

Determinants of Employee Productivity: The Role of Work-Life Balance, Communication Effectiveness, and Technological Support

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ABSTRACT

Employee productivity is a critical determinant of organisational performance, particularly in the information technology (IT) sector, where efficiency, innovation, and responsiveness are essential for organisational competitiveness. Although previous studies have identified work-life balance, communication effectiveness, technological support, and organisational support as important workplace factors, limited research has examined these variables within a single integrated framework in the Malaysian IT context. Using Social Exchange Theory, this study looked at the links between work-life balance, communication efficacy, technology assistance, organizational support, and employee productivity among IT personnel in Kuala Lumpur. A quantitative cross-sectional survey approach was used, with data collected from 273 full-time IT workers using a standardized questionnaire. The data were analysed using descriptive statistics, reliability analysis, Pearson correlation analysis, and the Sobel mediation test. The findings demonstrated that work-life balance, communication effectiveness, and technology assistance were all favourably and substantially related to employee productivity. Communication effectiveness had the greatest impact on employee productivity, followed by technical support and work-life balance. The findings also showed that organizational support strongly moderated the links between work-life balance, communication efficacy, technology assistance, and employee productivity. The study adds to the literature by expanding on Social Exchange Theory and proving the mediating effect of organizational support in increasing employee productivity in Malaysia's IT industry.

Keywords: Employee productivity; work-life balance; communication effectiveness; technological support; organisational support; Social Exchange Theory.

INTRODUCTION

Employee productivity is a critical indicator of organisational performance because it reflects how effectively employees utilise their skills, effort, and available resources to achieve organisational objectives (Koopmans et al., 2011). Another important measure of the organisation's performance is employee productivity which captures the effectiveness of employees in using their skills, effort and available resources to deliver the organisation's desired goals. Productivity is especially crucial in technology-intensive sectors, where efficiency, innovation, and responsiveness are key drivers of competitiveness (Hoo et al., 2024; Nyumah & Yusuf, 2025). Work-life balance, communication effectiveness, technological support and organisational support have been found to be significant factors affecting employee productivity in previous studies (Kurtessis et al., 2017; Rhoades & Eisenberger, 2002). The current studies, however, have focused on these factors individually, which means there is a lack of consensus on how these factors work together to improve employee productivity (Hoo et al., 2024; Shikusinde & Shimaneni, 2025). Despite the previous studies that have confirmed the impact of work-life balance, communication effectiveness, technological support and organisational support on employee outcomes in isolation, few empirical studies have explored all these factors together in one model and used organisational support as an underlying explanatory mechanism in the context of the Malaysian IT industry. The information technology (IT) industry in Kuala Lumpur is particularly of interest in this context, as it is known for its fast-

paced technological advancements, high expectations from customers, competitive work market, and heavy workloads (Yong et al., 2024). The importance of understanding what contributes to productivity of employees is vital to maintain the performance and competitiveness of organisations, as the IT sector continues to play a pivotal role in the development of Malaysia's economy (Department of Statistics Malaysia, 2025).

According to Social Exchange Theory, this study implies that organizational support is an important link between workplace resources and employee productivity. Cropanzano and Mitchell (2005) found that when employees feel more supported by the business, they are more likely to reciprocate with positive attitudes and behaviours that assist them execute their tasks and contribute to productivity. Although it has been generally connected to employee outcomes, little research has been conducted to examine the mediating influence of organizational support on work-life balance, communication efficacy, technology assistance, and employee productivity, particularly in the Malaysian IT setting. Thus, this study investigates the direct influence of three variables on employee productivity: work-life balance, communication efficacy, and technology assistance, as well as the indirect impact of organizational support as a mediator among IT personnel in Kuala Lumpur. The study contributes to the literature by merging different workplace factors into a single framework, expanding Social Exchange Theory by investigating organizational support as a mediating element, and providing empirical evidence from Malaysia's IT industry.

LITERATURE REVIEW

Underpinning Theory

The study is based on Social Exchange Theory (SET), which posits that employees are more likely to reward their employer with positive work attitudes and behaviours if they get favourable treatment from the organization (Blau, 1964; Cropanzano and Mitchell, 2005). Employees who believe their organization appreciates their contributions and cares about their well-being are more devoted, engaged, and perform better at work (Rhoades and Eisenberger, 2002; Kurtessis et al., 2017). Therefore, the mediating role of organisational support between workplace resources and employee productivity is suggested. Previous research on work-life balance, communication efficacy, technology assistance, and organizational support has been conducted independently, but no study has combined these elements in the context of Malaysia's IT industry. The study's goal is to contribute to the Social Exchange Theory by proposing organizational support as a mediator between workplace resources and subsequent effective employee behaviours. This theoretical approach provides a better understanding of how work environments affect employee productivity in a technologically advanced workplace.

Employee Productivity

Employee productivity refers to employees' ability to effectively utilise their time, skills, and available resources to achieve organisational goals (Stryker, 2024; Visier Team, 2023). It plays a crucial role in organizational efficiency, profitability, and competitiveness (Chen et al., 2020). Productivity in technology-intensive contexts is an indicator of how well the employees can produce quality work efficiently using digital resources and collaborative processes. In earlier research, organizational, leadership, technological and human factors were identified as factors that influence productivity (Han & Chen, 2025; Maliki, 2021).

Work Life Balance and Employee Productivity

Work-life balance refers to an employee's capacity to efficiently manage both work and personal duties while minimizing conflict. This is especially essential in the IT business, where personnel are regularly subjected to high workloads, tight deadlines, longer working hours, and expectations of constant availability, all of which can lead to stress and burnout (Teevan et al., 2022). Flexible working arrangements can assist employees attain work-life balance and boost workplace performance (Jaafar & Abdul Rahim, 2024). Overwork, on the other hand, has been linked to poor employee well-being and performance (Roslee et al., 2021; Tan & Doraisamy, 2025). Empirical research has consistently shown that work-life balance benefits employee productivity (Hoo et al., 2024; Wong et al., 2020).

H1: Work-life balance is positively associated with employee productivity.

Communication Effectiveness and Employee Productivity

Communication effectiveness is the degree to which information is delivered effectively, precisely, and consistently among members of an organization (Keyton, 2017; Tourish & Robson, 2006). Communication is especially important in IT organizations since cooperation takes place both digitally and in person (Leonardi, 2021; Waizenegger et al., 2020). Communication issues can lead to misconceptions, delays, and inefficiency in operation (Bhar & Abu Bakar, 2012; Mohamad et al., 2025). On the other hand, good communication improves coordination, reduces duplication of efforts, and assures employee performance and productivity (El Attari, 2024; Sridevi & Preetha, 2024).

H2: Communication effectiveness is positively associated with employee productivity.

Technological Support and Employee Productivity

Technological support relates to the presence of reliable technological infrastructure, digital resources and technical support to help employees do their work effectively. The growing use of cutting-edge technologies like cloud computing and artificial intelligence has made the availability of suitable technological resources crucial for workplace productivity (Militano et al., 2021). Technological support enables people to collaborate, minimises interruptions to work, and improves operational efficiency (Jaafar & Abdul Rahim, 2024; Tan & Doraisamy, 2025). Previous studies have indicated that the effective use of technological support has a positive effect on employee performance and productivity (Anwar et al., 2024).

H3: Technological support is positively associated with employee productivity.

Organizational Support as a Mediating Variable

Organisational support is defined as employees' perceptions of the amount of value placed on their contribution and interest in their welfare by the organisation (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002). The idea of Social Exchange Theory is that if an employee believes that their organization is more responsive to them, they will reciprocate with positive attitudes and actions towards the organization that can increase the chances of success (Blau, 1964, Cropanzano & Mitchell, 2005). Some of the conditions in the workplace can, therefore, reinforce employees' perceptions of organizational support, and in turn increase productivity (Kurtessis et al., 2017). Increased productivity is one of the benefits of implementing work-life balance practices as they demonstrate an organisation's concern for employee wellbeing, which boosts organisational support (Hoo et al., 2024; Kurtessis et al., 2017).

H4: Organizational support significantly mediates the relationship between work-life balance and employee productivity.

Similarly, the impact of effective communication on employee performance can be enhanced by organizational support. Past research has found that management communication is positively related to perceived organisational support and that this in turn positively influences employee performance (Neves & Eisenberger, 2012). It is especially important in jobs that require the use of technology and in remote positions where workers rely on well-functioning organizational policies, coordination and management to be effective. The relationship between communication and productivity is mediated by various support systems, as revealed by research data (El Attari, 2024). Other environments also have positive correlation with communication and employee performance in the IT environment (Sridevi & Preetha, 2024).

H5: Organizational support significantly mediates the relationship between communication effectiveness and employee productivity.

the productivity gains of technological assistance could be contingent on whether workers are well supported in their use of the technological resources available. Organisational support consists of guidance, resources, and working conditions that help the effective use of the technology (Eisenberger et al., 1986; Kurtessis et al., 2017).

The results indicate that technology-related programs are more effective when they are backed by proper organizational practices (Tan & Doraisamy, 2025).

H6: Organizational support significantly mediates the relationship between technological support and employee productivity.

Conceptual Framework

This study proposes a framework based on social exchange theory and a literature review, with work-life balance, communication effectiveness, and technological support as independent variables, employee productivity as a dependent variable, and organizational support as a mediating variable. The approach examines the direct and indirect effects of workplace characteristics on employee productivity through organisational support.

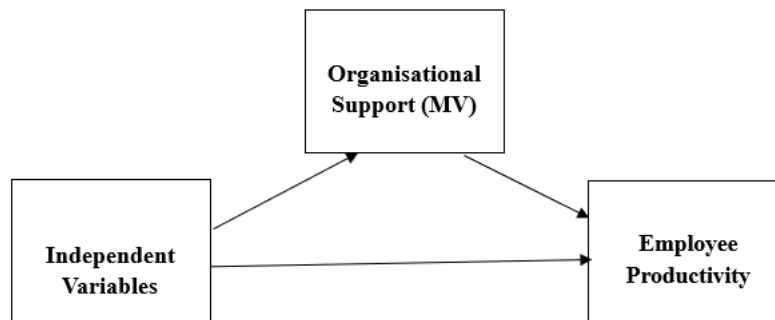


Figure 1: Conceptual Model for Sobel Test of Organizational Support Mediation

METHODOLOGY

The study has used quantitative cross sectionals survey method to see the relationships between work-life balance, communication effectiveness, technological support, organisational support and employee productivity among IT employees in Kuala Lumpur (Creswell, 2023). The target population included full-time employees in the information technology (IT) sector such as software developers, systems analysts, project managers, IT support staff, etc. The absence of a comprehensive sampling frame, led to using purposive sampling. The minimum sample size was determined using the Krejcie & Morgan (1970) formula of 260 respondents. 273 valid responses were obtained for analysis following data screening. Purposive sampling was deemed as suitable because the study focused on those individuals who were currently working in the IT sector but were full-time employees and had relevant knowledge and experience in workplace practices and productivity.

Research Instrument and Data Collection

A structured questionnaire was used to collect data, which was adapted from other studies to ensure content validity, reliability, and appropriate. A five-point Likert scale was used for all items. The questionnaire was disseminated online using the platform Google Forms on professional networks, LinkedIn, email and WhatsApp. To ensure the clarity and relevance of the items, a pilot study was conducted before the main data collection phase (Effendi et al., 2025).

Data Analysis

SPSS Version 30 was used to analyse the data. The characteristics of the respondents and variables in this study were described using descriptive statistics (Pallant, 2020; Creswell & Creswell, 2018). The Cronbach's Alpha reliability coefficient was used to assess test-retest reliability; a value of $r > 0.70$ was considered satisfactory (Field, 2024). Pearson correlation was utilized to look at the links between work-life balance, communication efficacy, technology support, and employee productivity. Pearson correlation is a popular technique for determining the direction and strength of a linear connection between two continuous variables (Pallant, 2020). The Sobel test (Sobel, 1982; Preacher & Hayes, 2004) was then used to assess if the indirect effect of the independent variable on the dependent variable via the mediator was statistically significant. The Sobel test is a

well-established method for detecting indirect effects in well-specified research with large sample sizes, however bootstrap-based techniques are becoming more popular (Abu-Bader & Jones, 2021). As a result, the mediation findings should be interpreted with careful consideration.

Common Method Bias Assessment

Common method bias (CMB) was addressed during the research design stage since all the study's variables were measured from the same respondents using the same self-administered questionnaire. This risk was decreased by many procedural procedures, including the use of standard assessment scales based on past research, the protection of respondents' identity and confidentiality, and voluntary participation.

Podsakoff et al., (2003) and Chang et al. (2010) suggested that these procedural methods are widely recommended to be able to reduce the evaluation apprehension, social desirability bias, and systematic response tendencies of the respondents. However, due to a cross-sectional design and the use of self-reported data from a single source, common method bias cannot be ruled out. As a result, the findings must be interpreted with caution. This study did not conduct a statistical analysis of common method variation, but the corrective steps used are like those advised by Podsakoff et al. (2003) and Chang et al. (2010). Future research should employ more advanced techniques, such as multi-source data collection, time-lagged research designs, marker-variable technique, common latent factor analysis, and full collinearity assessment, to further investigate and mitigate the potential influence of common method bias (Podsakoff et al., 2003; Kock, 2015).

Ethical Considerations

Participation was voluntary, and respondents were made aware of the study's aim prior to completing the survey. No personally identifying information was collected, and all responses were kept anonymous and used solely for academic purposes.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.Deviation
Work life balance	273	1.00	5.00	3.6978	1.05581
Communication effectiveness	273	1.00	5.00	3.7216	.98820
Technological support	273	1.00	5.00	3.7155	.95618
Organisational support	273	1.00	5.00	3.6288	.96306
Employee productivity	273	1.00	5.00	3.9829	.95578
Valid N (listwise)	273				

Table 1 presents the descriptive statistics of the study variables. The mean scores ranged from 3.6288 to 3.9829, indicating generally positive perceptions among respondents. Employee productivity recorded the highest mean score ($M = 3.9829$, $SD = 0.95578$), while organisational support recorded the lowest ($M = 3.6288$, $SD = 0.96306$). Overall, the findings suggest that respondents reported favourable levels of work-life balance, communication effectiveness, technological support, organisational support, and employee productivity.

Demographic Profile of Respondents

Table 2: Demographic Profile of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Age	18-24 years	43	15.8
	25-34 years	67	24.5
	35-44 years	92	33.7
	45-54 years	61	22.3
	55 years and above	10	3.7
Gender	Male	132	48.4
	Female	132	48.4
	Prefer not to say	9	3.3
Educational Level	SPM	1	0.4
	High School	56	20.5
	Diploma	77	28.2
	Bachelor's Degree	99	36.3
	Master's Degree	34	12.5
	Doctorate	6	2.2
Working Experience	< 1 year	34	12.5
	1-3 years	18	6.6
	4-6 years	33	12.1
	7-10 years	45	16.5
	> 10 years	143	52.4
Working Schedule	Full-time	220	80.6
	Part-time	13	4.8
	Flexible/Hybrid	24	8.8
	Remote	8	2.9
	Shift	8	2.9
Marital Status	Single	78	28.6
	Married	172	63.0
	Divorced/Separated	10	3.7
	Widowed	5	1.8
	Prefer not to say	8	2.9

Table 2 shows the demographic features of the 273 respondents. The largest age group was respondents aged 35-44 years (33.7%), followed by those aged 25-34 years (24.5%) and 45-54 years (22.3%). Regarding gender, the number of male respondents (48.4%) was equal to the number of female respondents (48.4%), with 3.3% preferring not to state their gender. In terms of education, most respondents had received a Bachelor's degree (36.3%), and then a Diploma (28.2%) and High School qualification (20.5%). Fewer had Master's degrees (12.5%), Doctorates (2.2%) or SPM qualifications (0.4%).

In terms of work experience, over half of the respondents (52.4%) had more than ten years of experience, which meant that the sample was very experienced. Further, most (80.6%) worked full-time, with smaller proportions working in flexible/hybrid (8.8%) or part-time (4.8%) arrangements, remote (2.9%), or shift-based (2.9%). Regarding marital status, most of the respondents were married (63.0%) and the next highest groups were the single (28.6%) and divorced (4.2%) participants. Those that remained were divorced (3.7%) or had not responded to the question (2.9%) or were widowed (1.8%). The sample was generally made up of adults who were experienced in their work and had full-time employment and were relatively highly educated.

Reliability Analysis

Table 3: Reliability Analysis Result

	Cronbach's Alpha	N of Items
Work life balance	0.96	6
Communication effectiveness	0.95	6
Technological support	0.94	6
Organisational support	0.94	6
Employee productivity	0.96	6

As shown in Table 3, all constructs demonstrated excellent internal consistency, with Cronbach's alpha values ranging from 0.94 to 0.96, exceeding the recommended threshold of 0.70 (Field, 2024). These results indicate that the measurement items were highly reliable.

Correlation Analysis

The Pearson correlation results for the variables of the study based on the 273 respondents is shown in Table 4. The results indicate that all the variables were positively and significantly related at the 0.01 level ($p < .001$). The highest correlation was found between work-life balance and communication effectiveness ($r = .827$) and the lowest correlation was seen between work-life balance and organisational support ($r = .738$). There were strong positive correlations between employee productivity and communication effectiveness ($r = .827$), technological support ($r = .824$), work-life balance ($r = .806$) and organisational support ($r = .746$). The overall results suggest that a better work-life balance, communication effectiveness, technological support, and organizational support are all related to increased employee productivity. There were several relatively strong correlations between the variables of the study such as: a correlation between communication effectiveness and employee productivity ($r = .827$) and another correlation between communication effectiveness and work-life balance ($r = .827$). While several of the correlations were reasonably high, none exceeded the conventional limit of 0.90, suggesting that multicollinearity was not likely to be severe. However, when interpreting the observed relationships between the study variables, there should be some overlap between the study variables. Other diagnostics that could be added to the study in the future is the Variance Inflation Factor (VIF) and the tolerance statistic to further confirm predictor independence.

Table 4: Correlation Analysis Results

Correlations						
		Work life balance	Communication effectiveness	Technological support	Organisational support	Employee productivity
Work life balance	Pearson Correlation	1	.827**	.764**	.738**	.806**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	273	273	273	273	273

*Continuation						
Communication effectiveness	Pearson Correlation	.827**	1	.805**	.821**	.827**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	273	273	273	273	273

Technological support	Pearson Correlation	.764**	.805**	1	.750**	.824**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001
	N	273	273	273	273	273
Organisational support	Pearson Correlation	.738**	.821**	.750**	1	.746**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	273	273	273	273	273
Employee productivity	Pearson Correlation	.806**	.827**	.824**	.746**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	273	273	273	273	273

**Correlation is significant at the 0.01 level (2-tailed).

Table 5: Normality Analysis Result

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Work life balance	.158	273	<.001	.909	273	<.001
Communication effectiveness	.163	273	<.001	.906	273	<.001
Technological support	.161	273	<.001	.911	273	<.001
Organisational support	.130	273	<.001	.936	273	<.001
Employee productivity	.192	273	<.001	.848	273	<.001

a. Lilliefors Significance Correction

Table 5 shows that both the Kolmogorov-Smirnov and Shapiro-Wilk tests were statistically significant ($p < .001$), suggesting deviations from normality. These tests are very sensitive, however, because of the relatively large sample size ($n = 273$), and can pick up relatively small deviations from normality. With large sample sizes, parametric analyses (e.g., Pearson correlation analysis) are also valid, provided that the Central Limit Theorem is applied. Hence, parametric analysis was applied for the analysis, but future studies can support the analysis with skewness, kurtosis, histograms, and Q-Q plot evaluation.

Hypothesis Testing

Table 6: Summary of Hypothesis Testing Results

Hypothesis	Statement	Statistical Evidence	Result
H1	Work-life balance positively influences employee productivity.	$r = .806, p < .001$	Supported
H2	Communication effectiveness positively influences employee productivity.	$r = .827, p < .001$	Supported
H3	Technological support positively influences employee productivity.	$r = .824, p < .001$	Supported

H4	Organisational support mediates the relationship between work-life balance and employee productivity.	$\beta = .738, p < .001$; $\beta = .746, p < .001$; Sobel $p < .001$	Supported
H5	Organisational support mediates the relationship between communication effectiveness and employee productivity.	$\beta = .821, p < .001$; $\beta = .746, p < .001$; Sobel $p < .001$	Supported
H6	Organisational support mediates the relationship between technological support and employee productivity.	$\beta = .750, p < .001$; $\beta = .746, p < .001$; Sobel $p < .001$	Supported

Table 6 summarises the results of the hypothesis testing. The results show support for all six hypotheses. When it came to the direct relationships, the most positive was between communication effectiveness and employee productivity ($r = .827, p < .001$), followed by technological support ($r = .824, p < .001$) and work-life balance ($r = .806, p < .001$). The findings indicate that employees who feel they are being well communicated with, have adequate technological support and feel they have a better work-life balance are more likely to report higher levels of productivity.

The positive correlation between work-life balance and employee productivity lends support to H1, consistent with Hoo et al. (2024) and Wong et al. (2020) which indicate that employees who have good work-life balance are more likely to exhibit high levels of performance and productivity. Likewise, the positive link between the communication effectiveness and employee productivity is consistent with H2, and in line with the findings of El Attari (2024) and Sridevi and Preetha (2024), who determined that employee productivity is positively influenced by good and effective communication.

Moreover, the positive relationship between technical support and employee productivity lends support to H3, which aligns with the findings of Jaafar and Abdul Rahim (2024) and Anwar et al. (2024) who emphasized that technical resources and technological support of the organization significantly impact employee productivity and work efficiency. This mediation analysis also confirmed the role of organisational support in the explanation of these relationships. Work-Life balance was a significant predictor of organisational support for H4 ($\beta = .738, p < .001$), and organisational support was a significant predictor of employee productivity for H4 ($\beta = .746, p < .001$). The very strong Sobel test result ($p < .001$) supports the findings that organisational support acts as the mediator between work-life balance and employee productivity. Results indicate that a better work-life balance for employees is correlated with them feeling that the organisation they work for is supportive, which in turn is linked to productivity. This clearly reinforces the notion that good working conditions have a positive impact on staff's sense of care and recognition in the organisation. This is in line with Social Exchange Theory (Blau, 1964; Cropanzano & Mitchell, 2005), which posits that employees will respond positively to their organisation's attempts to support their work-life needs, in terms of their work attitudes and productivity.

H5 was also supported, as communication effectiveness significantly predicted organisational support ($\beta = .821, p < .001$), which in turn had the highest correlation among the three independent variables. Mediating effect of organisational support was supported by significant Sobel test ($p < .001$) and organisational support was found to have significant influence on employee productivity ($\beta = .746, p < .001$). This is in line with the study by Neves and Eisenberger (2012) which determined that good organisational communication increases employees' perception of supportive work environments and, in turn, increased their work outcomes and performance. The discovery also reinforces Social Exchange Theory, as the efficient functioning of communication can strengthen the perception of organisational care and support, thereby reinforcing positive behaviours from employees which lead to greater productivity. Technological support was a strong predictor of organisational support ($\beta = .750; p < .001$), and organisational support was a significant predictor of employee productivity ($\beta = .746; p < .001$) for H6. Organisational support was also found to be a mediator between the Sobel test result ($p < .001$). This finding also indicates that technological resources, if not coupled with suitable support, guidance and access to relevant resources in the organisations, may not be enough to maximise employee productivity. Organisations that actively promote and support the effective use of technology to enhance employee value added will find that employees benefit more from such technology. The employees who are provided with technological resources

and organisational support can feel more valuable and thus motivated to use the available resources effectively to enhance the performance, consistent with Social Exchange Theory.

In general, the results indicate that the effectiveness of communication, technology support and work-life balance are highly correlated with employee productivity. Moreover, organisational support is an important pathway for these workplace factors to relate to increased employee productivity. The results are in line with Social Exchange Theory (Blau, 1964) which states that employees will respond to positive acts of the organisation with positive attitudes and actions, such as increased work performance and productivity. Organisations interested in enhancing employee productivity should therefore not only investigate the practices and resources they implement in the workplace, but also at the establishment of a positive work culture that appreciates employee's contributions and wellbeing.

Contributions Of the Study

Theoretical Contributions

The research adds to the employee productivity literature by showing that work life balance, communication effectiveness and technological support are important factors that influence employee productivity in the IT industry in Kuala Lumpur. The results confirm the findings of earlier studies which emphasized the significance of workplace resources in improving employee performance and productivity (Hoo et al., 2024; Wong et al., 2020; Sridevi & Preetha, 2024; Anwar et al., 2024). In addition, it is an extension of Blau (1964) and Cropanzano & Mitchell (2005) Social Exchange Theory findings, by showing the mediation effect of organisational support when linking workplace conditions and productive employee behaviours. The results indicate that employees' responses to increased organisational support are likely to be in the form of increased work performance and productivity.

Policy Implications

The results indicate that work-life balance, communication and availability of reliable technological resources are employee-friendly workplace policies that should be encouraged by organisations and policymakers (Jaafar & Abdul Rahim, 2024; Tan & Doraisamy, 2025). In addition, organisations should have policies that enhance the sense of organisational support by implementing employee recognition programs, fair treatment, career development opportunities, and supportive leadership procedures. Such efforts can enhance employees' productivity and ultimately help sustain and enhance the competitiveness of the Malaysian IT industry.

Managerial Implications

The findings provide practical guidance for managers and HR practitioners. Organisations need to encourage flexible working practices, reasonable workloads and employee health and wellbeing programs which will help to support work-life balance. To prevent misunderstandings, it is important to encourage clear and timely communication, enabling effective coordination. It's also vital that organisations have robust technological infrastructures, technical support services and ongoing training initiatives. Managers also need to enhance organizational support by acknowledging employee contributions, treating them fairly, offering career growth and development opportunities and maintaining positive supervisory relationships. These efforts can help to improve employee productivity and organizational performance.

CONCLUSION AND FUTURE RESEARCH

The objective of this study was to look at the relationship between work-life balance, communication efficacy, technical assistance, organizational support, and productivity among IT workers in Kuala Lumpur. The results showed a positive relationship between work-life balance, communication effectiveness, and technology support for employee productivity. The results of this study align with the previous studies which emphasized that work-life balance, effective communication and technological support are important factors to improve employee performance and productivity (Hoo et al., 2024; Wong et al., 2020; Jaafar & Abdul Rahim, 2024; Anwar et al., 2024). The study also showed that the relationships between work-life balance, communication effectiveness,

technological support and employee productivity were all significantly indirect through organisational support. Employees who feel supported are more likely to respond in a positive manner to the organisation with positive behaviours and attitudes that will lead to better performance and productivity.

The results are supported by Social Exchange Theory, where positive treatment of them by the organization is likely to evoke positive work responses and worker commitment (Blau, 1964; Cropanzano & Mitchell, 2005). The results are also like previous studies examining the link between perceived organisational support and employee performance (Rhoades & Eisenberger, 2002; Kurtessis et al., 2017; Neves & Eisenberger, 2012). This paper is a contribution to the literature for several reasons: First, it combines several workplace factors that influence productivity in one framework; and second, it shows that organisational support is an important pathway through which workplace resources relate to employee productivity. The present study has shown how organisational support can be a key mediator between workplace resources and employee productivity, whereas most previous studies have analysed these workplace factors individually. Based on the practical implications, it can be suggested that organisations should improve employee productivity and organisational performance by developing effective communication, encouraging work-life balance, offering sufficient technological support, and improving organisational support practices. There are a few caveats to be noted. The cross-sectional design does not allow causal inferences to be drawn, and self-reported data could suffer from common method bias (Podsakoff et al., 2003; Chang et al., 2010).

Despite its contributions, this study has several limitations. Construct validation methods such as exploratory factor analysis (EFA), confirmatory factor analysis (CFA), convergent validity, discriminant validity, and multicollinearity diagnostics were not used and should be addressed in future studies. Mediation was evaluated using the Sobel test, a well-known approach for determining indirect effects in mediation studies (Sobel, 1982). Although modern methodologies such as bootstrapping, PROCESS Macro, and Structural Equation Modelling (SEM) may give greater robustness, the Sobel test is still an acceptable and suitable tool for regression-based mediation investigations (Preacher & Hayes, 2004; Park & Han, 2024). Future research should use longitudinal and multi-source designs, enhanced validity tests, and bootstrapping or SEM methodologies to validate mediation effects (Preacher & Hayes, 2004). Furthermore, investigating additional organizational characteristics and performing research in diverse sectors and geographical situations might improve the generalizability of the findings. Overall, the findings show that work-life balance, effective communication, technology support, and perceived organizational support all have a substantial impact on employee productivity. Organizations that promote supportive work environments, effective communication, technology preparedness, and work-life balance practices are more likely to improve employee performance and achieve long-term organisational success.

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REFERENCES

1. Abu-Bader, S., & Jones, T. V. (2021). Statistical mediation analysis using the Sobel test and Hayes SPSS Process Macro. *International Journal of Quantitative and Qualitative Research Methods*, 9(1), 42-61.
2. Anwar, R., Rehman, M., Rehman, H. M., Nauman, S., Sarwar Khan, A., & Malik, M. (2024). Breaking down barriers: The moderating role of organizational support in facilitating knowledge sharing among software developers. *SAGE Open*.
3. Bhar, S. K., & Abu Bakar, N. A. (2012). Language barriers: Feedback from the IT industry. *Journal of Technical Education and Training*, 4(1), 1-10.
4. Blau, P. M. (1964). *Exchange and power in social life*. John Wiley & Sons.
5. Chang, S. J., van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies*, 41(2), 178-184. <https://doi.org/10.1057/jibs.2009.88>

6. Chen, T., Hao, S., Ding, K., Feng, X., Li, G., & Liang, X. (2020). The impact of organizational support on employee performance. *Employee Relations: The International Journal*, 42(1), 166-179. <https://doi.org/10.1108/ER-01-2019-0079>
7. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
8. Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
9. Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900. <https://doi.org/10.1177/0149206305279602>
10. Department of Statistics Malaysia. (2025). Micro, small and medium enterprises (MSMEs) performance 2024.
11. Effendi, D., Wati, R., & Realita, T. (2025). Kepuasan kerja pemediasi pengaruh budaya organisasi terhadap kinerja personil Subdit Patroliairud Ditpolairud Polda Jatim. *Manajemen & Bisnis Jurnal*, 11(2), 181-192. <https://doi.org/10.37303/embeji.v11i2.282>
12. Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500-507. <https://doi.org/10.1037/0021-9010.71.3.500>
13. El Attari, A. (2024). Impact of online work communication strategies on employee productivity. *International Journal of Research and Innovation in Social Science*, 8(3S), 5800-5810. <https://doi.org/10.47772/IJRISS.2024.803435S>
14. Field, A. (2024). *Discovering statistics using IBM SPSS statistics* (6th ed.). SAGE Publications.
15. Han, H., & Chen, X. (2025). Influencing factors and improvement strategies of IT employees' work performance under the background of digital transformation. *Open Journal of Business and Management*, 13, 3984-3992. <https://doi.org/10.4236/ojbm.2025.136217>
16. Hoo, W. C., Anne, G., Wolor, C. W., Wang, A., Prompanyo, M., & Shaznie, A. (2024). Modeling employee productivity in Malaysia by priorities work life balance. *Journal of Lifestyle and SDGs Review*, 5(1), e02265. <https://doi.org/10.47172/2965-730X.SDGsReview.v5.n01.pe02265>
17. Jaafar, N. A., & Abdul Rahim, R. (2024). Exploring the influence of mediating factors of flexible schedule, job satisfaction, and work-life balance on employee performance in hybrid working arrangements (HWAs): A quantitative research of information technology (IT) organization in Klang Valley, Malaysia. *Advances in Business Research International Journal*, 10(1), 98-112. <https://doi.org/10.24191/abrij.v10i1.4650>
18. Keyton, J. (2017). *Communication research: Asking questions, finding answers* (4th ed.). McGraw-Hill Education.
19. Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10. <https://doi.org/10.4018/IJEC.2015100101>
20. Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., de Vet, H. C. W., & van der Beek, A. J. (2011). Conceptual frameworks of individual work performance: A systematic review. *Journal of Occupational and Environmental Medicine*, 53(8), 856-866. <https://doi.org/10.1097/JOM.0b013e318226a763>
21. Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>
22. Kurtessis, J. N., Eisenberger, R., Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S. (2017). Perceived organizational support: A meta-analytic evaluation of organizational support theory. *Journal of Management*, 43(6), 1854-1884. <https://doi.org/10.1177/0149206315575554>
23. Leonardi, P. M. (2021). COVID-19 and the new technologies of organizing: Digital exhaust, digital footprints, and artificial intelligence in the wake of remote work. *Journal of Management Studies*, 58(1), 249-253. <https://doi.org/10.1111/joms.12648>
24. Maliki, M. U. (2021). Pengaruh gaya kepemimpinan dan iklim organisasi terhadap kinerja pegawai di Kantor Kec. Ilir Timur 1 Palembang. *Adminika*, 7(1), 40-49.
25. Militano, L., Zafeiropoulos, A., Bruschi, R., Edmonds, A., Fotopoulou, E., Lombardo, C., Papavassiliou, S., & Bohnert, T. M. (2021). AI-powered infrastructures for intelligent and privacy-aware beyond-5G systems. In 2021 IEEE Globecom Workshops (GC Wkshps) (pp. 1-6). IEEE. <https://doi.org/10.1109/GCWkshps52748.2021.9682117>

26. Mohamad, B., Adamu, A. A., Rahayu, S., Suciati, P., Mona, N., & Raza, S. H. (2025). An exploratory investigation on internal crisis communication across private and public sector employees in Indonesia. *Risk Analysis*, 45, 2341-2355. <https://doi.org/10.1111/risa.70006>
27. Neves, P., & Eisenberger, R. (2012). Management communication and employee performance: The contribution of perceived organizational support. *Human Performance*, 25(5), 452-464. <https://doi.org/10.1080/08959285.2012.721834>
28. Nyumah, T. J., & Yusuf, A. (2025). A conceptual approach to the determinants of employee productivity among workers in Malaysia. *Social Security Management Journal*, 2(2), 44-50.
29. Pallant, J. (2020). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS* (7th ed.). Routledge.
30. Park, J., & Han, K. (2024). Generalized Sobel test with robust standard errors for statistical validation of serial mediation effects on educational and psychological research. *Socialis Series in Social Science*, 8. <https://doi.org/10.62286/ssss.v8i.62>
31. Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
32. Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717-731. <https://doi.org/10.3758/BF03206553>
33. Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87(4), 698-714. <https://doi.org/10.1037/0021-9010.87.4.698>
34. Roslee, E. N., Ismail, I. N., & Nordin, J. (2021). The impact of employees' work life balance reviewed from work from home during COVID-19 pandemic. *Universiti Teknologi MARA*.
35. Shikusinde, E., & Shimaneni, F. (2025). Remote work: The impact of communication, technology and work-life balance on employee motivation. *SA Journal of Human Resource Management*, 23, a3171. <https://doi.org/10.4102/sajhrm.v23i0.3171>
36. Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-312). Jossey-Bass.
37. Sridevi, M. R., & Preetha, S. (2024). The crucial role of communicative career competency in enhancing employee productivity: An analysis of the IT sector. *Migration Letters*, 21(S5), 1190-1199.
38. Stryker, C. (2024, August 20). What is employee productivity? IBM. <https://www.ibm.com>
39. Tan, E. J., & Doraisamy, L. (2025). The impact of flexible work arrangement and technology integration on work-life balance in Malaysia SMEs. *Business Management and Strategy*, 16(2), 112-142. <https://doi.org/10.5296/bms.v16i2.22798>
40. Teevan, J., Baym, N., Butler, J., Hecht, B., Jaffe, S., Nowak, K., Sellen, A., & Yang, L. (Eds.). (2022). *Microsoft New Future of Work Report 2022*. Microsoft Research. <https://aka.ms/nfw2022>
41. Tourish, D., & Robson, P. (2006). Sensemaking and the distortion of critical upward communication in organizations. *Journal of Management Studies*, 43(4), 711-730. <https://doi.org/10.1111/j.1467-6486.2006.00608>
42. Visier Team. (2023). *New Visier products spring 2023*. Visier.
43. 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. <https://doi.org/10.1080/0960085X.2020.1800417>
44. Wong, K., Chan, A. H. S., & Teh, P. L. (2020). How is work-life balance arrangement associated with organisational performance? A meta-analysis. *International Journal of Environmental Research and Public Health*, 17(12), 4446. <https://doi.org/10.3390/ijerph17124446>
45. Yong, S.-W., Law, S.-H., Ibrahim, S., & Mohamad, W. N. H. W. (2024). ICTs and labour productivity nexus in developing countries: Evidence from panel estimation approach. *International Journal of Business and Society*, 25(1), 27-48. <https://doi.org/10.33736/ijbs.6868.2024>