_____

Adaptive Systems Theory Analysis of Remote Working: Exploring Productivity, Work-Life Balance, and Collaborative Dynamics among Employees

[1]Radhika Srinivasa, [2]Aparna T.S

[1] [2]Assoc. Prof, Department of Commerce and Management, ASC Degree College, Rajajinagar, Bengaluru

Abstract
Purpose: The purpose of this paper is to study the impact of Remote Working (RW) on productivity, work-life balance, and collaborative working among employees. This paper examines the literature concerning Remote working in the light of employee contribution to the organisation; also examines the literature on Remote Working has impacted other important aspects of employees' personal and professional life.
Methodology:
The paper adopts the qualitative method of analysing the literature concerning Remote Working and its impact on various professional and personal factors. To examine the same Adaptive Systems Theory will be adopted in the study.
Practical Implications: This study will help businesses to identify Remote Working factors that can negatively and positively influence the productivity of employees and the organisation as a whole.
Originality/Value: The paper will develop a framework that will help organisations understand the impact of RW on individual productivity, work-life balance and collaborative working among employees.
Key Words: Remote Working, Collaborative Working, Work-life balance.

1. Introduction

In addition to the obvious health consequences, the epidemiological emergency that unfolded following the outbreak of the SARS-COV-2 virus had far-reaching social and economic ramifications. One of the most prominent and enduring changes brought about by the pandemic was the widespread adoption of remote work, often necessitated by the need to curb the virus's spread. As the International Labour Organization (ILO) aptly put it, the pandemic initiated an "unprecedented experiment in working from home," and its outcomes are poised to shape the future of work for years to come. Experts across various industries and sectors suggest that the virus has effectively shattered cultural and technological barriers that had previously hindered the widespread acceptance of remote work, thus solidifying its position as a significant component of the post-pandemic working landscape. While significant strides have been made in understanding the benefits and risks associated with this "new normal" of remote work, including its potential impact on the well-being of employees, it's important to recognize that this experience of a "forced" transition to remote work presents a unique opportunity. It is, in essence, a kind of "mega-experiment" in the realm of employment and work arrangements. This experiment offers an unprecedented chance to collect data and insights on a massive scale, which can subsequently be used to inform the development of interventions aimed at enhancing the overall quality of personal and professional life. Such interventions are pivotal not only for organizational success but also for the holistic well-being of employees.

2. Objectives of the Paper:

1. To theoretically draw on Complex Adaptive Model Theory and examine conceptually the underlying factors that govern Remote Working and its impact on Work-life balance and productivity
2. To examine the efficacy of Remote Working, not merely as a short-term arrangement adopted by organizations, but as a fundamental shift in the management process.

3. Review Of Literature

Nagaratna Parameshwar Hegde, Sireesha Vikkurty, Gnyanee Kandukuri Sriya Musunuru Ganapati Krishna Parameshwar Hegde: This research focuses on sentiment analysis using an ensemble approach to understand public sentiment regarding remote work during the pandemic. Employees have expressed varied opinions about the work-from-home culture, and these sentiments are being discussed on social media platforms, especially Twitter. The results of the research suggest that Organizations should consider the changing sentiments when making decisions about their work policies. If employees are expressing more negative sentiments about remote work, organizations might need to reevaluate their work arrangements. This could involve considering options for hybrid workspaces that allow for a combination of remote and in-person work. The research findings underscore the importance of monitoring and responding to changing employee sentiments, particularly regarding remote work. Organizations that take these sentiments into account and make adjustments accordingly are more likely to maintain high levels of productivity and employee satisfaction

Rohit Raj , Vimal Kumar , Nagendra Kumar Sharma , Sumanjeet Singh , Seema Mahlawat , Pratima Verma: This paper aims to understand how remote work (RW) affects firm performance (FP). Researchers chose RW indicators as a critical factor because previous studies in IT companies have shown they help businesses grow. The paper introduces a theoretical framework to understand the interaction between RW indicators and FP. The paper mentions the importance of RW indicators (employee engagement, communication tools usage, and task completion rates), which are specific metrics or factors that can be used to assess the effectiveness of remote work arrangements. Past research, particularly in IT firms, has identified these indicators as valuable for promoting organizational growth. The results suggest that most of the connections between RW indicators and FP are influenced by the RW indicators themselves, which is important for companies implementing remote work.

Bruna Ferrara, Martina Pansini ORCID, Clara De Vincenzi, Ilaria Buonomo ORCID, (2022): This paper aims to summarize the initial assumptions associated with remote working, as well as the opportunities and challenges it presents. The review emphasized that even before the pandemic, remote working had a significant impact on employees' self-perception, their views of the workplace, their health, and their work-life balance However, the results revealed a diverse and complex picture regarding the effects of remote working on employees' well-being and productivity. This paper suggests that by considering the unique aspects of remote working and taking into account individual and organizational factors, organizations can better harness its benefits while mitigating potential risks. This strategic approach to remote working can contribute to its sustainable and effective implementation within the evolving landscape of work.

Kowalski G, Ślebarska K.2,022: This study focuses on understanding how remote work influences managerial effectiveness. the findings of this study suggest that managers who perceive more benefits from remote work tend to be assessed as more effective in various dimensions, including their own performance, team performance, and external cooperation. Moreover, the study reveals differences in how remote work is perceived among managers at different levels, such as lower-level and middle-level management. Those managers who have more direct contact with employees tend to be more aware of the advantages of remote work. Consequently, their perceived benefits are associated with a higher level of reported work effectiveness. In essence, this research highlights the positive impact of remote working

Dania M. Kurdy, et al, 2022: Remote work, also known as telecommuting, refers to the practice of working outside of a traditional office setting, which can include working from one's home or another location separate from the office environment. The concept of remote work has been around for several decades and was not a novel development brought about solely by the COVID-19 pandemic. In fact, during the 1970s, amidst the oil crisis, remote work gained traction as a response to the prevailing circumstances. There are several motivating factors associated with the adoption of remote working (RW). These include the necessity for social distancing, particularly highlighted during the pandemic, the desire to maintain proximity to one's family, and the allure of greater work schedule flexibility. In the context of research on this topic, the authors have employed the Structural Equation Modelling (SEM) technique known as SMART PLS (Partial Least Squares) to analyse their dataset. Their analysis has led to significant findings indicating that various factors such as workload, job satisfaction, work-life balance, and the availability of social support during remote work all have a positive impact on employee productivity. Interestingly, the authors also explored the role of job level as a moderating variable but found that it does not have a discernible influence on employee productivity during remote working scenarios.

_____

Noel Carroll, et al,2020: The research paper is centred around the utilization of the Normalization Process Theory (NPT), which outlines a structured framework comprising three essential stages for the normalization of any novel process. These stages encompass the Implementation stage, the Embedding stage, and the Integration of new technology and organizational innovation stage. The theory elucidates how significant shifts in behaviour can manifest as a result of the introduction of new technology, ultimately leading to the assimilation of these changes into everyday work routines until they become the established norm. In line with the theory, the paper asserts that organizations should embrace technology-driven practices and novel approaches to conducting their operations, thereby normalizing practices such as remote working within their organizational culture.

Ellen Harvey, et al,2022; in their paper applied the Complex Adaptive System Theory to analyse and understand the experiences of social health workers in rural settings. Complex Adaptive System Theory is a framework used to study systems that involve many interacting components, where the behaviour of the system as a whole emerges from the interactions of these components. In this context, the authors have divided the rural health experience into three stages: Client, Organization, and Rural System. Each of these stages likely represents different aspects or components of the overall healthcare system in a rural setting. Client Stage: This stage may focus on the individuals or patients who receive healthcare services in rural areas. It could involve studying their needs, challenges, and experiences when interacting with social health workers. Organization Stage: This stage might pertain to the healthcare organizations and institutions operating in rural areas. It could involve examining how these organizations are structured, how they function, and how they support or hinder the work of social health workers. Rural System Stage: this stage is considered important. It likely involves analysing the broader socio-economic and environmental factors that influence the delivery of healthcare in rural areas. This could encompass issues like infrastructure, community dynamics, government policies, and economic conditions that impact the overall healthcare ecosystem. The emphasis on the Rural System stage suggests that the authors believe that understanding the larger context in which social health workers operate is crucial. It acknowledges that the challenges and opportunities faced by these workers are not just determined by individual clients or specific healthcare organizations but are deeply intertwined with the complexity of the rural environment itself. By applying the Complex Adaptive System Theory to these stages, the authors may aim to explore how various elements within each stage interact and adapt over time, leading to the emergent properties and behaviours observed in rural healthcare systems. This approach can provide a holistic understanding of the challenges and dynamics involved in providing healthcare services in rural areas and potentially inform strategies for improving the social health worker's experiences and the overall healthcare outcomes for rural populations.

Tanya Sammut, et al, 2015, in the paper incorporate three crucial components of Complex Adaptive System Theory (CAS): Adaptive Behaviour, Emergent Behavior, and Cooperative Behavior. These components help in understanding how systems with many interacting elements behave and evolve over time. Adaptive Behavior: Adaptive behaviour is a fundamental concept in CAS, and it involves how individual components of a system respond and adapt to changes in their environment or the behaviour of other components within the system. It is about how entities within the system adjust their strategies or behaviours to maximize their chances of survival or success. The analogy of the forest ecosystem with fast lions and gazelles is a classic example of adaptive behaviour. In this context, fast lions (predators) put selective pressure on gazelles (prey) to become faster over generations, as the fastest gazelles are more likely to survive and reproduce. This illustrates how adaptation occurs in response to environmental pressures. Cooperative Behavior: Cooperative behaviour is about how elements within a system collaborate or work together to achieve common goals or objectives. It is important to understand how interactions among components contribute to the system's overall functioning.

In the context of remote working, cooperative behaviour might involve how employees collaborate effectively despite physical separation. This could include using digital tools and technologies to coordinate tasks, share information, and achieve team goals.

_____

4. Proposed Models
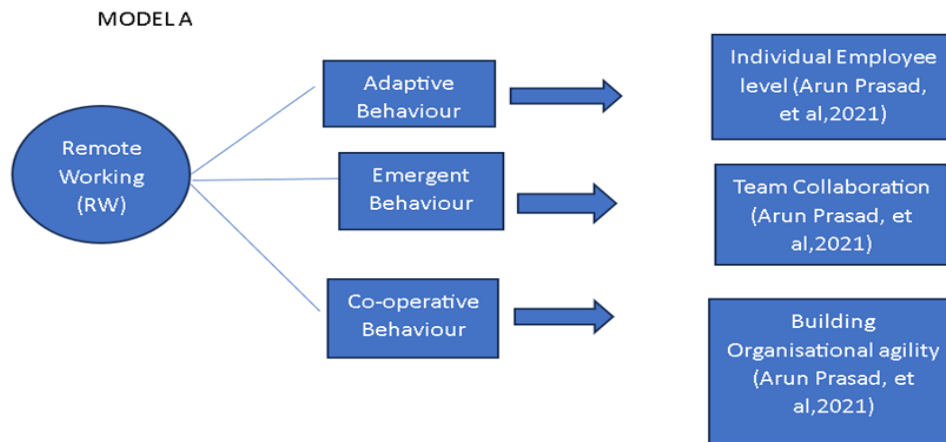
MODEL B: Remote Work Productivity and Complex Adaptive Systems Theory

_____
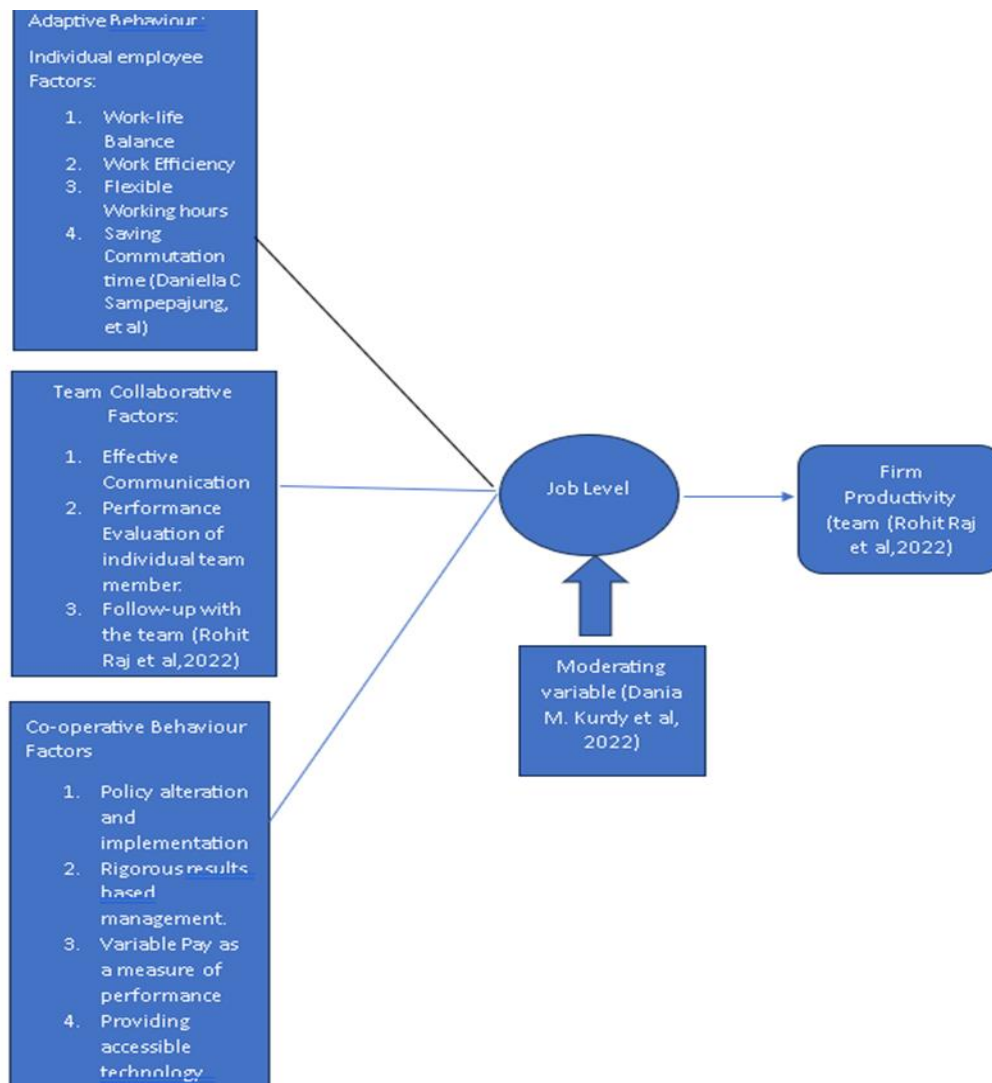
5. Discussion

Minimal research has been undertaken concerning the utilization of the Complex Adaptive System Model within the realm of Remote Working. This paper aimed to examine the efficacy of Remote Working, not merely as a short-term arrangement adopted by organizations, but as a fundamental shift in the management process. While organizations are currently encouraging their employees to return to in-person work, Remote Working remains a preferred and effective means of retaining valuable employees who may otherwise have to resign due to compelling personal circumstances. Additionally, the practice of Remote Working has prompted inquiries into the managerial competencies required to oversee remote team members while simultaneously delegating responsibilities to drive organizational growth.

The analogy of the forest ecosystem with fast lions and gazelles ((Tanya Sammut, et al) can indeed be applied to various contexts, including remote working. In the context of remote work:

Adaptive Behavior: Employees may initially need to adapt to the new technological aspects and tools of remote work. As they become more accustomed to these tools and workflows, they may develop more efficient work habits and adapt to the remote work environment.

Emergent Behavior: New work practices or team dynamics may emerge as employees adapt to remote work. For example, creative solutions for virtual collaboration may arise, leading to more effective remote teamwork.

Cooperative Behavior: Remote work often relies heavily on cooperative behaviour, as employees need to work together, albeit virtually. Effective communication and collaboration become essential to achieve common objectives.

By applying the principles of CAS to remote working, it may be important to explore how these three components interact and influence the overall functioning and outcomes of remote work arrangements, ultimately providing insights into how organizations and employees can adapt and thrive in a remote work environment.

6. Conclusion

This conceptual study has delineated several factors related to Remote Working that can either enhance or hinder overall organizational productivity. Theoretical frameworks have been formulated for subsequent empirical examination. As previously noted, there is a dearth of research in the field of Remote Working, with even fewer studies focusing on the application of the CAS Model in the context of Remote Working. Consequently, there is a pressing need for further empirical research in this domain.

References

[1] Hegde, Nagaratna Parameshwar, et al. "Employee Sentiment Analysis Towards Remote Work during COVID-19 Using Twitter Data." International Journal of Intelligent Engineering and Systems 15 (2022): 75-84.

[2] Raj, Rohit, et al. "The study of remote working outcome and its influence on firm performance." Social Sciences & Humanities Open 8.1 (2023): 100528.

[3] Ferrara, Bruna et al. "Investigating the Role of Remote Working on Employees' Performance and Well-Being: An Evidence-Based Systematic Review." International journal of environmental research and public health vol. 19,19 12373. 28 Sep. 2022, doi:10.3390/ijerph19191237

[4] Kowalski G, Ślebarska K. Remote Working and Work Effectiveness: A Leader Perspective. International Journal of Environmental Research and Public Health. 2022; 19(22):15326. https://doi.org/10.3390/ijerph192215326

[5] Daniella C. Sampepajung, Insany Fitri Nurqamar, Muhammad Nurhadi Faculty of Economics and Business, Universitas Hasanuddin, Makassar, Indonesia 2STIE Amkop Makassar, Makassar, Indonesia, "Work from Home Proclivity: A Year into Covid-19 Pandemic", Journal Manajemen & Kewireusahaan, Vol 9, ,No.2;2021:191-206; http://journal.unmer.ac.id/index.php/jmdk.

[6] Arunprasad, P.; Dey, Chitra; Jebli, Fedwa; Manimuthu, Arunmozhi El Hathat, Zakaria 5. Exploring the remote work challenges in the era of COVID-19 pandemic: review and application model" Benchmarking: An International Journal Volume 29, Number 10, 2021, pp. 3333-3 355(23)

_____

[7]   Dania M. Kurdy, The British University in Dubai, Dubai, United Arab Emirates, Husam-Aldin Nizar Al-Malkawi, Faculty of Business and Law, The British University in Dubai, Dubai, United Arab Emirates, and Shahid Rizwan Universiti Kuala Lumpur Business School, Kuala Lumpur, Malaysia " The impact of remote working on employee productivity during COVID-19 in the UAE: the moderating role of job level", Journal of Business and Socioeconomic Development Emerald Publishing Limited e-ISSN: 2635-1692,p-ISSN: 2635-1374, DOI 10.1108/JBSED-09-2022-0104.

[8]   Ellen Harvey, Michelle Jones, "Using Complex Adaptive Systems Theory to Understand the Complexities of Hospital Social Work Practice in Rural and Remote South Australia

[9]   Tanya Sammut-Bonnici University of Malta." Complex Adaptive Systems", Wiley Encyclopaedia of Management Publisher: John Wiley & Sons, Ltd, DOI:10.1002/9781118785317