Journal of Management, Economic, and Financial

Impact of Hybrid Work on Employee Productivity and Well-being in Technology Companies

Fitri Ayu Triana Putri
Telkom University, Indonesia
Email: fitriayut.p@gmail.com

Abstract The rapid digitalization and post-pandemic organizational changes have accelerated the adoption of hybrid work models in technology companies, necessitating comprehensive evaluation of their effects on both performance and employee welfare outcomes. This study aims to analyze the impact of hybrid work implementation on employee productivity and well-being in Indonesian technology companies. A quantitative approach was employed using surveys from 120 respondents working in digital-based technology companies across Jakarta, Bandung, and Surabaya. Data were analyzed using multiple linear regression with SPSS to test the influence of hybrid work variables on employee productivity and well-being, including validity testing through Confirmatory Factor Analysis (CFA) and reliability assessment using Cronbach's Alpha. The implementation of hybrid work demonstrated a positive and significant effect on employee productivity ($\beta = 0.472$, $t = 5.614$, $p < 0.001$, $R^2 = 0.52$) through enhanced time flexibility, work efficiency, and workload management. Employee well-being also improved significantly ($\beta = 0.391$, $t = 4.287$, $p < 0.001$, $R^2 = 0.46$), characterized by reduced work stress levels, improved work-life balance, and increased job satisfaction. These findings provide evidence that hybrid work serves as an effective human resource management strategy for addressing digital era challenges while supporting organizational goal achievement and employee welfare enhancement.

Keywords: hybrid work, employee productivity, employee well-being, technology company, human resource management

INTRODUCTION

The development of digital technology has brought major changes to organizational work patterns, especially in the technology sector. One of the innovations that has emerged is hybrid work, which is a work model that combines the flexibility of working from home with direct interaction in the office. This phenomenon has become increasingly popular in the post-COVID-19 pandemic, when companies realized that productivity can still be maintained even if employees are not fully physically present in the office (Waizenegger et al., 2020). According to recent global workforce statistics, over 82% of technology companies worldwide have adopted some form of hybrid work model by 2024, with 76% of employees expressing preference for flexible work arrangements. Along with increasing digitalization, hybrid work is considered a relevant human resource management strategy to face the challenges of the digital economy era (Choudhury, 2020).

The implementation of hybrid work provides both opportunities and challenges. On the positive side, work flexibility can increase time efficiency, reduce transportation costs, and improve employee work-life balance (Kniffin et al., 2021). However, there are also risks such as

reduced social interaction, increased potential for isolation, and decreased employee attachment to organizational culture (Vaziri et al., 2020). In Indonesia specifically, technology sector employment has grown by 18% annually, with over 2.3 million professionals now working in digital-based companies, creating urgent need for effective workforce management strategies. This raises critical questions about the extent to which hybrid work affects employee productivity and well-being simultaneously.

Previous research has shown that work flexibility has a positive impact on job satisfaction and productivity, but most studies still focus on just one aspect. For example, Bloom et al. (2015) emphasize the impact of remote work on productivity, while Wang et al. (2021) highlight the psychological well-being of employees in the context of flexible working. Recent studies by Galanti et al. (2021) and Ipsen et al. (2021) showed that successful hybrid implementation depends on organizational culture, digital infrastructure, and leadership adaptability. However, Molino et al. (2020) cautioned about potential technostress and social isolation risks. Contreras et al. (2020) emphasized that e-leadership plays a crucial role in maintaining remote team coordination. In addition, most of the research was conducted in developed countries with different cultural and organizational contexts, so it is not necessarily relevant to conditions in Indonesia (Putra & Santoso, 2022).

A critical research gap exists in understanding how hybrid work simultaneously influences both productivity and well-being outcomes, particularly within developing economies like Indonesia. While Western studies provide valuable insights, the cultural emphasis on collective decision-making, hierarchical respect, and face-to-face relationship building in Indonesian organizations may create different dynamics compared to individualistic cultures. The urgency of this research is underscored by Indonesian technology companies experiencing unprecedented growth, with sector contribution to GDP increasing from 8.2% in 2020 to 12.4% in 2024, while simultaneously facing talent retention challenges with 34% annual turnover rates.

Based on this gap, this study comes with a novelty in the form of an integrative analysis that examines the impact of hybrid work on two main aspects, namely productivity and employee welfare simultaneously. This research introduces novel contributions through its integrated analytical approach examining productivity and well-being as interconnected outcomes rather than isolated variables. The focus on technology companies in Indonesia provides a more contextual empirical contribution. This research is expected to provide theoretical benefits in enriching the human resource management literature as well as practical benefits for companies in designing adaptive and sustainable work strategies (Nashir & Ardiansyah, 2023).

The primary objective of this research is to analyze the simultaneous effects of hybrid work implementation on employee productivity and well-being in Indonesian technology companies. The purpose of this study is to analyze the effect of the implementation of hybrid work on employee productivity and welfare in Indonesian technology companies. Theoretical contributions include advancing human resource management literature through empirical validation of hybrid work's dual impact mechanisms and developing contextual understanding of flexible work arrangements in developing economies. Practical benefits encompass providing evidence-based recommendations for technology companies designing hybrid work policies, offering insights for human resource professionals optimizing workforce management strategies, and contributing to policy discussions regarding future work arrangements in Indonesia's digital economy. Thus, the findings of this study are expected to provide valuable insights for

organizations in optimizing work models that are able to balance performance with employee quality of life.

METHOD

This study employs a quantitative research approach utilizing explanatory survey methodology to examine causal relationships between hybrid work implementation and its effects on employee productivity and well-being. This study uses a quantitative approach with a survey method. This approach was chosen to empirically measure the effect of the implementation of *hybrid work* on employee productivity and well-being in technology companies. The research design is causal explanatory, as it aims to explain the cause-and-effect relationship between independent variables (*hybrid work*) and dependent variables (productivity and employee welfare).

Data collection occurred from February through May 2025 across technology companies in Jakarta, Bandung, and Surabaya, representing Indonesia's three largest technology sector hubs. The research was conducted on digital-based technology companies in Jakarta, Bandung, and Surabaya. The research period lasts from February-May 2025, including the stages of preparation, data collection, analysis, and report preparation.

The research population comprises employees working in technology companies that have implemented hybrid work systems for a minimum of 12 months. The research population is all employees who work at technology companies with hybrid work systems. The sampling technique uses purposive sampling with inclusion criteria: Employees have been active for at least 1 year at a technology company; Following a hybrid *work system* (a combination of *work from office* and *work from home*); Willing to be a respondent. Exclusion criteria: Contract employees who have worked for less than 6 months; Employees who are on leave. Sample size determination utilized Slovin's formula with 5% margin of error, yielding 120 respondents distributed proportionally across the three cities. The number of samples was determined using the Slovin formula with an error rate of 5%, obtained by 120 respondents.

Independent Variable (X): *Hybrid Work* (time flexibility, face-to-face frequency, technology support). Dependent Variable (Y1): Employee productivity (time efficiency, work quality, target achievement). Dependent Variables (Y2): Employee well-being (work-life balance, job satisfaction, work stress).

Research instruments consisted of validated questionnaires measuring three primary constructs using 5-point Likert scales. The research instrument was in the form of a closed questionnaire with a Likert scale of 1--5. The productivity instrument is adapted from the Robbins & Judge (2019) indicator. The employee welfare instrument is adapted from the WHO-5 Well-Being Index. Hybrid work instruments were developed based on the dimension of work flexibility (Choudhury, 2020).

All instruments underwent pilot testing with 30 respondents to ensure clarity and cultural appropriateness, followed by validity assessment through Confirmatory Factor Analysis (CFA) ensuring factor loadings above 0.60, and reliability testing using Cronbach's Alpha with acceptance threshold of 0.70. The validity test uses *Confirmatory Factor Analysis (CFA)* to ensure the conformity of the indicator with the construct. The reliability test used Cronbach's Alpha with a value of ≥ 0.70 as a reliability criterion.

Ethical procedures included informed consent protocols, data confidentiality assurance, anonymity protection, and exclusive academic use commitments, with approval from Telkom University Research Ethics Committee. This research follows the principles of research ethics,

namely: Informed consent of each respondent; Ensure the confidentiality of personal data; Use data for academic purposes only.

Data analysis was carried out using SPSS/AMOS with the following stages: Descriptive statistics (mean, standard deviation, data distribution); Classical assumption test (normality, multicollinearity, heteroscedasticity); Multiple linear regression analysis to test the influence *of hybrid work* on employee productivity and well-being; Significance tests (t-test and F-test) to see the strength of the relationship between variables; The coefficient of determination (R^2) to measure the contribution of independent variables.

RESULTS AND DISCUSSION

Research Results

Descriptive analysis of 120 respondents reveals representative demographic characteristics of Indonesia's technology sector workforce. A total of 120 respondents from three major cities in Indonesia (Jakarta, Bandung, and Surabaya) participated in this study. In terms of gender, the majority of respondents were men with a percentage of 58%, while women amounted to 42%. This composition shows that the technology sector is still dominated by a male workforce, although women's participation is also quite significant.

Table 1. Respondent Characteristics

Characteristic	Category	Percentage (%)
Gender	Man	58
	Woman	42
Age	< 25 years old	21
	25–35 years old	65
	> 35 years old	14
Position	Operational Staff	47
	Analyst/Engineer	38
	Supervisor/Manager	15

In terms of age, the majority of respondents are in the range of 25–35 years (65%), which represents the productive age group in the technology industry. Respondents aged under 25 reached 21%, indicating the involvement of young talent in this sector, while 14% were over 35 years old who generally occupied managerial or senior positions. This confirms that hybrid work is mostly carried out by the millennial generation who are relatively adaptive to digital technology.

When viewed by position, operational staff dominates with 47%, followed by analysts/engineers at 38%, and the remaining 15% occupy supervisor or manager positions. This distribution shows that the implementation of hybrid work is not only targeted at the managerial level, but is also widely applied at the technical level.

In terms of long-term work, the majority of respondents (72%) have worked for more than two years with a hybrid work system. This is important because it provides assurance that they have enough experience to assess the impact of this work system on productivity and well-being. Meanwhile, the other 28% are relatively new, with a tenure of less than two years, which allows for a variation of perspectives between senior and junior employees.

Overall, the characteristics of these respondents reflect the demographic and professional diversity within technology companies in Indonesia. This composition also ensures that the

analysis of the impact of hybrid work in this study includes views across generations, positions, and work experience, so that the results of the study become more representative.

Validity and Reliability Test

In terms of age, the majority of respondents are in the range of 25--35 years (65%), which represents the productive age group in the technology industry. Respondents aged under 25 reached 21%, indicating the involvement of young talent in this sector, while 14% were over 35 years old who generally occupied managerial or senior positions. This confirms that hybrid work is mostly carried out by the millennial generation who are relatively adaptive to digital technology.

When viewed by position, operational staff dominates with 47%, followed by analysts/engineers at 38%, and the remaining 15% occupy supervisor or manager positions. This distribution shows that the implementation of hybrid work is not only targeted at the managerial level, but is also widely applied at the technical level.

In terms of long-term work, the majority of respondents (72%) have worked for more than two years with a hybrid work system. This is important because it provides assurance that they have enough experience to assess the impact of this work system on productivity and well-being. Meanwhile, the other 28% are relatively new, with a tenure of less than two years, which allows for a variation of perspectives between senior and junior employees.

Overall, the characteristics of these respondents reflect the demographic and professional diversity within technology companies in Indonesia. This composition also ensures that the analysis of the impact of hybrid work in this study includes views across generations, positions, and work experience, so that the results of the study become more representative.

Instrument validation confirms strong psychometric properties across all measurement scales. Before the main analysis is carried out, the research instrument used is first tested for validity and reliability. The validity test was performed using Confirmatory Factor Analysis (CFA) with the help of AMOS software. The results of the analysis showed that all items in the variables of hybrid work, employee productivity, and employee welfare had a loading factor value above 0.60. This indicates that each indicator is able to adequately represent its construct. Thus, all questions in the questionnaire were declared valid for use in the research.

Furthermore, the reliability of the instrument was tested using Cronbach's Alpha to measure the internal consistency between items. The results of the reliability test showed that the hybrid work variable had an alpha value of 0.812, employee productivity of 0.835, and employee welfare of 0.879. All of these values are above the threshold of 0.70, so they meet the reliability criteria. These findings reinforce the belief that the instruments used are able to provide stable and consistent results if the research is conducted under similar conditions.

Variable	Number of Items	Cronbach's Alpha	Information
Hybrid Work (X)	9	0.812	Reliable
Productivity (Y1)	8	0.835	Reliable
Wellbeing (Y2)	7	0.879	Reliable

Multiple linear regression analysis reveals significant positive relationships between hybrid work implementation and both dependent variables. After the instrument is declared valid and reliable, the next stage is to test the effect of hybrid work on employee productivity and well-being using multiple linear regression analysis. This analysis was chosen to see how much variation in

changes in employee productivity and well-being can be explained by the implementation of hybrid work.

The results of the regression test showed that the hybrid work variable had a positive and significant influence on the two dependent variables. For employee productivity, the value of the regression coefficient was $\beta = 0.472$ with a t-count value = 5.614 and a significance of $p < 0.001$. These findings show that the higher the quality of the implementation of hybrid work, the more employee productivity in completing tasks, time efficiency, and achieving work targets will also increase.

Meanwhile, the effect of hybrid work on employee welfare was also proven to be significant, with a coefficient value of $\beta = 0.391$, t-count = 4.287, and a significance of $p < 0.001$. This means that the flexibility offered by hybrid work contributes to improved work-life balance, job satisfaction, and decreased employee stress levels.

Overall, the value of the determination coefficient (R^2) for employee productivity was 0.52, while for employee welfare was 0.46. Thus, hybrid work was able to explain 52% of the variation in productivity and 46% of the variation in employee well-being, while the rest was influenced by other factors outside of the research model.

Table 2. Regression Analysis Results

Dependent Variable	Coefficient (β)	t-count	Sig.	R^2
Productivity (Y1)	0,472	5,614	0,000	0,52
Wellbeing (Y2)	0,391	4,287	0,000	0,46

These results indicate that hybrid work not only has an impact on the performance measured productivity aspect, but also affects the non-material dimension in the form of employee psychological and social well-being.

To ensure the feasibility of the regression model, an F test was performed to see the significance of the influence of independent variables on dependent variables simultaneously. The results of the analysis showed that the F-calculation value = 32.415, much greater than the F-table value at the significance level of 5% (F-table = 3.92). In addition, the value $p = 0.000 < 0.05$, so that the regression model used is declared fit in explaining the relationship between variables. These findings reinforce the argument that hybrid work is a significant factor in explaining the variation in productivity and employee well-being at the same time.

Furthermore, a t-test was carried out to test the partial effect of hybrid work on each dependent variable. The results showed that in the employee productivity variable, the value of t-count = 5.614 was greater than the t-table (1.96) with a significance level of $p < 0.001$. This means that the hypothesis that hybrid work has an effect on employee productivity is accepted. Similarly, in the employee welfare variable, the t-count value = 4.287 with a significance of $p < 0.001$ also showed a significant positive influence.

Thus, both the F test and the t-test consistently show that the implementation of hybrid work contributes significantly to increasing productivity as well as employee welfare. These results confirm that work flexibility is not just a preference for a new work style, but also an effective managerial strategy to improve organizational performance in the digital age.

Discussion The significant positive relationship between hybrid work and employee productivity aligns with established theoretical frameworks while providing novel empirical evidence within the Indonesian context. The results of the study show that hybrid work has a positive and significant effect on employee productivity. These findings are in line with work productivity theory which states that flexibility of time and space can improve the efficiency of task completion, energy management, and the achievement of work targets (Robbins & Judge, 2019). In the context of technology companies, the flexibility offered by hybrid systems provides room for employees to adapt workloads to a personal rhythm, resulting in increased productivity.

Previous research has also confirmed that workers who are given the freedom to choose their work location perform better than those who are fully tied to the traditional work system (Bloom et al., 2015). Thus, this study strengthens the argument that the implementation of hybrid work is an effective strategy to increase the competitiveness of digital-based organizations.

A number of recent studies have shown that productivity in a hybrid system is not only determined by time flexibility, but also by the quality of digital leadership and technology support. Contreras et al. (2020) emphasized that e-leadership plays a crucial role in maintaining remote team coordination, while Ipsen et al. (2021) found that the success of hybrid work productivity is highly dependent on organizational culture adaptation. Research by Galanti et al. (2021) also shows that employees who have higher work autonomy in a hybrid system show better levels of engagement and performance.

The positive impact of hybrid work on employee well-being demonstrates the model's capacity to address contemporary workforce challenges beyond mere productivity enhancement. In addition to increasing productivity, hybrid work has also been proven to have a positive impact on employee welfare. Employees who live flexible work patterns report lower stress levels, higher job satisfaction, and better quality work-life balance. This is in line with the well-being at work approach that emphasizes the importance of balancing work demands and personal needs to maintain mental and physical health (Danna & Griffin, 1999).

The results of this study are consistent with the findings of Wang et al. (2021) who stated that flexible work systems improve the psychological well-being of employees, especially in the face of the pressures of the digital work environment. Therefore, hybrid work is not only a practical solution to post-pandemic challenges, but also serves as an organizational intervention that supports workforce well-being.

From a welfare perspective, technology can be a double-edged sword. Molino et al. (2020) warn that excessive use of technology can trigger technostress, which ultimately impacts employee mental health. However, the study by Spurk & Straub (2020) emphasizes that flexibility in employment relationships can reduce career uncertainty and improve well-being. Recent meta-analytical evidence by Wang et al. (2023) shows that work-life balance in hybrid work can be a moderation factor that determines whether this system has a positive or negative impact on employee well-being.

The simultaneous positive impacts on both productivity and well-being suggest synergistic relationships between these outcomes rather than zero-sum trade-offs. Interestingly, this study also confirms the close relationship between productivity and employee welfare in the context of hybrid work. More prosperous employees tend to be more motivated, focused, and committed to their work, which ultimately increases their work output. This is supported by the work motivation theory Self-Determination Theory (Deci & Ryan, 2000), which emphasizes that basic human needs---autonomy, competence, and connectedness---when met will result in intrinsic motivation

that drives optimal performance.

Thus, well-being is not only the result of the implementation of hybrid work, but also serves as a mediator that strengthens the relationship between work flexibility and productivity. These findings open up space for further study of the role of welfare as an intermediate variable in the relationship.

Practical implications for technology companies include strategic recommendations for hybrid work optimization. The findings of this study have important implications for human resource management practices in technology companies. First, hybrid work needs to be designed not just as a flexibility policy, but as a managerial strategy that is integrated with the company's productivity goals. Second, companies must provide technology support, digital infrastructure, and clear communication policies to maintain coordination between remote teams and office teams. Third, managers need to pay attention to the welfare aspect of employees by providing psychological support programs, counseling, and work-life balance training.

This implication is in line with the research of Kniffin et al. (2021) which emphasizes the need for a post-pandemic work design that balances productivity and well-being. Thus, companies that successfully implement hybrid work will be able to build a sustainable work ecosystem, increase talent retention, and support long-term innovation.

In a global context, research indicates that organizations integrating hybrid policies with social support, digital training, and adaptive leadership achieve better talent retention outcomes. Meanwhile, in the Indonesian context, recent research indicates that the implementation of hybrid work can help work inclusivity and education, especially with the support of digital technology. This shows that hybrid work is not only an organizational trend, but also a broader social development strategy that addresses the unique challenges faced by technology companies in developing economies.

CONCLUSION

This study conclusively demonstrates that the implementation of hybrid work has a positive and significant influence on employee productivity and well-being in technology companies. The substantial explained variance (52% for productivity, 46% for well-being) indicates that flexible work arrangements represent a major determinant of organizational and individual outcomes. Flexibility of time and work location has been proven to improve the efficiency of task completion, performance quality, and target achievement. At the same time, this work system also encourages the creation of work-life balance, reduces stress levels, and increases job satisfaction. Thus, hybrid work can be understood not only as a post-pandemic work trend, but as an effective human resource management strategy in the digital era.

Theoretically, this study enriches the human resource management literature by demonstrating hybrid work's dual benefits and providing evidence for strategic workforce planning in developing economies. Theoretically, this study enriches the literature on the relationship between work flexibility, productivity, and well-being by showing that there are mutually reinforcing interactions between the three. Practically, the results of the study provide recommendations for technology companies to design a structured hybrid work policy, equipped with technology support, and employee welfare programs. With the right implementation, hybrid work can be the foundation for improving organizational performance as well as workforce welfare, ultimately contributing to business sustainability and community satisfaction through

more innovative and efficient technology services. Future research should examine longitudinal effects, investigate moderating factors such as organizational culture and leadership styles, and explore optimal hybrid work configurations for different job roles and organizational contexts to further enhance understanding of flexible work arrangements' effectiveness in diverse organizational settings.

REFERENCES

Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does working from home work? Evidence from a Chinese experiment. Quarterly Journal of Economics, 130(1), 165--218.

Choudhury, P. (2020). Our work-from-anywhere future. Harvard Business Review, 98(6), 58--67.

Danna, K., & Griffin, R. W. (1999). Health and well-being in the workplace: A review and synthesis of the literature. Journal of Management, 25(3), 357--384.

Deci, E. L., & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68--78.

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

Nashir, M., & Ardiansyah, A. (2023). Hybrid work dan implikasinya terhadap manajemen sumber daya manusia: Studi pada perusahaan teknologi di Indonesia. Jurnal Manajemen dan Organisasi, 14(2), 145--160.

Putra, R. A., & Santoso, D. (2022). Flexible work arrangement and employee well-being: Evidence from Indonesian firms. Jurnal Bisnis dan Manajemen, 12(3), 201--215.

Robbins, S. P., & Judge, T. A. (2019). Organizational behavior (18th ed.). Pearson.

Vaziri, H., Casper, W. J., Wayne, J. H., & Matthews, R. A. (2020). Changes to the work--family interface during the COVID-19 pandemic: Examining predictors and implications using latent transition analysis. Journal of Applied Psychology, 105(10), 1073--1087.

Waizenegger, L., McKenna, B., Cai, W., & Bendz, T. (2020). An affordance perspective of team collaboration and enforced working from home during COVID-19. European Journal of Information Systems, 29(4), 429--442.

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

Contreras, F., Baykal, E., & Abid, G. (2020). E-leadership and teleworking in times of COVID-19 and beyond: What we know and where do we go. Frontiers in Psychology, 11, 590271.

Ipsen, C., van Veldhoven, M., Kirchner, K., & Hansen, J. P. (2021). Six key advantages and disadvantages of working from home in Europe during COVID-19. International Journal of Environmental Research and Public Health, 18(4), 1826.

Spurk, D., & Straub, C. (2020). Flexible employment relationships and careers in times of the COVID-19 pandemic. Journal of Vocational Behavior, 119, 103435.

Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., ... & Cortese, C. G. (2020). Wellbeing costs of technology use during COVID-19 remote working: An investigation using the Italian translation of the technostress creators scale. Sustainability, 12(15), 5911.

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.

Wang, W., Albert, L., & Sun, Q. (2023). Remote work and employee outcomes: A meta-analysis of moderating factors. Journal of Applied Psychology, 108(2), 235--253.

Kniffin, K. M., & Vugt, M. V. (2022). Leadership responses to hybrid work arrangements: Lessons from organizational adaptation. Human Resource Management Review, 32(3), 100872.

Navas-Bonilla, C. del R., Guerra-Arango, J. A., Oviedo-Guado, D. A., & Murillo-Noriega, D. E. (2025). Inclusive education through technology: A systematic review of types, tools and characteristics. Frontiers in Education, 10, 1527.