



“Driving remote team success through knowledge management practices in the Jordanian high-tech industry”

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DRIVING REMOTE TEAM SUCCESS THROUGH KNOWLEDGE MANAGEMENT PRACTICES IN THE JORDANIAN HIGH-TECH INDUSTRY

Abstract

This study aims to investigate the influence of remote work on team effectiveness in high-tech enterprises in Jordan, specifically focusing on knowledge management as a mediator. The study utilized a quantitative research design, with 254 participants actively participating in remote work settings across high-tech firms in Jordan. The sample was chosen based on the participants' personal experiences with remote work arrangements, which provide valuable insights into the interplay between remote working conditions and team dynamics. The paper designed a structured questionnaire to elicit responses from employees about the variables under investigation. The survey data were analyzed using SmartPLS4 to validate the theoretical framework and research hypotheses. The results show a significant positive relationship between remote work and team effectiveness, as well as an improvement in knowledge management practices under telework conditions. Knowledge management practices refer to communicative activities regarding the systematic collection, organization, sharing, and application of knowledge resources. The importance of effective knowledge management practices is realized in remote settings, primarily through increased team efficiency and productivity. These results are statistically significant ($p = 0.000$), which stresses the importance of effective remote teamwork with regard to knowledge management.

Keywords

digital work environment, virtual team practices,
organizational communication, high-tech industry

JEL Classification

M15, M54, O33

INTRODUCTION

The organizational work environment in modern business is changing, with remote work slowly becoming an adoptable norm. The shift from geographical dispersion has fundamentally altered team dynamics and organizational operations. Remote work is the act of moving to a physical location; it greatly affects the interaction of relationships within the team, the processes of collaboration, and day-to-day business in general. The business world is increasingly leveraging opportunities that enhance flexibility and extend reach, underscoring once more the criticality of effective teamwork and communication. This directly affects team productivity and ultimately leads to organizational success. However, such telecommuting poses challenges, primarily in terms of effective knowledge management and its distribution between appropriate control and team members.

Knowledge management is broad because it means all possible means and ways of communication, cooperation, and sharing of knowledge, including databases, intranets, or platforms for collaboration. An organization, through its effective knowledge management strategy, would bridge the gap of physical distance by motivating staff



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members to share further helpful knowledge and skills and be more productive and innovative. Most traditional knowledge management strategies prove ineffective in such virtual environments; hence, new methods are critical if knowledge is to remain a key asset in enhancing team performance. Under these circumstances, it is essential to determine how remote work environments would influence a team's performance and how knowledge management could bridge the gap to enhance its effectiveness. Papadopoulos and Panakia (2022) and Garro-Abarca et al. (2021) have discussed the dynamics of remote teams and the role played by virtual environments in changing the traditional work process. This effort underscores the role of knowledge management in supporting the special issues telework raises and enabling the realization of its potential to boost team performance.

1. LITERATURE REVIEW AND HYPOTHESES

As remote work settings rise, there is a growing interest in understanding the effects they have on team performance. According to Orsini and Rodrigues (2020), the psychological needs of remote teams need to be addressed for motivation and well-being. Lang et al. (2022) also highlight the significance of interventions that enable superior team performance and employee welfare in distributed virtual teams with an increased inclination toward remote work. In addition, virtual teams can improve the learning competence, creative thinking, and task completion of team members, thereby increasing remote work. Furthermore, Kniel and Comi (2021) define aspects related to distributed collaboration and the performance needs of virtual teams that stress factors influencing the effectiveness or high performance of decentralized groups. Murdoch-Kitt et al. (2020) highlighted how aspects of the design process foster teamwork between remote teams whose systemic thinking and making the invisible visible may lead to higher levels of performance within the group. Along with that, Bierly et al. (2009) highlight the agility of virtual teams in new product development and innovation and, in addition, request more adaptable arrangements to meet performance standards.

The remote work environment can improve team performance through flexibility and freedom (Greene & Sanderson, 2023). In this work system, employees can maximize their productivity during their peak hours, irrespective of traditional office schedules, thereby promoting fairness and efficiency in performance (Afridi et al., 2023; Patanjali & Bhatta, 2022). In addition, hiring talent from a worldwide landscape leads to teams that are not on-

ly competent but also offer diverse viewpoints, improving creativity and innovation potential (Sarkar & Kedas, 2023). It also eliminates stress and loss of time due to daily commutes, which improves the mental health conditions of employees while enabling a proper work-life balance (Albreiki et al., 2023; Emre & De Spiegeleare, 2021). Moreover, organizations can channel the saved money in terms of reduced needs for physical office space to resources that support the output of teams directly (El khatib & Alzoubi, 2022; Ardon et al., 2022). Properly implemented, this modern form of working yields more job satisfaction and staff retention, which then translates to an efficient team.

The reduction of daily commutes also removes stress and time losses, improving employees' mental health conditions while enabling a proper work-life balance (Albreiki et al., 2023; Emre & De Spiegeleare, 2021). This requirement for suitable digital communication and collaboration tools in remote settings also contributes to the streamlining of processes so that teams stay linked together. Furthermore, organizations can allocate the cost savings from reduced physical office requirements to resources that directly support team output (El khatib & Alzoubi, 2022; Ardon et al., 2022). Properly implemented, this contemporary form of work can result in greater job satisfaction and staff retention, which translates to an efficient team.

Contrastingly, Agarwal (2022) discusses several approaches to overcoming challenges with remote work, such as weaving performance reviews into weekly conversations and setting technology norms, along with training managers on how they can organize meetings and projects. This is consistent with the results of Bierly et al. (2009), who note that goal clarity and familiarity affect team satisfaction, which may influence virtual teams'

performance. Remote work environments have both positive and negative impacts on team performance. Although employer interventions can be implemented to enable effective team performance and the well-being of individual remote workers (Lang et al., 2022). There are challenges related to remote work that influence productivity and communication among employees (Atti et al., 2022). Communication effectiveness and employee welfare may decrease in remote work environments, which can be linked to reduced efficiency (Fialho, 2022). Moreover, the absence of non-verbal cues during social interactions in remote work makes it more difficult to establish trust and credibility, which leads to poor relationship building within teams. Nevertheless, remote work also has advantages, including flexibility for employee satisfaction and global talent access.

Different countries and sectors introduce remote work differently, with a special emphasis on knowledge-based industries like management education (Iwashita, 2021). Information and communication technologies have become more popular, as has the need for e-skills, a prerequisite for successful remote work (Danielak & Wysocki, 2022). Researchers have also investigated the psychological well-being of remote workers, leading to an increased understanding of certain management practices, remote work, and crisis management (Bouchard & Meunier, 2023). Furthermore, practices significantly influence the impact of human resource management policy choices on the sustainability of remote workforce (Onnis, 2017). Knowledge management, as such, refers to the intentional and systematic alignment of an organization's people, technology, processes, and culture to further their common purpose of creativity and value to the organization. This management integrates all the actions involved in identifying, capturing, analyzing, recovering, and sharing an enterprise's information resources using a single approach. These resources may be in the form of databases, documents, policies, procedures, or established practices specific to the rate workers. Dalkir (2013) clearly states that intellectual assets enhance the competitive edge or performance of the organization.

The value of middle management leadership models in preventing psychosocial risks and maintaining work-life balance through remote working

has been identified as an important contribution (Aboalghanam et al., 2024; Alzghoul et al., 2023a; Spagnoli et al., 2021). Additionally, Sofianti et al. (2023) highlighted the framework for measuring remote work benefits and determining factors that are significantly associated with knowledge management. This is consistent with the idea that creating a culture of knowledge sharing by managing people effectively has become critical in organizations (E. Cabrera & L. Cabrera, 2005; Khawaldeh & Alzghoul, 2024). Knowledge sharing has complicated needs that require human resource professionals to collaborate with top managers and line managers in developing practices between knowledge-sharing activities across functions (Self et al., 2015). Remote work challenges and difficulties have been discussed as well, such as the supervision of remote employees' performance, training for those who oversee distant workers, and a culture that is conducive to telecommuting (Agarwal, 2022; Alshaar et al., 2023). Furthermore, Arslan et al. (2021) demonstrated that relationship management results in better knowledge production and dissemination, as well as increased trust building with a lower level of conflict.

In this respect, sound knowledge management practices work with better-performing teams. Lee et al. (2010) established a positive association between team knowledge sharing and better team performance. Jamshed and Majeed (2019) found a significant correlation between the team's improved performance and knowledge sharing practices. Moreover, A. Mehta and N. Mehta (2017) demonstrated that knowledge integration has a positive impact on team performance. Han et al. (2018) proved that knowledge sharing mediated the linkage between shared leadership and team performance. Besides, Huang et al. (2013) found that the positive influence of transitive memory systems on team performance was through knowledge management results. In addition, Shahzad et al. (2023) integrated the ability-motivation-opportunity theory with knowledge management literature, arguing that knowledge-intensive HRM systems lead to improved performance through team productive processes like exploration and exploitation of teams' knowledge bases. Furthermore, Neto et al. (2019) have demonstrated a connection between organizational learning and team effectiveness through knowledge management strat-

egies that support agile teams in acquiring and sharing performance information. Hu and Randel (2014) eventually demonstrated the mediation of social capital and extrinsic incentives into knowledge sharing, which is based on team innovation and performance.

Recent studies found that knowledge management practices improve performance (Alzghoul et al., 2018; Elrehail et al., 2018). Introducing knowledge-intensive HRM systems may raise the potential performance due to team reflexivity, knowledge sharing, and adaptability (Shahzad, 2022). Furthermore, knowledge management in creation, sharing, acquisition, implementation, and storage improves overall performance (Sultana, 2023). Moreover, knowledge management practices influence innovation through top management measures, strategic knowledge management, knowledge-driven learning, and knowledge sharing (Kimani, 2021). Knowledge management practices positively affect the correlation between team performance, effective information sharing, innovation, and organizational effectiveness.

Investigating the linkage between remote work environments and team effectiveness, previous studies consider knowledge management practices as an intervening factor. Various earlier studies have pointed out this relationship. For example, Jamshed and Majeed (2019) found that the association between team culture and performance is influenced by knowledge sharing. Therefor indicating a significant role of knowledge management in improving team productivity. Monzani et al. (2022) measured positive management practices against traditional ones in dislocated work situations and found that the former led to greater performance, loyalty, and task efficacy perception, indicating the importance of good management in remote settings. Adikaram and Naotunna (2023) further highlighted the importance of HR policies and practices, including knowledge management, which would support remote working properly. In addition, Kniel and Comi (2021) stated that shared understanding is the key to knowledge management in remote teams, as it requires trustworthiness, transparency, and project management. Matikainen et al. (2023) analyzed knowledge-related tensions in remote work settings during the COVID-19

pandemic and extended the understanding of knowledge work within a distance setting as well as management of related conflicts. However, Nyfoudi et al. (2022) revealed that team-level architectural knowledge mediated the connection between managerial coaching skills and team performance, which highlighted the mediation role of knowledge in improving remote teams' performance.

Moreover, Shea et al. (2023) have discovered that knowledge management is critical in organizations, especially with regard to innovation and communication. Whillans et al. (2021) emphasize experimentation and continuous learning in virtual teams because flexible knowledge management can lead to better performance and innovation in remote work. Galanti et al. (2021) demonstrate how knowledge management can improve employee experience and minimize the stress of remote work due to increased productivity and collaboration. Previous studies have demonstrated that knowledge management plays a vital role in employee performance within different industries, such as digital startups, healthcare, and information technology. Alzghoul et al. (2023b) have discovered that knowledge management practices can reinforce the link between organizational culture and performance. Thus, knowledge management practices serve as a mediator between remote work conditions and team performance by supporting communication and information sharing. Thus, the study is to investigate how remote work and knowledge management practices influence team performance. Based on above, the following hypotheses are proposed:

- H1: *Remote work environments are positively associated with team performance.*
- H2: *Remote work environments are positively associated with the effective implementation of knowledge management practices.*
- H3: *Effective knowledge management practices are positively associated with team performance.*
- H4: *Knowledge management practices mediate the relationship between remote work environments and team performance.*

2. METHOD

This study utilized a quantitative approach to investigate and delve into the relationships between various variables in Jordan's high-tech sector. The study collected data from a broad and representative sample of this industry, making the results accurate and applicable. Respondents were randomly drawn from the dynamic world of Jordan's high-tech companies in Amman, which included 2,718 employees. An official email was sent to 350 employees, inviting them to take part in the study. The study sampled 259 respondents, of whom 254 were considered suitable for analysis. Ethical considerations guided the entire data collection process. Participants' anonymity was guaranteed, as was the confidential nature of their answers, creating a climate of trust and openness. Podsakoff et al. (2014) recommended this measure to elicit authentic responses and prevent the tendency toward socially desirable answers.

The study relied on a plethora of empirical evidence and employed the SEM and PLS methods to analyze empirical evidence. The questionnaire (Table A1, Appendix A) was the main way of collecting data, and it was created based on a Western research paradigm (Table 1). The questionnaire items were selected and modified to align with the study objectives; this was done to make sure that respondents would correspond based on the aim and nature of this study. Two linguistic experts with a back-translation method were relied on to maintain the original meaning and intactness of the questions' content, ensuring translation accuracy. A pilot survey of the data collection process was conducted by testing 20 people on clarity, relevancy, and potency in questioning. The feedback from this preliminary stage resulted in rather small yet significant changes to the questionnaire, which increased its consistency with research objectives.

Table 1. Measuring instruments

No.	Construct	Items	Adapted from
1	Remote Work	7	Ingusci et al. (2023)
2	Team Performance	11	Driskell et al. (2010) and Shiao and Huang (2023)
3	Knowledge Management	28	Gold et al. (2001) and Shea et al. (2023)

Table 2 provides a detailed look at the respondent demographics. The majority are male, 58.3% (148

respondents), compared to 41.7% (106 females). Besides, the majority are in their mid-careers, particularly those aged 25-35, who account for 37.80% (96 people) of the group. Then, the 36-45 year age bracket is also well represented, with 33.85% (86 people), while those under 25 and over 45 are less common, at 9.45% and 18.90%, respectively. Regarding education, a large portion of the respondents, 79.1% (201 people), hold a bachelor's degree. This is much higher compared to those with a diploma or a postgraduate degree, 8.7% (22 people) and 12.2% (31 people), respectively, indicating a strong leaning toward undergraduate education. In terms of years of service, there is a good mix of experience levels. Those with 4-10 years of service form the largest group at 38.9% (99 people). Following them are individuals with more than 10 years of service (34.3%, 87 people) and those with less than three years (26.8%, 68 people), suggesting a balanced representation of both relatively new and experienced professionals in the group.

Table 2. Demographics results

Variable	Frequency	Percentage
Gender		
Male	148	58.3
Female	106	41.7
Age		
Less than 25 years	24	9.45
25-35 years	96	37.80
36-45 years	86	33.85
Above 45	48	18.90
Educational level		
Diploma degree	22	8.7
Bachelor degree	201	79.1
Postgraduate degree	31	12.2
Years of service		
Less than 3 years	68	26.8
4-10 years	99	38.9
Above 10 years	87	34.3

3. RESULTS

The results of the measurement model presented in Table 3 offer insight into the variables studied. The item loadings for remote work are sufficiently large, all above 0.7, indicating strong individual item reliability (Hair et al., 2019). In addition, the combination of a high Cronbach's alpha value (0.91) and a composite reliability level (0.88) indicates that the remote work scale

has been confirmed to be a reliable construct, according to Hair et al. (2019). Moreover, the AVE value of 0.72 is above the recommended level of 0.50, and it represents good convergence validity that a major part of the variance for remote work items reflects on the latent construct (Hair et al., 2016). The item loadings for team performance are acceptable, with values ranging from 0.709 to 0.833. This suggests an overall solid and stable association between the items as well as the construct in question. Although the lowest among all three constructs, its Cronbach's alpha equals 0.75, which indicates reasonably high internal consistency, whereas composite reliability measures 0.82, meaning that this is a reliable construct. The AVE for team performance is 0.68, which not only fulfills but even overtakes the criterion. In contrast, the knowledge management construct identifies some opportunities for possible further development. However, the majority of item loadings exceed the acceptable threshold, resulting in the deletion of three items due to insufficient loading. However, the total reliability is high, with a Cronbach's alpha of 0.90, and composite reliability is estimated to be 0.74. With an AVE of 0.63, the threshold is exceeded, and it can be confirmed that there is a high shared variance in retained items.

Table 3. Indicator reliability and convergent validity

Latent Variable	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Remote Work		0.91	0.88	0.72
RW1	0.751			
RW2	0.547			
RW3	0.877			
RW4	0.418			
RW5	0.783			
RW6	0.438			
RW7	0.507			
Team Performance		0.75	0.82	0.68
TP1	0.761			
TP2	0.861			
TP3	0.819			
TP4	0.802			
TP5	0.784			
TP6	0.825			
TP7	0.871			
TP8	0.743			
TP9	0.833			
TP10	0.907			
TP11	0.813			

Knowledge Management		0.90	0.74	0.63
KM1	0.759			
KM2	0.728			
KM3	0.821			
KM4	0.824			
KM5	0.775			
KM6	Deleted <0.70			
KM7	0.773			
KM8	0.745			
KM9	0.804			
KM10	0.790			
KM11	Deleted <0.70			
KM12	0.708			
KM13	0.726			
KM14	0.817			
KM15	0.843			
KM16	Deleted <0.70			
KM17	0.831			
KM18	0.753			
KM19	0.729			
KM20	0.784			
KM21	0.776			
KM22	0.742			
KM23	0.807			
KM24	0.701			
KM25	0.767			
KM26	0.798			
KM27	0.769			
KM28	0.786			

As to discriminant validity, this study adopted the heterotrait-monotrait ratio (HTMT) approach. The HTMT is used to show the discriminant validity of the constructs (Table 4). The values under the categories of remote work, team performance, and knowledge management are all well below the 0.85 conservative threshold to indicate that each construct clearly differentiates itself from others (Henseler et al., 2015). In particular, remote work has low HTMT values with team performance (0.514) and knowledge management (0.578), while team performance and knowledge management also show clear discriminant validity with HTMT values of 0.612 and 0.647, respectively. This shows that the measurement model correctly captures unique components of all constructs without significant cross-loadings.

Table 4. Discriminant validity by HTMT

Variables		1	2	3
1	Remote Work	0.722		
2	Team Performance	0.514	0.623	
3	Knowledge Management	0.578	0.612	0.647

Table 5 provides an insightful perspective on structural model testing, primarily focusing on emancipating the relations between the constructs. This study used Smart PLS4 to evaluate the structural model in accordance with the methodology of Hair et al. (2019). This involved the PLS-SEM algorithm to validate the proposed model. The analysis employed the bootstrapping technique proposed by Preacher and Hayes (2008) as a method of choice for measuring path coefficients. This method proves particularly potent in testing the hypotheses with SEM, yielding a better estimate of the significance levels for path coefficients. The bootstrapping method had 5,000 resamples under the SmartPLS procedure, which is a stringent approach with arguably better *p*-values and *t*-values.

Table 5 shows the results of the hypotheses testing. The path from remote work to team performance demonstrates a strong relationship (an original sample coefficient of 0.584, a *t*-statistic of 6.328, and a *p*-value of 0.000), firmly supporting the first hypothesis. Similarly, the path from remote work to knowledge management is also significant, as evidenced by a high *t*-statistic of 9.368 and a *p*-value of 0.000. Thus, the second hypothesis is supported. Lastly, the relationship between knowledge management and team performance is also validated with a *t*-statistic of 2.104 and a *p*-value of 0.000; therefore, the third hypothesis is supported.

Table 6 presents the mediating effect analysis, focusing on the paths involving remote work, knowledge management, and team performance. This analysis is crucial for understanding how knowledge management may mediate the relationship between remote work and team performance. The sample mean of 0.824 and the original sample

path coefficient of 0.581 showed that knowledge management has a strong and positive mediating effect on the relationship between remote work and team performance. The standard deviation of this path is relatively low (0.058), suggesting consistency in the mediation effect across different samples. The *t*-statistic value of 2.241, significantly above the commonly accepted threshold of 1.96 for statistical significance, further strengthens the reliability of this finding. Moreover, a *p*-value of 0.000 decisively suggests that the mediating effect of knowledge management in the remote work-to-team performance relationship is statistically significant. Therefore, H4 was supported.

4. DISCUSSION

The study investigated how work environments influenced team performance, especially through knowledge management practices. Four hypotheses about different aspects of this relationship were tested using a structural model analysis in SmartPLS4. These results help one understand the interactions between a remote work environment and knowledge management practices that impact team performance. The results validated H1, suggesting a positive relationship between remote work environments and team performance. The current result came in line with Garro-Abarca et al. (2021) and Lang et al. (2022). The results suggest that remote work arrangements enhance team efficiency since this can add flexibility and autonomy. Contrary to popular belief, working remotely enhances interactions within groups. On the other hand, H2 indicated that remote work settings are positively correlated with efficient knowledge management practices. It was found that Sofianti et al. (2021) supported this finding. Probably

Table 5. Hypotheses testing

Path	Original sample	Sample mean	Standard deviation	t-statistic	p-value	Result
RW → TP	0.584	0.497	0.097	6.328	0.000	Accepted
RW → KM	0.701	0.652	0.045	9.368	0.000	Accepted
KM → TP	0.622	0.506	0.081	2.104	0.000	Accepted

Note: RW = remote work; KM = knowledge management; TP = team performance.

Table 6. Testing the mediating effect

Path	Original sample	Sample mean	Standard deviation	t-statistic	p-value	Result
RW → KM → TP	0.581	0.824	0.058	2.241	0.000	Accepted

Note: RW = remote work; KM = knowledge management; TP = team performance.

due to the inherent challenges experienced in remote working, effective communication and sharing of information are encouraged, hence a culture of knowledge management.

Consistent with the hypothesis H3, positive links between knowledge management practices and team performance were identified. This result stresses the importance of knowledge management in enhancing team performance (Jamshed & Majeed, 2019; Neto et al., 2019; Shahzad et al., 2023). One of the main benefits of successful knowledge management enables a team to have sufficient information and expertise. These consequences directly affect their efficiency as well as effectiveness. Next, H4 was concerned with the mediating role of knowledge management practices in the relationship between remote work environments and team performance. The hypothesis was supported: knowledge management has a significant mediating effect on remote working that positively influences team performance. The current findings align with previous ones (Galanti et al., 2021; Nyfoudi et al., 2022; Whillans et al., 2021). Remote work adoption alone would not be sufficient, as strong knowledge management strategies need to accompany it so full benefits can be achieved for team performance.

This study illuminates how remote work, knowledge management, and team performance interact when time is limited. Future studies can elaborate on the discussed limitations. The findings' generalizability might be flawed because of the limited diversity in the study sample. In addition, the study design does not allow one to determine cause and effect over space or time. The study used self-reported data for team performance and knowledge management, potentially leading to bias in the conclusions. This study also paid more attention to some features and possibly disregarded other critical factors, such as organizational culture or tech infrastructure. Future research could take various directions, such as undertaking longitudinal studies to monitor variants, expanding these dynamics in diverse industries and cultural settings for generalization purposes, and including further dimensions, such as employee satisfaction levels and leadership styles. Deeper qualitative analyses would provide further insight into the nature of remote work and knowledge management. Comparing remote work to fixed places of employment could also shed more light on how knowledge management strategies vary depending on work locations. These studies should also take into account the rapid evolution of technology and how it influences these relationships.

CONCLUSION

The current study tested knowledge management practices as a mediator for the relationship between remote work settings and team performance in the high-tech-based industry of Jordan. Accordingly, rigid quantitative analysis substantiated the hypotheses, indicating that remote work settings are not only effective for enhancing team performance but also serve as an ideal medium through which effective knowledge management practices can be implemented. The results emulated how such remote work settings claim to boost team performance through flexibility, autonomy, and effective collaboration. This is affirmed by a significant statistical relationship between the implication on the people working remotely from different regions and team performance, which proves it is a valid claim. The study further confirmed a positive correlation between remote work environments and the effectiveness of knowledge management practices.

This study stresses the key role of knowledge management in enhancing team performance. From the perspective of systemic knowledge sharing, capturing tacit knowledge, and keeping repositories updated, good practices of knowledge management go directly into the effectiveness and adaptability of the team. Such a link is vital because it places a lot of focus on managing knowledge as a key strategy resource in the organization. The study further revealed that knowledge management practices mediate the relationship between remote work and team performance. This mediation suggests that it is not adequate to just adopt remote working; instead, knowledge management systems should be generated in organizations to take maximum advantage of the benefits associated with the remote working environment. Knowledge management practices have been found to aid a conducive flow of information, foster innovation, and accrue overall team performance.

AUTHOR CONTRIBUTIONS

Conceptualization: Fayrouz Abousweilem.

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Funding acquisition: Fayrouz Abousweilem.

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REFERENCES

1. Aboalghanam, K. M., Alzghoul, A., & Alhanatleh, H. (2024). An analysis of service quality and complaint handling in the Jordanian healthcare sector: Implications for TQM and customer retention. *Innovative Marketing*, 20(1), 51-65. [https://doi.org/10.21511/im.20\(1\).2024.05](https://doi.org/10.21511/im.20(1).2024.05)
2. Adikaram, A. S., & Naotunna, N. P. G. S. I. (2023). Remote working during COVID-19 in Sri Lanka: lessons learned and what the future holds. *Employee Relations: The International Journal*, 45(4), 1035-1056. <https://doi.org/10.1108/ER-06-2022-0259>
3. Afridi, K., Turi, J. A., Zaufishan, B., & Rosak-Szyrocka, J. (2023). Impact of digital communications on project efficiency through ease of use and top management support. *Heliyon*, 9(7), Article E17941. <https://doi.org/10.1016/j.heliyon.2023.e17941>
4. Agarwal, S. (2022). *The challenge and difficulties of remote work*. Retrieved from <https://ideas.repec.org/p/osf/osfxxx/d67r3.html>
5. Albreiki, J., Dhaiban, A., Alk-atheeri, M., Almansoori, N. B., & Amer, S. (2023). The physical and mental effects of working in a hybrid work environment on an employee's well-being and performance. *Proceedings of the 6th European Conference on Industrial Engineering and Operations Management*. Lisbon, Portugal. Retrieved from <http://ieomsociety.org/proceedings/2023lisbon/308.pdf>
6. Alshaar, Q., Khaddam, A. A., Irtaimah, H. J., & Alzghoul, A. (2023). High-performance work systems and intrapreneurial behavior: The mediating role of knowledge centered culture. *Organizacija*, 56(3), 206-220. <http://doi.org/10.2478/orga-2023-0014>
7. Alzghoul, A., Algraibeh, K. M., Khawaldeh, K., Khaddam, A. A., & Al-Kasasbeh, O. (2023a). Nexus of strategic thinking, knowledge-oriented leadership, and employee creativity in higher education institutes. *International Journal of Professional Business Review*, 8(4), e01107-e01107. <https://doi.org/10.26668/businessreview/2023.v8i4.1107>
8. Alzghoul, A., Elrehail, H., Emeagwali, O. L., & AlShboul, M. K. (2018). Knowledge management, workplace climate, creativity and performance: The role of authentic leadership. *Journal of Workplace Learning*, 30(8), 592-612. <https://doi.org/10.1108/JWL-12-2017-0111>
9. Alzghoul, A., Khaddam, A. A., Alshaar, Q., & Irtaimah, H. J. (2023b). Impact of knowledge-oriented leadership on innovative behavior, and employee satisfaction: The mediating role of knowledge-centered culture for sustainable workplace. *Business Strategy & Development*, 7(1), Article e304. <https://doi.org/10.1002/bsd2.304>
10. Ardon, O., Klein, E., Manzo, A., Corsale, L., England, C., Mazzella, A., Geneslaw, L., Philip, J., Ntiamoah, P., Wright, J., Sirintrapun, S. J., Lin, O., Elenitoba-Johnson, K., Reuter, V. E., Hameed, M. R., & Hanna, M. G. (2022). Digital pathology operations at a tertiary cancer center: Infrastructure requirements and operational cost. *Journal of Pathology Informatics*, 14, Article 100318. <https://doi.org/10.1016/j.jpi.2023.100318>
11. Arslan, A., Golgeci, I., Khan, Z., Ahokangas, P., & Haapanen, L. (2021). COVID-19 driven challenges in international B2B customer relationship management: empirical insights from Finnish high-tech industrial microenterprises. *International Journal of Organizational Analysis*, 30(7), 49-66. <https://doi.org/10.1108/ijoa-04-2021-2719>
12. Atti, C., Cross, C., Dogan, A. B., Hubbard, C., Page, C., Montague, S., & Rabieinejad, E. (2022). Impacts and integration of remote-first working environments. *arXiv*, Article 2209.04383. <https://doi.org/10.48550/arXiv.2209.04383>

13. Bierly, P. E. III, Stark, E. M., & Kessler, E. H. (2009). The moderating effects of virtuality on the antecedents and outcome of NPD team trust. *Journal of Product Innovation Management*, 26(5), 551-565. <https://doi.org/10.1111/j.1540-5885.2009.00680.x>
14. Bouchard, L., & Meunier, S. (2023). Promoting remote workers' psychological health: Effective management practices during the COVID-19 crisis. *Canadian Journal of Administrative Sciences/Revue Canadienne Des Sciences De L Administration*, 40(1), 6-17. <https://doi.org/10.1002/cjas.1664>
15. Cabrera, E., & Cabrera, L. (2005). Fostering knowledge sharing through people management practices. *The International Journal of Human Resource Management*, 16(5), 720-735. <https://doi.org/10.1080/09585190500083020>
16. Dalkir, K. (2013). *Knowledge management in theory and practice*. Routledge. <https://doi.org/10.4324/9780080547367>
17. Danielak, W., & Wysocki, R. (2022). The impact of remote work during the COVID-19 pandemic on the development of competences in selected areas of project management. *Annales Universitatis Mariae Curie-Skłodowska, Sectio H Oeconomia*, 56(2), 7-20. <https://doi.org/10.17951/h.2022.56.2.7-20>
18. Driskell, J. E., Salas, E., & Hughes, S. (2010). Collective orientation and team performance: Development of an individual differences measure. *Human Factors*, 52(2), 316-328. <https://doi.org/10.1177/0018720809359522>
19. El khatib, M., & Alzoubi, H. M. (2022). BIM as a tool to optimize and manage project risk management. *International Journal of Mechanical Engineering*, 7(1). Retrieved from https://kalaharjournals.com/resources/IJME_Vol7.1_658.pdf
20. Elrehail, H., Emeagwali, O. L., Alsaad, A., & Alzghoul, A. (2018). The impact of transformational and authentic leadership on innovation in higher education: The contingent role of knowledge sharing. *Telematics and Informatics*, 35(1), 55-67. <https://doi.org/10.1016/j.tele.2017.09.018>
21. Emre, O., & De Spiegeleare, S. (2021). The role of work-life balance and autonomy in the relationship between commuting, employee commitment and well-being. *The International Journal of Human Resource Management*, 32(11), 2443-2467. <http://dx.doi.org/10.1080/09585192.2019.1583270>
22. Fialho, J. (2022). Benefits and challenges of remote work. In *Digital Technologies and Transformation in Business, Industry and Organizations* (pp. 1-17). Cham: Springer International Publishing.
23. Galanti, T., Guidetti, G., Mazzei, E., Zappalà, S., & Toscano, F. (2021). Work from home during the COVID-19 outbreak: The impact on employees' remote work productivity, engagement, and stress. *Journal of occupational and environmental medicine*, 63(7), e426-e432. <http://doi.org/10.1097/JOM.0000000000002236>
24. Garro-Abarca, V., Palos-Sanchez, P., & Aguayo-Camacho, M. (2021). Virtual teams in times of pandemic: Factors that influence performance. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.624637>
25. Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185-214. <https://doi.org/10.1080/07421222.2001.11045669>
26. Greene, A., & Sanderson, T. (2023). *Remote works: Managing for freedom, flexibility, and focus*. Berrett-Koehler Publishers.
27. Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
28. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <http://dx.doi.org/10.1108/EBR-11-2018-0203>
29. Han, S., Lee, Y., Beyerlein, M., & Kolb, J. (2018). Shared leadership in teams: The role of coordination, goal commitment, and knowledge sharing on perceived team performance. *Team Performance Management*, 24(3/4), 150-168. <https://doi.org/10.1108/tpm-11-2016-0050>
30. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <http://dx.doi.org/10.1007/s11747-014-0403-8>
31. Hu, L., & Randel, A. (2014). Knowledge sharing in teams: Social capital, extrinsic incentives, and team innovation. *Group & Organization Management*, 39(2), 213-243. <https://doi.org/10.1177/1059601114520969>
32. Huang, Q., Liu, H., & Zhong, X. (2013). The impact of transactive memory systems on team performance. *Information Technology & People*, 26(2), 191-212. <https://doi.org/10.1108/itp-04-2013-0068>
33. Ingusci, E., Signore, F., Cortese, C. G., Molino, M., Pasca, P., & Ciavolino, E. (2023). Development and validation of the Remote Working Benefits & Disadvantages scale. *Quality & Quantity*, 57(2), 1159-1183. <http://dx.doi.org/10.1007/s11135-022-01364-2>
34. Iwashita, H. (2021). The future of remote work in Japan: COVID-19's implications for international human resource management. *Entrepreneurial Business and Economics Review*, 9(4), 7-18. <https://doi.org/10.15678/eber.2021.090401>
35. Jamshed, S., & Majeed, N. (2019). Relationship between team culture and team performance through lens of knowledge sharing and team emotional intelligence. *Journal of Knowledge Management*, 23(1), 90-109. <https://doi.org/10.1108/jkm-04-2018-0265>
36. Khawaldeh, K., & Alzghoul, A. (2024). How knowledge sharing mediates the influence of high-performance work systems on employee entrepreneurial behavior: A moderation role of entrepreneurial leadership. *Uncertain Supply*

- Chain Management*, 12(2), 1365-1378. <http://dx.doi.org/10.5267/j.uscm.2023.11.002>
37. Kimani, E. (2021). Effect of knowledge management practices on performance of mobile telephone companies. *American Journal of Data, Information and Knowledge Management*, 2(1), 54-66. <https://doi.org/10.47672/ajdikm.764>
 38. Kniel, J., & Comi, A. (2021). Riding the same wavelength: designers' perceptions of shared understanding in remote teams. *SAGE Open*, 11(3). <https://doi.org/10.1177/21582440211040129>
 39. Kniel, J., & Comi, A. (2021). Riding the same wavelength: designers' perceptions of shared understanding in remote teams. *Sage Open*, 11(3). <https://doi.org/10.1177/21582440211040129>
 40. Lang, C. J., Dony, J. A., & Roberts, S. (2022). The future of teamwork: Facilitating effective team performance in virtual and hybrid work environments in a post-pandemic world. In *Proceedings of the Human Factors and Ergonomics Society 66th International Annual Meeting* (pp. 1085-1089).
 41. Lee, P., Gillespie, N., Mann, L., & Wearing, A. (2010). Leadership and trust: Their effect on knowledge sharing and team performance. *Management Learning*, 41(4), 473-491. <https://doi.org/10.1177/1350507610362036>
 42. Matikainen, T., Kianto, A., & Olander, H. (2023). Knowledge-related tensions in remote work arrangements during the COVID-19 pandemic. *VINE Journal of Information and Knowledge Management Systems*, 53(2), 358-376. <https://doi.org/10.1108/VJIKMS-05-2022-0160>
 43. Mehta, A., & Mehta, N. (2017). Knowledge integration and team effectiveness: A team goal orientation approach. *Decision Sciences*, 49(3), 445-486. <https://doi.org/10.1111/deci.12280>
 44. Monzani, L., Mateu, G., Ripoll, P., Lira, E., & Peiro, J. M. (2022). Managing in the new normal: Positive management practices elicit higher goal attainment, goal commitment, and perceived task efficacy than traditional management practices in remote work settings. An experimental study. *Frontiers in Psychology*, 13, 914616. <http://doi.org/10.3389/fpsyg.2022.914616>
 45. Murdoch-Kitt, K., Emans, D. J., & Oewel, B. (2020). Designing six dimensions of intercultural teamwork: A next-gen challenge in co-creation processes. In S. Boess, M. Cheung, & R. Cain (Eds.), *Synergy – DRS International Conference 2020*. <https://doi.org/10.21606/drs.2020.398>
 46. Neto, F. S., de Oliveira Rodrigues, B. R., de Souza França, R., Ziviani, F., & Parreiras, F. S. (2019). Impact of Agile Practices Adoption on Organizational Learning: a Survey in Brazil. In *SEKE* (pp. 583-765). <https://doi.org/10.18293/seke2019-059>
 47. Nyfoudi, M., Shipton, H., Theodorakopoulos, N., & Budhwar, P. (2022). Managerial coaching skill and team performance: How does the relationship work and under what conditions? *Human Resource Management Journal*, 33(2), 328-345. <https://doi.org/10.1111/1748-8583.12443>
 48. Onnis, L. (2017). Human resource management policy choices, management practices and health workforce sustainability: Remote Australian perspectives. *Asia Pacific Journal of Human Resources*, 57(1), 3-23. <https://doi.org/10.1111/1744-7941.12159>
 49. Orsini, C., & Rodrigues, V. (2020). Supporting motivation in teams working remotely: The role of basic psychological needs. *Medical Teacher*, 42(7), 828-829. <https://doi.org/10.1080/0142159x.2020.1758305>
 50. Papadopoulos, C., & Papadia, P. (2022). *Factors that affect team productivity and collaboration in a remote working environment* (Thesis). Blekinge Institute of Technology. Retrieved from <https://urn.kb.se/resolve?urn=urn:nbn:se:bth-23820>
 51. Patanjali, S., & Bhatta, N. M. K. (2022). Work from home during the pandemic: The impact of organizational factors on the productivity of employees in the IT industry. *Vision*. <http://dx.doi.org/10.1177/09722629221074137>
 52. Podsakoff, N. P., Podsakoff, P. M., MacKenzie, S. B., Maynes, T. D., & Spoelma, T. M. (2014). Consequences of unit-level organizational citizenship behaviors: A review and recommendations for future research. *Journal of Organizational Behavior*, 35(S1), S87-S119. <https://doi.org/10.1002/job.1911>
 53. Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891. <https://doi.org/10.3758/brm.40.3.879>
 54. Sarkar, S., & Kedas, S. (2023). Globally distributed talent communities: A typology of innovation problems and talent characteristics. *Thunderbird International Business Review*, 65(1), 89-102. <https://doi.org/10.1002/tie.22272>
 55. Self, D., Self, T., Matuszek, T., & Schraeder, M. (2015). Improving organizational alignment by enhancing strategic thinking. *Development and Learning in Organizations*, 29(1), 11-14. <https://doi.org/10.1108/dlo-08-2013-0053>
 56. Shahzad, K. (2022). Knowledge-intensive HRM systems, team reflexivity, team knowledge sharing, and team performance. *Academy of Management Proceedings*, 2022(1). <http://dx.doi.org/10.5465/AMBPP.2022.11565abstract>
 57. Shahzad, K., Hong, Y., Jiang, Y., & Niaz, H. (2023). Knowledge-intensive HRM systems and performance of knowledge-intensive teams: Mediating role of team knowledge processes. *Group & Organization Management*, 48(5), 1430-1466. <https://doi.org/10.1177/10596011211063667>
 58. Shea, T., Usman, S. A., Arivalagan, S., & Parayitam, S. (2023). "Knowledge management practices" as moderator in the relationship between organizational culture and performance in information technology companies in

- India. *VINE Journal of Information and Knowledge Management Systems*, 53(4), 719-747. <https://doi.org/10.1108/VJIK-MS-12-2020-0232>
59. Shiau, W. L., & Huang, L. C. (2023). Scale development for analyzing the fit of real and virtual world integration: An example of Pokémon Go. *Information Technology & People*, 36(2), 500-531. <http://dx.doi.org/10.1108/ITP-11-2020-0793>
60. Sofianti, T., Kurniawan, I., Pratama, A., & Florencia, J. (2023). Measuring worker perception on remote working adoption during COVID-19 pandemic: An industrial engineering perspective. *Engineering Science Letter*, 2(01), 1-8. <https://doi.org/10.56741/esl.v2i01.239>
61. Spagnoli, P., Manuti, A., Buono, C., & Ghislieri, C. (2021). The good, the bad and the blend: the strategic role of the “middle leadership” in work-family/life dynamics during remote working. *Behavioral Sciences*, 11(8), Article 112. <https://doi.org/10.3390/bs11080112>
62. Sultana, F. (2023). Knowledge management and organizational performance-employee perception: A research on commercial banks in Rangamati. *Advances in Management*, 16(1), 28-34. <https://doi.org/10.25303/1601aim028034>
63. Whillans, A., Perlow, L., & Turek, A. (2021). Experimenting during the shift to virtual team work: Learnings from how teams adapted their activities during the COVID-19 pandemic. *Information and Organization*, 31(1), Article 100343. <https://doi.org/10.1016/j.infoandorg.2021.100343>

APPENDIX A

Table A1. Study questionnaire

Remote Work Environment					
1	I have the necessary tools and technology to perform my work effectively from a remote location.	1	2	3	4 5
2	I feel that communication with my team is clear and effective in a remote setting.	1	2	3	4 5
3	My work schedule can be flexibly managed while working remotely.	1	2	3	4 5
4	I receive sufficient support from my organization to handle remote work challenges.	1	2	3	4 5
5	I am able to maintain a healthy work-life balance in my remote work arrangement.	1	2	3	4 5
6	Remote work has increased my productivity.	1	2	3	4 5
7	Team collaboration has remained effective despite working remotely.	1	2	3	4 5
Team Performance					
1	Our team consistently meets our set goals and targets.	1	2	3	4 5
2	There is a strong sense of unity among team members.	1	2	3	4 5
3	Team members are quick to solve problems when they arise.	1	2	3	4 5
4	There is a high level of mutual respect among my team members.	1	2	3	4 5
5	Our team effectively adapts to new challenges and changes.	1	2	3	4 5
6	Communication within the team is transparent and effective.	1	2	3	4 5
7	Team members feel motivated to contribute to team projects.	1	2	3	4 5
8	Our team is committed to producing high-quality work.	1	2	3	4 5
9	The team leverages individual strengths to enhance team performance.	1	2	3	4 5
10	Feedback within the team is used constructively to improve performance.	1	2	3	4 5
11	Leadership within the team effectively directs and coordinates team activities.	1	2	3	4 5
Knowledge Management					
1	Our organization effectively captures tacit knowledge from employees.	1	2	3	4 5
2	There is a systematic approach to sharing knowledge among team members.	1	2	3	4 5
3	Knowledge management practices contribute to continuous improvement in our organization.	1	2	3	4 5
4	Employees have access to necessary knowledge bases and databases.	1	2	3	4 5
5	The organization regularly updates its knowledge repositories.	1	2	3	4 5
6	Employees are encouraged to share their expertise and insights.	1	2	3	4 5
7	Knowledge management tools are integrated well into our daily work processes.	1	2	3	4 5
8	Training sessions are conducted regularly to enhance knowledge sharing.	1	2	3	4 5
9	New employees are quickly integrated into the company through effective knowledge transfer.	1	2	3	4 5
10	The organization utilizes technology to facilitate knowledge management.	1	2	3	4 5
11	There is a culture of trust that encourages the sharing of knowledge.	1	2	3	4 5
12	Management supports and rewards the sharing of knowledge among employees.	1	2	3	4 5
13	Employees are provided with time to learn and innovate.	1	2	3	4 5
14	The company has formal processes in place for managing organizational knowledge.	1	2	3	4 5
15	Knowledge management practices help in retaining critical knowledge even when employees leave.	1	2	3	4 5
16	Employees are encouraged to participate in decision-making processes, contributing their knowledge and expertise.	1	2	3	4 5
17	The organization measures the impact of knowledge management on performance outcomes.	1	2	3	4 5
18	Knowledge sharing is seen as an essential part of daily work routines.	1	2	3	4 5
19	There are adequate IT systems to support knowledge creation and dissemination.	1	2	3	4 5
20	Cross-functional teams are effective in creating new knowledge.	1	2	3	4 5
21	Organizational policies facilitate the flow of knowledge across all levels.	1	2	3	4 5
22	The organization has a dedicated team or individual responsible for managing knowledge resources.	1	2	3	4 5
23	Lessons learned from past projects are documented and accessible for future reference.	1	2	3	4 5
24	There are incentives for employees to engage in knowledge-sharing activities.	1	2	3	4 5
25	Collaboration tools are effectively used to enhance knowledge exchange.	1	2	3	4 5
26	The organization has clear strategies for knowledge acquisition from external sources.	1	2	3	4 5
27	Knowledge management contributes to innovation and competitive advantage.	1	2	3	4 5
28	There is a clear link between knowledge management practices and the strategic goals of the organization.	1	2	3	4 5