

The mediating role of employee engagement in the link between life–work skills, organisational support and employee loyalty



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Orientation: Employees face high work pressure, work–life imbalance, and insufficient organisational support, which can diminish loyalty. Employee engagement is posited as a key mechanism linking life–work skills and organisational support to loyalty.

Research purpose: This study examines the mediating role of employee engagement in the relationships between two types of life–work skills (life–work effectiveness skills and harmony of life skills), organisational support, and employee loyalty.

Motivation for the study: Little research has explored how different life–work skills and organisational support influence loyalty in collectivist cultures such as Indonesia.

Research approach/design and method: A quantitative, cross-sectional survey was conducted with 200 permanent employees across various Indonesian industries. Data were analysed using Partial Least Squares Structural Equation Modelling in SmartPLS.

Main findings: Both harmony of life skills and organisational support positively affect employee engagement, and life–work effectiveness skills also show a significant positive effect on engagement. Only organisational support and employee engagement directly enhance loyalty. Employee engagement fully mediates the effects of both types of life–work skills on loyalty, and partially mediates the effect of organisational support on loyalty.

Practical/managerial implications: Organisations should foster loyalty by strengthening organisational support, promoting work–life harmony, and developing employees' life–work effectiveness skills – all of which enhance engagement. In collectivist cultures like Indonesia, special emphasis should be placed on relational support and reciprocity.

Contribution/value-add: This study clarifies the distinct pathways through which personal and organisational resources affect loyalty, highlighting the central mediating role of engagement. It extends the Job Demands–Resources and Social Exchange theories to a collectivist cultural setting.

Keywords: life–work effectiveness skills; harmony of life skills; organisational support; employee engagement; employee loyalty.

Introduction

In the context of heightened business competition, organisations increasingly acknowledge that the quality of human resources is fundamental to sustainability and success (Novitasari et al., 2020). Employee loyalty has become a critical determinant of long-term organisational performance and stability (Ha, 2023; Hernandez Jaime & Encabo, 2024). Loyalty extends beyond tenure, encompassing emotional attachment, positive attitudes and commitment to organisational vision and values (Wei et al., 2022). However, sustaining high levels of employee loyalty is increasingly complex because of rising work demands, social pressures and challenges in balancing professional and personal life (Obeng et al., 2025; Rasool et al., 2021). In Indonesia's predominantly collectivist culture, loyalty is often characterised by prioritising group goals and maintaining harmony, whereas in individualist cultures, it may emphasise personal achievement and autonomy (Wibawa et al., 2021). Recognising these cultural distinctions enhances the applicability of this study's insights to global contexts, providing a broader understanding of employee loyalty across diverse cultural settings.

To address these challenges, the modern workforce requires a robust set of personal skills. Life–work effectiveness skills encompass time management, stress management, priority setting

and goal-oriented behaviour, all of which enable employees to navigate complex work environments efficiently (Kalra et al., 2020; Yener et al., 2021). Harmony of life skills, on the other hand, refers to the ability to balance personal and professional responsibilities, fostering a sense of equilibrium and well-being (Obeng et al., 2025). These skills are increasingly recognised as essential for maintaining employee engagement and loyalty in dynamic organisational contexts (Choirisa, 2023).

Organisational support, defined as employees' perceptions of how much the organisation values their contributions and cares about their well-being, plays a crucial role in shaping employees' attitudes and behaviours (Meira & Hancer, 2021; Rasool et al., 2021). Perceived organisational support (POS) has been consistently linked to positive outcomes, such as increased engagement, commitment and loyalty (Asan et al., 2020; Priskila et al., 2021). According to Social Exchange Theory (SET), when employees perceive that their organisation supports them, they feel obligated to reciprocate by enhancing performance, commitment and loyalty (Meira & Hancer, 2021; Wei et al., 2022).

Employee engagement, characterised by vigour, dedication and absorption in work, has emerged as a critical mediating variable in the relationship between organisational resources and employee outcomes (Priyono et al., 2022; Wibawa et al., 2021). The Job Demands–Resources (JD-R) model posits that job resources, including organisational support and personal skills, foster engagement, which in turn leads to positive organisational outcomes such as loyalty and performance (Scholze & Hecker, 2024; Wibawa et al., 2021). Recent empirical evidence from Asian contexts, including Indonesia, supports the mediating role of engagement in translating organisational support and personal resources into loyalty and performance outcomes (Ha, 2023; Suharto & Suprpto, 2023; Valentina & Putra, 2024).

Despite growing recognition of the importance of employee engagement and loyalty, several gaps remain in the literature. Firstly, while previous studies have examined the direct effects of organisational support on loyalty (Hernandez Jaime & Encabo, 2024), fewer have explored the mediating mechanisms by which these effects occur, particularly in the context of life–work skills (Utami et al., 2023). Secondly, the distinction between different types of life skills, specifically, life–work effectiveness skills versus harmony of life skills, and their differential effects on engagement and loyalty, remains underexplored (Kalra et al., 2020; Obeng et al., 2025). Thirdly, most research has been conducted in Western contexts, with limited attention to collectivist cultures such as Indonesia, where loyalty dynamics may differ significantly (Choirisa, 2023; Wibawa et al., 2021).

This study addresses these gaps by examining the mediating role of employee engagement in the relationships between two distinct types of life–work skills, namely, life–work effectiveness skills and harmony of life skills, and organisational support, as well as employee loyalty.

Hereafter, we use the term 'life–work skills' as an umbrella concept encompassing these two specific dimensions. Drawing on SET (Meira & Hancer, 2021), Self-Determination Theory (Camilleri, 2021), Conservation of Resources (COR) Theory (Charoensukmongkol, 2023; Obeng et al., 2025) and the JD-R model (Priyono et al., 2022; Scholze & Hecker, 2024), this research provides a comprehensive theoretical framework for understanding these complex relationships. By focusing on the Indonesian context, this study contributes to a more nuanced understanding of employee loyalty in collectivist cultures.

Literature review and hypotheses development

Theoretical foundations

This study is grounded in four complementary theoretical frameworks that collectively explain the relationships among life–work skills, organisational support, employee engagement and employee loyalty.

Social Exchange Theory posits that social relationships are based on reciprocal exchanges, in which individuals engage in cost-benefit analyses to determine the value of maintaining them (Meira & Hancer, 2021; Wei et al., 2022). In organisational contexts, when employees perceive that their organisation supports them and values their contributions, they feel obligated to reciprocate by increasing their commitment, engagement and loyalty (Meira & Hancer, 2021). Social Exchange Theory provides a foundational explanation for why organisational support leads to enhanced employee loyalty, mediated by engagement.

Self-Determination Theory emphasises the importance of intrinsic motivation and the satisfaction of three basic psychological needs: autonomy, competence and relatedness (Camilleri, 2021). When organisations provide support and employees possess practical life–work skills, these needs are more likely to be satisfied, leading to higher levels of engagement and loyalty (Camilleri, 2021). Self-Determination Theory helps explain why personal skills and organisational resources contribute to engagement by fulfilling fundamental psychological needs.

Conservation of Resources Theory suggests that individuals strive to acquire, maintain and protect valued resources, and that resource loss is more salient than resource gain (Charoensukmongkol, 2023; Obeng et al., 2025). Life–work skills and organisational support are essential personal and organisational resources that help employees manage demands and prevent resource depletion (Choirisa, 2023; Obeng et al., 2025). According to COR Theory, employees with greater resources are better positioned to invest in their work through engagement, which in turn protects against burnout and enhances loyalty.

The JD-R Model proposes that job characteristics can be categorised into demands (aspects that require sustained effort) and resources (aspects that facilitate goal achievement

and reduce demands) (Scholze & Hecker, 2024; Wibawa et al., 2021). Job resources, including organisational support and personal skills, foster engagement through both motivational and health-protection processes (Priyono et al., 2022; Wibawa et al., 2021). The JD-R model provides a comprehensive framework for understanding how resources lead to engagement and, subsequently, to positive outcomes such as loyalty.

Life-work effectiveness skills and employee engagement

Life-work effectiveness skills encompass a range of competencies that enable employees to manage their work responsibilities efficiently, including time management, stress management, priority setting and goal-oriented behaviour (Kalra et al., 2020; Yener et al., 2021). These skills are conceptualised as personal resources that help employees navigate complex work environments and meet job demands effectively.

Time management skills enable employees to allocate their time efficiently, prioritise tasks and meet deadlines, thereby reducing stress and enhancing productivity (Yener et al., 2021). Research has shown that effective time management can mitigate the negative effects of work stressors on employee well-being and performance (Kalra et al., 2020). Stress management skills, including coping strategies and emotional regulation, help employees maintain psychological well-being amid work pressures (Choirisa, 2023).

According to the JD-R model, personal resources such as life-work effectiveness skills can enhance engagement by helping employees meet job demands and achieve work goals (Priyono et al., 2022; Wibawa et al., 2021). Employees who possess strong time and stress management skills are better equipped to handle work challenges, experience less burnout and maintain higher levels of vigour and dedication (Yener et al., 2021). However, the relationship between life-work effectiveness skills and engagement may be complex, as these skills may operate indirectly through other mechanisms or may be more strongly related to performance outcomes than to engagement per se (Kalra et al., 2020):

H1: Life-work effectiveness skills have a positive effect on employee engagement.

Harmony of life skills and employee engagement

Harmony of life skills refers to the ability to balance personal and professional responsibilities, maintain work-life balance and integrate different life domains in ways that promote overall well-being (Obeng et al., 2025). Unlike life-work effectiveness skills, which focus on task management and efficiency, harmony of life skills emphasises holistic well-being and the integration of work and non-work life.

Work-life balance has been consistently linked to positive employee outcomes, including engagement, satisfaction and retention (Obeng et al., 2025). According to COR Theory, employees who successfully balance work and personal life are better able to maintain and replenish their resources, preventing resource depletion and burnout (Choirisa, 2023; Obeng et al., 2025). When employees experience harmony between their work and personal lives, they are more likely to feel energised, motivated and engaged at work (Asan et al., 2020).

Research in collectivist cultures, including Indonesia, suggests that harmony and balance are particularly valued, and that employees who achieve work-life harmony experience higher levels of well-being and engagement (Choirisa, 2023; Wibawa et al., 2021). The ability to maintain harmony across life domains represents a vital personal resource that can enhance engagement by satisfying needs for autonomy and relatedness (Camilleri, 2021):

H2: Harmony of life skills have a positive effect on employee engagement.

Organisational support and employee engagement

Perceived organisational support reflects employees' beliefs about the extent to which their organisation values their contributions and cares about their well-being (Meira & Hancer, 2021; Rasool et al., 2021). Perceived organisational support is a critical organisational resource consistently linked to positive employee outcomes, including engagement, commitment and performance (Asan et al., 2020; Priskila et al., 2021; Suharto & Suprpto, 2023).

According to SET, when employees perceive high levels of organisational support, they feel obligated to reciprocate by increasing their effort, commitment and engagement (Meira & Hancer, 2021; Wei et al., 2022). Perceived organisational support signals to employees that the organisation is invested in their success and well-being, thereby enhancing their sense of psychological safety and motivation to contribute (Rasool et al., 2021).

Empirical research has consistently demonstrated a positive relationship between POS and employee engagement across diverse contexts (Asan et al., 2020; Nengrum et al., 2025; Utami et al., 2023). Studies in Indonesian contexts have found that POS is a significant predictor of engagement among both younger and more experienced employees (Wibawa et al., 2021; Wiryawan, 2025). Furthermore, research has shown that POS can buffer the negative effects of toxic work environments and work stressors on engagement and well-being (Rasool et al., 2021):

H3: Organisational support has a positive effect on employee engagement.

Life–work effectiveness skills and employee loyalty

Employee loyalty encompasses emotional attachment to the organisation, commitment to organisational goals and the intention to remain with the organisation (Ha, 2023; Hernandez Jaime & Encabo, 2024). While engagement represents a psychological state characterised by vigour and dedication, loyalty reflects a more enduring attitude and behavioural intention (Wei et al., 2022).

Life–work effectiveness skills may contribute directly to employee loyalty by enabling employees to perform effectively, achieve their goals and experience success in their roles (Kalra et al., 2020). Employees who possess strong time and stress management skills are better able to meet job demands, avoid burnout and maintain positive attitudes towards their organisation (Yener et al., 2021). These positive experiences may translate into greater loyalty, as employees who feel competent and successful are more likely to remain committed to their organisation (Camilleri, 2021).

However, the relationship between life–work effectiveness skills and loyalty may be more complex than a simple direct effect. While these skills enhance performance and reduce stress, they may not directly foster the emotional attachment and commitment that characterise loyalty (Ha, 2023). Instead, life–work effectiveness skills may operate primarily through engagement or other mediating mechanisms:

H4: Life–work effectiveness skills have a positive effect on employee loyalty.

Harmony of life skills and employee loyalty

The ability to maintain harmony between work and personal life is increasingly recognised as an essential determinant of employee attitudes and retention (Obeng et al., 2025). Employees who successfully balance work and personal responsibilities experience greater well-being, satisfaction and commitment to their organisation (Asan et al., 2020).

According to COR Theory, work–life balance represents a vital resource that helps employees maintain psychological well-being and prevent resource depletion (Choirisa, 2023; Obeng et al., 2025). When employees experience harmony across life domains, they are less likely to experience work–family conflict, burnout and turnover intentions (Obeng et al., 2025). This sense of balance and well-being may translate into greater loyalty, as employees who feel that their organisation supports their overall life harmony are more likely to remain committed (Asan et al., 2020).

However, the relationship between harmony of life skills and loyalty may be indirect, operating primarily through engagement or other mediating variables (Ha, 2023; Utami et al., 2023). While the harmony of life skills contribute to well-being and engagement, they may not directly foster the organisational commitment and attachment that characterise loyalty:

H5: Harmony of life skills have a positive effect on employee loyalty.

Organisational support and employee loyalty

The relationship between organisational support and employee loyalty is well established in the literature (Hernandez Jaime & Encabo, 2024; Wei et al., 2022). According to SET, when employees perceive that their organisation supports them, they feel obligated to reciprocate with loyalty, commitment and extra-role behaviours (Meira & Hancer, 2021; Wei et al., 2022).

Empirical research has consistently demonstrated a positive relationship between POS and loyalty across diverse contexts and cultures (Ha, 2023; Valentina & Putra, 2024). Studies have shown that POS predicts not only attitudinal loyalty (emotional attachment and commitment) but also behavioural loyalty (retention and organisational citizenship behaviours) (Palupi et al., 2024; Priskila et al., 2021). In collectivist cultures such as Indonesia, where reciprocity and group harmony are highly valued, the relationship between organisational support and loyalty may be particularly strong (Choirisa, 2023; Wibawa et al., 2021):

H6: Organisational support positively affects employee loyalty.

Employee engagement and employee loyalty

Employee engagement, characterised by vigour, dedication and absorption in work, represents a positive psychological state consistently linked to loyalty and retention (Ha, 2023; Valentina & Putra, 2024). Engaged employees are more likely to identify with their organisation, feel committed to organisational goals and intend to remain with the organisation (Jha et al., 2019; Kapil & Rastogi, 2019).

The relationship between engagement and loyalty can be explained through multiple theoretical lenses. According to the JD-R model, engagement represents a motivational state that leads to positive organisational outcomes, including commitment and retention (Priyono et al., 2022; Wibawa et al., 2021). From a social exchange perspective, engaged employees who experience positive work experiences feel obligated to reciprocate through loyalty and commitment (Meira & Hancer, 2021). Self-Determination Theory suggests that engagement, which reflects the satisfaction of basic psychological needs, naturally leads to greater responsibility and loyalty (Camilleri, 2021).

Empirical research has consistently demonstrated a positive relationship between engagement and loyalty across diverse contexts (Ha, 2023; Valentina & Putra, 2024). Studies in Asian contexts, including Indonesia and Vietnam, have found that engagement is a significant predictor of employee loyalty across sectors (Ha, 2023; Wibawa et al., 2021):

H7: Employee engagement positively affects employee loyalty.

The mediating role of employee engagement

While direct relationships between resources (life–work skills and organisational support) and loyalty are essential, the mediating role of engagement offers a more complete understanding of the mechanisms by which these resources influence loyalty (Suharto & Suprpto, 2023; Utami et al., 2023). According to the JD-R model, job resources foster engagement, which in turn leads to positive organisational outcomes (Priyono et al., 2022; Scholze & Hecker, 2024).

Recent research has provided strong evidence for the mediating role of engagement in the relationships between various resources and outcomes. Studies have shown that engagement mediates the relationships between POS and performance (Suharto & Suprpto, 2023), between self-efficacy and performance (Utami et al., 2023), between employee voice and organisational effectiveness (Jha et al., 2019), and between POS and organisational citizenship behaviour (Palupi et al., 2024; Priskila et al., 2021).

In the context of life–work skills and organisational support, engagement may serve as a critical mediator. Life–work skills and organisational support represent resources that help employees meet job demands and achieve work goals (Wibawa et al., 2021). These resources foster engagement by enhancing employees' sense of competence, autonomy and relatedness (Camilleri, 2021). In turn, engaged employees who experience vigour, dedication and absorption in their work are more likely to develop an emotional attachment and commitment to their organisation, which manifests as loyalty (Ha, 2023; Valentina & Putra, 2024).

The mediating role of engagement may be crucial in collectivist cultures such as Indonesia, where relational dynamics and reciprocity are highly valued (Choirisa, 2023; Wibawa et al., 2021). When organisations provide support and employees possess practical life–work skills, these resources foster engagement, which in turn strengthens the Social Exchange relationship and enhances loyalty:

H8: Employee engagement mediates the relationship between life–work effectiveness skills and employee loyalty.

H9: Employee engagement mediates the relationship between harmony of life skills and employee loyalty.

H10: Employee engagement mediates the relationship between organisational support and employee loyalty.

Based on the theoretical foundations and the 10 research hypotheses developed above, the proposed conceptual framework for this study is illustrated in Figure 1. The framework depicts the relationships among the three exogenous variables (life–work effectiveness skills, harmony

of life skills and organisational support), the mediating variable (employee engagement) and the endogenous outcome variable (employee loyalty). The model posits that employee engagement mediates the effects of life–work skills and organisational support on employee loyalty.

Research methods

Research design and sample

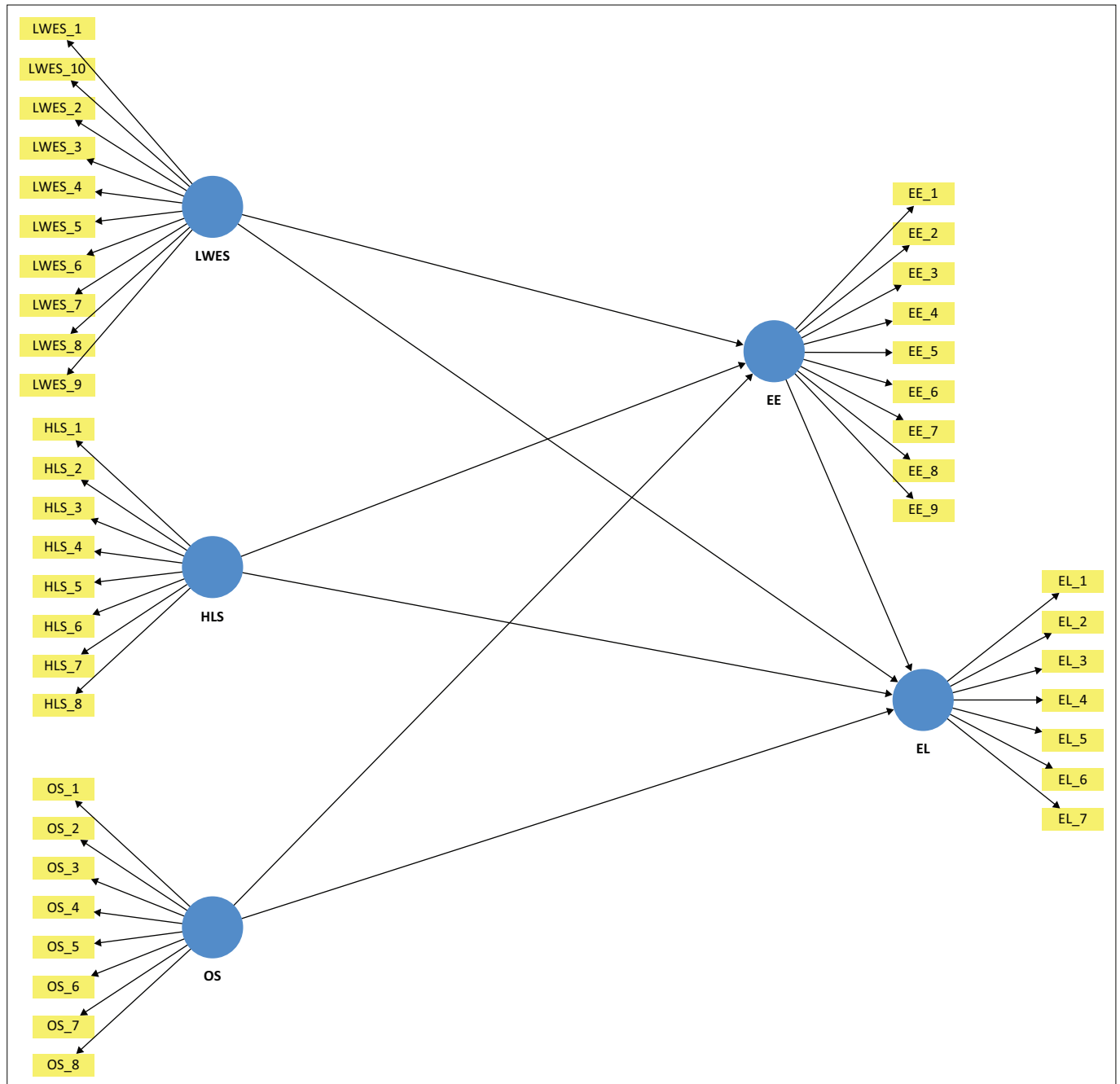
This study employed a quantitative, cross-sectional research design to examine the relationships among life–work skills, organisational support, employee engagement, and employee loyalty. Data were collected from 200 permanent employees working in diverse industrial sectors across Indonesia, including manufacturing, services, finance and technology. The sample was selected using a purposive sampling technique. While this method is appropriate for theory testing and ensures that participants meet the specific criteria of being permanent employees across multiple industries, it does not guarantee statistical representativeness of the entire Indonesian workforce. Unlike probability sampling methods such as stratified random sampling, purposive sampling limits the generalisability of findings to the broader population. However, for the purpose of examining theoretical relationships using Partial Least Squares Structural Equation Modelling (PLS-SEM), this sampling strategy is considered acceptable, as it prioritises the inclusion of information-rich cases that align with the study's focus (Ringle et al., 2020).

The sample size of 200 was determined based on Hair's 10-times rule for PLS-SEM, which recommends a minimum sample size of 10 times the largest number of structural paths directed at a particular construct in the structural model (Ringle et al., 2020). Given the complexity of the proposed model, a sample size of 200 provides adequate statistical power to detect medium- to large effect sizes.

The demographic characteristics of the 200 respondents are presented in Table 1. The sample comprised 117 male employees (58.5%) and 83 female employees (41.5%), with ages ranging from 25 years to 55 years (mean age = 35.49 years, SD = 7.21 years). In terms of educational background, the majority held bachelor's degrees (47.5%), followed by master's degrees (31.5%) and diplomas or equivalent qualifications (21.0%). Tenure ranged from 2 years to 20 years (mean tenure = 8.16 years, SD = 4.27 years), reflecting a balanced mix of relatively new and experienced employees. The respondents represented diverse industrial sectors, including services (29.0%), finance (26.0%), manufacturing (23.0%) and technology (22.0%).

Measurement instruments

All constructs were measured using established scales adapted from previous research and validated in the Indonesian context. Items were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).



Source: Developed by the authors based on Priyono, H.A., Irawanto, D.W., & Suryadi, N. (2022). Job demands-resources, work engagement, and organisational commitment. *International Journal of Research in Business and Social Science*, 11(1), 1–11. <https://doi.org/10.20525/ijrbs.v11i1.1546>; Scholze, A., & Hecker, A. (2024). The job demands-resources model as a theoretical lens for the bright and dark side of digitisation. *Computers in Human Behavior*, 154, 108177. <https://doi.org/10.1016/j.chb.2024.108177>; Wibawa, W.M.S., Takahashi, Y., & Riantoputra C.D. (2021). Investigating work engagement of highly educated young employees through applying the job demands-resources model. *International Journal of Organizational Leadership*, 10(1), 72–89. <https://doi.org/10.33844/IJOL.2021.60519>; and Meira, J.V.D.S., & Hancer, M. (2021). Using the social exchange theory to explore the employee-organisation relationship in the hospitality industry. *International Journal of Contemporary Hospitality Management*, 33(2), 670–692. <https://doi.org/10.1108/IJCHM-06-2020-0538>.

OS, organisational support; EE, employee engagement; HLS, harmony of life skills; EL, employee loyalty; LWES, life-work effectiveness skills.

FIGURE 1: Proposed conceptual framework.

Life-work effectiveness skills were measured using a 10-item scale adapted from previous research on time management and stress management (Kalra et al., 2020; Yener et al., 2021). Sample items include 'I effectively manage my time to complete work tasks' and 'I use effective strategies to manage work-related stress'.

Harmony of life skills was measured using an 8-item scale adapted from work-life balance research (Obeng et al., 2025).

Sample items include 'I successfully balance my work and personal life' and 'I maintain harmony across different areas of my life'.

Organisational support was measured using an 8-item scale adapted from the Survey of POS (Meira & Hancer, 2021; Rasool et al., 2021). Sample items include 'My organisation values my contributions' and 'My organisation cares about my well-being'.

Employee Engagement was measured using a 9-item scale adapted from the Utrecht Work Engagement Scale (Priyono et al., 2022; Wibawa et al., 2021). The scale includes three dimensions: vigour (e.g. 'At work, I feel full of energy'), dedication (e.g. 'I am enthusiastic about my job') and absorption (e.g. 'I am immersed in my work').

Employee Loyalty was measured using a 7-item scale adapted from previous research on organisational commitment and loyalty (Ha, 2023; Hernandez Jaime & Encabo, 2024). Sample items include 'I feel a strong sense of belonging to this organisation' and 'I intend to remain with this organisation for the foreseeable future'.

Data collection procedures

Data were collected through an online survey distributed via email and organisational communication channels. The data collection period spanned approximately 2 months, from December 2024 to January 2025. Participation was voluntary, and respondents were assured of confidentiality and anonymity. The survey took approximately 20–25 min to complete. To minimise common method bias, procedural remedies were employed, including ensuring respondent anonymity, separating predictor and criterion variables in the questionnaire, and using clear, concise language (Ringle et al., 2020).

Data analysis

Data were analysed using PLS-SEM in SmartPLS 4.0 (Monheim am Rhein, Germany) (Ringle et al., 2020). Partial Least Squares Structural Equation Modelling was chosen for several reasons: (1) it is appropriate for exploratory research and theory development, (2) it can handle

complex models with multiple relationships, (3) it does not require multivariate normality assumptions, and (4) it is effective with relatively small sample sizes (Ringle et al., 2020; Yener et al., 2021).

The analysis proceeded in two stages. Firstly, the measurement model was assessed to ensure the reliability and validity of the constructs. Indicators of measurement quality included composite reliability (CR > 0.70), average variance extracted (AVE > 0.50) and discriminant validity assessed using the Fornell–Larcker criterion and Heterotrait–Monotrait (HTMT) ratio (Ringle et al., 2020). Secondly, the structural model was evaluated to test the hypothesised relationships. Path coefficients, *t*-values and significance levels were estimated using bootstrapping with 5000 resamples. The mediating effects were assessed using the specific indirect effects approach, examining whether the indirect effects were significant and whether they represented partial or complete mediation (Suharto & Suprpto, 2023; Utami et al., 2023).

Ethical considerations

Ethical clearance to conduct this study was obtained from the Faculty of Economics and Business, University of Jember Research Ethics Committee (Ref. No. 7661/UN25.3.1/LT/2024).

Results

Measurement model assessment

The measurement model demonstrated satisfactory reliability and validity (Table 2). All constructs exhibited CR values above 0.80, indicating good internal consistency (Ringle et al., 2020). Average variance extracted values ranged from 0.811 to 0.832, exceeding the recommended threshold of 0.50, indicating adequate convergent validity. Discriminant validity was established using both the Fornell–Larcker criterion and the HTMT ratio (Table 3), with all values meeting the recommended thresholds (Ringle et al., 2020).

Factor loadings for all items exceeded 0.700, with most exceeding 0.884, indicating that items were strongly associated with their respective constructs. Items with loadings below 0.700 were removed during the preliminary analysis to improve measurement quality. The final measurement model included all five constructs with satisfactory psychometric properties.

TABLE 1: Demographic profile of respondents.

Characteristic	Category	Frequency (<i>n</i>)	Percentage
Gender	Male	117	58.5
	Female	83	41.5
	Total	200	100
Age group (years)	25–35	107	53.5
	36–45	68	34.0
	46–55	25	12.5
	Total	200	100
Educational background	Diploma	42	21.0
	Bachelor's degree	95	47.5
	Master's degree	63	31.5
	Total	200	100
Tenure (years)	2–5	72	36.0
	6–10	62	31.0
	11–20	66	33.0
	Total	200	100
Industry sector	Manufacturing	46	23.0
	Services	58	29.0
	Finance	52	26.0
	Technology	44	22.0
	Total	200	100

Note: Mean age = 35.49 years (SD = 7.21); Mean tenure = 8.16 years (SD = 4.27).

TABLE 2: Construct reliability and validity.

Variable	Cronbach's alpha	Composite reliability	AVE
OS	0.971	0.972	0.832
EE	0.971	0.971	0.811
HLS	0.971	0.973	0.831
EL	0.966	0.966	0.829
LWES	0.976	0.979	0.824

AVE, average variance extracted; OS, organisational support; EE, employee engagement; HLS, harmony of life skills; EL, employee loyalty; LWES, life–work effectiveness skills.

Structural model assessment

The structural model was assessed by examining path coefficients, *t*-values and R^2 values. The model explained a moderate amount of variance in employee engagement ($R^2 = 0.283$, adjusted $R^2 = 0.272$) and employee loyalty ($R^2 = 0.485$, adjusted $R^2 = 0.474$), indicating acceptable predictive power for the proposed relationships (Ringle et al., 2020; Wibawa et al., 2021).

While the R^2 values for employee engagement (0.283) and loyalty (0.485) may be considered moderate, recent methodological literature suggests that R^2 can serve as a meaningful indicator of model informativeness, even when not exceedingly high (Li, 2024). This is particularly relevant in organisational behaviour research, where human attitudes and behaviours are influenced by numerous unobserved factors.

Direct effects on employee engagement

The results revealed differential effects of the three predictors on employee engagement. Harmony of life skills had a significant positive impact on employee engagement ($\beta = 0.250$, $t = 3.157$, $p < 0.01$), supporting H2. Organisational support also had a significant positive effect on employee engagement ($\beta = 0.193$, $t = 2.466$, $p < 0.05$), supporting H3. Life-work effectiveness skills had a significant positive effect on employee engagement ($\beta = 0.199$, $t = 2.302$, $p < 0.05$), supporting H1.

These findings suggest that all three predictors – harmony of life skills, organisational support and life-work effectiveness skills – significantly contribute to employee engagement.

Direct effects on employee loyalty

The results revealed that life-work effectiveness skills did not have a significant direct effect on employee loyalty ($\beta = 0.093$, $t = 1.104$, $p > 0.05$), thereby rejecting H4. Harmony of life skills also did not have a significant direct effect on

employee loyalty ($\beta = -0.017$, $t = 0.229$, $p > 0.05$), leading to rejection of H5. Organisational support had a significant positive impact on employee loyalty ($\beta = 0.125$, $t = 2.001$, $p < 0.05$), supporting H6. Employee engagement had a strongly significant positive effect on employee loyalty ($\beta = 0.591$, $t = 11.691$, $p < 0.001$), supporting H7.

These findings indicate that, in this model, only organisational support and employee engagement are direct predictors of loyalty, while the two types of life-work skills do not directly influence loyalty.

Mediating effects of employee engagement

The mediating role of employee engagement was assessed by examining the specific indirect effects. The results revealed that employee engagement significantly mediated the relationship between life-work effectiveness skills and employee loyalty (indirect effect = 0.118, $t = 2.174$, $p < 0.05$), supporting H8. Employee engagement also significantly mediated the relationship between harmony of life skills and employee loyalty (indirect effect = 0.148, $t = 3.091$, $p < 0.01$), supporting H9. Similarly, employee engagement significantly mediated the relationship between organisational support and employee loyalty (indirect effect = 0.114, $t = 2.386$, $p < 0.05$), supporting H10.

Given that the direct effects of both life-work effectiveness skills and harmony of life skills on loyalty were not significant, while their indirect effects via engagement were significant, this represents complete mediation for both skill types. For organisational support, the mediation is partial, as the direct effect remained significant alongside the indirect effect.

Summary of hypotheses testing

The results (Table 4) provide support for seven of the 10 hypotheses.

TABLE 3: Discriminant validity–heterotrait–monotrait matrix.

Variable	OS	EE	HLS	EL	LWES
OS	-	-	-	-	-
EE	0.408	-	-	-	-
HLS	0.371	0.459	-	-	-
EL	0.419	0.698	0.362	-	-
LWES	0.594	0.480	0.663	0.441	-

OS, organisational support; EE, employee engagement; HLS, harmony of life skills; EL, employee loyalty; LWES, life-work effectiveness skills.

TABLE 4: Hypothesis testing results.

Hypothesis	Path	β	SD	<i>t</i>	<i>p</i> -value	Decision
H1	LWES → EE	0.199	0.086	2.302	0.021	Accepted
H2	HLS → EE	0.250	0.079	3.157	0.002	Accepted
H3	OS → EE	0.193	0.078	2.466	0.014	Accepted
H4	LWES → EL	0.093	0.084	1.104	0.270	Rejected
H5	HLS → EL	-0.017	0.075	0.229	0.819	Rejected
H6	OS → EL	0.125	0.062	2.001	0.045	Accepted
H7	EE → EL	0.591	0.051	11.691	0.000	Accepted
H8	LWES → EE → EL	0.118	0.054	2.174	0.030	Accepted
H9	HLS → EE → EL	0.148	0.048	3.091	0.002	Accepted
H10	OS → EE → EL	0.114	0.048	2.386	0.017	Accepted

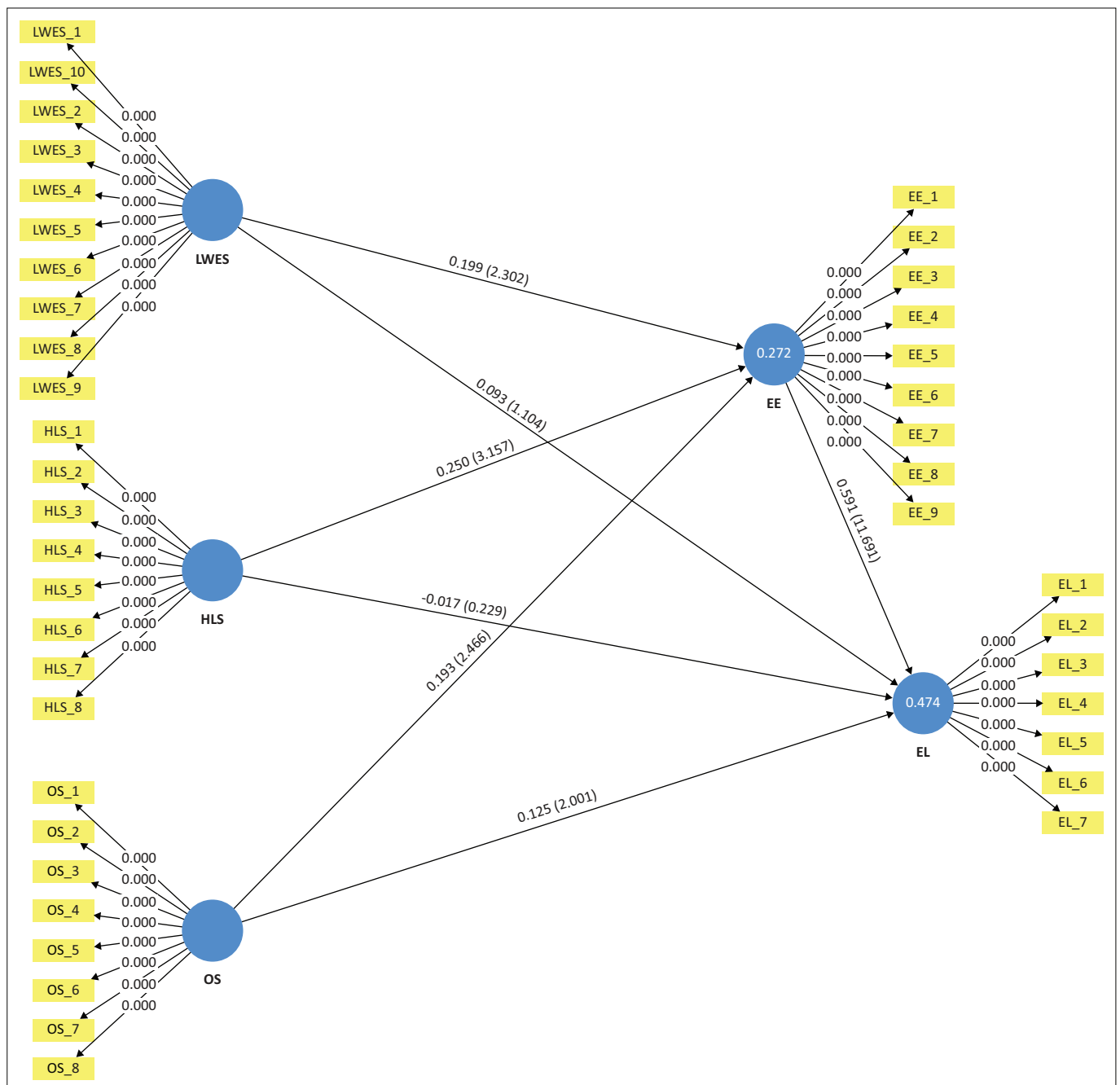
OS, organisational support; EE, employee engagement; HLS, harmony of life skills; EL, employee loyalty; LWES, life-work effectiveness skills.

Discussion

This study aimed to examine the mediating role of employee engagement in the relationships between life-work skills, organisational support, and employee loyalty. The results of the structural model analysis, which tested the 10 hypotheses, revealed a pattern of significant and non-significant relationships. Figure 2 presents the validated model, showing only the significant paths with their respective path coefficients (β) and significance levels. This model illustrates the differential effects of the three predictors on engagement and loyalty, and highlights the central mediating role of employee engagement.

Theoretical implications

This study makes several significant theoretical contributions to the literature on employee engagement and loyalty. Firstly, it demonstrates the differential effects of two types of life-work skills on engagement and loyalty (Kalra et al., 2020; Obeng et al., 2025). While both harmony of life skills (work-life balance) and life-work effectiveness skills (time and stress management) significantly predict engagement, neither directly predicts loyalty. Instead, their influence on loyalty is fully mediated by employee engagement. This distinction clarifies that different types of personal resources contribute to loyalty primarily



OS, organisational support; EE, employee engagement; HLS, harmony of life skills; EL, employee loyalty; LWES, life-work effectiveness skills.

FIGURE 2: Validated model with significant paths.

through psychological engagement rather than through direct attitudinal pathways.

The finding that life–work effectiveness skills significantly predict engagement ($\beta = 0.199, p < 0.05$) aligns with the JD-R model, which posits that personal resources can enhance engagement by helping employees manage job demands (Priyono et al., 2022; Wibawa et al., 2021). This result is consistent with empirical work by Yener et al. (2021), who found that time management skills, a core component of life–work effectiveness, were positively associated with employee vigour and dedication ($\beta = 0.32, p < 0.01$) among Turkish professionals. Similarly, Kalra et al. (2020) demonstrated that, among sales professionals, employees with stronger time management skills reported higher levels of work engagement ($\beta = 0.28, p < 0.05$) as they were better able to cope with competitive work environments. Similarly, the finding that harmony of life skills significantly predicts engagement ($\beta = 0.250, p < 0.01$) reinforces the importance of work–life balance as a personal resource. This finding corroborates recent research by Obeng et al. (2025), who reported that work–life balance had a significant positive effect on psychological well-being and engagement ($\beta = 0.41, p < 0.001$) among healthcare workers in Ghana. The result also aligns with Asan et al. (2020), who found that employees in Indonesia who perceived greater work–life harmony demonstrated higher levels of engagement ($r = 0.38, p < 0.01$), suggesting that the ability to balance personal and professional responsibilities is particularly valued in collectivist cultures where harmony is a central cultural value.

The finding that life–work effectiveness skills and harmony of life skills do not directly predict loyalty, while initially counterintuitive, is consistent with emerging research. Yener et al. (2021) initially hypothesised a direct link between time management and organisational commitment, but their results ultimately showed that this relationship was fully mediated by reduced burnout. Similarly, Kalra et al. (2020) found that time management skills influenced retention-related outcomes only indirectly through performance and satisfaction. The present study's finding that engagement fully mediates this relationship provides important clarification and extends this line of inquiry to the Indonesian context.

Secondly, this study provides strong evidence for the mediating role of employee engagement in the relationships between organisational support and loyalty, and between both types of life–work skills and loyalty (Palupi et al., 2024; Suharto & Suprpto, 2023). Engagement fully mediates the effects of life–work skills on loyalty, whereas it partially mediates the effect of organisational support on loyalty. This partial mediation indicates that organisational support influences loyalty through multiple pathways – both directly via Social Exchange processes and indirectly via engagement (Meira & Hancer, 2021; Wei et al., 2022).

The mediating role of engagement found in this study aligns with and extends previous empirical research.

Utami et al. (2023) similarly found that engagement fully mediated the relationship between self-efficacy and employee performance (indirect effect = 0.21, $p < 0.05$) in their Indonesian study. Suharto and Suprpto (2023) reported that engagement partially mediated the POS–performance relationship (indirect effect = 0.18, $p < 0.01$), which parallels the partial mediation found in the present study (indirect effect = 0.114, $p < 0.05$). The pattern of mediation also contributes to the growing literature on engagement as a mechanism in collectivist cultures. Priskila et al. (2021) and Palupi et al. (2024) both found that engagement mediated the relationship between POS and organisational citizenship behaviour among Indonesian employees, with indirect effects ranging from 0.15 to 0.22.

Thirdly, this study contributes to the literature on employee engagement and loyalty in collectivist cultures (Choirisa, 2023; Wibawa et al., 2021). The observed pattern of relationships – particularly the strong direct and indirect effects of organisational support on loyalty – underscores the importance of relational reciprocity and group harmony in Indonesian contexts. This finding is consistent with research by Asan et al. (2020) and Rasool et al. (2021), who demonstrated that POS has both direct and indirect effects on employee outcomes across various cultural contexts. However, the magnitude of these effects in the present study (direct effect $\beta = 0.125$; indirect effect $\beta = 0.114$) suggests that in collectivist cultures, the Social Exchange mechanism may be particularly salient, as employees are more attuned to reciprocity and organisational care (Wibawa et al., 2021). This supports the cross-cultural applicability of the JD-R model and SET while also highlighting cultural nuances in how resources translate into loyalty (Meira & Hancer, 2021; Priyono et al., 2022).

Limitations and future research

While this study provides valuable insights, several limitations should be acknowledged. Firstly, the cross-sectional research design precludes definitive causal inferences (Ringle et al., 2020). The relationships identified, particularly the mediating role of employee engagement, should be interpreted as associative rather than causative. Future studies could employ longitudinal or experimental designs to establish temporal precedence and strengthen causal claims (Scholze & Hecker, 2024). Additionally, there is a risk of omitted-variable bias, as this study may not account for all factors that influence employee engagement and loyalty. Future research should consider incorporating a broader range of variables or using techniques such as instrumental variable analysis to mitigate this bias and enhance the robustness of causal inference.

Secondly, the sample, though adequate for the analytical technique employed, comprised only 200 permanent employees across various industrial sectors in Indonesia (Ringle et al., 2020). This may affect the statistical power and the generalisability of the findings. Replication studies with larger, more diverse samples, including non-permanent or gig-economy workers,

would enhance the external validity of the results (Wibawa et al., 2021). Additionally, future research could examine these relationships in other cultural contexts to assess the cross-cultural validity of the findings (Priyono et al., 2022).

Thirdly, data for all constructs were collected from a single source (employee self-reports) using the same method (questionnaires), which raises the possibility of standard method bias (Ringle et al., 2020). Although procedural remedies were employed (e.g. ensuring respondent anonymity), future research would benefit from incorporating multi-source data (e.g. supervisor ratings of loyalty or engagement) to mitigate this potential bias (Suharto & Suprpto, 2023).

Fourthly, this study employed reflective indicators for all constructs, including life-work effectiveness skills, which were conceptualised as reflective manifestations of broader self-management competence (Ringle et al., 2020). Future research could explore formative measurement approaches for such skill-based constructs, in which indicators represent distinct components that collectively form the latent construct rather than reflecting a single underlying trait (Kalra et al., 2020).

Despite these limitations, this research lays a solid foundation for future inquiry. Subsequent investigations could explore the potential moderating roles of variables such as organisational culture, leadership style and personality traits (Hernandez Jaime & Encabo, 2024; Valentina & Putra, 2024). Additionally, future research could examine these dynamics within specific industrial contexts to uncover sector-specific nuances (Wibawa et al., 2021). Finally, future studies could further investigate the mechanisms through which life-work effectiveness skills influence engagement and, indirectly, loyalty, given that engagement fully mediates this relationship (Kalra et al., 2020; Yener et al., 2021).

Conclusion

This study demonstrates the complex interplay between different types of life skills, organisational support, and their effects on engagement and loyalty. The findings emphasise that employee engagement serves as a crucial psychological mechanism for translating personal and organisational resources into loyalty, while different resources operate through distinct pathways. Specifically, both life-work effectiveness skills and harmony of life skills influence loyalty entirely through engagement, whereas organisational support influences loyalty both directly and through engagement.

These findings have important implications for both theory and practice. Theoretically, the study contributes to the literature by demonstrating the differential effects of personal resources on engagement and loyalty, and by providing evidence for the central mediating role of engagement in collectivist cultural contexts. The results support the applicability of the JD-R model and SET in explaining how resources translate into loyalty through engagement.

Practically, the findings suggest that organisations should implement comprehensive strategies that address both the technical and psychological aspects of employee well-being. Skill development programmes focusing on time management, stress management and work-life balance should be complemented by supportive organisational practices that demonstrate care for employee well-being. By fostering both engagement and loyalty through multiple pathways, organisations can create a committed workforce that contributes to sustainable organisational success.

To maintain a competitive edge, managers must leverage employee loyalty as a sustainable advantage against the challenges of an evolving business landscape. By prioritising engagement and loyalty interventions that address multiple pathways – including organisational support, work-life balance and skill development – organisations can secure committed workforces ready to propel them towards future success.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

CRedit authorship contribution

Yunni R. DJ: Conceptualisation, Data curation, Formal analysis, Methodology, Supervision, Validation, Writing – original draft, Writing – review & editing. Sri W.L.H. Setyanti: Conceptualisation, Methodology, Project administration, Validation, Writing – original draft, Writing – review & editing. Handriyono Handriyono: Conceptualisation, Investigation, Software, Visualisation, Writing – original draft, Writing – review & editing. Dewi Prihatini: Conceptualisation, Formal analysis, Investigation, Methodology, Software, Writing – original draft, Writing – review & editing. Diana S.K. Tobing: Conceptualisation, Project administration, Resources, Supervision, Writing – original draft. All authors reviewed the article, contributed to the discussion of results, approved the final version for submission and publication, and take responsibility for the integrity of its findings.

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Data availability

The datasets generated and analysed during this study are not publicly available because of confidentiality and privacy agreements with participating organisations and individuals. However, anonymised data are available from the corresponding author, Yunni R. DJ, upon reasonable request, subject to ethical and institutional approvals.

Disclaimer

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