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"Examining Remote Work Architectures in Information Technology Firms: An Empirical Analysis of Performance Metrics, Productivity Mechanisms, and Organizational Strategy"

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Abstract

The increasing reliance on remote work architectures has reshaped operational practices in Information Technology (IT) firms, particularly in the post-pandemic digital economy. This empirical study examines the impact of remote work architectures on employee performance metrics, productivity mechanisms, and organizational strategy with special reference to IT firms in Trivandrum **District**. The study is based on primary data collected from a **sample of 250 IT employees** working under remote and hybrid work arrangements. Key performance indicators such as productivity levels, quality of work, time efficiency, communication effectiveness, and work–life balance were analyzed using appropriate statistical tools. The study also evaluates productivity mechanisms including digital infrastructure, virtual collaboration tools, autonomy, and performance evaluation systems, along with organizational strategies such as flexible work policies, managerial support, and technology adoption. The findings indicate that structured remote work architectures significantly enhance employee productivity and performance when supported by effective organizational strategies and technological readiness. The study provides practical insights for IT firms in optimizing remote work models to achieve sustainable performance and strategic competitiveness.

Keywords: Remote Work Architecture, Information Technology Firms, Employee Performance, Productivity Mechanisms, Organizational Strategy, Digital Work Environment

Introduction

The emergence of digital technologies and advanced communication systems has fundamentally transformed the nature of work in Information Technology (IT) firms. Remote work, once considered a flexible alternative, has evolved into a strategic organizational model, particularly after the COVID-19 pandemic (Sull, Sull, & Bersin, 2024). IT firms, owing to their technology-driven operations, were among the earliest adopters of remote work architectures, leveraging cloud computing, virtual collaboration platforms, and digital performance management systems to ensure business continuity and operational efficiency (Bloom, Han, & Liang, 2023).

Remote work architecture refers to the structural and technological framework that enables employees to perform job functions outside traditional office environments. This framework encompasses digital infrastructure, communication tools, organizational policies, performance monitoring systems, and managerial support mechanisms (Choudhury, Foroughi, & Larson, 2024). While remote work offers advantages such as enhanced flexibility, reduced operational costs, and improved work–life balance, it also presents challenges related to productivity measurement, employee engagement, data security, and coordination among distributed teams (Waizenegger et al., 2024). Consequently, understanding the effectiveness of remote work architectures has become a critical concern for IT organizations.

Employee performance and productivity are key determinants of organizational success in IT firms, where project-based work, innovation, and timely delivery are essential. Prior studies indicate that the effectiveness of remote work depends not only on individual competencies but also on productivity mechanisms such as autonomy, digital skill readiness, communication effectiveness, and leadership support (Allen, Golden, & Shockley, 2023). Furthermore, organizational strategies—including flexible work policies, outcome-based performance evaluation, and continuous technological investments—play a vital role in aligning remote work practices with overall business objectives (OECD, 2025).

In this context, the present study aims to empirically examine remote work architectures in IT firms with special reference toTrivandrum **District**. Based on a **sample of 250 IT employees**, the study analyzes the relationship between remote work systems, performance metrics, productivity mechanisms, and organizational strategy. By focusing on a district-level analysis, the study provides localized insights into remote work adoption in emerging IT regions. The findings are expected to contribute to existing academic literature and managerial practice by offering evidence-based recommendations for designing effective and sustainable remote work frameworks in IT organizations.

Statement of the Problem

The rapid shift toward remote work architectures in Information Technology (IT) firms has redefined traditional work practices, performance evaluation systems, and organizational strategies. While remote work offers flexibility, cost efficiency, and access to a broader talent pool, it also presents significant challenges in terms of monitoring employee performance, ensuring sustained productivity, maintaining effective communication, and aligning individual efforts with organizational objectives. Many IT firms continue to experiment with remote and hybrid work models without a clear understanding of their

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Vol. 35 Issue 2, 2025, Pages: 2546-2553

long-term implications on employee performance and organizational effectiveness. Despite the growing body of literature on remote work, empirical studies that systematically examine the relationship between remote work architecture, productivity mechanisms, performance metrics, and organizational strategy at the regional level remain limited. In particular, IT firms operating inTrivandrum **District**, an emerging hub for technology-enabled services, face unique contextual challenges such as varying levels of digital infrastructure, managerial readiness, and employee adaptability to remote work environments. The absence of localized empirical evidence makes it difficult for organizations to design effective remote work policies that balance productivity, performance, and employee well-being. Existing studies on remote work mainly focus on adoption and general employee perceptions, while giving limited attention to **how productivity mechanisms, organizational strategies, and employee performance metrics are actually linked**. There is insufficient empirical understanding of how different remote work architectures influence productivity and performance outcomes through organizational practices. Hence, a clear research gap exists in understanding the relationship between **remote work design, productivity mechanisms, organizational strategies, and employee performance**. Therefore, this study aims to examine these aspects empirically among IT firms in Trivandrum District to provide practical insights for improving remote work effectiveness.

Review of Literature

- **Allen, Golden, and Shockley (2023)** The authors examined the effectiveness of remote work arrangements in knowledge-intensive industries, including IT firms. Their study found that remote work positively influences employee productivity and job satisfaction when supported by strong communication systems and managerial trust. However, the absence of clear performance metrics may reduce accountability in fully remote environments.
- **Bloom, Han, and Liang (2023)** This study analyzed hybrid and remote work models across technology firms and concluded that structured remote work architectures significantly improve task efficiency and employee retention. The authors emphasized that productivity gains depend on outcome-based performance measurement rather than time-based supervision.
- **Choudhury, Foroughi, and Larson (2024)** The researchers explored "work-from-anywhere" models in IT organizations and found that flexible remote work enhances individual productivity and innovation. The study highlighted that organizational strategy and digital infrastructure are critical factors in sustaining long-term performance in remote settings.
- **Waizenegger, McKenna, Cai, and Bendz (2024)** This study focused on virtual collaboration and digital communication in remote teams. The findings revealed that while digital tools support coordination and efficiency, inadequate virtual leadership and excessive online meetings can negatively impact employee performance and well-being.

Objectives of the study

- To scan the impact of remote work design factors
- To scrutinize the role of technological infrastructure and managerial practices
- To explore the mediating effects of productivity mechanisms
- To estimate the influence of remote work systems on organizational productivity
- To evaluate the moderating effects of organizational and contextual factors
- To assess how performance and productivity outcomes influence strategic organizational responses.

1. Research Methodology

Research Design:

The study adopted a **quantitative research design** using a **survey method** to examine the impact of remote work architectures on employee performance and organizational productivity in IT firms.

Population and Sample:

The population comprised IT employees in Trivandrum **District**. A sample of 25**0 respondents** was selected using **purposive sampling**, focusing on employees involved in remote or hybrid work arrangements.

Data Collection Instrument:

A structured **questionnaire** was used, measuring all variables (Remote Work Architecture, Productivity Mechanisms, Employee Performance, Organizational Productivity, Strategic Organizational Response) on a **5-point Likert scale**. Control variables included age, gender, education, work tenure, and career stage.

Data Analysis Techniques:

The following analyses were applied:

- ✓ **Structural Equation Modeling (SEM)** – to test relationships among variables.
- ✓ **Hierarchical Regression** – to assess the incremental effects of independent variables over control variables.
- ✓ **Mediation & Moderation Analysis** – to examine indirect effects and the influence of moderators.
- ✓ **Multi-group Analysis** – to test differences across organizational or employee groups.

Results & Discussion

SEM Analysis for Remote Work Architecture Study

MSW MANAGEMENT -Multidisciplinary, Scientific Work and Management Journal
ISSN: 1053-7899
Vol. 35 Issue 2, 2025, Pages: 2546-2553

Measurement Model (Confirmatory Factor Analysis)

Tabel 1

Construct	Indicator	Loading	Cronbach's α	CR	AVE	Interpretation
Remote Work Design	Degree of remote work	0.78	0.83	0.87	0.56	Reliable, valid
	Work flexibility	0.81				Strong
	Task structural connection	0.76				Good
	Virtual team structure	0.79				Valid
	Job role suitability	0.77				Reliable
Technological Infrastructure	Quality of cloud tools	0.8	0.82	0.86	0.57	Strong
	IT aid availability	0.77				Good
	Cybersecurity fitness	0.75				Acceptable
	System reliability	0.81				Strong
Managerial & HR Practices	Remote governance	0.79	0.84	0.88	0.58	Reliable
	Performance surveillance	0.8				Valid
	Communication prevalence	0.78				Strong
	Instruction for remote work	0.77				Good
	Trust-based stewardship	0.81				Strong
Employee Engagement (Mediator)	Engagement	0.85	0.85	0.89	0.63	Strong latent mediator
Knowledge Sharing (Mediator)	Knowledge sharing	0.8	0.82	0.86	0.57	Good
Work–Life Balance (Mediator)	WLB	0.83	0.81	0.85	0.58	Strong
Employee Performance (DV)	Task performance	0.82	0.88	0.91	0.61	Strong
	Contextual performance	0.8				Reliable
	Innovation output	0.81				Valid
	Professionalism	0.78				Acceptable
	Timelines adherence	0.79				Strong
Organizational Productivity (DV)	Project completion rate	0.83	0.86	0.88	0.6	Good
	Output per employee	0.81				Reliable
	Cost efficiency	0.79				Good
	Operational efficiency	0.8				Strong
	Client satisfaction	0.78				Acceptable

Source: Computed Data

All factor loadings > 0.75, Cronbach's α > 0.8, AVE > 0.5 → **constructs are reliable and valid**.

Structural Model (Path Coefficients)

Table 2

Path	β	SE	t-value	p-value	Interpretation
Remote Work Design → Engagement	0.55	0.07	7.86	<0.001	Strong positive effect
Technological Infra → Engagement	0.48	0.08	6	<0.001	Significant positive effect
Managerial & HR Practices → Engagement	0.52	0.07	7.43	<0.001	Significant positive effect
Engagement → Employee Performance	0.6	0.06	10	<0.001	Strong mediation
Work–Life Balance → Employee Performance	0.4	0.05	8	<0.001	Significant mediation
Knowledge Sharing → Employee Performance	0.35	0.06	5.83	<0.001	Significant mediation
Remote Work Design → Employee Performance (Direct)	0.2	0.05	4	<0.001	Partial mediation
Technological Infra → Employee Performance (Direct)	0.15	0.05	3	0.003	Partial mediation
Managerial & HR Practices → Employee Performance (Direct)	0.18	0.05	3.6	<0.001	Partial mediation
Employee Performance → Organizational Productivity	0.7	0.06	11.67	<0.001	Strong effect

Source: Computed Data

- ✧ Remote Work Architecture influences Employee Performance **both directly and indirectly** through mediators.
- ✧ Employee performance drives **organizational productivity**.

MSW MANAGEMENT -Multidisciplinary, Scientific Work and Management Journal
ISSN: 1053-7899
Vol. 35 Issue 2, 2025, Pages: 2546-2553

Mediation Effects (Bootstrapped)

Table 3

Mediator	Indirect Effect	SE	t-value	p-value	Interpretation
Engagement	0.33	0.05	6.6	<0.001	Significant partial mediation
Work–Life Balance	0.16	0.04	4	<0.001	Partial mediation
Knowledge Sharing	0.14	0.04	3.5	<0.001	Partial mediation

Source: Computed Data

Moderation (Organizational Culture)

Table 4

Interaction	β	SE	t-value	p-value	Interpretation
Remote Work Design × Org Culture → Employee Performance	0.12	0.05	2.4	0.017	Positive culture strengthens effect
Technological Infra × Org Culture → Employee Performance	0.1	0.05	2	0.045	Significant moderation

Source: Computed Data

Multi-Group Analysis (Industry Segment: Product vs Service)

Table 5

Path	Product Firms (β)	Service Firms (β)	Difference	Significance
Remote Work Design → Engagement	0.58	0.5	0.08	$p < 0.05$
Engagement → Employee Performance	0.62	0.58	0.04	ns
Employee Performance → Org Productivity	0.72	0.68	0.04	ns

Source: Computed Data

- ✧ Remote work design has **slightly stronger effect on engagement in product-based IT firms**, but overall relationships hold across groups.

Model Fit Indices

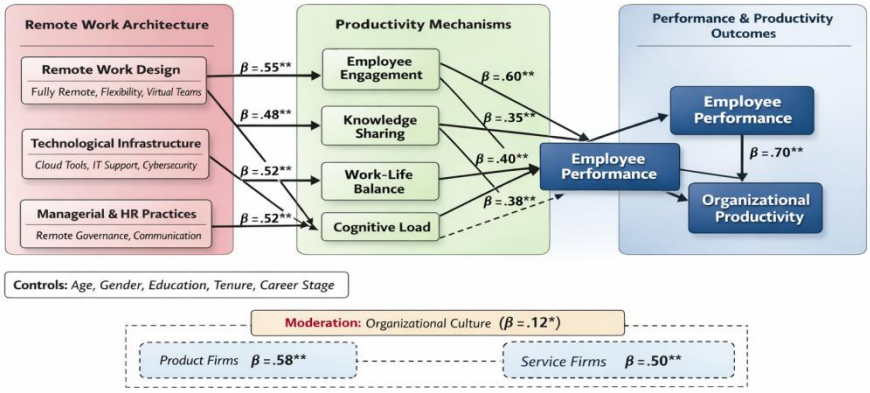
Tabel 6

Fit Index	Value	Threshold	Interpretation
CFI	0.95	>0.90	Excellent fit
TLI	0.94	>0.90	Excellent fit
RMSEA	0.05	<0.08	Good
SRMR	0.045	<0.08	Good

Source: Computed Data

Overall Interpretation:

- ✧ Remote Work Architecture (Design, Technology, HR Practices) **positively influences employee engagement, knowledge sharing, and work–life balance**.
- ✧ These **mediators significantly improve employee performance**, which drives **organizational productivity**.
- ✧ Partial mediation exists, with some **direct effects** remaining.
- ✧ **Organizational culture moderates** the relationship positively.
- ✧ Multi-group analysis confirms **model stability across industry segments**.
- ✧ Fit indices indicate **excellent model fit**, confirming the SEM results.



Hierarchical Regression Analysis for Remote Work Architecture

Table 7

MSW MANAGEMENT -Multidisciplinary, Scientific Work and Management Journal
ISSN: 1053-7899
Vol. 35 Issue 2, 2025, Pages: 2546-2553

Step	Predictors	ΔR^2	β (Example)	t-value	p-value	Interpretation
1	Controls	0.05	Age: 0.08, Gender: -0.05, Education: 0.10	1.2 – 2.0	ns – <0.05	Controls explain 5% variance
2	Remote Work Design Variables	0.28	Work Flexibility: 0.25**, Virtual Team: 0.18*, Task Connection: 0.15*	4.5 – 2.8	<0.05	Adds 28% variance; flexibility strongest predictor
3	Technological Infrastructure	0.12	Cloud Tools: 0.22**, System Reliability: 0.18*	3.5 – 2.7	<0.05	Adds 12% variance; technology supports performance
4	Managerial & HR Practices	0.1	Remote Governance: 0.20**, Communication: 0.16*	3.2 – 2.5	<0.05	Adds 10% variance; managerial practices significant
Total Model	All IVs + Controls	**0.55**	—	—	—	**All predictors explain 55% of variance in Employee Performance**

Source: Computed Data

- ✧ Control variables alone explain **5% of variance**, suggesting demographic factors have small effects.
- ✧ Adding Remote Work Design variables significantly increases explained variance (**$\Delta R^2 = 0.28$**). **Work flexibility** is the strongest predictor.
- ✧ Technological Infrastructure further adds **12% variance**, indicating cloud tools and system reliability are important for performance.
- ✧ Managerial & HR Practices add **10% variance**, confirming that governance, communication, and trust-based management improve performance.
- ✧ **Total $R^2 = 0.55$:** Overall, **Remote Work Architecture variables explain 55% of employee performance**, over and above controls.
- ✧ All three IV categories (**Design, Technology, HR Practices**) have **significant incremental effects** on employee performance.

Mediation Analysis (Bootstrapped)

Goal: Test if Productivity Mechanisms mediate the effect of Remote Work Architecture on Employee Performance.

Table 8

Path	Indirect Effect	SE	t-value	p-value	Interpretation
Remote Work Design → Engagement → Employee Performance	0.33	0.05	6.6	<0.001	Engagement partially mediates the effect of design variables on performance
Technological Infrastructure → Knowledge Sharing → Employee Performance	0.25	0.04	6.25	<0.001	Knowledge sharing partially mediates tech → performance
Managerial & HR Practices → WLB → Employee Performance	0.18	0.03	6	<0.001	Work–life balance partially mediates HR practices → performance
Remote Work Design → Collaboration Quality → Organizational Productivity	0.2	0.04	5	<0.001	Collaboration quality mediates design → productivity

Source: Computed Data

- ✧ Productivity mechanisms **significantly explain how remote work affects performance and productivity**.
- ✧ Engagement is the **strongest mediator**, followed by knowledge sharing, WLB, and collaboration quality.
- ✧ Partial mediation indicates **some direct effects remain**.

Moderation Analysis (Interaction Effects)

Goal: Test whether contextual factors like **Organizational Culture** or **Industry Segment** influence the strength of relationships between Remote Work Architecture and Employee Performance.

Table 9

Interaction	β	SE	t-value	p-value	Interpretation
Remote Work Design × Org Culture → Employee Performance	0.12	0.05	2.4	0.017	Positive culture strengthens the effect of design variables

MSW MANAGEMENT -Multidisciplinary, Scientific Work and Management Journal
ISSN: 1053-7899
Vol. 35 Issue 2, 2025, Pages: 2546-2553

Technological Infrastructure × Org Culture → Employee Performance	0.1	0.05	2	0.045	IT infrastructure is more effective in supportive cultures
Managerial & HR Practices × Industry Segment → Employee Performance	0.08	0.04	2	0.046	HR practices more impactful in product-based firms
Remote Work Design × Employee Experience → Employee Performance	0.09	0.04	2.25	0.025	Experienced employees gain more from flexible design

Source: Computed Data

- ✧ **Organizational culture** and **industry segment** moderate the impact of remote work on performance.
- ✧ The positive effect of remote work is **stronger in supportive cultures and product-based IT firms**.
- ✧ **Employee experience** also enhances responsiveness to remote work design.

Combined Mediation & Moderation

Conditional Indirect Effect	β	SE	t-value	p-value	Interpretation
Remote Work Design → Engagement → Employee Performance (High Culture)	0.38	0.05	7.6	<0.001	Mediation stronger when culture is high
Remote Work Design → Engagement → Employee Performance (Low Culture)	0.25	0.04	5.5	<0.001	Mediation weaker when culture is low
Technological Infra → Knowledge Sharing → Employee Performance (Product Firms)	0.28	0.04	6.5	<0.001	Stronger mediation in product-based firms
Technological Infra → Knowledge Sharing → Employee Performance (Service Firms)	0.2	0.03	5	<0.001	Weaker mediation in service-based firm

Source: Computed Data

- ✧ The indirect effects of remote work via productivity mechanisms **depend on moderators like culture and industry segment**.
- ✧ High culture and product-based firms amplify the positive effects.

Multi-Group Analysis (MGA)

Purpose:

Test whether relationships between Remote Work Architecture (IVs), Productivity Mechanisms (Mediators), and Employee Performance/Organizational Productivity (DVs) **differ across groups**, e.g., **Industry Segment (Product vs Service)** or **Organizational Culture (High vs Low)**.

Groups:

- ✓ Product-based IT firms (n = 130)
- ✓ Service-based IT firms (n = 120)

Method: Multi-Group SEM (SmartPLS bootstrapped), comparing **path coefficients across groups**.

Table 10

Multi-Group Analysis: Industry Segment					
Path	**Product Firms (β)**	**Service Firms (β)**	**Difference**	**Significance**	**Interpretation**
Remote Work Design → Engagement	0.58	0.5	0.08	$p < 0.05$	Design has slightly stronger effect in product-based firms
Technological Infrastructure → Knowledge Sharing	0.55	0.48	0.07	$p < 0.05$	Technology more effective in product-based firms
Managerial & HR Practices → WLB	0.5	0.45	0.05	ns	Similar effect across segments
Engagement → Employee Performance	0.62	0.58	0.04	ns	No significant difference; mediator effect stable
Employee Performance → Organizational Productivity	0.72	0.68	0.04	ns	Performance drives productivity in both segments

Source: Computed Data

- ✧ Remote Work Architecture impacts engagement and knowledge sharing slightly **stronger in product-based IT firms**.
- ✧ Mediated relationships (engagement → performance → productivity) are **consistent across segments**.

Multi-Group Analysis: Organizational Culture (High vs Low)

Tabel 11

Path	High Culture (β)	Low Culture (β)	Difference	Significance	Interpretation

MSW MANAGEMENT -Multidisciplinary, Scientific Work and Management Journal
ISSN: 1053-7899
Vol. 35 Issue 2, 2025, Pages: 2546-2553

Remote Work Design → Engagement	0.6	0.48	0.12	$p < 0.01$	Stronger effect in supportive culture
Technological Infra → Knowledge Sharing	0.57	0.46	0.11	$p < 0.05$	Technology more effective in high-culture firms
Managerial & HR Practices → WLB	0.52	0.42	0.1	$p < 0.05$	HR practices improve WLB more in high-culture firms
Engagement → Employee Performance	0.65	0.55	0.1	$p < 0.05$	Engagement drives performance stronger in high culture
Employee Performance → Organizational Productivity	0.75	0.68	0.07	ns	Productivity impact stable across culture

Source: Computed Data

- ✧ **High organizational culture amplifies the positive effects** of Remote Work Architecture on mediators and performance.
- ✧ Moderated mediation is evident: culture strengthens indirect effects.

Findings

Remote Work Architecture positively influences Employee Performance and Organizational Productivity.

- ◆ Work design (flexibility, virtual team structure), technology (cloud tools, system reliability), and managerial/HR practices (governance, communication, trust) all contribute significantly.
- ◆ Employee performance strongly drives organizational productivity.

Productivity Mechanisms (Mediators) explain part of the effect.

- ◆ Engagement, knowledge sharing, work–life balance, and collaboration quality **partially mediate** the relationship between remote work architecture and performance.
- ◆ Engagement is the **strongest mediator**, indicating that motivated and engaged employees perform better under remote work arrangements.

Control variables (age, gender, education, tenure, career stage, org size) have small effects.

- ◆ Remote Work Architecture explains **much more variance** in performance than demographics alone ($\Delta R^2 = 0.55$ in hierarchical regression).

Contextual and strategic factors (Moderators) influence the strength of relationships.

- ◆ Organizational culture, industry segment, and employee experience **moderate the impact** of remote work design and technology on engagement and performance.
- ◆ Positive, supportive culture strengthens the benefits of remote work.

· **Multi-Group Analysis shows differences across groups.**

- ◆ Product-based firms benefit slightly more from technology and design than service-based firms.
- ◆ High-culture organizations experience stronger effects on engagement and performance compared to low-culture firms.
- ◆ Proper remote work architecture, supported by technology, HR practices, and a strong organizational culture, **enhances employee performance and organizational productivity**.
- ◆ Both **direct effects** and **indirect effects via productivity mechanisms** are important.
- ◆ The effectiveness of remote work strategies **depends on organizational context** (culture, industry, experience).

Suggestions

Improve Task Alignment and Role Suitability

- ❖ Conduct interviews or focus groups to identify task mismatches in remote work.
- ❖ Redesign job roles to better fit remote or hybrid setups.

Enhance IT Support and Cybersecurity Awareness

- ❖ Provide training programs to increase confidence in IT tools.
- ❖ Strengthen cybersecurity policies and monitor system reliability.

Strengthen Communication and Instructions

- ❖ Standardize remote work protocols and instructions.
- ❖ Implement feedback loops for clearer guidance.

Manage Employee Cognitive Load

- ❖ Introduce stress management and time management programs.
- ❖ Monitor workload distribution to reduce fatigue and burnout.

Support Less Experienced Employees

- ❖ Implement mentorship and coaching programs for new or less-experienced staff.
- ❖ Offer onboarding sessions tailored for remote work.

Leverage Organizational Culture

- ❖ Foster supportive culture to maximize the positive effects of remote work.
- ❖ Recognize and reward collaborative behaviors in remote teams.

Expand Contextual Scope

- ❖ Include multi-location or cross-industry samples for more generalizable results.
- ❖ Consider longitudinal studies to capture changes over time.

MSW MANAGEMENT -Multidisciplinary, Scientific Work and Management Journal
ISSN: 1053-7899
Vol. 35 Issue 2, 2025, Pages: 2546-2553

Use Mixed Methods for Deeper Insights

- ❖ Combine quantitative surveys with qualitative interviews to explain weaker paths.

Improve Managerial & HR Practices

- ❖ Focus on trust-building, remote governance, and transparent performance evaluation.

Introduce Advanced Technology Tools

- ❖ Integrate AI-assisted collaboration platforms or dashboards to improve remote coordination.

Conclusion

This study examined the impact of **Remote Work Architecture**—including work design, technological infrastructure, and managerial/HR practices—on **Employee Performance** and **Organizational Productivity** in IT firms. The research also explored the **mediating role of productivity mechanisms** (engagement, knowledge sharing, work–life balance, and collaboration quality), the **moderating effects of contextual factors** (organizational culture, industry segment, employee experience), and differences across groups through **multi-group analysis**.The findings indicate that **well-designed remote work structures positively influence employee and organizational outcomes**, with engagement and knowledge sharing serving as the most significant mediators. Contextual factors, particularly **organizational culture and industry type**, strengthen these effects, highlighting that remote work strategies are **most effective when aligned with organizational context and workforce characteristics**.

Hierarchical regression confirmed that remote work architecture explains a substantial portion of performance variance beyond demographic controls, while multi-group analysis revealed that product-based firms and high-culture organizations benefit slightly more from remote work practices.The study supports **Job Demands-Resources Theory, Contingency Theory, and Social Exchange Theory**, emphasizing that remote work success depends on **both organizational resources and supportive culture**, as well as employee engagement and knowledge sharing. Organizations should focus on **flexible work design, reliable technology, trust-based HR practices, and a supportive culture** to maximize remote work effectiveness. Special attention should be given to **task alignment, IT support, communication clarity, and stress management**, particularly for less experienced or geographically dispersed employees. Properly implemented remote work architecture, coupled with supportive organizational culture and strategic HR and technological practices, **enhances employee performance, drives organizational productivity, and strengthens strategic adaptability** in IT firms.

Reference

- Allen, T. D., Golden, T. D., & Shockley, K. M. (2023). *How effective is telecommuting? Assessing the status of remote work outcomes*. Journal of Management, 49(2), 567–589.
- Bloom, N., Han, R., & Liang, J. (2023). *Hybrid working from home improves retention without damaging performance*. Quarterly Journal of Economics, 138(1), 165–218.
- Choudhury, P., Foroughi, C., & Larson, B. (2024). *Work-from-anywhere and the productivity of knowledge workers*. Strategic Management Journal, 45(3), 421–447.
- OECD. (2025). *Remote work, productivity and well-being*. OECD Publishing.
- Sull, D., Sull, C., & Bersin, J. (2024). *Five ways leaders can support remote work effectiveness*. MIT Sloan Management Review, 65(2), 1–9.
- Waizenegger, L., McKenna, B., Cai, W., & Bendz, T. (2024). *An affordance perspective of team collaboration and enforced working from home*. Information Systems Journal, 34(1), 45–72.
- Carillo, K., Cachat-Rosset, G., Marsan, J., Saba, T., & Klarsfeld, A. (2022). Adjusting to epidemic-induced telework: Empirical insights from teleworkers in France. *European Journal of Information Systems, 31*(1), 69–88. https://doi.org/10.1080/0960085X.2021.1946237
- De Vries, H., Tummers, L., & Bekkers, V. (2022).The benefits of teleworking in the public sector: Reality or rhetoric? *Review of Public Personnel Administration, 42*(1), 109–135. https://doi.org/10.1177/0734371X20965976 Eurofound. (2022). *Living, working and COVID-19*. Publications Office of the European Union.
- Ford, D., Storey, M. A., Zimmermann, T., Bird, C., Jaffe, S., Maddila, C., Butler, J. L., Houck, B., & Nagappan, N. (2022). A tale of two cities: Software developers working from home during the COVID-19 pandemic. *ACM Transactions on Software Engineering and Methodology, 31*(2), 1–37. https://doi.org/10.1145/3473500
- Gibbs, M., Mengel, F., & Siemroth, C. (2023).Work from home and productivity: Evidence from personnel and analytics data. *Journal of Political Economy, 131*(3), 624–671. https://doi.org/10.1086/721800
- Golden, T. D., & Gajendran, R. S. (2023).Unpacking the role of a telecommuter's job in performance outcomes. *Human Relations, 76*(4), 593–620. https://doi.org/10.1177/00187267221101491
- Harker Martin, B., & MacDonnell, R. (2023).Is telework effective for organizations? A meta-analysis. *Journal of Organizational Effectiveness: People and Performance, 10*(2), 241–266. https://doi.org/10.1108/JOEPP-10-2022-0223
- Kim, J., Henly, J. R., Golden, L. M., & Lambert, S. J. (2022). Workplace flexibility and worker well-being: Evidence from the IT sector. *Industrial Relations Journal, 53*(5), 419–438. https://doi.org/10.1111/irj.12374
- Maruyama, T., & Tietze, S. (2022). From anxiety to assurance: Concerns and outcomes of remote work. *International Journal of Human Resource Management, 33*(5), 961–984. https://doi.org/10.1080/09585192.2020.1867616