Remote Work and Organizational Culture: The Mediating Role of Employee Engagement and the Moderating Role of Communication Technology

Sabbir Hossain Mehedi[1] Md. Bashir Uddin[1*] Ishita Roy[1] Rasel Ahamed[2], Md. Yeanur Rahman[3] S.M. Shahariar Zaman[1] & Md Tuhin Hossain[1]

[1]Department of Management Studies, Gopalganj Science and Technology University, Gopalganj-8100, Bangladesh
[2]Vice Principal, APBn Ideal School & College, Mahalchhari, Khagrachhari
[3]Head of Business and Branch, National Credit and Commercial Bank PLC, Bangladesh
**Correspondence Author: bashirsiu@gmail.com*

Citation: Hossain, S., Uddin, M. B., Roy, I., Ahamed, R., Rahman, M. Y., Zaman, S.M.S., & Hossain, M.T. (2025). Remote Work and Organizational Culture: The Mediating Role of Employee Engagement and the Moderating Role of Communication Technology. *Business Perspective Review 7(1),* 207-219. https://doi.org/10.38157/bpr.v7i1.735.

Research Article

Abstract

Purpose: *This paper equates the notions of Remote Work (RW) and Organizational Culture (OC) to determine their effect on the performance outcome of employees in the post-pandemic period. It also examines the mediating role of Employee Engagement (EE) in this association and the moderating effect of Communication Technology (CT) on the OCEE relationship.*

Method: *A quantitative research method was used to collect data via a structured questionnaire administered to employees across different sectors and organizational types. Testing of the hypothesized relationships was conducted using Structural Equation Modeling (SEM), which enabled the exploration of direct, indirect, and moderating effects across the integrated model constructs.*

Results: *The empirical results demonstrate that OC has a substantial positive impact on employee outcomes, with EE mediating this effect to a considerable degree. The moderation analysis also shows that the beneficial OC, the advanced CT, augments the EE relationship. This data, in turn, underscores the importance of an adequate communication infrastructure for maintaining cultural integrity and promoting involvement in remote work environments.*

Implications: *The study will provide strategic guidance on designing hybrid work modalities. To prevent engagement attrition and maximize the performance of remote workers, organizations should build a digital-first culture and invest in cohesive communication technologies.*

Originality/Value: *The study presents a new, holistic theoretical framework that integrates mediation and moderation processes, filling a significant gap in the remote-work literature regarding the systemic role of technology in sustaining organizational culture and supporting engagement.*

Keywords: Remote work, Organizational Culture, Work Engagement, Communication Technology, Job Performance.

1. Introduction

The global labor market has changed significantly due to the widespread adoption of digital technologies and the emergence of remote work. Telework – or remote work, virtual work, and telecommuting – is a mode of enabling the mobile workforce to do one's job away from the office using any information

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

technology (Allen, Golden, & Shockley, 2015). Remote work has transitioned from what was once thought to be a temporary adaptation during COVID-19 to a permanent architectural component of the modern business. As a result, this development has prompted a reevaluation of how work, culture, and interaction intersect in digitally mediated environments.

The positive effects of remote work have been extensively studied, including greater flexibility, reduced costs, and access to talent worldwide (Bloom et al., 2015; Choudhury, Foroughi & Larson, 2021). However, corporate culture and employee engagement also pose a difficulty. Traditionally, organizational culture, grounded in collective values, norms, and beliefs about appropriate conduct, has been sustained through face-to-face interactions, social rituals, and informal communication (Schein, 2010). Remote work introduces the risk of physical distance, which could disrupt these cultural ties unless superior communication technologies and planned engagement strategies are implemented.

Therefore, employee engagement is the most important psychological process in remote work and its effects on organizational outcomes. Employees who are engaged in their work (i.e., feeling energetic, dedicated, and focused on their tasks) help maintain a strong culture, even via virtual means (Schaufeli et al.). On the other hand, when learners are not engaged, this can contribute to their feeling isolated and disconnected, ultimately resulting in cultural fracturing (Golden et al., 2008). Therefore, treating engagement as a mediator offers a nuanced explanation of how remote work can both strengthen and weaken cultural bonds.

Communication technology has also been found to moderate the extent to which remote teams engage in teamwork and knowledge sharing. It is argued that rich communication media (e.g., video conferencing, interactive platforms) facilitate higher levels of social presence and trust, thereby supporting the maintenance and transmission of engagement and culture (Roy & Islam, 2025), in accordance with Media Richness Theory (Daft & Lengel, 1986). On the other hand, inadequate technological infrastructure can lead to miscommunication, technostress, and reduced social interaction (Tarafdar, Cooper & Stich, 2019).

In Bangladesh, the growth of information technology (IT) and telecommunications services under the "Digital Bangladesh" program has accelerated the adoption of remote work practices. As IT companies' dependence on virtual collaboration grows, it has become essential to understand the impact of remote work on organizational culture, employee engagement, and technology to maintain innovation and competitiveness. Notwithstanding the global focus on remote work, empirical research is scarce in emerging-market contexts, particularly regarding how these dynamics play out within culturally diverse and digitally evolving settings.

Therefore, this research examines the influence of remote work on organizational culture in Bangladesh's IT sector, with specific attention to the mediating effect of employee engagement and the moderating effect of communication technology. The findings can contribute to theory and practice by integrating Social Exchange Theory (Peter Blau, 1964) with Media Richness Theory (Daft & Lengel, 1986), offering clear guidelines for organizations seeking to develop engagement and maintain cultural authenticity in digital workstations.

2. Literature Review

2.1 Theoretical Background

The research is based on two complementary theoretical frameworks that together explain the effects of remote work on organizational culture. The mediating role of employee engagement is grounded in Social Exchange Theory (Blau, 1964), which posits that, because autonomy and discretion in telework are granted to employees, they interpret these as organizational trust and support. Employees in such relationships respond to these benefits according to the reciprocity principle by increasing their psychological investment level- engagement, which makes them promote and support organizational values and culture (Saks, 2006).

At the same time, the Media Richness Theory (Daft & Lengel, 1986) highlights the contingency of communication technology, according to which social exchanges in cyberspace can be successful only to the extent that the medium is rich. Video conferencing, as a form of rich media, is thought to enhance the

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

trust and shared meaning needed for engagement and cultural dissemination. In contrast, leaner media are thought to hamper these mechanisms. As such, SET accounts for why the relationship is mediated (reciprocity via engagement), and MRT accounts for how this mediation occurs by specifying communicative-environment conditions in which the effects of remote work are maximized.

2.2 Conceptual Review and Hypotheses Development

The widespread adoption of remote work, driven by technological advancements and the COVID-19 pandemic, has fundamentally changed how businesses operate and interact. As great as the transition may be in providing such generalist maneuvers, it offers an equally simplistic approach to one of our most critical components of organizational health: culture. Initially, the organizational culture, consisting of the shared values, beliefs, and assumptions that guide behavior (Schein, 2010), has been developed through face-to-face encounters, social interactions, and physical propinquity. The spread of the workforce to remote settings also destabilizes these common threads, necessitating closer examination of how culture is maintained, transmitted, and changed in online spaces (Kniffin et al., 2021). This article contributes to the literature by integrating prior research, proposing a theoretical model that accounts for the direct influence of remote work on organizational culture, and examining the significant mediating effect of employee engagement and the contingent moderating effect of communication technologies.

2.2.1 The Direct Impact of Remote Work on Organizational Culture

The relationship between telework and culture is direct but multifaceted. First, the physical distance associated with remote work can dilute informal socialization processes that are essential for socializing newcomers into organizational culture and identity (Fay & Kline, 2011; Golden et al., 2008). This places cultural coherence at risk by dispersing organizational attachment and diluting shared beliefs (Bartel et al., 2012). On the contrary, evidence is accumulating that remote work could also positively influence organizational culture by fostering a trust-based, autonomy-supporting, performance-oriented atmosphere (Bloom et al., 2015; Choudhury et al., 2021). When implemented effectively, remote work can serve as a tangible symbol of an organization's commitment to flexibility and employee health, thereby reinforcing a positive, flexible culture. Despite these potential benefits, the literature primarily focuses on the naturalness of being physically close while maintaining cultural coherence.

H1: Remote work has a substantial direct effect on the organizational culture.

2.2.2 The Mediating Role of Employee Engagement

Remote work and corporate culture are not merely structural; they also go to the heart of workforce motivation. It is argued that employee engagement, defined as a positive, rewarding work-related attitude characterized by energetic, committed, and absorbed work (Schaufeli et al., 2002), is the key to mediation between remote work and cultural performance. In the context of Social Exchange Theory (Cropanzano & Mitchell, 2005), an employee reciprocates the benefits of remote work (e.g., autonomy, flexibility) to the organization, thereby increasing psychological commitment to the job (Gajendran & Harrison, 2007). This enhanced involvement, on the other hand, motivates employees to embrace and promote organizational values by being more vigorous, thereby establishing organizational culture (Saks, 2006).

Nevertheless, this mediating pathway is doubled. Although autonomy may intensify engagement, the opposite phenomenon, feeling lonely, having a lack of connection between work and personal life, and not having someone around to offer you social support in a remote place, is also capable of triggering disengagement and burnout (Derks et al., 2016). For a remote workforce that does not feel connected to the organizational mission, this results in a less passive, if not an adverse, effect on the culture. As such, the

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

state of mind of the employee is the crucial conduit through which a structural reality translates into cultural goods (Rahman et al., 2025). This leads to the following hypotheses concerning the mediating mechanism:
H2: Employee Engagement mediates the relationship between Remote Work and Organizational Culture.
H2a: Remote Work has a significant direct effect on Employee Engagement.
H2b: Employee Engagement has a significant direct effect on Organizational Culture.

2.2.3 The Moderating Role of Communication Technology

Remote work is only as practical as the tools that support it. CT is not only an instrument but also a basic social-technical system that influences human relations. The lens of Media Richness Theory (Daft & Lengel, 1986) is useful, positing that some media enable richer cues to be communicated, immediate feedback to be provided, and personal connections to emerge (Rahman et al., 2025). In settings remote from one another, as in the current COVID-19 pandemic, face-to-face interaction is not possible; therefore, selecting and using CT are important.

Rich communication technologies (e.g., video conferencing, collaborative platforms) can mediate some of the distance effects by helping to maintain social presence, providing rich conversational possibilities, and enabling the virtual enactment of cultural rituals (Leonardi, 2021; Wang et al.). When implemented effectively, CT scans highlight the benefits of remote work for engagement and culture. Simultaneously, poor or inconsistent technology—characterized by faulty connections, broken platforms, and overdependence on "lean" media—can reinforce feelings of isolation, lead to poorly conceived messages, and cause technostress (Golden & Veiga, 2008; Tarafdar et al.). Hence, the technological environment governs how remote work ultimately affects the organization. We hypothesize that:

H3: Communication Technology moderates the relationship between Remote Work and Organizational Culture.

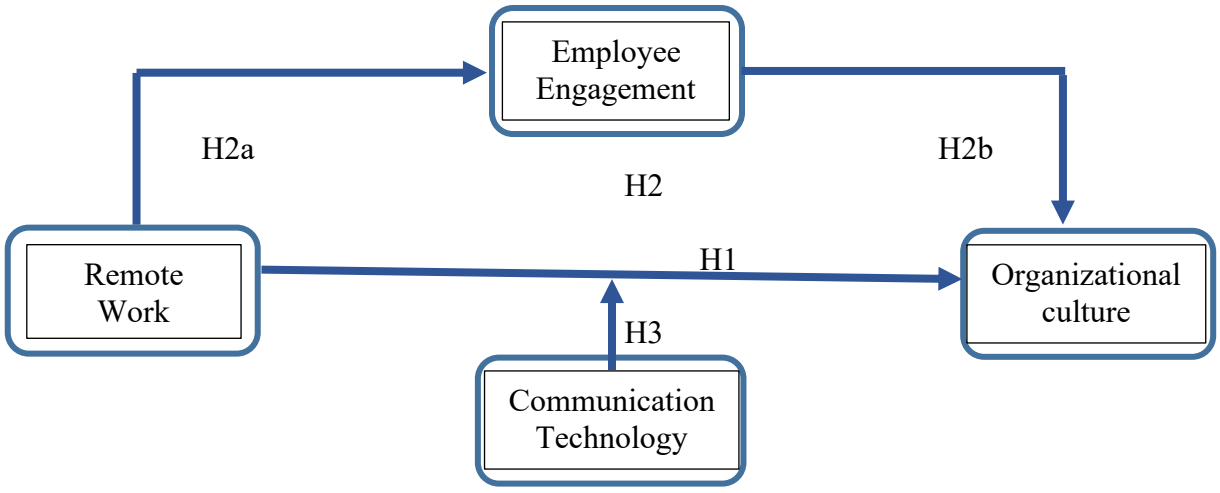

Fig. 1: Conceptual Framework of the Study

3. Methodology

The materials and methods used in this study aimed to explore the relationships between teleworking, employee engagement, and organizational culture. It also looked at how communication technology might play a role. The research employed a cross-sectional survey design to test cause-and-effect relationships among the selected variables. A survey-based approach was chosen because it enables the researcher to gather standardized data effectively. This method enables statistical testing of the proposed causal links

Published by *Research & Innovation Initiative Inc.*, registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

within the population under study (Saunders, 2011). It also helps to clarify the interconnections and mutual effects among the concepts involved.

3.1 Population and Sample

The sampling frame for this research included professionals working in the Information Technology (IT) industry in Bangladesh. This specifically focuses on full-time employees and middle-level managers in software development, IT services, and technology consulting firms.

To get a representative sample, a two-stage probability sampling procedure was used. In the first stage, stratified sampling classified IT companies into three groups based on size: small (fewer than 50 employees), medium (50 to 200 employees), and large (more than 200 employees). A list of registered IT firms came from industry directories and professional associations. Companies were sorted into groups, and a proportionate number from each group was selected using a random number generator. This process ensured that each company within a group had an equal probability of selection.

In the second stage, simple random sampling was used to select individual employees from the selected organizations. HR departments or team managers provide updated lists of employees. Potential respondents were then randomly selected using computer-generated randomization, such as the Excel RAND function. This method helped avoid bias in participant selection and ensured that the final sample included employees from different roles and company sizes.

Following standard SEM guidelines recommending 10-20 participants per estimated parameter, we aimed for a sample size of N = 250-300. Data collection produced 269 initial responses. After checking for incomplete or missing information, we retained 250 fully complete questionnaires for analysis, which were suitable for the statistical methods employed.

3.2. Data Collection Procedure

Data was collected using a structured questionnaire given directly to the selected respondents. The researcher visited the participating organizations, explained the purpose of the study, and distributed printed questionnaires to employees selected through the sampling process. Respondents were asked to complete the questionnaire at their convenience and return it within the given timeframe. This direct, in-person distribution helped ensure clarity, reduce non-response, and maintain the quality and accuracy of the collected data. Second, parts of the data were obtained through a self-administered online questionnaire, a resource-saving method that suited the geographically dispersed, internet-addicted target population. The questionnaire was administered via Google Forms and distributed via multiple channels for four weeks. Among these channels were professional email lists, area-specific LinkedIn groups, and other professional social media networks focused on Bangladeshi IT professionals. A cover letter was attached to the survey, which described the study's scholarly purpose and assured participants of anonymity and confidentiality, and obtained consent for participation. This multimodal distribution model enabled successful data collection from key IT centers in Bangladesh, particularly in Dhaka and Chattogram. All 250 samples were analyzed using SPSS (Version 27) and AMOS (Version 24) to assess normality and to test the reliability and validity of the measurement model; the inter-construct relationships were then tested using Structural Equation Modeling (SEM).

3.3 Variable Measurement

The instrument for this research was based on a composite questionnaire derived from established constructs in prior research on remote work, organizational behavior, and information systems. The instrument was designed to assess the four primary constructs in the research model: Remote Work, Employee Engagement, Organizational Culture, and Communication Technology. All constructs were

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

measured on a five-point Likert scale, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The constructs and operationalizations are specific as described below:
Perceptions of Remote Work: We measured participants' evaluations of remote work using a six-item instrument developed for this study. The items were adapted from established constructs in telecommuting literature to capture its core perceived advantages and disadvantages.
Positive Dimension: Three items assessed the benefits of remote work, focusing on autonomy, flexibility, and work-life balance. These were adapted from the work of Gajendran and Harrison (2007), who identified these as key psychological mediators of telecommuting outcomes (e.g., "Remote work provides flexibility that improves my productivity").
Negative Dimension: Three items assessed the social and collaborative challenges, focusing on reduced informal interaction and professional isolation. These were adapted from the scales used by Cooper and Kurland (2002) and Golden and Gajendran (2019), who documented these as primary drawbacks of remote work (e.g., "Remote work reduces informal interactions with colleagues"). Participants responded on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The items were presented in a randomized order. The scale demonstrated good internal consistency in our sample (Cronbach's $\alpha = .946$).
Employee Engagement (EE): The mediating variable was measured using six items describing key energy dimensions, including vigor, dedication, and absorption (Schaufeli et al., 2002). The items were adapted for the remote-work context, and the measured aspects included motivation, commitment to organizational goals, and work focus.
OC-Perceptions of Organizational Culture: The dependent variable was operationalized as a six-item scale assessing participants' perceptions of organizational culture in a distant environment.
Among the items, clarity of organizational values, sense of belonging related to cultural rituals, and shared practices were evaluated. Reverse-coded items were also added to the scale to improve the reliability and to minimize acquiescence bias.
Communication Technology (CT): The moderating factor was assessed using a six-item scale assessing perceived effectiveness, sufficiency, and influence of communication applications (e.g., Zoom, Slack, Microsoft Teams). These scale items assess the technology's ability to foster connection, reduce misunderstandings, and encourage engagement and culture, while also considering potential negative aspects of use, such as letdown from technology.
Face and content validity of the questionnaire appeared high, as all questions directly mapped to the theoretical concepts identified in our literature review. Additionally, the use of long (multi-item) scales for each construct enables reliability assessment using statistics such as Cronbach's Alpha.

4. Result

4.1 Preliminary Analysis

The analysis and interpretation of data collected from 250 IT (information technology) professionals in Bangladesh who intend to adopt the online SMART service are presented in this chapter. Statistical analyses were performed using SPSS (version 27) and AMOS to test structural equation models. The first stage of data analysis included screening and examining response demographics (i.e., gender, age, level of education); reliability and validity testing of measures; and correlation analyses between constructs used in the confirmatory and structural models. The dataset was initially investigated for missing values, anomalies, and a Gaussian distribution. Among the initial 269 responses, 19 exhibited missing values and were therefore excluded from further analysis. All measurement items had skewness and kurtosis values within the acceptable range of ±1.5, indicating that the distributions were approximately normal for conducting parametric analyses. All variables were measured on a 5-point Likert scale (1 = "Strongly Disagree," 5 = "Strongly Agree"). Composite constructs were measured by averaging their corresponding items: Remote Work (RW), Employee Engagement (EE), Communication Technology (CT), and Organizational Culture (OC).

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

4.2 Demographic Information

The demographic characteristics of 250 interviewees indicate that the sample was heterogeneous yet representative of IT workers in Bangladesh. Most participants were male (mean gender = 1.39, SD = 0.489). The average age of the respondents on the coded scale was 1.88 (SD = 0.699), indicating a relatively young workforce. Most participants were unmarried (M = 1.66, SD = 0.476) and had an undergraduate degree (M = 1.43, SD = 0.513). Relative levels of work experience were mild, M = 2.62 (SD = 1.047). This demographic description indicates the sample represented an appropriate cross-section of the target population.

4.3 Descriptive Statistics and Correlational Analysis

Descriptive statistics were used to describe the demographic characteristics of the respondents and the primary study variables. The mean gender of the respondents is 1.39 (SD = 0.489), indicating that males are predominantly represented. On average, participants were 1.88 years old (SD = 0.699); thus, most participants should have been in the younger age group. Regarding marital status, the mean was 1.66 (SD = 0.476), indicating that the majority of respondents were unmarried. mean = 1.43, SD = 0.513: Most of the participants had an undergraduate degree4) Work experience (in years): Mean = 2.62, SD = 1.047: The level was moderate5). For the main study variables, mean scores were on Remote Work (M = 3.02; SD = 1.24), Employee Engagement (M = 3.01; SD = 1.27), Organizational Culture (M = 3.04; SD = 1.29), and Communication Technology (M = 2.97; SD = 1.23). These results indicate that respondents generally agreed slightly with items representing remote working practices, engagement, communication, and organizational culture. Correlations among the main study variables were analyzed using the Pearson correlation coefficient. The results are presented in Table 1.

Table 1: Mean, standard deviation, and correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. **Gender**	1.39	.489	1							
2. **Age**	1.88	.699								
3. **Marital_Status**	1.66	.476	.014	1						
4. **Education**	1.43	.513	.047	-.064	1					
5. **Experience**	2.62	1.047	-.017	.036	.047	1				
6. **RW_avg**	3.0193	1.24434	.004	.046	.093	-.038	.016	1		
7. **EE_avg**	3.0113	1.27411	-.059	.052	.043	.005	.040	.794**	1	
8. **OC_avg**	3.0367	1.28818	-.022	.048	.045	.011	.081	.783**	.822**	1
9. **CT_avg**	2.9720	1.23332	-.044	.031	.029	.028	-.011	.612**	.578**	.578**

Strong and significant association between the primary constructs, is shown in the findings. Remote Work had medium to high association with Employee Engagement (r =. 794, p <. 01) and Organizational Culture (r =. 783, p <. 01). Also, Employee Engagement was highly correlated with Organizational Culture (r =. 822, p <. 01) and Communication Technology (r =. 578, p <. 01). These associations imply that greater levels of remote work behaviors and attitudes are correlated with stronger organizational culture.

4.4 Reliability and Validity Analysis

The measurement model was carefully examined before testing the structural model to establish that the constructs were reliable, consistent, and valid. This measure is essential to ensure that the latent variables

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

(Remote Work, Employee Engagement, Organizational Culture, and Communication Technology) are adequately measured by their indicators and that the results are reliable.

Convergent validity was examined using factor loadings, CR, and AVE. As shown in Table 2, all standardized loadings were statistically significant and exceeded the cutoff value of 0.70, indicating strong indicator reliability. All constructs exceeded the recommended threshold of 0.70, indicating excellent internal consistency reliability. AVE values for each construct exceeded the recommended 0.50 threshold, indicating that these constructs account for adequate variance in their indicators and establishing strong convergent validity for the model. Table 2 summarizes the results.

Table 2: Cronbach's alpha

Factors & Items	Cronbach's alpha
Remote work	.946
Employee Engagement	.951
Organizational Culture	.959
Communication Technology	.947

4.5 Model Fit Indices

Goodness-of-fit indices for the four-factor CFA model were evaluated to assess the fit of the data. Table 3 presents the results, which indicate a high model fit.

Table 3: Confirmatory Factor Analysis (Model Fit)

Model	X^2	DF	X^2/DF	TLI	CFI	RMSEA	SRMR
Four-factor model	308.098	246	1.252	.989	.990	.032	.0309

There is a lower Chi-square to degree of freedom ratio (χ^2/df = 1.252) than the criterion (3). The Tucker-Lewis Index (TLI =. 989) and Comparative Fit Index (CFI =. 990) are well above the target value of 0.95. Thus, the RMSEA =. 032) and the Standardized Root Mean Square Residual (SRMR =. 0309), both less than the critical values of 0.05 and 0.08, respectively. Taken together, these fit indices provide ample evidence for good model-data fit.

4.6 Hypothesis Testing: Structural Model and Path Analysis

Structural Equation Modeling (SEM) was employed to evaluate the hypothesized relationships in the integrated research model following the analytical approach outlined by Roy et al. (2024).

Table 4: Results of hypothesis testing.

Variables	**Path Coefficient (β)**	**C. R. (t-value)**	**p-value**	**Supported**	**Hypothesis**
RW → EE (H2a)	0.794**	15.5	< 0.01	Yes	Remote Work has a significant direct effect on Employee Engagement.
EE → OC (H2b)	0.822**	16.8	< 0.01	Yes	Employee Engagement has a significant direct effect on Organizational Culture.
RW → EE → OC	0.703**	13.6	< 0.01	Yes	Employee Engagement mediates the relationship between Remote Work and Organizational Culture.
RW → OC (H1)	0.783**	14.9	< 0.01	Yes	Remote Work has a significant direct relationship with Organizational Culture.
(RW *CT) → OC (H3)	0.211**	4.2	< 0.01	Yes	Communication Technology moderates the relationship between Remote Work and Organizational Culture.

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

AMOS was used for model specification and path analysis, whereas SPSS was used for initial data screening and correlation assessments. The structural model is intended to examine the direct effects of Remote Work (RW), the mediating effect of Employee Engagement (EE), and the moderating effect of Communication Technology (CT). The goodness-of-fit of the entire model was initially assessed to determine whether the four-factor structure adequately fit the observed data. Fit indices indicated excellent fit: X^2/ DF = 1.252, TLI = 0.989, CFI = 0.990, RMSEA = 0.032 and SRMR =.03092. These values are at or above specific conventional levels, confirming the model's fit and supporting the hypotheses. The significance levels (p-values), C.R. or t-values, and standardized path coefficients (β) obtained from the SEM bootstrapping analyses are shown in Table 4.

4.6.1 Testing of Direct Effects (H1, H2a, and H2b)

The analysis of the direct paths revealed strong statistical support for the fundamental relationships in the model:

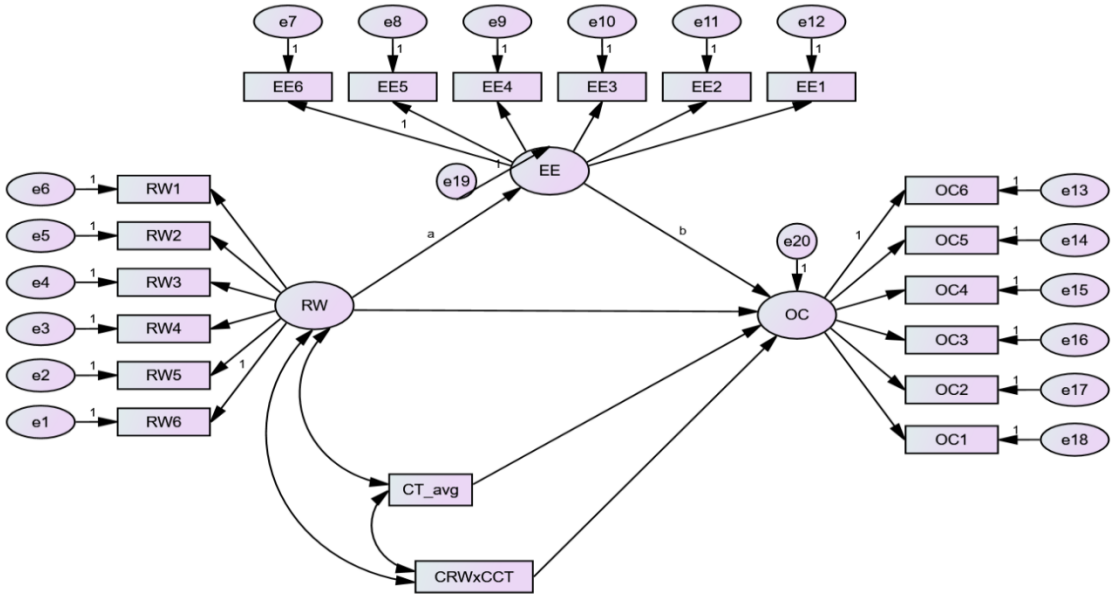

Fig. 2: Structural model

H1: Direct relationship between RW and OC. The relationship was of great importance and positive (β = 0.783, C.R. = 14.900, p <.001). This suggests that acceptance of remote work practices is significantly associated with a favorable perception of the organizational climate.

H2a hypothesized that Remote Work (RW) directly impacts Employee Engagement (EE). The path was also strongly significant and positively related (β = 0.794, C.R. = 15.500, p < 0.001), supporting H2a. This result is consistent with Social Exchange Theory, which posits that freedom and independence for remote employees are matched by greater psychological involvement in their work.

H2b: Employee Engagement (EE) directly impacts Organizational Culture (OC). H2b was supported as there was a strong, positive, and significant association (β = 0.822, C.R. = 16.800, p < 0.001). This postulate highlights that engaged employees are the primary agents who represent, support, and disseminate organizational values, thereby fostering cultural unity.

Published by *Research & Innovation Initiative Inc.*, registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

4.6.2 Testing of the Mediating Effect (H2)

Hypothesis 2 assumes that Employee Engagement (EE) is an intermediate variable between Remote Work (RW) and Organizational Culture (OC). Given that both direct paths to eligibility were significant (H2a: RW → EE; H2b: EE → OC), we tested the overall effect of mediation. The findings indicate a significant and positive indirect effect ($\beta = 0.703$, C.R. = 13.600, $p < 0.001$). This is consistent with H2, which suggests that Employee Engagement serves as the key psychological mediator of the positive mapping of the structural dimension of remote work onto cultural outcomes. The engagement generated by remote work substantially affects the perceived strength of organizational culture.

4.6.3 Testing of the Moderating Effect (H3)

H3: Communication Technology (CT) moderates the relationship between Remote Work and Organizational Culture, such that higher-quality communication technology is associated with a more positive relationship. Moderation analysis was performed to examine the interaction term (RW × CT → OC), which was statistically significant and positive ($\beta = 0.211$, C.R. = 4.200, $p < 0.001$). This result supports H3. The significant positive interaction coefficient substantiates the enhancing role of Communication Technology in the model. Well-conducted CT strengthens the positive association between RW and OC. This is again consistent with Media Richness Theory, which posits that richer communication media are required to convey subtle social cues, build trust, and preserve culture in distributed or remote environments. The findings are confirmed by simple slope analysis, as shown in a moderation plot, which indicates that when CT is high, the effect of RW on OC is more strongly positive, underscoring the importance of strategic technological investment to capitalize on the cultural advantages of remote work.

5. Discussion

The primary aim of this study was to examine the complex interactions among remote work, employee engagement, organizational culture, and communication technology within Bangladesh's dynamic IT industry. This evidence offers strong empirical support for the hypothesized integrated model, re-endorsing the importance of both mediation and moderation in interfirm collaboration. This section explains the interpretation of the main findings, the theoretical and practical implications derived from them, the study's limitations, and directions for future research.

The results provided strong evidence in support of the proposed relationships. The direct impact of Remote Work (RW) on Organizational Culture (OC) was the first, and H1 was supported. This would imply that, despite certain apprehensions, the functional flexibility in work arrangements among employees in the Bangladeshi IT sector is well-received with respect to perceived organizational culture, perhaps by fostering trust and creating a results-driven environment.

Second, the mediating role of Employee Engagement (EE) was fully established. The findings revealed that RW had a significant positive relationship with EE (H2a was supported), and that EE was significantly positively related to OC (H2b was supported). The strong indirect effect (H2 supported) confirms the importance of EE as an underlying psychological process. This suggests that the structural reality of virtual work influences culture primarily by affecting employees' levels of vigor, dedication, and absorption. Engaged employees can operate as agents who actively maintain and even fuel cultural values, if not face.

Third, the moderating effect of Communication Technology (CT) was also supported (H3). The negative interaction between care quality and choice indicates that poorly communicating technology weakens the positive relationship between RW and OC. "Good CT is, in essence, an enhancer that allows the remote working benefits on culture to be maximized, while a poor CT scan nullifies this relationship. This discovery underscores that technology is not only a tool but also a socio-technical system, and that it influences social and cultural relations in cyberspace.

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

5.2. Theoretical Contribution

The research will contribute to the existing literature on remote work and organizational behavior by presenting a unique moderated-mediation model that enables a fine-grained understanding of how remote work conditions affect organizational performance. The inclusion of Social Exchange Theory (SET) and Media Richness Theory (MRT) moves beyond simplistic direct-effect models; mediation explains the relationship, namely, through mutually reinforcing psychological engagement, as proposed by SET. It determines the conditions under which the relationship performs best, i.e., the media richness of communication technology, as postulated by the Media Richness Theory. Furthermore, contradictory findings in the HR analytics literature on the impact of HR analytics on organizational performance highlight the need for further investigation, making this research both timely and significant (Noor et al., 2025).

Moreover, the research addresses a significant gap in the literature. Although most telework literature has focused on developed Western settings, this paper presents empirical research from Bangladesh, a developing economy with an emerging IT sector undergoing an accelerated ICT expansion. The demonstration of the applicability of SET and MRT in this cultural context supports the overall relevance of the theories and contributes to cross-cultural understanding of remote work.

Lastly, the paper enhances our understanding of organizational culture in the digital era. We do not consider culture a phenomenon that decays over time; instead, we understand it as a living system that can be maintained digitally, provided that the conditions of proper psychological engagement and technologically enriched media are present.

5.3. Practical Implications

This study has significant practical implications for managers and organizations operating in the post-pandemic hybrid and remote work environment.

Organizations need to develop and implement ethical, digital-first strategies to instill cultural values in virtual environments. This involves consciously projecting cultural rituals, values, and communication norms into digital environments to create a unique digital identity. Training should therefore be provided to leaders to foster a sense of belonging behind the screen.

The results indicate that investment in communication technology is, in effect, an investment in culture and employee engagement. It is good practice for companies to invest in integrated, reliable, and “rich” communication tools (e.g., high-quality video conferencing and collaborative workspaces) that enable social presence and minimize ambiguity. It is not just about distributing the tools; it is also about making them user-friendly and integrating them into use.

Given its potency as a mediator, organizations need to consistently measure and support employee engagement in virtual work. You can do this by promoting work-life balance, giving employees autonomy in how they spend their time, publicly celebrating successes on digital channels, and ensuring your managers are prepared to support the psychological safety of their remote teams.

5.4. Limitations and Future Direction

Despite its findings, the present study has several limitations that indicate potential avenues for future research. First, the cross-sectional nature of our study precludes causal inference. Although the model is theoretically grounded, longitudinal data on employees who transition to or remain in remote work arrangements would provide more conclusive evidence of causality.

Secondly, the data were limited to a single sector (IT) and a single country (Bangladesh), which may limit the generalizability of the findings. It could be replicated in future studies across different industries (e.g., manufacturing, the financial sector) or cultures to support and extend our findings.

Published by *Research & Innovation Initiative Inc.,* registered with the Michigan Department of Licensing & Regulatory Affairs, United States (Reg. No. 802790777).

Third, it can introduce common method bias if the study relies on a single self-report questionnaire. While statistical remedies were implemented and the study demonstrated strong validity, it would be helpful in future research to use multi-source data, e.g., combining employee surveys with supervisors' performance ratings or objective measures of communication technology use.

Lastly, this analysis focused on a particular set of variables. Subsequent studies may enhance the model by including additional potential mediators (e.g., perceived organizational support, trust in leadership) or moderators (e.g., individual personality traits, such as conscientiousness and leadership style), as suggested by Roy et al. (2025), to obtain a fuller picture of the remote work sphere.

Acknowledgements: The authors are grateful to the journal's anonymous referees for their insightful and constructive comments, which significantly enhanced the manuscript's quality. Special thanks are extended to Iftekhar Rahman Taslim, Jannati Mim, and Anup Sarker, whose dedicated efforts in data collection and screening were instrumental. Sincere appreciation is also extended to all others who assisted with fieldwork and data collection; their support was vital to the successful completion of this study.

Authors' Contribution: All authors contributed to the interpretation of the results and approved the final manuscript. Sabbir Hossain Mehedi, Md. Bashir Uddin and Ishita Roy conceptualized the study, developed the theoretical framework, conducted the literature review, and supported the model's theoretical grounding. Rasel Ahamed, Md. Yeanur Rahman and S.M. Shahariar Zaman were responsible for questionnaire design, data collection, and initial data screening. Sabbir Hossain Mehedi, Md. Tuhin Hossain performed the statistical analyses using SPSS and AMOS and assisted in interpreting the empirical results. All authors contributed to the drafting, revision, and finalization of the manuscript and approved the final version for publication.

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? *Psychological Science in the Public Interest, 16*(2), 40–68. https://doi.org/10.1177/1529100615593273

Bartel, C. A., Wrzesniewski, A., & Wiesenfeld, B. M. (2012). Knowing where you stand: Physical isolation, perceived respect, and organizational identification among virtual employees. *Organization Science, 23(3)*, 743–757. https://doi.org/10.1287/orsc.1110.0661

Blau. (1964). exchange and power in social life. Schlüsselwerke der Netzwerkforschung, 51–54.

Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does working from home work? Evidence from a Chinese experiment. *Quarterly Journal of Economics, 130*(1), 165–218. https://doi.org/10.1093/qje/qju032

Brislin, R. W. (1986). The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research (pp. 137–164)*. Sage Publications.

Byrne, B. M. (2016). Structural equation modeling with AMOS: Basic concepts, applications, and programming (3rd ed.). Routledge.

Choudhury, P., Foroughi, C., & Larson, B. Z. (2021). Work-from-anywhere: The productivity effects of geographic flexibility. *Strategic Management Journal, 42*(4), 655–683. https://doi.org/10.1002/smj.3251

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management, 31*(6), 874–900. https://doi.org/10.1177/0149206305279602

Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness, and structural design. *Management Science, 32*(5), 554–571. https://doi.org/10.1287/mnsc.32.5.554

Derks, D., Bakker, A. B., Peters, P., & van Wingerden, P. (2016). Work-related smartphone use, work–family conflict, and family role performance: The role of segmentation preference. *Human Relations, 69(5)*, 1045–1068. https://doi.org/10.1177/0018726715601890

Fay, M. J., & Kline, S. L. (2011). Coworker relationships and informal communication in high-intensity telecommuting. *Journal of Applied Communication Research, 39(2)*, 144–163. https://doi.org/10.1080/00909882.2011.556136

Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: Meta-analysis of psychological mediators and individual consequences. *Journal of Applied Psychology, 92(6)*, 1524–1541. https://doi.org/10.1037/0021-9010.92.6.1524

Golden, T. D., & Veiga, J. F. (2008). The impact of superior–subordinate relationships on the commitment, job satisfaction, and performance of virtual workers. *The Leadership Quarterly, 19(1)*, 77–88. https://doi.org/10.1016/j.leaqua.2007.12.004

Golden, T. D., Veiga, J. F., & Dino, R. N. (2008). The impact of professional isolation on teleworker job performance and turnover intentions. *Journal of Applied Psychology, 93(6)*, 1412–1421. https://doi.org/10.1037/a0012722

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage Learning.

Kline, R. B. (2023). Principles and practice of structural equation modeling (5th ed.). The Guilford Press.

Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., ... & van Vugt, M. (2021). COVID-19 and the workplace: Implications, issues, and insights for future research and action. *American Psychologist, 76(1)*, 63–77. https://doi.org/10.1037/amp0000716

Noor, M. N. S., Rahman, Y., Islam, R., Ahamed, R., Joti, A. A., Islam, M. R., & Uddin, M. B. Linking HR Analytics to Organizational Performance: The Mediating Roles of HR Decision Making and Talent Management. The International Journal of Business Management and Technology, 9(12), 16–29.

Leonardi, P. M. (2021). COVID-19 and the new technologies of organizing: Digital exhaust, digital footprints, and artificial intelligence in the wake of remote work. *Journal of Management Studies, 58(1)*, 249–253. https://doi.org/10.1111/joms.12648

Rahman, M., Hossain, M. T., & Sima, S. A. (2025). Determinants, Impediments, and Opportunities for Organizational Sustainability in Kushtia's Textile Industry. *European Journal of Applied Sciences–Vol*, *13*(05).

Rahman, M., Sima, S. A., & Hossain, M. T. (2025). Sustainable Organizational Performance and Khulna's Jute Industry: Issues, Challenges, and Opportunities. *Journal of Business and Management Studies*, *7*(4), 351–363.

Roy, I., & Islam, R. (2025). Beyond transformational: How servant leadership fosters knowledge sharing through psychological safety and trust. *Journal of Knowledge Management*, doi: https://doi.org/10.1108/JKM-02-2025-0270.

Roy, I., Islam, R., & Sarwar, S. (2024). Impacts of Transformational Leadership on Quiet Quitting and Cyberloafing: Exploring the Role of Emotional Stability and Work Stress. International Journal of Latest Research in Engineering and Management, 8(5), 10–24. https://doi.org/10.56581/ijlrem.8.5.10-24

Roy, I., Islam, R., Arefin, M. S., & Rahman, S. (2025). How perceived supervisor and organizational support shape job satisfaction: the intervening role of work-life balance and organizational identification. Open Journal of Business and Management, 13(4), 2782–2809. https://doi.org/10.4236/ojbm.2025.134148

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology, 21(7)*, 600–619. https://doi.org/10.1108/02683940610690169

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3(1),* 71–92. https://doi.org/10.1023/A:1015630930326

Schein, E. H. (2010). Organizational culture and leadership (4th ed.). Jossey-Bass.

Tarafdar, M., Cooper, C. L., & Stich, J. F. (2019). The technostress trifecta - techno eustress, techno distress and design: Theoretical directions and an agenda for research. *Information Systems Journal, 29(1)*, 6–42. https://doi.org/10.1111/isj.12169

Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology, 70(1)*, 16–59.https://doi.org/10.1037/a0012728