemed to be fit for implementing. Despite challenges faced during the crisis, the lockdown scenario also offered an opportunity for novel adaptations and a chance for reassessment of conventional labor practices. By acknowledging and integrating the obtained insights, organizations need to continuously evolve by learning the digital trends and improve their infrastructure and its framework to be resilient to cultivate a future that promotes employee well-being through virtual work. The virtual work has taken many shapes in the post covid situation. It paved way for Flexible working, Hybrid working, Moonlighting and what not, even silent quitting was a result of the effect of digital disruption. The paradigm shift in working modes necessitates the need for better and efficient Virtual Human Resource Management (VHRM) practices across organizations for their better survival. The history of managing people underscores the prime factor of timely interventions in employee engagement and wellbeing within any workplace environment.

Entrepreneurial ecosystem is a conglomeration of multiple elements that affect the various forms of AI innovation. It is not just limited to particular AI application. It extends beyond it and its implications in managing financial, operational, human resource aspects. Policy makers need to establish dynamic and robust ecosystems that facilitate growth of the business landscape and at the same time they must address the conflicts related to the interests of human capital in employing AI in workplace (Roundy & Asllani, 2024).

The study demonstrated that VHRM and AI are complex facilitators of economic and IT advancement. This literature study establishes a foundation for additional investigation, emphasizing the significance of comprehending and utilizing virtual human resource management solutions in the quest for India's constructive economy. Despite persistent challenges, the experience afforded companies the opportunity to adapt, innovate, and develop effective ways and strategies for personnel management in a virtual work ecosystem.



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As we approach a new era driven by artificial intelligence (AI), the entrepreneurial landscape is filled with both difficulties and opportunity. This paper has explored a diverse range of emerging trends and AI applications, each holding the potential to revolutionize industries, create groundbreaking solutions, and empower a new generation of business leaders.

The world of AI-powered entrepreneurship is overwhelmed with possibilities. As we move forward, remember that the true differentiator lies not just in the technology itself, but in the vision, creativity, and resilience of the entrepreneurs who wield it. Let us confront the problems, capitalize on the opportunities, and cultivate a future where AI empowers humans and promotes a more fair, sustainable, and prosperous society. The management of Generations Z, a substantial segment of the workforce, is notably hard. They engage in activities in a manner distinct from millennials. They participate in moonlighting, flexible work, hybrid, and do silent quitting etc. Training programs should be offered to assist remote workers in establishing a suitable, safe and secure workstation, recognizing and comprehending risk factors and ergonomic solutions, and identifying and reporting work-related health issues and symptoms of detrimental practices or incidents. Clear protocols for reporting cyber incidents, job-related illnesses, and injuries must be established, allowing remote workers to submit reports securely and without fear of retaliation. It is suggested to develop an agenda to improve the efficacy of virtual workgroups, focusing on "Netiquette" (the conventions of online politeness) to foster positive relationships among colleagues, hence facilitating team tasks more efficiently. A standardized array of employer-supplied communication and technology solutions will facilitate efficient connectivity for remote workers with their colleagues. Thus, AI and the Virtual Workforce is supercharging the Entrepreneurial Journey in numerous dimensions.

6. References

- 1. Abousweilem, F. (2024). Driving remote team success through knowledge management practices in the Jordanian high-tech industry. *Problems and Perspectives in Management*, 22, 708–720. https://doi.org/10.21511/ppm.22(2).2024.55
- 2. Adamovic, M., Gahan, P., Olsen, J., Gulyas, A., Shallcross, D., & Mendoza, A. (2022). Exploring the adoption of virtual work: The role of virtual work self-efficacy and virtual work climate. *INTERNATIONAL JOURNAL OF HUMAN RESOURCE MANAGEMENT*, 33(17), 3492–3525. https://doi.org/10.1080/09585192.2021.1913623
- 3. Al Dilby, H. K., & Farmanesh, P. (2023). Exploring the impact of virtual leadership on job satisfaction in the post-COVID-19 era: The mediating role of work–life balance and trust in leaders. *Frontiers in Psychology*, 14. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2023.994539
- 4. Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. https://doi.org/10.1016/j.joi.2017.08.007
- 5. Bui, H. N., & Duong, C. D. (2024). ChatGPT adoption in entrepreneurship and digital entrepreneurial intention: A moderated mediation model of technostress and digital entrepreneurial self-efficacy. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 19(2), Article 2. https://doi.org/10.24136/eq.3074
- 6. Chumg, H.-F., Seaton, J., Cooke, L., & Ding, W.-Y. (2016). Factors affecting employees' knowledge-sharing behaviour in the virtual organisation from the perspectives of well-being and



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- organisational behaviour. *Computers in Human Behavior*, 64, 432–448. https://doi.org/10.1016/j.chb.2016.07.011
- 7. Efimov, I., Harth, V., & Mache, S. (2020). Health-Oriented Self- and Employee Leadership in Virtual Teams: A Qualitative Study with Virtual Leaders. *International Journal of Environmental Research and Public Health*, 17(18), Article 18. https://doi.org/10.3390/ijerph17186519
- 8. Gazit, L., Zaidman, N., & Van Dijk, D. (2021). Career self-management perceptions reflected in the psychological contract of virtual employees: A qualitative and quantitative analysis. *Career Development International*, 26(6), 786–805. https://doi.org/10.1108/CDI-12-2020-0334
- 9. Giuggioli, G., Pellegrini, M. M., & Giannone, G. (2024). Artificial intelligence as an enabler for entrepreneurial finance: A practical guide to AI-driven video pitch evaluation for entrepreneurs and investors. *Management Decision*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/MD-10-2023-1926
- 10. Gupta, V. (2024). An Empirical Evaluation of a Generative Artificial Intelligence Technology Adoption Model from Entrepreneurs' Perspectives. *Systems*, *12*(3), Article 3. https://doi.org/10.3390/systems12030103
- 11. Harvey, M., Novicevic, M. M., & Garrison, G. (2005). Global virtual teams: A human resource capital architecture. *INTERNATIONAL JOURNAL OF HUMAN RESOURCE MANAGEMENT*, *16*(9), 1583–1599. https://doi.org/10.1080/09585190500239119
- 12. Jorzik, P., Antonio, J. L., Kanbach, D. K., Kallmuenzer, A., & Kraus, S. (2024). Sowing the seeds for sustainability: A business model innovation perspective on artificial intelligence in green technology startups. *Technological Forecasting and Social Change*, 208, 123653. https://doi.org/10.1016/j.techfore.2024.123653
- 13. Kinnula, M., Durall Gazulla, E., Hirvonen, N., Malmberg, J., & Haukipuro, L. (2024). Nurturing systems thinking among young people by developing business ideas on sustainable AI. *International Journal of Child-Computer Interaction*, 40, 100656. https://doi.org/10.1016/j.ijcci.2024.100656
- 14. Kirkman, B. L., Rosen, B., Gibson, C. B., Tesluk, P. E., & McPherson, S. O. (2002). Five challenges to virtual team success: Lessons from Sabre, Inc. *ACADEMY OF MANAGEMENT EXECUTIVE*, *16*(3), 67–79. https://doi.org/10.5465/AME.2002.8540322
- 15. Lauring, J., & Jonasson, C. (2023). How is work group inclusiveness influenced by working virtually? *Human Resource Management Review*, 33(2), 100930. https://doi.org/10.1016/j.hrmr.2022.100930
- 16. Lin, J., Abdrasulov, S. M., Yuhao, Z., & Shaiyldaeva, A. (2024). The Impact of Artificial Intelligence on Sustainable Building Technologies. *E3S Web of Conferences*, *535*, 05009. https://doi.org/10.1051/e3sconf/202453505009
- 17. Majeed, S. (2020). *Electronic Human Resource Management: Need of the Hour*. https://www.academia.edu/44248010/Electronic_Human_Resource_Management_Need_of_the_Hour
- 18. McElheran, K., Li, J. F., Brynjolfsson, E., Kroff, Z., Dinlersoz, E., Foster, L., & Zolas, N. (2024). AI adoption in America: Who, what, and where. *Journal of Economics & Management Strategy*, *33*(2), 375–415. https://doi.org/10.1111/jems.12576
- 19. Mosquera, P., & Branco, M. (2024). Can supervisors dwindle turnover in virtual teams? *International Journal of Organizational Analysis*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/IJOA-03-2024-4330



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- 20. Norberto Carneiro, W., Mendonça Neto, O. R. de, Afonso, P., Oyadomari, J. C. T., & Dultra-de-Lima, R. G. (2024). Implementing total quality management in a virtual organisation: Thoughts and lessons from an interventionist approach. *Business Process Management Journal*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/BPMJ-11-2023-0876
- 21. Noto, G., Marisca, C., & Barresi, G. (2023). Adapting management control to virtual teams: Evidence from a natural experiment. *Qualitative Research in Accounting & Management*, 20(5), 621–646. https://doi.org/10.1108/QRAM-04-2022-0066
- 22. Olatoye, F. O., Elufioye, O. A., Oladapo, J. O., Nwankwo, E. E., Okoye, C. C., Olatoye, F. O., Elufioye, O. A., Oladapo, J. O., Nwankwo, E. E., & Okoye, C. C. (2024). Human resources challenges in global health organizations: Managing a diverse and dispersed workforce. *International Journal of Science and Research Archive*, 11(1), Article 1. https://doi.org/10.30574/ijsra.2024.11.1.0272
- 23. R., M., Soju, A., & B., S. (2024). *Artificial Intelligence and Service Marketing Innovation* (pp. 150–172). https://doi.org/10.4018/979-8-3693-2153-9.ch007
- 24. Roundy, P. T., & Asllani, A. (2024). Understanding AI innovation contexts: A review and content analysis of artificial intelligence and entrepreneurial ecosystems research. *Industrial Management & Data Systems*, 124(7), 2333–2363. https://doi.org/10.1108/IMDS-08-2023-0551
- 25. Seo, J. (Jamie), & Kim, E. E. K. (2023). Flexible work systems: Preparing employees for the new normal. *Journal of Business Strategy*, 45(2), 133–141. https://doi.org/10.1108/JBS-10-2022-0175
- 26. Teng-Calleja, M., Mactal, Ma. T. de G., & Caringal-Go, J. F. (2023). Examining employee experiences of hybrid work: An ecological approach. *Personnel Review*, *53*(6), 1408–1424. https://doi.org/10.1108/PR-03-2023-0222
- 27. Truong, Y. (2023). Startup category membership and boundary expansion in the field of artificial intelligence. *International Journal of Entrepreneurial Behavior & Research*, 30(2/3), 398–420. https://doi.org/10.1108/IJEBR-08-2022-0773
- 28. Wadhwa, R., & Bansal, R. (2024). *Unleashing the Role of Artificial Intelligence on Entrepreneurship*. 364–371. https://doi.org/10.1109/CCICT62777.2024.00066
- 29. Whillans, A., Perlow, L., & Turek, A. (2021). Experimenting during the shift to virtual team work: Learnings from how teams adapted their activities during the COVID-19 pandemic. *INFORMATION AND ORGANIZATION*, 31(1), 100343. https://doi.org/10.1016/j.infoorg.2021.100343