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EXPLORING THE CONFLUENCE OF COLLABORATIVE TECHNOLOGY ACCESS AND SUPPORT SYSTEMS IN ENHANCING ORGANISATIONAL PERFORMANCE

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ABSTRACT

This paper examines the mediating effect of collaborative technology (CT) and its antecedents namely access to networks and mentorship, social support, and work family balance in determining organisational culture, organisational effectiveness, and work performance. The research focuses on the IT women employees in Karnataka who returned to work recently after taking the maternity leave and the research design is a quantitative research design using a survey data of 395 surveyed respondents. The analysis of the data was performed with the help of the Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS, which gauged the convergent and discriminant validity, path coefficients, effect sizes, and Importance-Performance Map Analysis (IPMA). It was found that organisational effectiveness and organisational culture are most effective predictors of work performance, and that CT has a positive impact on organisational culture and organisational effectiveness. Antecedents that can be improved by networks, mentorship, social support, and work family balance are factors that play a significant role in the adoption of CT which can in turn improve performance outcomes. IPMA points out the fact that the greatest leverage on enhancing employee performance is to focus on the organisational effectiveness, culture and CT. The results highlight the value of the supportive resources combined with technology to achieve an effective workflow, clear communication, and teamworking organisational culture. This research can be useful in organisations that are striving to maximize the use of technology and support systems to promote both the cultural and performance results. It also offers guiding research in various sectors and settings in future, especially in trying to comprehend the long-term and cross-cultural impacts of collaborative technology.

KEYWORDS: Collaborative technology, Work–family balance, Organisational culture, Organisational effectiveness, Work performance

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1. INTRODUCTION

Innovation, connectivity, and operational effectiveness in a variety of work environments are becoming interdependent in the contemporary digital environment, requiring organisations to use collaborative technologies (CT) to foster it (Adornes and Janissek-Muniz, 2019; Gao, 2025). Implementing CT is not merely a technological improvement but acts as a strategic process that strengthens the communication channels, promotes the sharing of knowledge, and helps to engage in collective problem-solving (Cherbonnier et al., 2024; de Vreede et al., 2016). The available literature proves the effectiveness of introducing the collaborative system to enhance employee engagement, organisational learning, and adaptive capability in rapidly changing business environments (Alyami et al., 2022; Aleksandra Przegalinska et al., 2025). Consequently, the technological collaboration has developed into a vital contributing factor to the organisational culture and performance, redefining the interaction, learning, and value creation of employees in virtual and hybrid workplaces (Deschênes, 2024; Beer and Mulder, 2020).

Professional networks and mentorship are a crucial precondition to the successful utilization of collaborative technology, which develops digital competence, knowledge circulations, and trust-based professional relationships (Amin et al., 2022; Gao, 2025). The earlier research has shown that people who have more access to networks and mentoring services are more adaptable and maintain a longer interest in the collaborative platforms (Abdelrahman et al., 2025; AlNuaimi et al., 2022). Besides, mentorship facilitates the presence of the receptive and innovation-driven environment, and it allows the dissemination of teamwork habits throughout the organisational tiers (Homayoun et al., 2024; Leso et al., 2023). Such relational and cognitive assets are at the centre of the preparation organisations to further technological transformation (Borodako et al., 2022; Wu et al., 2024).

Social support is another beneficial trigger of technology-mediated collaboration since it forms psychological safety, motivation, and willingness of employees to engage in common digital spaces (Al-Omar et al., 2019; Medina-Garrido et al., 2023). Employees feel encouraged to use and successfully implement collaborative tools when they feel that they have good support within the group and the hierarchy (Sasmaz and Fogarty, 2023; Niemann et al., 2022). This type of relational support increases the organisational cohesiveness and fosters an organisational culture of inclusiveness, feedback, and digital flexibility (Abebe and Assemie, 2023; Amoa-Gyarteng and Dhliwayo, 2024). Meanwhile, digital collaboration shapes and is shaped by the organisational culture that affects the way employees interpret, maintain and naturalise the work practices created by technology (Wijethilake et al., 2021; Tadesse Bogale and Debela, 2024).

The balance between work and family has also become an important factor of collaborative technologies usage, especially in the post-pandemic work organization (Dr. Stephen et al., 2024; R.

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K. et al., 2025). Technology-based work arrangements permit employees to juggle between personal and professional lives better, which increases their satisfaction and productivity (Irfan et al., 2023; Kangas et al., 2023). However, the maintenance of the balance is not an easy task as, even with the extended use of digital usage, there is a possibility of technostress and burnout (Sadaf et al., 2025; Rasool et al., 2022). Worked properly, however, collaborative technologies can contribute to the well-being of employees and increase organisational performance (Maraqa et al., 2025; Zaitouni et al., 2024).

The synergic impact of network access and mentorship, social support, and work-family balance promote the successful existence of collaborative technology (Manzoor et al., 2025; Amankona et al., 2025). Technology-mediated collaboration, in its turn, strengthens the organisational culture through the encouragement of shared values, openness and flexibility (Dung Thi My Tran et al., 2025; Stephanie Bilderback and Kilpatrick, 2024). Empirical research also supports the assumption that those organisations with an adoption of collaborative technologies have high innovation capacity, improved effectiveness, and remain performance outcomes (Long Lam et al., 2021; Sadaoui et al., 2025). However, it is, finally, the combination of human, technological and cultural factors which are the keystone of organisational success in the digital era.

2. Conceptual Framework & Hypothesis Development:

Though it is a well-recognised fact that the adoption of collaborative technologies (CT) is a pivotal determinant of organisational performance, its successful implementation depends on several antecedent factors, such as the availability of professional networks, mentorship, social support, and work-family balance (Sun, 2024; Dirks and Wanda, 2022). The existing body of literature suggests that the existence of good professional networks and organized mentoring relationships contributes greatly to the acceptance and long-term application of collaborative technologies (Chen et al., 2025; Hsu and Shiue, 2018). These social, as well as relational processes, foster the exchange of resources, establishment of trust, and employee competencies required to use technology in facilitating coordination, collaborative decision-making, and innovations. Regardless of these revelations, there is no empirical research available that looks at the interaction of these antecedents with CT to affect organisational culture and performance (Borodako et al., 2022; Gao, 2025). In filling this vacuum, the current research paper makes CT a key process by which these antecedent factors are converted into an organisational product. The importance of social support in facilitating technology-mediated collaboration is also substantiated with much evidence. According to the current research, employees, who have the support of supervisors and coworkers on a regular basis, are willing to use collaborative tools more frequently and, thus, the level of information exchange and group performance improves (Kong et al., 2023; Mayweg-Paus et al., 2021). Also, social support helps to mitigate work-related strain and increase psychological safety, thus promoting the confident involvement in the technology-

facilitated collaborative setting (Beer and Mulder, 2020; Dirks and Wanda, 2022). Although most of the extant literature has been devoted to general organisational outcomes, little is known about the direct relationships between social support and collaborative technology and other dimensions, such as organisational culture, effectiveness, and work performance, specifically in digitally intensive and hybrid working environments (Trenerry et al., 2021; Chen et al., 2025). Another important aspect that determines the use of collaborative technologies by employees is work-family balance (WFB). According to the previous studies, people who enjoy healthy work-family balance are more productive and have a better opportunity to coordinate tasks and optimise their performance with the help of collaborative technologies (Khan, 2024; Alkhodary, 2023). On the other hand, work-family imbalance has been linked to increased stress and reduced working performance (Sana Sadaf et al., 2025; Raffi et al., 2020). It is also worth noting that the impact of WFB on the organisational culture and effectiveness indirectly via the adoption of CT has not been sufficiently studied yet, and this represents a valuable research potential (Nancy Verma et al., 2024; Hunsaker, 2021). The impact of collaborative technology on organisational culture has been widely recorded. CT ensures openness, values, and problem-solving and enhances cultural underpinnings that are critical to organisational performance (Abebe & Assemie, 2023; Josephine Chong and Duan, 2025). Empirical findings also indicate that organisations that have properly developed collaborative infrastructures are more flexible, innovative, and engaged employees, a fact supporting positive cultural features (Leso et al., 2023; Manzoor et al., 2025). Simultaneously, it has been demonstrated that CT leads to the improvement of organisational effectiveness through the enhancement of the workflow and decision-making processes as well as strategic alignment (AlNuaimi et al., 2022; Wu et al., 2024). Nevertheless, limited studies that combine organisational culture and organisational effectiveness in the same CT-mediated construct are low. The current paper has availed this weakness by looking into CT as a cohesive channel between antecedent conditions and organisational outcomes. Lastly, the organisational culture and effectiveness changes work performance indirectly through the use of technology to facilitate collaboration. Although the literature supports the idea that culture and effectiveness have a positive influence on the individual and team performance, the fact that the collaborative technology supports the relationships between the two remains eloquently explained. This study provides a deeper insight into the influence of technology-based work practises on organisational performance during the digital age by incorporating antecedents, collaborative technology and the organisational outcomes. The hypotheses that were proposed were based on the literature reviewed.

- **H1:** Access to Networks and Mentorship (ANM) has a positive and significant effect on Collaborative Technology (CT).
- **H2:** Organisational Culture (OC) has a positive and significant effect on Work Performance (WP).

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- **H3:** Organisational Effectiveness (OE) has a positive and significant effect on Work Performance (WP).
- **H4:** Social Support (SS) has a positive and significant effect on Collaborative technology (CT).
- **H5:** Collaborative technology (CT) has a positive and significant effect on Organisational Culture (OC).
- **H6:** Collaborative technology (CT) has a positive and significant effect on Organisational Effectiveness (OE).
- **H7:** Work–Family Balance (WFB) has a positive and significant effect on Collaborative technology (CT).

3. METHODS & MATERIALS:

The quantitative research design was chosen to study the effect of collaborative technology and its antecedent on organisational culture, organisational effectiveness, and work performance. Primary data were gathered using a cross-sectional survey that was given to the women IT employees in the state of Karnataka that worked in the operational level and those who had just returned to work after their maternity leave. The research sample was pre-emptively chosen to include organisations that can be described as having highly developed digital infrastructure and hybrid working environments, which will offer a suitable focus of study of the technology-enabled collaboration. It used a purposive non-probability sampling method which is appropriate in the structural equation modelling (SEM) which obtained 395 valid responses. This is an adequate sample that meets various adequacy standards. The 35-item measurement instrument in the first instance (confirmatory factor analysis) requires 350 cases on the basis of the subject-item ratio that is recommended to be 10:1; the current study attains a ratio of around 15:1. Second, multiple regression of power analysis with three predictors (access to networks and mentorship, social support, and work-family balance) to predict collaboration technology shows that a sample size of 395 is adequate at a level of significance of 0.05, statistical power of 0.80, and a small effect size ($f^2 = 0.02$). Besides, the guidelines of SEM indicate that a sample of 200 is good and 500 is excellent with the current sample falling within excellent limits. The analysis of the data was performed with Partial Least Squares Structural Equation Modelling (PLS-SEM) through SmartPLS software. The measurement model was tested on the convergent validity, and the discriminant validity was tested using Fornell-Larcker criterion. Structural model was evaluated by testing hypothesis, estimating the effect size (f^2) and Importance Performance Map Analysis (IPMA) to determine the relative predictor importance and performance of important predictors. This high methodology is used to make sure that there is a credible and valid assessment of the suggested conceptual framework in relation to IT women employees who were on maternity leave.

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4. DATA ANALYSIS & INTERPRETATION

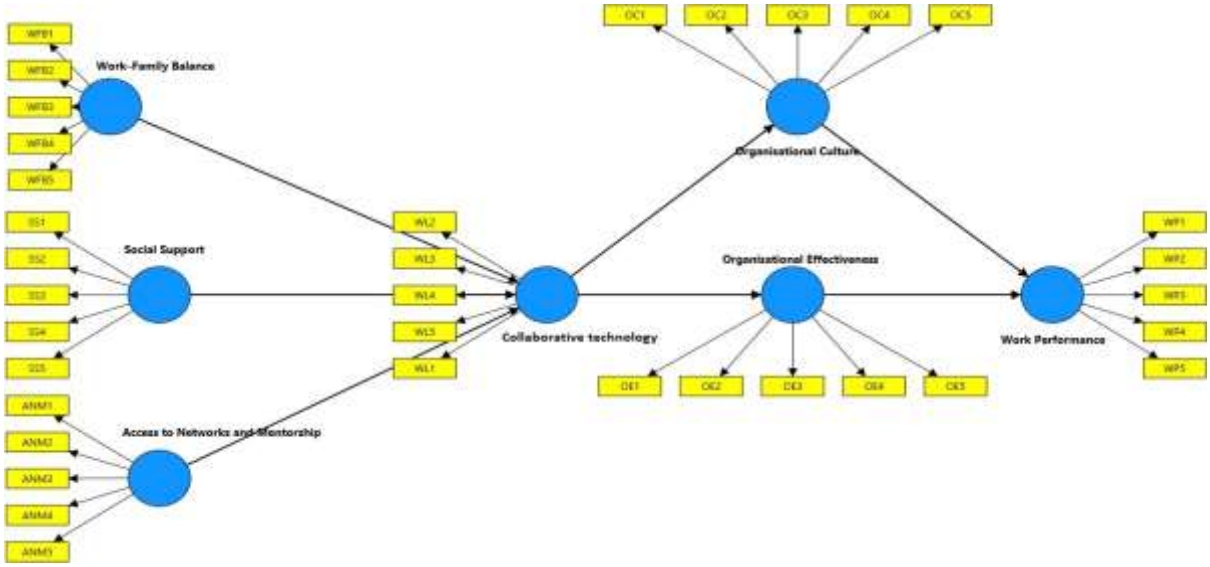

Table 1. Results of Convergent Validity

Item	Details	loadings
	Access to Networks and Mentorship	
ANM1	Have access to professional networks that support leadership growth.	0.790
ANM2	Receive guidance and advice from mentors who help improve as a leader.	0.847
ANM3	Organisation provides opportunities to connect with influential professionals.	0.790
ANM4	Networking with peers and seniors has enhanced leadership capabilities.	0.800
ANM5	Mentorship has played a significant role in advancing career as a leader.	0.807
	Alpha = 0.866, CR = 0.871, AVE = 0.651	
Termini et.al., 2021; Christou et.al., 2017; Haynes et.al., 2008		
	Organisational Culture	
OC1	Organisation values teamwork and collaboration.	0.746
OC2	The culture encourages open communication and trust.	0.729
OC3	Employees are motivated to share ideas and knowledge freely.	0.756

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OC4	Continuous learning and improvement are promoted by the organisation.	0.708
OC5	Inclusiveness and fairness are embedded in organisational culture.	0.733
Alpha = 0.788, CR = 0.791, AVE = 0.540		
Bilderback & Kilpatrick, 2024; Wu, Li & Surangkana B 2024; Wijethilake, Upadhaya, & Lama, 2021.		
Organisational Effectiveness		
OE1	Organisation achieves its strategic goals efficiently.	0.795
OE2	Resources are used effectively to meet organisational objectives.	0.757
OE3	Employees adapt quickly to changes in the work environment.	0.798
OE4	Organisation delivers high-quality services/products to stakeholders.	0.803
OE5	Organisation maintains a good reputation for performance.	0.827
Alpha = 0.856, CR = 0.859, AVE = 0.634		
Kataria, Aakanksha & Garg, 2013; McMahan & Sprague, 2024		
Social Support		
SS1	Receive emotional encouragement from my family that strengthens my leadership.	0.711
SS2	Colleagues aid when faced challenges at work.	0.755
SS3	Rely on friends or peers for advice and guidance in leadership role.	0.747
SS4	Organisation provides resources and support that make leadership easier.	0.730
SS5	Feel supported by family and workplace in pursuing leadership responsibilities.	0.748
Alpha = 0.793, CR = 0.797, AVE = 0.545		
Sasmaz, & Fogarty, 2023; Medina-Garrido, Biedma-Ferrer, Bogren, 2023.		
Work–Family Balance		
WFB1	Balance the demands of leadership role with family responsibilities.	0.790
WFB2	Work schedule allows to fulfil both professional and personal obligations.	0.805
WFB3	Rarely experience conflict between leadership duties and family needs.	0.801
WFB4	Feel that organisation supports in managing both work and family roles.	0.748
WFB5	Family responsibilities do not interfere with effectiveness as a leader.	0.783

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Alpha = 0.846, CR = 0.854, AVE = 0.618		
Žnidaršič & Bernik, 2021; Michael, 2003; Llanes-Ordóñez, et.al., 2024		
Collaborative technology (CT)		
CT1	Collaborative technology helps to keep balance work and personal responsibilities effectively	0.796
CT2	Collaborative technology provides easy access to professional networks and resources	0.802
CT3	Collaborative technology enables social support from colleagues and supervisors for task completion	0.800
CT4	Using collaborative technology improves work performance and efficiency	0.817
CT5	Collaborative technology strengthens organisational culture and effectiveness through teamwork and transparency	0.754
Alpha = 0.853, CR = 0.857, AVE = 0.63		
Mihaela Taranu et al., 2025; Gao, 2025; Gustavo Scheffel Adornes & Janissek Muniz, 2019; Hsu & Shiue, 2018		
Work Performance		
WP1	Consistently meet the performance standards expected by the role.	0.755
WP2	Complete work tasks on time and with accuracy.	0.773
WP3	Contribute effectively to the success of the team.	0.760
WP4	Demonstrate initiative and creativity in job.	0.770
WP5	Exceed expectations in achieving performance targets.	0.748
Alpha = 0.819, CR = 0.857, AVE = 0.58		
Przegalinska et.al., 2025; Maraqa et.al., 2025		

4.1 Measurement model assessment

Convergent validity was assessed using outer loadings, Composite Reliability (CR), and Average Variance Extracted (AVE). As suggested by Hair et al. (2016), indicator reliability is achieved when outer loadings exceed 0.708. In this study, all item loadings ranged from 0.708 (OC4) to 0.847 (ANM2), confirming the reliability of measurement indicators. The CR values for all constructs were above the recommended threshold of 0.70 (Chin, 1998), ranging between 0.791 (Organisational Culture) and 0.871 (Access to Networks and Mentorship), demonstrating satisfactory internal consistency. Similarly, the AVE values for all constructs exceeded the benchmark of 0.50, ranging from 0.540 (Organisational Culture) to 0.651 (Access to Networks and Mentorship), indicating that each latent variable explains more than half of the variance in its indicators. Thus, the measurement

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model satisfies the requirements of convergent validity.

Table 2 Discriminant validity using the Fornell and Larcker

Construct	ANM	OC	OE	SS	CT	WP	WFB
Access to Networks and Mentorship	**0.807**						
Organisational Culture	0.172	**0.735**					
Organisational Effectiveness	0.340	0.187	**0.796**				
Social Support	0.244	0.172	0.236	**0.738**			
Collaborative technology (CT)	0.322	0.256	0.319	0.297	**0.794**		
Work Performance	0.491	0.377	0.431	0.430	0.440	**0.761**	
Work–Family Balance	0.260	0.187	0.218	0.191	0.253	0.400	**0.786**

Source: *Authors Calculation via SmartPLS*

Discriminant validity was assessed using the Fornell and Larcker (1981) criterion. Table 2 presents the square roots of AVE values on the diagonal in bold, which are 0.807 (ANM), 0.735 (OC), 0.796 (OE), 0.738 (SS), 0.794 (CT), 0.761 (WP), and 0.786 (WFB). Each of these values is greater than the corresponding inter-construct correlations in the same row and column, confirming that every construct shares more variance with its own indicators than with those of other constructs. Therefore, discriminant validity is satisfactorily established for all constructs in the measurement model. The mean and standard deviation of all constructs are also reported in Table 2.

Table 3 Results of R2 and Q2 values

Endogenous latent variable	R-square	Q^2predict	Interpretation
Work Performance	0.276	0.097	substantial

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Table 4 Hypotheses testing and effect size

Hyp	Path	Beta	STDEV	T value	P values	Supported	f-square	Interpretation
H1	ANM → CT	0.231	0.046	5.077	0.000	yes	0.058	Small
H2	OC → WP	0.307	0.037	8.312	0.000	yes	0.125	Medium
H3	OE → WP	0.373	0.036	10.248	0.000	yes	0.186	Medium
H4	SS → CT	0.211	0.040	5.220	0.000	yes	0.050	Small
H5	CT → OC	0.256	0.046	5.620	0.000	yes	0.070	Small
H6	CT → OE	0.319	0.041	7.791	0.000	yes	0.113	Medium
H7	WFB → CT	0.153	0.043	3.573	0.000	yes	0.026	Small

Source: *Authors Calculation via SmartPLS*

4.2 Structural model assessment

The structural model was assessed using the coefficient of determination (R^2), predictive relevance (Q^2), path coefficients (β), and effect sizes (f^2), following the recommendations of Hair et al. (2016). As shown in Table 3, the endogenous construct Work Performance achieved an R^2 value of 0.276, which, according to Cohen's (1988) thresholds (0.26 = substantial, 0.13 = moderate, 0.02 = weak), indicates a substantial level of predictive accuracy. The Q^2 value for Work Performance was 0.097, which is greater than zero, thereby confirming that the model has predictive relevance.

Table 4 presents the results of hypothesis testing, where all seven hypothesised relationships were supported at the 1% significance level ($p < 0.01$). Specifically, H1: ANM → CT was significant (β = 0.231, t = 5.077, p = 0.000, $f^2 = 0.058$, small effect). H2: OC → WP was also significant (β = 0.307, t = 8.312, p = 0.000, $f^2 = 0.125$, medium effect). H3: OE → WP showed the strongest path (β = 0.373, t = 10.248, p = 0.000, $f^2 = 0.186$, medium effect). Likewise, H4: SS → CT was significant (β = 0.211, t = 5.220, p = 0.000, $f^2 = 0.050$, small effect). For leadership-related outcomes, H5: CT → OC (β = 0.256, t = 5.620, p = 0.000, $f^2 = 0.070$, small effect) and H6: CT → OE (β = 0.319, t = 7.791, p = 0.000, $f^2 = 0.113$, medium effect) were supported. Finally, H7: WFB → CT was significant (β = 0.153, t = 3.573, p = 0.000, $f^2 = 0.026$, small effect). Overall, the model demonstrates acceptable explanatory power, adequate predictive relevance, and statistically significant structural relationships, confirming the hypothesised linkages among Collaborative technology (CT), organisational culture, organisational effectiveness, work–family balance, and work performance.

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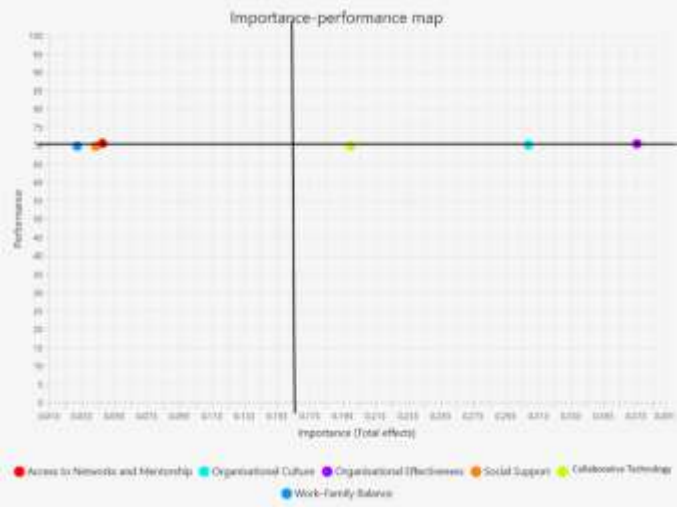
4.3 Importance-Performance Map Analysis (IPMA)



The importance–performance map (IPMA) highlights the relative impact (importance) and the performance level of each construct on Work Performance. As shown in the results, Organisational Effectiveness (importance = 0.373, performance = 70.455) emerges as the most influential factor, indicating that improvements in organisational effectiveness would yield the greatest gains in work performance. Organisational Culture (importance = 0.307, performance = 70.166) also shows a strong effect, suggesting that fostering a collaborative and trust-based culture can significantly enhance work performance. Collaborative technology (CT) (importance = 0.198, performance = 69.862) contributes moderately, demonstrating that effective Collaborative technology (CT) styles strengthen both culture and performance outcomes. In contrast, Access to Networks and Mentorship (importance = 0.046, performance = 70.564) and Social Support (importance = 0.042, performance = 69.776) have relatively low importance, though their performance values are comparable to other constructs. Finally, work–Family Balance (importance = 0.030, performance = 69.829) has the least influence, with a small effect size on performance, implying it plays a supportive but not a dominant role. Overall, the IPMA suggests prioritising improvements in organisational effectiveness, organisational culture, and Collaborative technology (CT), as these constructs provide higher leverage for enhancing work performance.

DISCUSSIONS & IMPLICATIONS

The results of this research put forward direct connections between access to networks and mentorship (ANM), social support (SS), work -family balance (WFB), and collaborative technology (CT) as key drivers of organisational culture, organisational effectiveness, and work performance. The convergent and discriminant validity tests have given the results that all the constructs used in the study were reliably measured. Moreover, the structural model proved to explain work performance with a significant strength (R 2 = 0.276), which means that the proposed framework is a meaningful explanation of the outcome in terms of performance. The result shows that the organisational effectiveness was the best predictor of work performance (0.373, medium effect), and the organisational culture was the next best predictor (0.307, medium effect). The findings can be attributed to the available literature that highlights the role of efficient resource use, strategic

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achievement of goals, and a participative, trust-based organisational climate in promoting better employee performance (Kataria, Aakanksha & Garg, 2013; Wu, Li and Surangkana, 2024). Moreover, the research shows that the collaborative technology has great positive effects on organisational culture and organisational effectiveness which supports the hypotheses H5 and H6. These findings indicate that collaboration powered by technology enhances the clarity of information exchange, potential collaborative work, and efficiency in the workflow (Gao, 2025; Mihaela Taranu et al., 2025). Whereas the effect of collaborative technology on the work performance was moderate in a direct relationship, the effect was significantly high when it was mediated by organisational culture and organisational effectiveness. The result of this finding proves the mediating effect of CT in transforming antecedent conditions into concrete performance outcomes. Likewise, network access and mentorship and social support had small but significant impacts on CT, meaning that professional networks and serving relationships promote the use of collaborative technologies, but their effects need organisational support. Work-family balance was also positively related to the adoption of CT, implying that work-related balance mainly facilitates employees to effectively harness the power of technology and not necessarily the performance. According to the Importance Performance Map Analysis (IPMA), the managers are supposed to focus on enhancing organisational effectiveness, development of collaborative organisational culture, and proper adoption of collaborative technologies in order to be able to maximise the work performance. Although mentorship, networking opportunities, and social support are still necessary, they serve as support and enablers of performance and not performance boosters. In practice, organisations are advised to develop technology-based programs that combine social support, mentoring, and flexible work practices as a way of enhancing culture and performance. Academically speaking, this research contributes significantly to the current gap by explaining the interrelated steps between the antecedent of CT and the organisational outcomes in IT women employees who go on maternity leave, thus contributing to the current understanding of using technology to enhance performance in modern workplaces.

FUTURE SCOPE OF STUDY

An initial understanding of how collaborative technology (CT) and its antecedents—network access and mentorship, social integration, work–family balance—shape parts of organisational culture, efficacy, and work performance, has been established. However, there remains tremendous scope to further this understanding in multiple dimensions. For instance, this study has concentrated on IT women employees in Karnataka who are returning from maternity leave. Future research can extend work on cross-cultural and cross-industry contexts to determine whether the relationships hold in varying organisational settings. Comparative work in industries like healthcare, manufacturing and education may provide substantial insight into contextual differences pertaining to adoption of CT and associated organisational outcomes. Finally, longitudinal work can fill the gap on the sustainable effects of CT on organisational culture and performance over time, particularly empirical studies that

focus on the temporal dimensions and sustainability of technology-sustained collaborative work. In addition, future studies could add other moderating and mediating variables, including organizational support toward digital transformation, employee resilience, and technostress, to capture the dimensionality of the conditions surrounding the effectiveness of CT. Lastly, given the increasing prominence of AI and collaborative tools, future research could focus on how emerging technologies influence the balance of work and personal time, social support, and professional networking, and the extent to which they shape workplace culture and performance. Such extensions would offer valuable practical contributions to advance scholarship and practice.

POTENTIAL LIMITATIONS

The study has limitations which need to be addressed. To begin with, the use of cross-sectional design entails a lack of causal inference, which means impact on variables can only be understood in relationship to collaborative technology. There are also only designed outcomes on the other variables. Second, the researched demographic of IT women employees in Karnataka on maternal leave is also a restriction, especially on other industries, other regions, and other demographic cross-sections. Third, bias must also be considered when a study relies solely on self-reported data. Last, the focus on a few selected antecedents misses key variables that could be examined, such as the degree of organisational support to employees during periods of digital transformation, technostress, leadership style, and support on technology to be able to implement digital transformation.

CONCLUSION

This study examined the impact of collaborative technology (CT) and its primary antecedents—network and mentorship access, social support, and work–family balance—on dimensions of organisational culture, organisational effectiveness, and work performance. Findings emphasise the role of CT as a bridge between supportive resources and organisational outcomes, demonstrating the impact of workplace collaborative technologies on CT-enabled interpersonal collaboration on workplace dynamics, particularly for IT women employees on maternal leave.

The impact of organisational effectiveness and organisational culture on work performance was substantial, reinforcing the notion that organisational work performance hinges on streamlined processes, the alignment of goals, and a trust-based culture. The study observed a positive impact of CT on culture and organisational effectiveness, supporting the notion of technology as a social and structural enabler for collaboration, interdependence, and integration of workflows and CT-enabled collaboration. Moreover, resources suggested for access and support (networking, mentorship, social support, and work–family balance) are of less direct impact on work performance, though instrumental in the adoption of CT. These resources and performance outputs underscore the role of organisational culture and processes as a primary conduit for translating supportive resources into effective

performance.

The research discusses the emphasised practical implications of the study. It indicates the need for organisations to balance investments in collaborative technologies, strategic policies, mentorship frameworks, and work–life balance systems to fully realise the potential of CT. If organisations adopt technology and provide organisational balance support goals, they will achieve sustainable progress in performance and cultural outcomes. The study also adds to the literature on the intersections of technology, the interpersonal and organisational contexts, and the performance of employees. It highlights how the operational integration of collaborative technology enhanced through organisational and social practices positively impacts operational efficiency, cohesion, and the productivity of employees in the workplace. This study provides organisations with significant outcomes for using technology, centred on organisational and human practices.

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