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Examining the Impact of Information and Communication Technology (ICT) Use on Internal Communication Satisfaction and Remote Employee Engagement: The Moderating Role of Organizational Commitment

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ABSTRACT

The primary objective of this study is to examine the impact of information and communication technology (ICT) use on internal communication satisfaction and remote employee engagement, considering the moderating role of organizational commitment (attachment tendency). This research is applied in terms of purpose and descriptive-survey in terms of methodology. The statistical population comprised all official employees of the Islamic Azad University, Sari Branch (N = 257), from which a sample of 248 participants was selected using a census approach. Data were collected using a researcher-developed questionnaire based on a five-point Likert scale. The validity of the instrument was confirmed through content and face validity assessments, and its reliability was established with a Cronbach's alpha coefficient of 0.90. To test the hypotheses and evaluate model fit, partial least squares structural equation modeling (PLS-SEM) was employed using SmartPLS software. The findings revealed that ICT use has a significant positive effect on internal communication satisfaction ($\beta = 0.894$) and remote employee engagement ($\beta = 0.887$). Furthermore, the moderating role of organizational commitment was significantly confirmed in both relationships ($\beta = 0.474$ and $\beta = 0.468$, respectively). The coefficient of determination (R^2) values for the endogenous variables indicated a strong fit for the structural model. It is concluded that the systematic implementation of communication technologies not only provides a foundation for interaction and communication satisfaction among remote employees but also significantly amplifies these effects when organizational commitment is strengthened. Practical recommendations are offered to university administrators and knowledge-based organizations for optimizing communication infrastructures and managing the remote work experience.

KEYWORDS: Information and Communication Technology (ICT), Internal Communication Satisfaction, Remote Employee Engagement, Organizational Commitment

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1. Introduction

Over the past decade, profound technological transformations and the digitalization of organizational processes have fundamentally altered traditional paradigms of work and management. The rapid proliferation of the internet, real-time communication platforms, and virtual collaboration tools has enabled the implementation of flexible work arrangements and remote work as a core strategy for business continuity under both normal and crisis conditions. Numerous studies indicate that the adoption of information and communication technology (ICT), initially as an emergency measure and subsequently as an institutionalized practice, has exerted profound impacts on organizational structures, work culture, and interpersonal interactions among employees (Kumar et al., 2023; Urbaniec et al., 2022). However, the transition toward virtual and hybrid work environments has introduced novel challenges regarding internal communication, team cohesion, and the maintenance of employee commitment. Li (2023) emphasizes that both formal and informal utilization of communication technologies, such as email, video conferencing, and instant messaging, demonstrates a positive correlation with employees' satisfaction with information and communication, which in turn establishes a foundation for enhancing organizational engagement.

Internal communication satisfaction, as one of the vital pillars of organizational behavior, refers to employees' positive perception of the quality, transparency, frequency, and effectiveness of information flow across various organizational levels. This construct encompasses not only formal communications (directives, policies, and performance reports) but also informal interactions and intra-organizational social networks. In a comprehensive study, Tkalac Vercic et al. (2023) demonstrated that internal communication satisfaction, through social exchange quality indicators, directly impacts employee engagement and employer attractiveness. In remote work environments, the absence of face-to-face interactions and reduced opportunities for nonverbal communication can lead to feelings of isolation, diminished motivation, and job burnout (Prasad et al., 2023; Li et al., 2023). Consequently, organizations are compelled to leverage information technologies to bridge communication gaps and provide a platform for sustaining meaningful interactions. Similarly, Ali et al. (2023), in their exploratory research, emphasized the factors influencing remote employee engagement, demonstrating that intrinsic motivation, affective commitment, and human resource policies, facilitated through technological platforms, can enhance personal well-being and organizational engagement.

Remote employee engagement extends beyond mere virtual presence or the execution of assigned tasks; it denotes active involvement, professional enthusiasm, a sense of belonging, and the alignment of individual values with organizational goals within a decentralized work environment. In a case study conducted at a hybrid digital hub, Hytönen (2023) revealed that purposeful and strategically designed internal communication serves as the driving force behind remote employees' motivation, and its absence can rapidly lead to psychological and organizational disengagement. Santoso et al. (2023) also emphasize that during and following the pandemic, the

expanded role of internal communication as a tool for managing trust and engagement has been critical for sustaining organizational performance. Nevertheless, the mere availability of information technology tools does not guarantee successful engagement; rather, how these tools are perceived and utilized is influenced by employees' psychological and attitudinal characteristics.

In this context, the construct of “organizational attachment” or “attachment tendency toward the organization” is recognized as a key variable in the literature on organizational behavior and internal marketing. Organizational attachment denotes a deep emotional bond, a willingness to maintain a long-term relationship, a sense of identification with the organization, and a positive evaluation of organizational values (Li, 2023; Abgun & Mousavi, 2022). Battisti et al. (2022), in their examination of digital transformation and remote work, demonstrated that psychological and behavioral variables, particularly employee participation and organizational attachment, play a decisive role in the sustainability of remote work and the adoption of new technologies. Hasebrook et al. (2023) also found that workload and the initial level of employee interaction influence the adoption of communication technologies, with more experienced or highly committed employees demonstrating greater flexibility in adapting to digital platforms. Lartey and Randall (2023) demonstrated in their research that empathy, transparent expression, and intrinsic motivation within computer-mediated communication serve as strong predictors of remote knowledge workers' engagement.

Despite the substantial volume of research on remote work and information technology, a noticeable theoretical and empirical gap remains regarding how employees' psychological characteristics (particularly organizational attachment) interact with the effects of technology on internal communication and virtual engagement. Most prior studies have treated technology as a direct independent variable and have seldom addressed the moderating role of employees' stable attitudes. As a generalized attachment tendency, organizational attachment can alter how employees interpret organizational messages, their level of trust in communication platforms, and their willingness to actively participate in virtual environments. Yang et al. (2023) showed that information technology-based tools affect the components of virtual team effectiveness; however, these effects are amplified in groups characterized by mutual trust and shared mental models. In Iran, studies such as Nasiri's (2023) research on remote work strategies during the pandemic, Bahrami's (2023) work on the role of technology in crisis management, and Dovali et al.'s (2022) investigation into the impact of remote work on employee engagement mediated by job autonomy have been conducted; however, none have systematically examined the moderating role of organizational attachment in the technology-communication-engagement relationship within an academic and educational context.

Therefore, the central research question addresses whether the use of information and communication technology significantly impacts internal communication satisfaction and remote employee engagement, and whether organizational attachment, as a moderating variable, alters the

strength of these relationships. The necessity of this research stems from the fact that, in the post-pandemic era, educational institutions and universities have become heavily reliant on the continuity of virtual operations, while employees in these sectors face communication challenges, professional isolation, and diminished engagement. Understanding the mechanisms through which technology enhances engagement and communication satisfaction, coupled with identifying the role of organizational attachment, can inform human resource policies and information technology management in knowledge-based organizations. The objectives of the present study encompass examining the direct effect of ICT use on communication satisfaction and remote employee engagement, as well as testing the moderating role of organizational attachment within these relationships. Accordingly, the following hypotheses were formulated:

1. The use of information and communication technology has a significant effect on internal communication satisfaction.
2. The use of information and communication technology has a significant effect on remote employee engagement.
3. Organizational attachment significantly moderates the relationship between ICT use and internal communication satisfaction.
4. Organizational attachment significantly moderates the relationship between ICT use and remote employee engagement.

2. Theoretical Foundations and Research Framework

Use of Information and Communication Technology in the Workplace

Information and Communication Technology (ICT) refers to an integrated set of hardware, software, networking, and communication tools that enable the collection, processing, storage, and exchange of information without spatial or temporal constraints. Within the management literature, ICT is regarded not merely as a technical infrastructure but as a transformative strategy that mechanizes organizational processes, accelerates interactions, and enhances knowledge management through intelligent systems (Kumar et al., 2023). The historical trajectory of information systems implementation in Iran indicates that although initial steps were taken during the 1960s and 1970s, the most significant leap in ICT adoption and utilization occurred following recent crises and the imperative for service continuity (Bahrami, 2023). Today, organizations leverage intranets, cloud-based collaboration platforms, project management systems, and video conferencing tools to bridge geographically dispersed employees. The effectiveness of these technologies depends not only on technical quality but also on their design, support mechanisms, and alignment with organizational culture. Urbaniec et al. (2022) emphasize that managerial perspectives on technology, employee training levels, and structural flexibility are decisive factors in the success or failure of remote work initiatives. Furthermore, Hytönen (2023) demonstrated

that in hybrid work models, technology-mediated internal communication, when characterized by transparency, continuity, and human-centered design, can sustain motivation and productivity.

Internal Communication Satisfaction

Internal communication refers to the flow of information, ideas, and feedback among organizational members across all levels (upward, downward, horizontal, and diagonal). Internal communication satisfaction is a multidimensional construct that reflects the extent to which employees hold positive perceptions regarding the transparency, timeliness, relevance, and effectiveness of received messages. In their research, Tkalac Vercic et al. (2023) demonstrated that communication satisfaction, by fostering shared understanding, reducing role ambiguity, and strengthening perceived organizational support, directly influences employee commitment and engagement. Leading strategies in this domain include emphasizing channel flexibility, integrating interactive intranets, prioritizing data security, and utilizing digital human resource tools to facilitate communication (Urbaniec et al., 2022). Lartey and Randall (2023) also outlined seven key stages for designing internal communication programs, encompassing processes from situational analysis to progress measurement. In remote work environments, the absence of informal communication and spontaneous interactions can diminish communication satisfaction; consequently, organizations are obliged to proactively plan and transform digital channels into trust-building platforms.

Remote Employee Engagement

Employee engagement extends beyond the mere completion of assigned tasks; it denotes active involvement, professional enthusiasm, a sense of ownership over organizational goals, and a willingness to exceed formal expectations. In the context of remote work, this construct faces specific challenges: social isolation, work-life boundary blurring, reduced direct supervision, and a high degree of self-regulation. Ali et al. (2023), in their exploratory study, found that intrinsic motivation, self-efficacy, and human resource policies are key predictors of engagement and personal well-being among remote employees. Prasad et al. (2023) also demonstrated that personal skills, virtual teamwork, and occupational stress management are decisive variables in sustaining engagement. To successfully manage remote teams, strategies such as equipping employees with appropriate tools, clarifying roles, defining key performance indicators (KPIs), conducting regular virtual meetings, designing online team-building activities, and promoting mental health have been proposed (Lartey & Randall, 2023). Additionally, gamification, informal virtual meetings (e.g., virtual coffee breaks), and continuous feedback represent innovative approaches to maintaining engagement. Ultimately, remote engagement remains sustainable only when employees feel heard, supported, and integrated into a dynamic organizational community.

Organizational Attachment (Attachment Tendency toward the Organization)

Organizational attachment, or attachment tendency, refers to a deep emotional bond, a willingness to maintain a long-term relationship, a sense of identification with the organization, and a positive

evaluation of its values and performance. This construct extends beyond temporary job satisfaction and is rooted in long-term interactions, positive experiences, and a shared understanding of the organization's mission. Abgun and Mousavi (2022) emphasize that organizational attachment can function as a mediator or moderator in relationships among organizational variables. Li (2023) demonstrated that during the pandemic, employees with a high attachment tendency derived greater utility from communication technologies, and their communication satisfaction was significantly influenced by both formal and informal use of ICT. Organizational attachment encompasses multiple dimensions: enthusiasm for the organization, sense of belonging, positive evaluation, and willingness to advocate for the organization.

Attachment styles are also diverse: rationalist (focused on control and directives), transformational (inspirational and future-oriented), bureaucratic (adherence to rules), charismatic (personal influence during crises), participative (collective decision-making), and delegative (full empowerment) (Hasebrook et al., 2023; Prasad et al., 2023). In virtual environments, organizational attachment can serve as a psychological buffer against isolation and enhance the propensity for voluntary participation and the adoption of new technologies.

Research Framework

The framework of this study is grounded in Li's (2023) model and supplementary research in the field of digital organizational behavior. In this model, the use of information and communication technology serves as the independent variable, exerting influence on two dependent variables: internal communication satisfaction and remote employee engagement. Concurrently, organizational attachment functions as a moderating variable, altering the strength and direction of these effects. Empirical evidence indicates that these relationships have been validated across diverse contexts. In international research, Kumar et al. (2023) characterized ICT adoption as a survival strategy with a direct impact on organizational performance. Santoso et al. (2023) confirmed the role of internal communication in strengthening trust and engagement. Battisti et al. (2022) emphasized the significance of psychological variables in sustaining remote work arrangements. Hasebrook et al. (2023) also demonstrated that workload and initial levels of participation influence technology adoption. In domestic research, Dovali et al. (2022) examined the mediating roles of job autonomy and work-family conflict. Darjani and Akbari (2021) confirmed the impact of interactions with colleagues and supervisors on job outcomes, mediated by remote work. Karimipour (2021) and Mirzaei Ghadehar (2021) also emphasized employee satisfaction with remote work and the organizational and personal factors influencing it. Nevertheless, the existing research gap pertains to the lack of simultaneous examination of the moderating role of organizational attachment in the direct technology-communication-engagement relationship within an academic context. By addressing this gap, the present study offers a comprehensive framework for understanding the psychological-technological mechanisms operating in remote work environments.

3. Research Methodology

In terms of purpose, this study is applied, and in terms of nature and execution method, it is descriptive-survey. The statistical population comprised all official employees of the Islamic Azad University, Sari Branch, totaling 257 individuals. Given the feasibility of a census approach and the limited population size, a census sampling method was employed. Ultimately, 248 completed and valid questionnaires were analyzed, representing a response rate of 96.5%. The geographical scope of the study was the Islamic Azad University, Sari Branch, and the temporal scope spanned from February 2024 to August 2024.

The data collection instrument was a standardized, researcher-developed questionnaire based on a five-point Likert scale (ranging from "very low" to "very high"), consisting of 21 specialized items alongside demographic questions. Items pertaining to ICT use (4 items), internal communication satisfaction (5 items), remote employee engagement (6 items), and organizational attachment/attachment tendency (6 items) were adapted from the standardized scales developed by Li (2023). The validity of the questionnaire was confirmed through content and face validity assessments conducted by supervising professors, advisors, and experts in the fields of management and organizational behavior. To assess reliability, a pilot test was administered to 30 questionnaires, yielding an overall Cronbach's alpha coefficient of 0.90, which indicates excellent reliability.

Data Analysis Method

Data analysis was conducted at two levels: descriptive and inferential statistics. At the descriptive level, frequency, percentage, mean, and standard deviation were employed to examine demographic characteristics and response tendencies. At the inferential level, to test the hypotheses and evaluate model fit, structural equation modeling (SEM) based on partial least squares (PLS) was utilized using SmartPLS software, version 4. The selection of PLS was justified by its lack of requirement for normally distributed data, high efficiency with moderate sample sizes, and emphasis on predicting the variance of dependent variables.

Model evaluation was performed in two stages: First, assessment of the measurement model fit, which included examining construct reliability through Cronbach's alpha and composite reliability (CR), convergent validity via factor loadings and Average Variance Extracted (AVE), and discriminant validity using the Fornell-Larcker criterion. Second, evaluation of the structural model fit, encompassing the examination of path coefficients, t-statistics, p-values, the coefficient of determination (R^2), and the predictive relevance coefficient (Q^2). The significance level was set at 0.05 for this study, with a minimum factor loading threshold of 0.4 and a critical AVE value of 0.5.

4. Findings

A) Descriptive Statistics and Demographic Characteristics

Among the 248 respondents, 64% were male and 36% were female. Regarding marital status, 59% reported being married and 41% single. The age distribution indicated that the largest proportion

belonged to the 41–50 age group (50%), followed by the 31–40 age group (38%), the over-50 group (6%), and the 21–30 age group (6%). In terms of educational attainment, 43% held a master's degree or higher, 41% held a bachelor's degree, 8% held an associate degree, and 7% held a high school diploma. This distribution reflects a sample with moderate to high work experience and university-level education, which aligns with the organizational context of the academic setting.

B) Measurement Model Assessment

The evaluation of construct reliability indicated that all standardized factor loadings exceeded 0.4 (and were predominantly above 0.7), demonstrating desirable convergence of indicators with their corresponding constructs. Cronbach's alpha coefficients were calculated as 0.941 for ICT use, 0.940 for internal communication satisfaction, 0.948 for remote employee engagement, and 0.939 for organizational attachment, all of which surpassed the threshold of 0.7. Composite reliability (CR) values for all constructs ranged from 0.952 to 0.957, indicating very strong internal consistency. Convergent validity was assessed using the Average Variance Extracted (AVE) index. The AVE values were reported as 0.849, 0.807, 0.788, and 0.767, respectively, all exceeding the 0.5 threshold and thereby confirming convergent validity. To examine discriminant validity, the Fornell-Larcker criterion was applied. Based on the correlation matrix, the square root of the AVE for each construct was placed on the main diagonal and, in all cases, was greater than the correlation coefficients between that construct and other constructs, confirming the conceptual distinctiveness of the variables.

Table 1: Reliability Coefficients and Convergent Validity of Research Variables

Latent Variable	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Use of Information and Communication Technology (ICT)	0.941	0.957	0.849
Internal Communication Satisfaction (SIC)	0.940	0.954	0.807
Remote Employee Engagement (IRM)	0.948	0.957	0.788
Organizational Attachment/Attachment Tendency (AT)	0.939	0.952	0.767

Table 2: Discriminant Validity Assessment (Fornell-Larcker Criterion)

Variable	ICT	SIC	IRM	AT
ICT	0.922			
SIC	0.897	0.898		
IRM	0.898	0.877	0.908	
AT	0.819	0.751	0.829	0.876

C) Structural Model Assessment and Hypothesis Testing

To examine the structural relationships, standardized path coefficients, t-statistics, and p-values were calculated. All relationships were reported as significant at the 95% confidence level. The coefficient of determination (R^2) for the endogenous variables of internal communication satisfaction and remote employee engagement was calculated as 0.810 and 0.889, respectively, indicating very strong variance explanation (exceeding the threshold of 0.67). The predictive relevance coefficient (Q^2) was also reported as 0.567 and 0.624 for the two variables, respectively, demonstrating the model's strong predictive capability. The overall goodness-of-fit criterion (GoF), calculated using the formula $\sqrt{(AVE \times R^2)}$, yielded a value of 0.813, indicating a strong overall model fit.

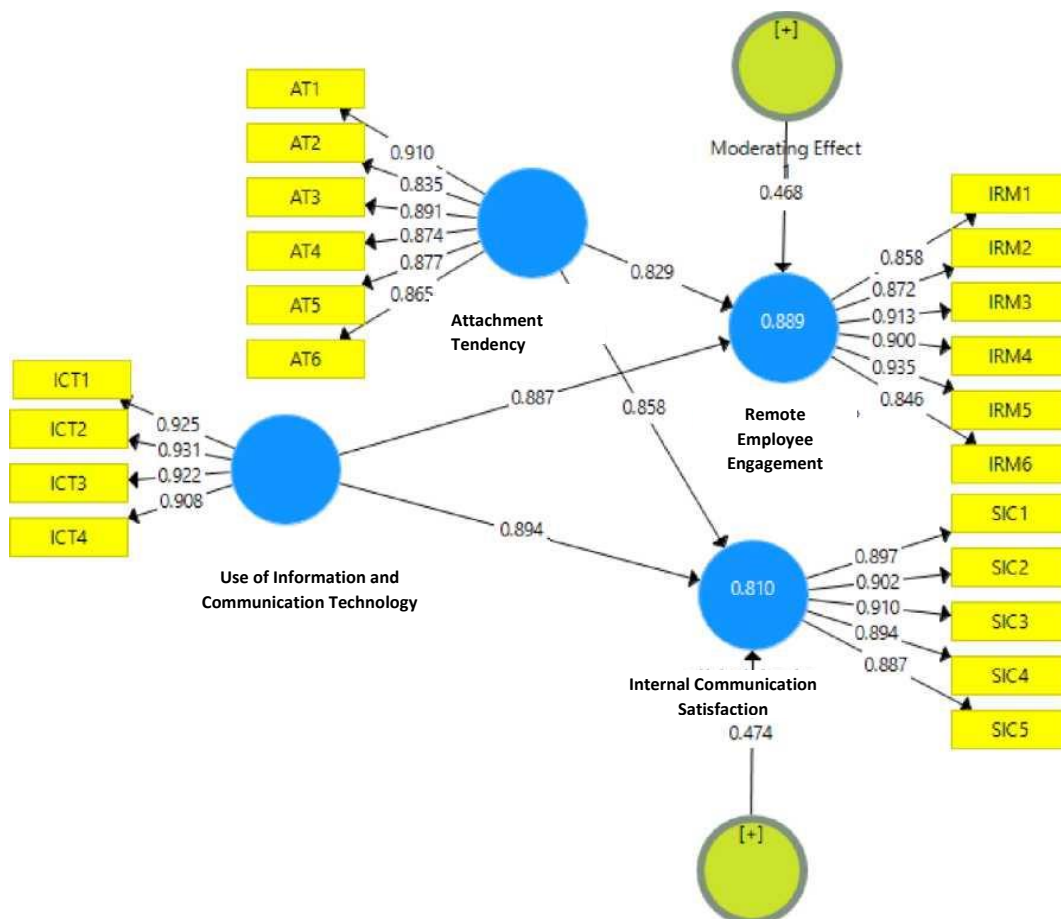


Figure 1. Factor loadings of the research indicators.

Results of Hypothesis Testing

The results of the hypothesis tests are as follows:

1. **Hypothesis 1:** The use of information and communication technology has a significant effect on internal communication satisfaction ($\beta = 0.894$, $t = 9.208$, $p < 0.001$) → Supported.

2. **Hypothesis 2:** The use of information and communication technology has a significant effect on remote employee engagement ($\beta = 0.887$, $t = 8.013$, $p < 0.001$) → Supported.
3. **Hypothesis 3:** The effect of ICT use on internal communication satisfaction is significantly moderated by organizational attachment ($\beta = 0.474$, $t = 3.618$, $p < 0.001$) → Supported.
4. **Hypothesis 4:** The effect of ICT use on remote employee engagement is significantly moderated by organizational attachment ($\beta = 0.468$, $t = 3.980$, $p < 0.001$) → Supported.

Table 3: Results of Hypothesis Testing

Hypothesis	Relationship Examined	Path Coefficient (β)	t-Statistic	p-Value	Result
H1	ICT → SIC	0.894	9.208	< 0.001	Supported
H2	ICT → IRM	0.887	8.013	< 0.001	Supported
H3	ICT × AT → SIC	0.474	3.618	< 0.001	Supported
H4	ICT × AT → IRM	0.468	3.980	< 0.001	

The findings indicate that the utilization of information and communication technology not only exerts a direct and robust influence on enhancing communication satisfaction and remote employee engagement but also that this effect is significantly amplified in the presence of high levels of organizational attachment. In other words, employees who possess stronger emotional and identity-based bonds with the organization leverage digital tools more effectively to strengthen communications and engage in more active participation.

5. Discussion and Conclusion

The findings of this study conclusively demonstrate that the use of information and communication technology serves as a primary driver for enhancing internal communication satisfaction and remote employee engagement within an academic setting. This result aligns with the findings of prior research conducted by Li (2023), Kumar et al. (2023), Bahrami (2023), Tkalac Vercic et al. (2023), and Ali et al. (2023). The mechanism underlying this effect can be attributed to the reduction of spatial and temporal barriers, the acceleration of information flow, the establishment of multiple interactive channels, and the provision of a foundation for organizational transparency. In educational environments, where the nature of work is fundamentally based on knowledge exchange, team coordination, and continuous support, information technology tools play a vital infrastructural role. Furthermore, the significant impact of technology on remote employee engagement indicates that mere virtual presence is insufficient; rather, the intelligent design of communication platforms, digital skills training, and continuous technical support constitute necessary conditions for transforming remote employees from passive task-executors into active participants. This finding is corroborated by the studies of Hytönen (2023), Santoso et al. (2023), and Lartey and Randall (2023).

The innovative and pivotal contribution of this research lies in confirming the moderating role of organizational attachment. The findings revealed that organizational attachment is not merely an

outcome variable but a powerful facilitator that amplifies the strength of technology's impact on communication and engagement. This result is consistent with the perspectives of Li (2023), Battisti et al. (2022), and Hasebrook et al. (2023). Employees with high organizational attachment perceive technology not as a tool for control or surveillance, but as a communicative bridge for maintaining belonging, participating in decision-making, and reinforcing organizational identity. Conversely, employees with low organizational attachment may experience digital isolation or superficial utilization of tools, even when advanced technologies are accessible. Therefore, investing solely in technological infrastructure without attending to the psychological and emotional dimensions of human resources will yield limited returns.

Based on the findings, the following practical recommendations are offered to university administrators and similar organizations:

1. **Development of Integrated Communication Infrastructures:** Implementation of secure cloud-based platforms and integration of email, organizational messaging systems, video conferencing, and task management systems to reduce information fragmentation.
2. **Design of Targeted Communication Programs:** Formulation of a regular communication calendar, clarification of expectations, establishment of bidirectional feedback mechanisms, and conduct of short but focused virtual meetings to sustain engagement without inducing digital fatigue.
3. **Strengthening Organizational Attachment:** Implementation of virtual recognition programs, involvement of employees in decision-making processes related to remote work, creation of informal interactive spaces (e.g., virtual coffee breaks), and attention to mental health and work-life balance.
4. **Continuous Training in Digital and Communication Skills:** Organization of specialized workshops for employees and managers to enhance technological literacy, time management in virtual environments, and techniques for leading geographically dispersed teams.
5. **Continuous Monitoring of Remote Employee Experience:** Utilization of periodic surveys, analysis of interaction data, and adaptation of policies based on authentic employee feedback.

The limitations of this study include its focus on a specific statistical population (Islamic Azad University, Sari Branch), the potential for self-reporting bias in questionnaire responses, and the cross-sectional nature of the research. Future studies could examine the longitudinal effects of technology on remote engagement, conduct inter-organizational comparisons across different economic sectors, and elucidate the role of variables such as organizational learning, competitive advantage, or leadership styles within this framework. Additionally, employing mixed-methods approaches (qualitative-quantitative) could provide deeper insights into the lived experiences of remote employees.

In summary, this research demonstrated that information and communication technology, particularly when reinforced by organizational attachment, can serve as a driving force for

communication satisfaction and sustainable engagement among remote employees. Organizations that can establish an intelligent balance between technological investment and emotional-psychological investment in their human resources will achieve greater sustainability, agility, and productivity in the era of hybrid and virtual work.

References

Abgun, M., & Mousavi, F. (2022). Investigating the effect of employee participation on employee remote work with the mediating role of organizational commitment.

Abgun, M., & Mousavi, F. (2022). Investigating the effect of employee participation on employee remote work with the mediating role of organizational commitment. *Management Science in Industry*, 1(10), 47–54.

Ali, A. D., Narine, L. K., Hill, P. A., & Bria, D. C. (2023). Factors affecting remote workers' job satisfaction in Utah: An exploratory study. *International Journal of Environmental Research and Public Health*, 20(9), 5736.

Bahrani, M. (2023). Investigating the role of information technology in managing the coronavirus epidemic crisis. *Quarterly Journal of Applied Research in Technical and Engineering*, 4(30), 87–99.

Battisti, E., Alfiero, S., & Leonidou, E. (2022). Remote working and digital transformation during the COVID-19 pandemic: Economic-financial impacts and psychological drivers for employees. *Journal of Business Research*, 150, 38–50.

Darjani, A., & Akbari, M. (2021). Investigating the effect of employee interaction with colleagues and supervisors on job outcomes with the mediating role of employee remote work and the moderating role of environmental dynamics. *Journal of Human Resource Management and Support Development*, 1(60), 165–190.

Dovali, M., Haghdoost, S., & Masoomzadeh, R. (2022). The effect of remote work on employee engagement with the mediating role of job autonomy and work-family conflict during the COVID-19 pandemic. *Cognitive and Behavioral Sciences Research*, 12(1), 57–82.

Hasebrook, J. P., Michalak, L., Kohnen, D., Metelmann, B., Metelmann, C., Brinkrolf, P., ... & Hahnenkamp, K. (2023). Digital transition in rural emergency medicine: Impact of job satisfaction and workload on communication and technology acceptance. *PLOS ONE*, 18(1), e0280956.

Hytönen, E. (2023). *Case study: How internal communication influences employee motivation in a hybrid working model: SAP Barcelona Digital Hub* [Unpublished master's thesis].

- Karimipour, A. (2021). Investigating the effect of employee satisfaction with remote work on organizational performance based on Morgan's remote work theory. *Accounting and Management Perspective*, 4(50), 82–93.
- Kumar, V., Verma, P., Mittal, A., Tuesta Panduro, J. A., Singh, S., Paliwal, M., & Sharma, N. K. (2023). Adoption of ICTs as an emergent business strategy during and following COVID-19 crisis: Evidence from Indian MSMEs. *Benchmarking: An International Journal*, 30(6), 1850–1883.
- Lartey, F. M., & Randall, P. M. (2023). The relationship between remote employee engagement and computer-mediated communication indicators. In *Current topics on business, economics and finance* (Vol. 1, pp. 132–144).
- Li, J. Y. (2023). *Remote work, ICT use, and internal communication satisfaction: The moderating role of attachment tendency* [Unpublished manuscript].
- Mirzaei Ghadehar, A. (2021). *Investigating the effect of job hardiness on remote work performance and employee satisfaction at the Iran National Deeds Registration Organization* [Paper presentation]. 4th National Conference on Modern Management and Business Models.
- Nasiri, B. (2023). Identifying remote work and home quarantine strategies from the perspective of female faculty members during the COVID-19 pandemic: A phenomenological approach. *Quarterly Journal of Communication Culture Studies*, 24(61), 97–130.
- Prasad, K. D. V., Vaidya, R., & Rani, R. (2023). Remote working and occupational stress: Effects on IT-enabled industry employees in Hyderabad Metro, India. *Frontiers in Psychology*, 14, 998.
- Santoso, N. R., Sulistyaningtyas, I. D., & Pratama, B. P. (2023). Employee engagement and trust relationships during COVID-19 pandemic: The expanded role of internal communication. *Communication & Society*, 187–204.
- Tkalac Vercic, A., Galić, Z., & Žnidar, K. (2023). The relationship of internal communication satisfaction with employee engagement and employer attractiveness: Testing the joint mediating effect of the social exchange quality indicators. *International Journal of Business Communication*, 60(4), 1313–1340.
- Urbaniec, M., Małkowska, A., & Włodarkiewicz-Klimek, H. (2022). The impact of technological developments on remote working: Insights from the Polish managers' perspective. *Sustainability*, 14(1), 552.

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ETHICAL CONSIDERATION

Authenticity of the texts, honesty and fidelity has been observed.

CONFLICT OF INTEREST

Author/s confirmed no conflict of interest.