

Effect of Perceived Support, Autonomy, Job Satisfaction, Work-Life Balance, on Engagement among Employees in Technology-based SMEs in Guangdong Province

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Abstract: Employee engagement has become an essential outcome in organizational research due to its relevance for innovation, productivity, and workforce sustainability, particularly within competitive technology-based SMEs. Despite growing scholarly attention, limited empirical work has examined how organizational and job-related resources shape engagement in Guangdong Province, where SMEs face rapid technological change, high turnover, and constrained HR capacity. This study investigates the effects of perceived organizational support, job autonomy, and job satisfaction on employee engagement among employees working in technology-based SMEs. A quantitative cross-sectional survey design was employed, and data were collected from 385 respondents using validated measurement scales. Descriptive statistics, reliability tests, correlation analysis, and simple linear regressions were conducted to evaluate each hypothesized relationship. The results show that perceived organizational support, job autonomy, and job satisfaction each exert significant and positive effects on employee engagement, explaining substantial proportions of variance across models. These findings highlight the importance of supportive organizational environments, meaningful decision latitude, and positive work experiences in fostering vigor, dedication, and absorption among employees. The study concludes that strengthening supportive practices, increasing autonomy, and enhancing job satisfaction can serve as practical strategies for SMEs seeking to improve motivation, organizational stability, and long-term competitiveness in dynamic technological settings.

Keywords: perceived organizational support, job autonomy, job satisfaction, employee engagement, technology-based SMEs

1. Introduction

Employee engagement has become a critical outcome in organizational research because it is closely linked to innovation, productivity, and long-term organizational sustainability. Engagement, defined through vigor, dedication, and absorption, reflects the extent to which employees are psychologically energized and involved in their work (Yadav et al., 2022). Engaged employees typically exhibit higher creativity, stronger resilience, and improved well-being, enabling organizations to adapt effectively to demanding and dynamic work environments (Ali et al., 2022; Andrllic et al., 2025). Moreover, engagement has been shown to mediate the effects of organizational resources on job performance, highlighting its central role in shaping employee behavior and organizational outcomes (Ahmed et al., 2024; Arief et al., 2021). In technology-based SMEs, where rapid technological change and competitive pressures are prevalent, sustaining high engagement is essential for supporting innovation, adaptability, and workforce stability.

Research consistently identifies perceived organizational support, job autonomy, and job satisfaction as key antecedents of employee engagement. Perceived organizational support enhances engagement by assuring employees that their contributions are valued and that the organization is committed to their well-being, thereby strengthening emotional attachment and motivating positive work behaviors (Sheikh, 2023; Lee and Shin, 2023). Job autonomy promotes engagement by granting individuals greater discretion and control over their tasks, which fosters intrinsic motivation, empowerment, and proactive work behavior (Emre and De Spiegeleire, 2021; Judi et al., 2025). Job satisfaction also plays a significant role, as employees who experience positive and fulfilling work conditions are more

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likely to display dedication, energy, and sustained involvement in their work roles (Hasan et al., 2021; Parizad et al., 2025). Collectively, these three variables represent essential job and organizational resources that consistently support engagement across varied professional and cultural contexts.

Despite the robust empirical evidence, research examining these predictors within technology-based SMEs in Guangdong Province remains limited. Chinese SMEs continue to face challenges such as high turnover, constrained HR capabilities, and unstable employee commitment, all of which weaken organizational continuity and reduce engagement (China Association of SMEs, 2020; China Youth Online, 2017). While perceived organizational support has been associated with reduced stress and enhanced organizational commitment, its effects may differ under the resource limitations and high-speed innovation pressures characteristic of SMEs (Hngoi et al., 2024; Canboy et al., 2023). Similarly, although autonomy and satisfaction have been linked to engagement in sectors such as healthcare, education, and banking, it remains unclear whether these relationships hold in innovation-driven SME environments where workloads may be heavier and job roles less structured (Arief et al., 2021; Ahmed et al., 2024). These contextual gaps signal the need for further investigation into how perceived organizational support, job autonomy, and job satisfaction shape engagement in Guangdong's technology-based SMEs.

The purpose of this study is to examine the effects of perceived organizational support, job autonomy, and job satisfaction on employee engagement among workers in technology-based SMEs in Guangdong Province. By focusing specifically on these three predictors, the study aims to develop a clearer and more targeted understanding of how critical organizational and job-related resources influence employees' willingness to invest energy, effort, and commitment in their work roles.

This study is significant because it contributes new empirical evidence to both theory and practice. For scholars, it expands the literature by examining an underexplored organizational context in which employee expectations, job structures, and resource constraints may differ from those in larger corporations or public-sector organizations. For practitioners, particularly SME leaders in Guangdong, the findings offer actionable insights for enhancing engagement through supportive managerial practices, increased autonomy, and job enrichment strategies. By understanding how these three predictors influence engagement, technology-based SMEs can strengthen motivation, reduce turnover, and improve long-term competitiveness in a rapidly evolving technological landscape.

2. Literature Review

2.1 Employee Engagement

Employee engagement is widely recognized as a work-related state characterized by vigor, dedication, and absorption, reflecting the extent to which employees invest energy, enthusiasm, and persistence in their tasks. Engagement has been strongly associated with essential organizational outcomes including job performance, innovation, and well-being (Yadav et al., 2022; Mazzetti et al., 2023). Prior studies show that engaged employees demonstrate greater psychological resilience, higher creativity, and enhanced persistence when facing complex work challenges, particularly in fast-paced and dynamic industries such as technology-based SMEs (Ali et al., 2022; Andrllic et al., 2025). Engagement is also conceptualized as a mediating mechanism that transmits the effects of organizational resources, training conditions, and work-life initiatives to performance outcomes (Ahmed et al., 2024; Arief et al., 2021). Because technology-based SMEs rely heavily on human capital and rapid knowledge creation, engagement plays a critical role in enabling employees to sustain motivation under high job demands while contributing to innovation and organizational adaptability.

Research consistently emphasizes the psychological and contextual nature of engagement, suggesting that employees' emotional attachment, cognitive focus, and behavioral involvement emerge when organizations provide adequate support, autonomy, and favorable work experiences (Biswas and Bhatnagar, 2013; Sehunoe et al., 2015). In the context of Chinese SMEs, challenges such as high turnover, heavy workloads, and intense competition underscore the importance of engagement as a stabilizing force that can strengthen workforce commitment and retention (China Association of Small and Medium Enterprises, 2020; China Youth Online, 2017). As a result, understanding the factors that influence engagement is essential for SME leaders seeking to cultivate a motivated and innovative workforce.

2.2 Perceived Organizational Support and Employee Engagement

Perceived organizational support (POS) refers to employees' belief that their organization values their contributions and cares about their well-being. POS is widely recognized as a major antecedent of engagement because it enhances employees' emotional security, reduces stress, and fosters a sense of reciprocal obligation to contribute positively to the organization (Gupta et al., 2016; Nazir et al., 2018). Prior studies demonstrate that POS increases work meaningfulness and strengthens engagement, as employees who feel valued are more willing to expend discretionary effort and remain psychologically invested in their roles (Canboy et al., 2023; Andrllic et al., 2025). POS also plays a critical role during periods of uncertainty or crisis by reinforcing employees' confidence that the organization will provide necessary support and stability (Lee and Shin, 2023).

Additional research highlights POS as a mechanism that enhances well-being and reduces strain, thereby enabling sustained engagement. Supportive organizational practices have been shown to improve fairness perceptions, strengthen trust, and reduce job insecurity, all of which reinforce employees' commitment and engagement (Alzadjali

and Ahmad, 2024; Sheikh, 2023). Collectively, prior evidence consistently shows that employees who perceive high levels of organizational support are more likely to experience increased engagement.

H1: Perceived organizational support has a significant positive effect on employee engagement.

2.3 Job Autonomy and Employee Engagement

Job autonomy refers to the degree of discretion employees have over scheduling, decision-making, and the methods used to complete their tasks. As a key job resource, autonomy enhances employees' sense of control, responsibility, and ownership, which contributes directly to higher levels of engagement. Research shows that autonomy supports psychological empowerment and intrinsic motivation, enabling employees to invest greater effort and energy in their work (Emre and De Spiegleare, 2021; Judi et al., 2025). Employees with greater autonomy typically report stronger feelings of competence and purpose, both of which reinforce sustained engagement.

Autonomy also contributes to well-being by reducing strain, improving satisfaction, and enhancing employees' ability to adapt to demanding work environments. Studies indicate that autonomy promotes creativity, encourages proactive behavior, and supports effective coping strategies in innovation-intensive industries (Ali et al., 2022; Samroodh et al., 2022). When employees are given the freedom to organize their tasks in ways that align with their strengths, they experience greater meaningfulness and are more likely to remain engaged.

H2: Job autonomy has a significant positive effect on employee engagement.

2.4 Job Satisfaction and Employee Engagement

Job satisfaction reflects employees' affective evaluations of their work experiences and the degree to which their expectations and needs are met. Satisfied employees tend to display higher engagement because positive work experiences strengthen emotional attachment, motivation, and willingness to exert effort in their roles (Hasan et al., 2021; Dube and Ndofirepi, 2024). Empirical research shows that job satisfaction reduces burnout, enhances enthusiasm, and supports persistence, making it an important antecedent of engagement in dynamic and high-demand work environments.

Furthermore, job satisfaction frequently acts as a mediating mechanism linking organizational practices, such as support, work design, and work-life initiatives, to engagement and performance outcomes (Aruldoss et al., 2022; Arief et al., 2021). When employees feel fulfilled, appreciated, and satisfied with their work, they are more likely to engage deeply in their tasks and demonstrate loyalty toward the organization. In fast-paced SME contexts, where workloads may be heavy and resources limited, job satisfaction serves as a stabilizing force that helps sustain engagement despite operational pressures (Rashmi and Kataria, 2023; Parizad et al., 2025).

H3: Job satisfaction has a significant positive effect on employee engagement.

2.5 Theoretical Foundations

This study is grounded primarily in Job Demands–Resources (JD-R) Theory and Social Exchange Theory (SET). JD-R theory proposes that engagement emerges when employees possess adequate job and organizational resources such as support, autonomy, and satisfaction that help them manage job demands effectively (Bakker and Demerouti, 2017; Bakker et al., 2023). These resources energize employees, promote motivation, and strengthen their ability to cope with pressure, making JD-R theory a strong foundation for explaining how workplace resources influence engagement.

Social Exchange Theory suggests that when employees perceive benefits or support from the organization, they feel obligated to reciprocate with positive attitudes and behaviors, including engagement (Blau, 1964; Meira and Hancer, 2021). POS, job satisfaction, and favorable working conditions function as signals of organizational care, prompting employees to respond with greater loyalty, commitment, and involvement. Together, JD-R and SET provide a comprehensive theoretical explanation for the relationships between organizational resources and employee engagement.

2.6 Conceptual Framework

The conceptual framework for this study proposes that employee engagement is directly influenced by three key predictors: perceived organizational support, job autonomy, and job satisfaction. These variables are positioned as essential organizational and job-related resources that shape employees' motivation, emotional connection, and willingness to invest effort in their work roles. Perceived organizational support reflects the extent to which employees believe the organization values their contributions and cares for their well-being, which can enhance their sense of obligation and strengthen engagement. Job autonomy represents employees' discretion in making decisions and managing their tasks, thereby promoting feelings of empowerment and increasing intrinsic motivation. Job satisfaction captures employees' overall positive evaluations of their work experiences, contributing to higher levels of commitment and engagement. Together, these three predictors form the basis of the proposed model, which assumes that greater

organizational support, higher autonomy, and stronger satisfaction will lead to increased employee engagement within technology-based SMEs in Guangdong Province.

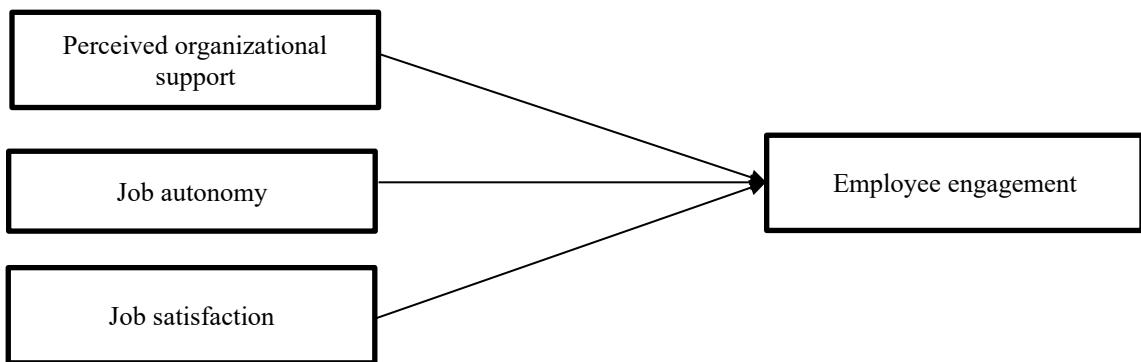


Figure 1. Conceptual Framework

3. Methodology

This study employed a quantitative cross-sectional research design to examine the effects of perceived organizational support, job autonomy, and job satisfaction on employee engagement among employees working in technology-based SMEs in Guangdong Province. A cross-sectional approach was selected because it enables the collection of data at a single point in time and is suitable for identifying statistical relationships among variables within organizational settings. The quantitative method allows the use of standardized measurement instruments and objective analytic procedures, making it appropriate for testing hypothesized relationships grounded in established theoretical frameworks.

Data were collected using a structured self-administered questionnaire comprising four validated scales measuring perceived organizational support, job autonomy, job satisfaction, and employee engagement. Perceived organizational support was assessed using eight items adapted from Canboy et al. (2023), while job autonomy was measured using six items from Morgeson and Humphrey (2006). Job satisfaction was assessed using five items adapted from Susanto et al. (2022), and employee engagement was measured using nine items from Canboy et al. (2023). Content validity was ensured through expert evaluation, as three specialists in organizational behavior and human resource management reviewed the questionnaire for clarity, relevance, and representativeness. Reliability analysis demonstrated strong internal consistency, with Cronbach's alpha values of 0.927 for perceived organizational support, 0.819 for job autonomy, 0.830 for job satisfaction, and 0.903 for employee engagement, confirming that all scales were suitable for empirical analysis.

A total of 385 valid responses were obtained, consistent with the recommended sample size derived from Cochran's formula (Cochran, 1977), which provides an appropriate estimation for studies involving large populations. Data collection was conducted through Wenjuanxing, an online survey platform that facilitated efficient distribution and response management across SMEs in Guangdong. Following data collection, all responses were coded and analyzed using SPSS, which enabled descriptive analysis, reliability testing, and subsequent statistical examination of the relationships among the study variables. This systematic analytic approach ensured that the data were processed rigorously and aligned with the quantitative objectives of the study.

4. Results

This chapter presents the results of the quantitative analysis based on the 385 valid responses collected from employees working in technology-based SMEs in Guangdong Province. The demographic information of respondents indicates a balanced distribution across gender, age groups, education levels, job positions, years of work experience, and company size. The descriptive statistics and correlations among the study variables were examined prior to hypothesis testing. All variables demonstrated acceptable means and standard deviations, and the correlation matrix indicated significant positive associations among perceived organizational support, job autonomy, job satisfaction, and employee engagement, suggesting suitability for subsequent regression analyses.

Table 1. Demographic Profile of Respondents

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	198	51.4
	Female	187	48.6
Age Group	18–25 years	72	18.7
	26–35 years	181	47.0

	36–45 years	96	24.9
	46 years and above	36	9.4
Education Level	High school diploma or below	34	8.8
	College diploma	108	28.1
	Bachelor's degree	185	48.1
	Master's degree or above	58	15.1
Position in the Company	Entry-level employee	102	26.5
	Technical staff / Specialist	143	37.1
	Middle management / Supervisor	96	24.9
	Senior management	44	11.4
Years of Work Experience	Less than 1 year	61	15.8
	1–3 years	142	36.9
	4–6 years	103	26.8
	7 years or more	79	20.5
Company Size	Fewer than 10 employees	45	11.7
	10–100 employees	213	55.3
	101–300 employees	127	33.0

Following the demographic analysis, descriptive statistics and correlations among the main study variables were examined to provide an overview of their distributional characteristics and the strength of their associations prior to hypothesis testing. Table 2 presents the means, standard deviations, and correlation coefficients for all variables.

Table 2. Descriptive Statistics and Correlation Matrix

Variable	Mean	SD	1	2	3	4
1. Perceived organizational support	3.82	0.71	1			
2. Job autonomy	3.76	0.74	0.48**	1		
3. Job satisfaction	3.89	0.69	0.52**	0.46**	1	
4. Employee engagement	3.95	0.73	0.58**	0.49**	0.55**	1

Note. **p < 0.01

The correlation matrix in Table 2 provides an initial examination of the associations among the study variables. All three independent variables, perceived organizational support, job autonomy, and job satisfaction, show significant positive correlations with employee engagement, indicating that higher levels of these job and organizational resources tend to be associated with higher engagement. However, correlation analysis alone does not determine the magnitude or unique contribution of each predictor, nor does it establish causal direction. Therefore, although the correlations suggest that meaningful relationships exist among the variables, further hypothesis testing through regression analysis is required to evaluate the independent effects of each predictor on employee engagement. The subsequent sections present these regression results in detail.

4.1 Effect of Perceived Organizational Support on Employee Engagement

To test Hypothesis 1, a simple linear regression analysis was conducted to examine the effect of perceived organizational support on employee engagement. The results indicate that perceived organizational support is a significant predictor of employee engagement. As shown in Table 3, perceived organizational support demonstrated a strong positive effect on employee engagement ($\beta = 0.58$, $t = 12.74$, $p < 0.001$). This suggests that employees who perceive higher levels of support from their organization are more likely to experience greater vigor, dedication, and absorption in their work.

The model explained 34 percent of the variance in employee engagement ($R^2 = 0.34$), indicating that perceived organizational support contributes substantially to engagement among employees in technology-based SMEs in Guangdong Province. These results support the theoretical expectation that organizational support functions as an important psychological and motivational resource that enhances employees' willingness to invest their energy into their work roles. Therefore, H1 is supported.

Table 3. Regression Analysis for the Effect of Perceived Organizational Support on Employee Engagement

Variable	β	t-value	p-value
Perceived organizational support	0.58	12.74	< 0.001
R^2	0.34		
F-value	162.30	p < 0.001	

Note. Dependent variable: Employee engagement.

4.2 Effect of Job Autonomy on Employee Engagement

A simple linear regression analysis was conducted to evaluate the effect of job autonomy on employee engagement. The results indicate that job autonomy significantly predicts employee engagement, as shown in Table 4. Job autonomy demonstrated a positive and meaningful effect on employee engagement ($\beta = 0.49$, $t = 10.21$, $p < 0.001$). This implies that employees who experience greater decision-making freedom, control over work processes, and opportunities for independent judgment are more likely to report higher levels of vigor, enthusiasm, and work absorption.

The model accounted for 24 percent of the variance in employee engagement ($R^2 = 0.24$), suggesting that autonomy serves as an essential job resource that enhances intrinsic motivation and supports deeper engagement. These findings align with prior evidence that autonomy empowers employees to take ownership of their tasks and maintain sustained involvement in dynamic work environments. Therefore, H2 is supported.

Table 4. Regression Analysis for the Effect of Job Autonomy on Employee Engagement

Variable	β	t-value	p-value
Job autonomy	0.49	10.21	< 0.001
R^2	0.24		
F-value	104.24	p < 0.001	

Note. Dependent variable: Employee engagement.

4.3 Effect of Job Satisfaction on Employee Engagement

To test Hypothesis 3, a simple linear regression analysis was performed to examine the effect of job satisfaction on employee engagement. As presented in Table 5, job satisfaction showed a significant positive effect on employee engagement ($\beta = 0.55$, $t = 11.43$, $p < 0.001$). This indicates that employees who experience positive feelings toward their job, find enjoyment in their work, and perceive their tasks as fulfilling are more likely to demonstrate strong levels of engagement.

The model explained 30 percent of the variance in employee engagement ($R^2 = 0.30$), highlighting the substantial role of job satisfaction in fostering employees' emotional and behavioral involvement in their work roles. These results emphasize that satisfaction serves as an important motivational factor that strengthens dedication and enthusiasm, particularly within demanding SME environments. Therefore, H3 is supported.

Table 5. Regression Analysis for the Effect of Job Satisfaction on Employee Engagement

Variable	β	t-value	p-value
Job satisfaction	0.55	11.43	< 0.001
R^2	0.30		
F-value	130.65	p < 0.001	

Note. Dependent variable: Employee engagement.

5. Discussion

5.1 Perceived Organizational Support and Employee Engagement

The findings show that perceived organizational support has a significant positive effect on employee engagement, demonstrating that employees who believe their organization values their contributions and well-being are more likely to demonstrate vigor, dedication, and absorption in their work roles. This result is consistent with existing research, which highlights perceived organizational support as a major driver of engagement because it strengthens employees' emotional security and sense of reciprocity (Gupta et al., 2016; Nazir et al., 2018). Studies conducted in various organizational contexts similarly report that supportive environments enhance engagement by increasing work meaningfulness and reducing strain (Canboy et al., 2023; Andrllic et al., 2025). The present study extends this understanding to technology-based SMEs in Guangdong Province, where rapid technological change and competitive pressure create a high-demand work environment. In such settings, organizational support may function as a particularly critical resource that encourages employees to remain invested despite uncertainty and workload challenges.

The findings also align with theoretical expectations from the job demands-resources model, which suggests that organizational support serves as a resource that helps employees cope with job demands and maintain motivation (Bakker and Demerouti, 2017; Bakker et al., 2023). Moreover, social exchange theory posits that when employees perceive that the organization cares for them, they reciprocate through greater involvement and engagement (Blau, 1964; Meira and Hancer, 2021). In the context of Chinese SMEs, where turnover rates are high and HR systems may be less

formalized (China Association of Small and Medium Enterprises, 2020; China Youth Online, 2017), organizational support takes on heightened importance. The findings suggest that even modest improvements in supportive practices such as fair treatment, developmental opportunities, and empathy from supervisors may have substantial effects on sustaining employee engagement in innovation-driven environments.

5.2 Job Autonomy and Employee Engagement

The results indicate that job autonomy significantly enhances employee engagement. Employees who have discretion over scheduling, decision-making, and work methods are more likely to demonstrate enthusiasm, energy, and deeper psychological involvement in their tasks. These findings reinforce prior studies that position job autonomy as a core resource that fosters intrinsic motivation and empowerment (Emre and De Spiegeleire, 2021; Judi et al., 2025). In addition, research shows that autonomy reduces role stress and supports work-life balance, which indirectly strengthens engagement (Aruldoss et al., 2021; Talukder and Galang, 2021). In high-innovation environments such as technology-based SMEs, autonomy contributes to creativity, proactive behavior, and adaptability, factors that are essential for firm competitiveness (Ali et al., 2022; Samroodh et al., 2022). Therefore, autonomy not only enhances employees' psychological connection to their work but also strengthens organizational agility.

The results also align with the job demands-resources model, which highlights decision-making latitude as a motivational resource that stimulates learning and resilience (Bakker and Demerouti, 2017; Bakker et al., 2023). In the specific context of Guangdong's technology-based SMEs, employees often face demanding workloads and rapid technological changes (Feng et al., 2022; Petti and Zhang, 2014). Autonomy may therefore serve as an important mechanism that allows employees to manage competing priorities and tailor their work processes to dynamic conditions. The findings suggest that SMEs in Guangdong could improve engagement by expanding employee participation in decision-making, reducing overly rigid work structures, and encouraging initiative-taking—practices that are feasible even for firms with limited resources.

5.3 Job Satisfaction and Employee Engagement

The study also finds that job satisfaction significantly predicts employee engagement, indicating that employees who feel fulfilled, motivated, and content with their work conditions are more likely to invest energy and enthusiasm in their roles. This relationship aligns with existing research showing that satisfaction enhances commitment, motivation, and persistence in high-demand work settings (Hasan et al., 2021; Dube and Ndofirepi, 2024). Prior studies also demonstrate that job satisfaction mediates the effects of work-life balance, organizational support, and workplace quality on engagement (Arief et al., 2021; Aruldoss et al., 2022). These findings suggest that satisfaction serves as a stabilizing force that sustains engagement even when employees face pressures associated with fast-paced industries.

The discussion aligns with both the job demands-resources model and social cognitive theory, which propose that positive affective experiences enhance self-efficacy, motivation, and willingness to engage (Granziera and Perera, 2019; Bandura, 1986). For technology-based SMEs in Guangdong, job satisfaction may be particularly important because employees often work in environments characterized by intensive workloads, long hours, and rapid technological shifts (Wang et al., 2024; Southcn.com, 2022). Satisfaction derived from meaningful work, recognition, supportive leadership, and opportunities for development may compensate for resource constraints and strengthen employees' emotional resilience. These results indicate that improving job satisfaction, through job enrichment, recognition systems, fair workload distribution, and career development, could be a powerful strategy for SMEs seeking to sustain employee engagement in highly competitive markets.

6. Conclusion

This study examined the effects of perceived organizational support, job autonomy, and job satisfaction on employee engagement among employees in technology-based SMEs in Guangdong Province. The findings demonstrate that all three variables significantly and positively influence engagement, highlighting the importance of organizational and job-related resources in shaping employees' willingness to invest effort, energy, and dedication in their work roles. As technology-based SMEs operate in highly competitive and innovation-driven environments, sustaining employee engagement is essential for organizational adaptability, productivity, and long-term development.

The results underscore that employees who feel valued and supported by their organization are more likely to remain engaged, suggesting that supportive practices and positive social exchanges are crucial in strengthening workforce motivation. Likewise, employees who experience autonomy are better able to navigate complex work demands and maintain intrinsic motivation, which enhances their engagement in dynamic technological settings. Job satisfaction also emerged as a strong predictor, emphasizing the role of meaningful work experiences, emotional fulfillment, and positive attitudes in sustaining engagement despite resource constraints or workload pressures.

Overall, the study contributes to a deeper understanding of employee engagement in the context of Chinese technology-based SMEs and provides practical insights for organizational leaders seeking to enhance employee motivation and retention. By fostering supportive environments, empowering employees with greater autonomy, and

improving job satisfaction, SMEs can strengthen engagement and build a more resilient and innovative workforce capable of meeting the challenges of a rapidly evolving technological landscape.

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Conflict of Interest

The author declares no conflicts of interest.

References

Abdulaziz, A., Bashir, M., & Alfalih, A. A. (2022). The impact of work-life balance and work overload on teacher's organizational commitment: do Job Engagement and Perceived Organizational support matter. *Education and Information Technologies*, 27(7), 9641-9663.

Ahmed, S., Ashrafi, D. M., Ahmed, R., Ahmed, E., & Azim, M. (2024). How employee engagement mediates the training and development and work-life balance towards job performance of the private banks?. *The TQM Journal*.

Ali, H., Li, M., & Qiu, X. (2022). Employee engagement and innovative work behavior among Chinese millennials: mediating and moderating role of work-life balance and psychological empowerment. *Frontiers in psychology*, 13, 942580.

Alzadjali, B., & Ahmad, S. Z. (2024). The impacts of a high commitment work system on well-being: the mediating role of organization support and employee work-life balance. *Industrial and Commercial Training*, 56(1), 53-77.

Andrić, B., Ali, T., & Ramanathan, H. N. (2025). Balancing act: exploring the mediating role of work-life balance on improving work engagement through organisational support. *Journal of management development*, 44(1), 39-52.

Arief, N. R., Purwana, D., & Saptono, A. (2021). Effect of quality work of life (QWL) and work-life balance on job satisfaction through employee engagement as intervening variables. *The International Journal of Social Sciences World (TIOSSW)*, 3(1), 259-269.

Aruldoss, A., Kowalski, K. B., & Parayitam, S. (2021). The relationship between quality of work life and work-life-balance mediating role of job stress, job satisfaction and job commitment: evidence from India. *Journal of Advances in Management Research*, 18(1), 36-62.

Aruldoss, A., Berube Kowalski, K., Travis, M. L., & Parayitam, S. (2022). The relationship between work-life balance and job satisfaction: Moderating role of training and development and work environment. *Journal of Advances in Management Research*, 19(2), 240-271.

Asfahani, A. M., Eskandarany, A., Dahlan, D. A., Ullah, Z., Khan, H., & Naheed, R. (2024). Empowering Women in Saudi Workforce: HR, Job Satisfaction, and Policies for Work-Life Balance. *Sustainability*, 16(20), 8826.

Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: taking stock and looking forward. *Journal of occupational health psychology*, 22(3), 273.

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. (2023). Job demands-resources theory: Ten years later. *Annual review of organizational psychology and organizational behavior*, 10(1), 25-53.

Bakker, A. B., & Demerouti, E. (2024). Job demands-resources theory: Frequently asked questions. *Journal of Occupational Health Psychology*, 29(3), 188.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bellini, D., Barbieri, B., Mondo, M., De Simone, S., & Marocco, S. (2025). Sustainable Work-Life Balance, Social Support, and Workload: Exploring the Potential Dual Role of Flexible Work in a Moderated Mediation Model. *Sustainability*, 17(15), 7067.

Biswas, S., & Bhatnagar, J. (2013). Mediator analysis of employee engagement: role of perceived organizational support, PO fit, organizational commitment and job satisfaction. *Vikalpa*, 38(1), 27-40.

Blau, P. M. (1964). Justice in social exchange. *Sociological inquiry*, 34(2).

Canboy, B., Tillou, C., Barzantny, C., Güçlü, B., & Benichoux, F. (2023). The impact of perceived organizational support on work meaningfulness, engagement, and perceived stress in France. *European Management Journal*, 41(1), 90-100.

Chaudhary, A., Islam, T., Ali, H. F., & Jamil, S. (2023). Can paternalistic leaders enhance knowledge sharing? The roles of organizational commitment and Islamic work ethics. *Global Knowledge, Memory and Communication*, 72(1/2), 98-118.

China Association of Small and Medium Enterprises. (2020). *Research report on human resource management in small and medium-sized enterprises*. Retrieved from https://ca-sme.org/static/uploadfile/content/2020_06/%7B641A0C3D-131F-F0F2-939F-E3DAA4C2C122%7D.pdf

China Youth Online. (2017, April 14). *Workplace crisis: frequent job-hopping in high-tech industries with a turnover rate of 25.1%*. Retrieved from https://chuangye.cyol.com/content/2017-04/14/content_15935440.htm

Dube, N., & Ndofirepi, T. M. (2024). Academic staff commitment in the face of a role (im) balance between work and personal life: can job satisfaction help?. *European Journal of Management Studies*, 29(1), 31-50.

Emre, O., & De Spiegeleire, S. (2021). The role of work-life balance and autonomy in the relationship between commuting, employee commitment and well-being. *The International Journal of Human Resource Management*, 32(11), 2443-2467.

Feng, Y., Zhang, H., Chiu, Y. H., & Chang, T. H. (2022). The efficiency of financing and R&D in technology-based SMEs and impact of financial regulation. *Technological and Economic Development of Economy*, 28(5), 1439-1475.

Granziera, H., & Perera, H. N. (2019). Relations among teachers' self-efficacy beliefs, engagement, and work satisfaction: A social cognitive view. *Contemporary Educational Psychology*, 58, 75-84.

Gupta, V., Agarwal, U. A., & Khatri, N. (2016). The relationships between perceived organizational support, affective commitment, psychological contract breach, organizational citizenship behaviour and work engagement. *Journal of advanced nursing*, 72(11), 2806-2817.

Hasan, T., Jawaad, M., & Butt, I. (2021). The influence of person-job fit, work-life balance, and work conditions on organizational commitment: investigating the mediation of job satisfaction in the private sector of the emerging market. *Sustainability*, 13(12), 6622.

Hngoi, C. L., Abdullah, N. A., Wan Sulaiman, W. S., & Zaiedy Nor, N. I. (2024). Examining job involvement and perceived organizational support toward organizational commitment: job insecurity as mediator. *Frontiers in Psychology*, 15, 1290122.

Husniati, R., Supriadi, Y. N., & Ali, S. (2024). The Work Life Balance and Job Embeddedness on Turnover Intention: The Role of Organizational Commitment as Intervening. *Quality-Access to Success*, 25(198).

JiHaeng, L., & QianQian, W. (2020). Analysis of Support Policies for Chinese SMEs Influenced by the COVID-19-Focused on Guangdong Province. *아시아연구*, 23(2), 137-169.

Judi, A., Parizad, N., Mohammadpour, Y., & Alinejad, V. (2025). The relationship between professional autonomy and job performance among Iranian ICU nurses: the mediating effect of job satisfaction and organizational commitment. *BMC nursing*, 24(1), 20.

Krejcie, R.V. and Morgan, D.W. (1970) Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610.

Lee, S. E., & Shin, G. (2023). The effect of perceived organizational and supervisory support on employee engagement during COVID-19 crises: Mediating effect of work-life balance policy. *Public Personnel Management*, 52(3), 401-428.

Luo, L., Li, T., & Wu, C. (2022, December). Research on Technological Innovation Strategy of Technology-Based Enterprises in Guangdong-Hong Kong-Macao Greater Bay Area. In *2022 International Conference on Economics, Smart Finance and Contemporary Trade (ESFCT 2022)* (pp. 1627-1640). Atlantis Press.

Mazzetti, G., Robledo, E., Vignoli, M., Topa, G., Guglielmi, D., & Schaufeli, W. B. (2023). Work engagement: A meta-analysis using the job demands-resources model. *Psychological reports*, 126(3), 1069-1107.

Meira, J. V. D. S., & Hancer, M. (2021). Using the social exchange theory to explore the employee-organization relationship in the hospitality industry. *International Journal of Contemporary Hospitality Management*, 33(2), 670-692.

Michael, A. R., Maria, G. M., George, H. J., Jayacyril, C. M., & Parayitam, S. (2025). Employee commitment and cognitive engagement as moderators in the relationship between quality of work life and work life balance: A conditional moderated moderated-mediation model. *Global Business and Organizational Excellence*, 44(4), 94-118.

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of applied psychology*, 91(6), 1321.

Nagpal, P. (2022). Organizational commitment as an outcome of employee engagement: A social exchange perceptive using a SEM model. *International Journal of Biology, Pharmacy and Allied Sciences*, 11(1), 72-86.

Na-Nan, K., Kanthong, S., & Joungtrakul, J. (2021). An empirical study on the model of self-efficacy and organizational citizenship behavior transmitted through employee engagement, organizational commitment and job satisfaction in the thai automobile parts manufacturing industry. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3), 170.

Nazir, S., Qun, W., Hui, L., & Shafi, A. (2018). Influence of social exchange relationships on affective commitment and innovative behavior: Role of perceived organizational support. *Sustainability*, 10(12), 4418.

Olfat, M., Shokouhyar, S., Ahmadi, S., & Ghaderi, S. M. M. (2023). Organizational members' use of online social networks and their job satisfaction: a social cognitive perspective. *Kybernetes*, 52(1), 1-23.

Palumbo, R., Flamini, G., Gnan, L., Pellegrini, M. M., Petrolo, D., & Fakhar Manesh, M. (2022). Disentangling the implications of teleworking on work-life balance: a serial mediation analysis through motivation and satisfaction. *Journal of Organizational Effectiveness: People and Performance*, 9(1), 68-88.

Parizad, N., Mohammadpour, Y., Alinejad, V., & Judi, A. (2025). The Role of Job Satisfaction as a Mediator Between Professional Autonomy and Organizational Commitment Among Iranian ICU Nurses. *Journal of Nursing Management*, 2025(1), 6683020.

Paray, Z. A., Shah, T. A., & Islam, S. U. (2023, August). Psychological capital and employee job attitudes: the critical significance of work-life balance. In *Evidence-based HRM: A global forum for empirical scholarship* (Vol. 11, No. 3, pp. 483-500). Emerald Publishing Limited.

Petti, C., & Zhang, S. (2014). Factors influencing technological entrepreneurship in Chinese firms: evidence from Guangdong. *International Journal of Technology Management*, 65(1-4), 70-95.

Rashmi, K., & Kataria, A. (2023). The mediating role of work-life balance on the relationship between job resources and job satisfaction: perspectives from Indian nursing professionals. *International Journal of Organizational Analysis*, 31(5), 1316-1342.

Samroodh, M., Anwar, I., Ahmad, A., Akhtar, S., Bino, E., & Ali, M. A. (2022). The indirect effect of job resources on employees' intention to stay: A serial mediation model with psychological capital and work-life balance as the mediators. *Sustainability*, 15(1), 551.

Sehunoe, N., Viviers, R., & Mayer, C. H. (2015). Job satisfaction, organisational commitment and work engagement in an insurance company. *South African Journal of Labour Relations*, 39(2), 123-144.

Sheikh, A. M. (2023). Impact of perceived organizational support on organizational commitment of banking employees: role of work-life balance. *Journal of Asia Business Studies*, 17(1), 79-99.

Southcn.com. (2022, June 2). *Over 57,000 technology-based SMEs registered in Guangdong Province*. Retrieved from <https://nflive.southcn.com/index?id=606>

Sulistiyani, E., Hidayat, Y. A., Setiawan, A., & Suwardi, S. (2022). Perceived organizational support, employee work engagement and work life balance: Social exchange theory perspective. *Jurnal Riset Ekonomi Dan Bisnis*, 15(2), 133-143.

Susanto, P., Hoque, M. E., Jannat, T., Emely, B., Zona, M. A., & Islam, M. A. (2022). Work-life balance, job satisfaction, and job performance of SMEs employees: The moderating role of family-supportive supervisor behaviors. *Frontiers in psychology*, 13, 906876.

Talukder, A. M. H., & Galang, M. C. (2021). Supervisor support for employee performance in Australia: Mediating role of work-life balance, job, and life attitude. *Journal of Employment Counseling*, 58(1), 2-22.

Tan, L. P., Choe, K. L., Choong, Y. O., Ng, Y. K., Rungruang, P., & Li, Z. (2024). How felt obligation and organization engagement mediate the relationship between perceived organizational support and work life balance amid COVID-19 pandemic: empirical evidence from emerging countries. *Current Psychology*, 43(19), 17866-17878.

Tummers, L. G., & Bakker, A. B. (2021). Leadership and job demands-resources theory: A systematic review. *Frontiers in psychology*, 12, 722080.

Wang, X., Han, G., Wu, K., He, J., Ma, X., Zhou, Q., & Chen, X. (2024). Digital Capabilities and Ambidextrous Innovation: Evidence from Chinese Technology-Based SMEs. *Sustainability*, 16(23), 10611.

Xiao, L., & Ritchie, B. (2009). Access to finance for high-tech SMEs: regional differences in China. *Environment and Planning C: Government and Policy*, 27(2), 246-262.

Xiangfeng, L. (2007). SME development in China: A policy perspective on SME industrial clustering. *Asian SMEs and Globalization*, ERIA Research Project Report, 5, 37-68.

Yadav, A., Pandita, D., & Singh, S. (2022). Work-life integration, job contentment, employee engagement and its impact on organizational effectiveness: a systematic literature review. *Industrial and Commercial Training*, 54(3), 509-527.

Yakin, M., & Erdil, O. (2012). Relationships between self-efficacy and work engagement and the effects on job satisfaction: a survey on certified public accountants. *Procedia-Social and Behavioral Sciences*, 58, 370-378.

Yangzhou Polytechnic College. (2017). *Research on the problem of employee turnover in small and medium-sized logistics enterprises*. Retrieved from https://jwc.yzpc.edu.cn/_upload/article/files/61/43/6bb5053744daba667f34dd26571f/48746888-aa32-461a-887f-ac4234a867c7.pdf

Yeh, S. H., & Huang, K. C. (2025, September). Why Organizational Commitment and Work Values of Veterans Home Caregivers Affect Retention Intentions: A Social Exchange Theory Perspective. In *Healthcare* (Vol. 13, No. 19, p. 2396). MDPI.

Yicai. (2023). *76,000 high-tech enterprises in Guangdong Province in 2023, ranking first in China for the eighth consecutive year*. Yicai Media Group. Retrieved from <https://www.yicai.com>