The Effect of Work-Life Balance on Generation Z Productivity: The Mediating Role of Employee Engagement among Part-Time Working Students in Jakarta

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The increasing participation of Generation Z university students in part-time employment has intensified the challenge of balancing academic responsibilities, work commitments, and personal life, making work-life balance an important factor influencing employee productivity. This study aims to examine the effect of work-life balance on Generation Z productivity, with employee engagement serving as a mediating variable among part-time working students in Jakarta. A quantitative research approach with a cross-sectional survey design was employed. Data were collected through an online questionnaire from 168 Generation Z university students in Jakarta who met the predetermined sampling criteria using purposive sampling. The measurement instrument consisted of 21 indicators adapted from established scales and was assessed using a seven-point Likert scale. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0. The results indicate that work-life balance has a positive and significant effect on employee engagement and Generation Z productivity. Employee engagement also exerts a significant positive effect on productivity and partially mediates the relationship between work-life balance and productivity. The structural model explains 50.8% of the variance in Generation Z productivity, demonstrating moderate predictive power. These findings suggest that organizations and higher education institutions should promote flexible work arrangements, supportive supervision, and employee well-being initiatives to strengthen employee engagement and improve the productivity of Generation Z part-time working students.
Keyword : Work-Life Balance; Employee Engagement; Generation Z Productivity; Part-Time Working Students

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1. Introduction

The contemporary workplace has undergone profound transformations driven by digitalization, globalization, and changing workforce demographics. One of the most significant developments is the rapid emergence of Generation Z as a dominant segment of the labor market. Having grown up in an era characterized by advanced digital technologies and instant access to information, Generation Z demonstrates distinctive work-related values compared to previous generations. Rather than prioritizing financial rewards alone, they increasingly emphasize flexibility, personal well-being, mental health, and work-life balance when evaluating employment opportunities[1][2]. Consequently, organizations are facing new challenges in managing Generation Z employees while maintaining high levels of productivity.

The increasing participation of university students in part-time employment has further intensified concerns regarding work-life balance. Many students choose to work while pursuing higher education to gain professional experience, improve employability, or support their financial needs. However, balancing

academic responsibilities, employment obligations, and personal life often creates considerable psychological and physical demands. In metropolitan cities such as Jakarta, these challenges become even more complex due to heavy traffic congestion, high living costs, and demanding academic and organizational expectations[3]. These conditions require students to effectively allocate their limited resources of time, energy, and attention across multiple competing roles.

Work-life balance (WLB) has therefore become one of the most widely discussed issues in contemporary human resource management. WLB refers to an individual's ability to achieve harmony between work responsibilities and personal life without experiencing excessive role conflict[4]. Employees who successfully maintain work-life balance generally experience lower stress levels, higher psychological well-being, greater job satisfaction, and improved work performance. For Generation Z, work-life balance is no longer viewed as an additional organizational benefit but rather as a fundamental expectation influencing career decisions and organizational commitment[5][6]

For part-time working students, maintaining work-life balance is considerably more difficult than for full-time employees because they simultaneously perform dual roles as students and workers. Academic assignments, examinations, organizational activities, and workplace responsibilities often compete for limited time and energy. Failure to balance these responsibilities may lead to emotional exhaustion, academic procrastination, declining work quality, and reduced productivity[7]. Consequently, understanding the mechanisms through which work-life balance contributes to productivity among Generation Z students represents an increasingly important research issue.

Employee productivity remains one of the primary indicators of organizational effectiveness. Productivity is generally defined as the ability to produce high-quality work efficiently while meeting organizational objectives within the expected timeframe[8]. However, productivity among Generation Z cannot merely be evaluated through quantitative outputs because this generation places greater emphasis on meaningful work, flexibility, and psychological well-being[9]. Previous studies have suggested that excessive workloads, poor time management, and continuous psychological pressure may significantly reduce productivity among young employees, particularly those balancing employment with academic responsibilities[10]

Employee engagement has emerged as an important psychological mechanism that may explain how work-life balance translates into higher productivity. Employee engagement refers to employees' emotional, cognitive, and behavioral attachment to their work, characterized by vigor, dedication, and absorption[11][12]. Employees with high engagement generally demonstrate stronger commitment, greater enthusiasm, higher motivation, and superior work performance than less engaged employees. For part-time working students, engagement may become a critical resource enabling them to remain motivated despite facing considerable academic and occupational pressures[13]

Previous empirical findings consistently indicate that employee engagement contributes positively to organizational outcomes. Employees with stronger engagement are more likely to exhibit greater organizational commitment, lower turnover intentions, and higher productivity[10]. Martdinata[14] further argued that engagement not only enhances employee performance but also reduces work-related stress by strengthening employees' emotional attachment to their organizations. These findings suggest that employee engagement may serve as an important mediating mechanism linking work-life balance with productivity.

Although numerous studies have investigated work-life balance and employee engagement, empirical findings remain inconclusive. Several researchers reported that work-life balance directly improves employee performance and productivity[9][15]. Conversely, other studies found that the relationship is

indirect and depends on intervening variables such as job satisfaction or employee engagement[13][16]. These inconsistent findings indicate that the underlying psychological mechanisms explaining the influence of work-life balance on productivity require further investigation.

Another important limitation concerns the research context. Existing studies predominantly focus on permanent employees working in corporations or public organizations, whereas research involving part-time university students remains relatively limited[7][17]. This population possesses unique characteristics because they simultaneously pursue academic achievement and professional development. Unlike full-time employees, part-time students continuously experience competing demands originating from educational institutions and employers, making their work-life dynamics substantially different.

Furthermore, most previous Indonesian studies have concentrated on work-life balance as a predictor of job satisfaction, turnover intention, burnout, or employee performance[5][18][19]. Comparatively fewer studies have investigated employee engagement as the mediating mechanism through which work-life balance influences Generation Z productivity, particularly among part-time working students in Jakarta. Consequently, the existing literature provides limited empirical evidence explaining the psychological processes underlying productivity within this increasingly important workforce segment.

This study addresses these research gaps by examining the relationship between work-life balance and Generation Z productivity while investigating the mediating role of employee engagement among part-time working university students in Jakarta. The findings are expected to contribute theoretically by extending employee engagement literature within the context of Generation Z and work-life balance, while also providing practical implications for organizations and higher education institutions in designing policies that support student employees in maintaining both academic achievement and workplace productivity.

2. Literature Review and Problem Statement

Work-Life Balance

Work-life balance (WLB) has become one of the most important issues in contemporary human resource management due to changes in workforce characteristics, technological advancement, and increasingly flexible employment arrangements. WLB refers to an individual's ability to effectively balance work responsibilities with personal and family life while minimizing inter-role conflict. Greenhaus and Beutell[20] conceptualized work-life balance through work–family conflict, suggesting that conflict occurs when participation in one role makes it difficult to fulfill responsibilities in another role because of time, strain, or behavioral incompatibility. This theoretical perspective remains one of the most influential foundations for understanding work-life balance in organizational research.

The concept of WLB has evolved beyond merely reducing conflict between work and personal life. Contemporary studies emphasize that work-life balance represents employees' ability to maintain psychological well-being while simultaneously achieving organizational objectives. Organizations that support flexible working arrangements, workload management, and employee well-being generally experience higher organizational commitment, lower burnout, and improved employee performance[4][21]

Generation Z employees place significantly greater importance on work-life balance than previous generations because they highly value flexibility, autonomy, mental health, and meaningful work experiences. Consequently, organizations increasingly recognize work-life balance as a strategic human resource practice rather than merely an employee welfare program. Previous Indonesian studies also indicate that work-life balance positively influences employee satisfaction, organizational commitment, and performance among Generation Z employees[5][6][9]. These findings suggest that employees experiencing

higher work-life balance are more likely to demonstrate better psychological well-being and improved workplace performance.

Within the context of part-time working students, work-life balance becomes considerably more challenging because students simultaneously perform academic and professional roles. Competing responsibilities often generate stress, emotional exhaustion, and difficulties in allocating sufficient time for academic, occupational, and personal activities. Consequently, understanding work-life balance among Generation Z part-time students represents an increasingly relevant research topic.

Generation Z Productivity

Employee productivity represents one of the primary indicators of organizational effectiveness because it reflects the efficiency and quality with which employees perform assigned tasks. Robbins and Judge[8] define productivity as the ability to produce quality outputs while efficiently utilizing organizational resources. Modern perspectives further argue that productivity encompasses not only quantitative performance but also effectiveness, creativity, consistency, and the ability to achieve organizational objectives.

Generation Z exhibits unique productivity characteristics compared with previous generations. Growing up within highly digitalized environments has enabled this generation to develop strong technological capabilities, rapid information processing skills, and adaptive problem-solving abilities. However, these advantages are frequently accompanied by higher psychological pressure, shorter attention spans, and stronger expectations regarding flexibility and meaningful work. Therefore, productivity among Generation Z is strongly influenced by psychological well-being rather than merely financial compensation.

Previous studies demonstrate that excessive workloads, academic pressure, poor time management, and burnout substantially reduce work productivity among part-time students[7]. Likewise, Wibowo and Ahmadi[9] found that work-life balance significantly improves employee performance by reducing stress and increasing job satisfaction. Similarly, Ilham et al[10] reported that employee engagement contributes substantially to higher employee productivity by strengthening motivation and organizational commitment. Therefore, productivity among Generation Z should be understood as a multidimensional construct that integrates performance quality, efficiency, innovation, commitment, and psychological well-being.

Employee Engagement

Employee engagement has become a central concept within organizational behavior because it explains why employees voluntarily invest cognitive, emotional, and physical energy into their work. Kahn[11] first introduced employee engagement as the psychological condition in which individuals express themselves physically, cognitively, and emotionally during role performance. Employees experiencing high engagement become fully immersed in their work and demonstrate stronger organizational commitment.

Schaufeli and Bakker[12] further conceptualized engagement through three fundamental dimensions: vigor, dedication, and absorption. Vigor refers to high levels of energy and resilience, dedication reflects enthusiasm and commitment toward work, while absorption represents complete concentration during task performance. Employees possessing these characteristics generally demonstrate higher performance, stronger organizational commitment, and lower turnover intention.

Employee engagement is particularly important for Generation Z because meaningful work experiences significantly influence their motivation and career decisions. Unlike previous generations, Generation Z seeks organizations that provide opportunities for learning, career development, flexibility, and

psychological support. Consequently, engagement functions as an essential psychological mechanism connecting organizational practices with employee performance.

Previous empirical studies consistently support this relationship. Yuliani and Ekhsan[13] demonstrated that employee engagement positively influences job satisfaction and organizational retention. Martdinata[14] further concluded that employee engagement reduces occupational stress while strengthening employee commitment. Similarly, Ilham et al[10] found that highly engaged employees consistently achieve superior productivity compared with less engaged employees. These findings indicate that employee engagement may function as an important mediating mechanism between work-life balance and productivity.

Problem Statement

Although extensive research has examined work-life balance, employee engagement, and employee productivity, several important research gaps remain. First, previous studies predominantly investigate permanent employees working in corporations or public institutions, whereas research focusing specifically on Generation Z part-time working students remains limited. This population possesses unique characteristics because they simultaneously manage academic responsibilities and employment obligations, resulting in work-life dynamics substantially different from those experienced by full-time employees. Second, empirical findings regarding the relationship between work-life balance and productivity remain inconsistent. Several studies reported a direct positive relationship between work-life balance and employee performance[15][9], whereas others concluded that this relationship becomes significant only through psychological mechanisms such as job satisfaction or employee engagement[13][16].

Third, most Indonesian studies have emphasized outcomes such as turnover intention, job satisfaction, burnout, or employee performance, while relatively few have examined Generation Z productivity as the primary dependent variable. Fourth, although employee engagement has frequently been investigated independently, limited empirical evidence explains its mediating role between work-life balance and productivity among Generation Z working students. Finally, empirical evidence from metropolitan environments such as Jakarta remains scarce despite the city's unique socioeconomic characteristics, including high living costs, demanding academic environments, and increasingly competitive labor markets that may intensify work-life challenges experienced by Generation Z students.

Accordingly, this study seeks to address these theoretical and contextual gaps by examining the effect of work-life balance on Generation Z productivity through the mediating role of employee engagement among part-time working students in Jakarta. The findings are expected to extend the work-life balance and employee engagement literature while providing practical recommendations for organizations and higher education institutions in supporting the productivity and well-being of Generation Z student employee

3. Method

This study employed a quantitative research design to examine the effect of work-life balance on Generation Z productivity, with employee engagement serving as a mediating variable among part-time working students in Jakarta. A quantitative approach was considered appropriate because it enables the empirical examination of causal relationships among latent constructs using statistical techniques. The study adopted a cross-sectional survey design, whereby data were collected from respondents at a single point in time through a structured questionnaire.

The target population comprised Generation Z university students in Jakarta who were simultaneously enrolled in higher education and employed in part-time jobs. This population was selected because part-

time working students simultaneously perform academic and occupational roles, making them an appropriate context for examining the relationships among work-life balance, employee engagement, and productivity. Respondents were selected using purposive sampling based on the following criteria: (1) belonging to Generation Z (aged approximately 18–27 years), (2) being actively enrolled at a university in Jakarta, (3) currently employed in a part-time job, and (4) having at least three months of work experience to ensure adequate exposure to the working environment.

The minimum sample size was determined following the recommendation of Hair et al[22], who suggested that studies employing Partial Least Squares Structural Equation Modeling (PLS-SEM) should recruit between five and ten observations for each measurement indicator. To improve statistical power and obtain more reliable parameter estimates, this study adopted the more conservative criterion of ten respondents per indicator. The research instrument consisted of 21 measurement items, including six items measuring work-life balance, nine items measuring employee engagement, and six items measuring Generation Z productivity. Accordingly, the minimum required sample size was 210 respondents (21 × 10). To further enhance the robustness and generalizability of the findings, the study aimed to collect responses exceeding this minimum requirement.

Table 1. Operational Definition of Variables

Variable	Dimension	Code	Measurement Indicator
Work-Life Balance (X) *(Greenhaus & Beutell, 1985; Greenhaus & Allen, 2011)*	Time Balance	WLB1	I have sufficient time to balance my academic activities and part-time work.
		WLB2	My work schedule allows me to complete my academic responsibilities effectively.
	Involvement Balance	WLB3	I can equally devote my attention to both my studies and my job.
		WLB4	I remain actively involved in my academic, work, and personal activities.
	Satisfaction Balance	WLB5	I am satisfied with the balance between my work and personal life.
		WLB6	I successfully maintain a healthy balance between my academic and work responsibilities.
Employee Engagement (M) *(Schaufeli & Bakker, 2010)*	Vigor	EE1	I feel energetic while performing my job.
		EE2	I am willing to put extra effort into my work.
		EE3	I remain enthusiastic even when facing challenging tasks.
	Dedication	EE4	I feel proud of the work I do.
		EE5	My job inspires me to perform well.
		EE6	I am committed to achieving the objectives of my work.
	Absorption	EE7	I become fully concentrated when working.
		EE8	I often become deeply immersed in my work.
		EE9	Time passes quickly when I am working because I am fully engaged.

Variable	Dimension	Code	Measurement Indicator
Generation Z Productivity (Y) *(Robbins & Judge, 2015)*	Work Efficiency	GP1	I complete my work efficiently with minimal wasted time.
		GP2	I can accomplish my work despite my academic commitments.
	Work Quality	GP3	The quality of my work consistently meets organizational expectations.
		GP4	I carefully complete my work with minimal errors.
	Timeliness	GP5	I complete my assigned tasks on schedule.
		GP6	I consistently meet deadlines given by my supervisor.

Source: Adapted from Greenhaus and Beutell (1985), Schaufeli and Bakker (2010), and Robbins and Judge (2015)

Primary data were collected using a structured online questionnaire administered through Google Forms. The measurement instrument was adapted from well-established and validated scales in the literature. Work-life balance was measured using six items adapted from Greenhaus and Beutell[4] and Greenhaus and Allen[20], employee engagement was measured using the nine-item Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli and Bakker[12], and Generation Z productivity was measured using six items adapted from Robbins and Judge[23]. All questionnaire items were measured using a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The seven-point scale was selected because it provides greater response variability, improves measurement sensitivity, and enhances the accuracy of respondents' perceptions, making it particularly suitable for behavioral research employing PLS-SEM[24].

Data analysis was conducted using SmartPLS version 3.0. Partial Least Squares Structural Equation Modeling (PLS-SEM) was selected because it is suitable for prediction-oriented research, simultaneously estimates measurement and structural models, accommodates relatively small sample sizes, and does not require multivariate normality assumptions[24].

4. Results and Discussion

Respondent Characteristics

The sample size was determined based on the recommendation of Hair et al[24]., who suggested that studies employing Partial Least Squares Structural Equation Modeling (PLS-SEM) should recruit between five and ten observations for each measurement indicator. To enhance statistical power and improve the stability of parameter estimation, this study adopted the more conservative criterion of ten respondents per indicator. Since the research instrument consisted of 21 measurement items, the minimum required sample size was 210 respondents (21 × 10).

The questionnaire was distributed online through Google Forms to Generation Z university students in Jakarta who met the predetermined sampling criteria. Although the targeted sample size was 210 respondents, 168 questionnaires were returned and passed the data screening process, resulting in a response rate of 80.0%. The screening process excluded incomplete responses and questionnaires that did not satisfy the respondent criteria. Although the final sample size was lower than the initial target, it remained adequate for PLS-SEM analysis because this method is prediction-oriented and can produce

reliable estimates using moderate sample sizes[24].. Therefore, the 168 valid responses were considered sufficient for evaluating both the measurement model and the structural model.

Table 2. Respondent Characteristics

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	70	41.7
	Female	98	58.3
Age	18–19 years	36	21.4
	20–22 years	104	61.9
	23–24 years	22	13.1
	>24 years	6	3.6
Semester	1–2	24	14.3
	3–4	53	31.5
	5–6	71	42.3
	≥7	20	11.9
Part-Time Job	Retail	58	34.5
	Food & Beverage	48	28.6
	Tutor/Freelancer	30	17.9
	Administration	19	11.3
	Others	13	7.7
Length of Employment	3–6 months	43	25.6
	6–12 months	78	46.4
	>1 year	47	28
Working Hours/Week	<20 hours	46	27.4
	20–30 hours	93	55.4
	>30 hours	29	17.2

Table 2 presents the demographic characteristics of the respondents. Of the 168 respondents, 98 (58.3%) were female, while 70 (41.7%) were male, indicating that female students constituted the majority of the sample. In terms of age, most respondents were between 20 and 22 years old (61.9%), followed by 18–19 years old (21.4%), 23–24 years old (13.1%), and above 24 years old (3.6%). These findings indicate that the respondents appropriately represent the Generation Z cohort currently pursuing higher education while participating in the labor market.

Regarding educational background, respondents were drawn from several public and private universities across Jakarta. The majority were undergraduate students in their fifth and sixth semesters (42.3%), followed by those in the third and fourth semesters (31.5%), while the remaining respondents were in the first and second semesters (14.3%) and seventh semester or above (11.9%). This distribution suggests that most respondents had accumulated sufficient academic and work experience to evaluate the constructs examined in this study.

With respect to employment characteristics, the respondents were employed in various part-time occupations. Approximately 34.5% worked in the retail sector, 28.6% in food and beverage services, 17.9% as private tutors or freelance educators, 11.3% in administrative positions, and the remaining 7.7% in other service-related occupations. This diversity indicates that the respondents represented various forms of part-time employment commonly undertaken by university students.

In terms of work experience, the majority of respondents (46.4%) had been employed for six months to one year, followed by 28.0% with more than one year of experience, while 25.6% had worked for three to six

months. Furthermore, most respondents (55.4%) reported working 20–30 hours per week, whereas 27.4% worked fewer than 20 hours, and 17.2% worked more than 30 hours weekly. These findings indicate that the respondents possessed sufficient work exposure to assess their work-life balance, level of employee engagement, and productivity within the context of part-time employment.

Structural Equation Models

The hypothesized relationships among work-life balance, employee engagement, and Generation Z productivity were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0. The structural model evaluation included the assessment of path coefficients, the coefficient of determination (R^2), and the mediating effect of employee engagement. The estimated structural model is illustrated in Figure 1.

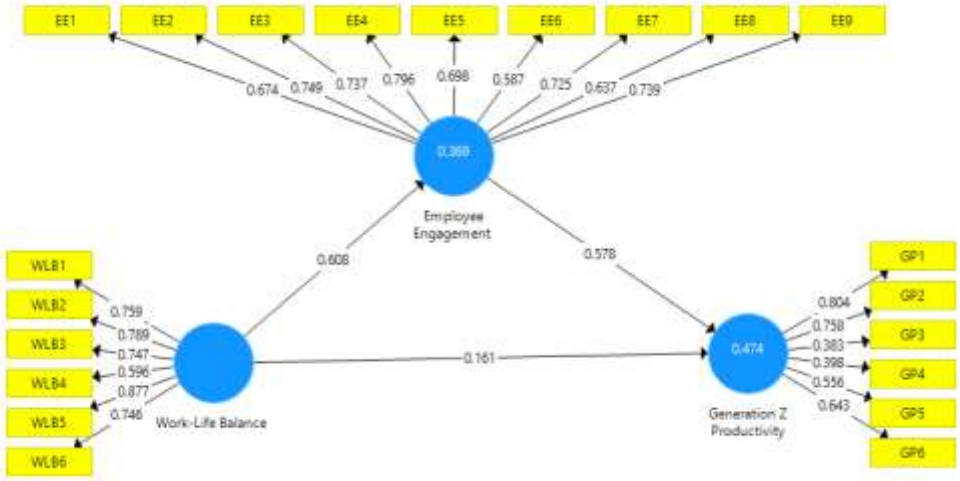

Figure 1. Initial Outer Loading Assessment

Figure 1 presents the initial measurement model, including the outer loading values of all measurement indicators. According to Hair et al[24]., indicators should demonstrate outer loading values of at least 0.70 to ensure satisfactory indicator reliability. The initial estimation revealed that several indicators did not meet the recommended threshold. Specifically, WLB4 (0.596) from the Work-Life Balance construct; EE1 (0.674), EE5 (0.698), EE6 (0.587), and EE8 (0.637) from the Employee Engagement construct; and GP3 (0.383), GP4 (0.398), GP5 (0.556), and GP6 (0.643) from the Generation Z Productivity construct exhibited outer loading values below 0.70. Since these indicators did not adequately represent their respective latent constructs, they were excluded from the measurement model. After removing the nine indicators, the PLS algorithm was re-estimated to obtain a refined measurement model with improved indicator reliability, which was subsequently used for further assessments of construct reliability, convergent validity, discriminant validity, and structural model evaluation.

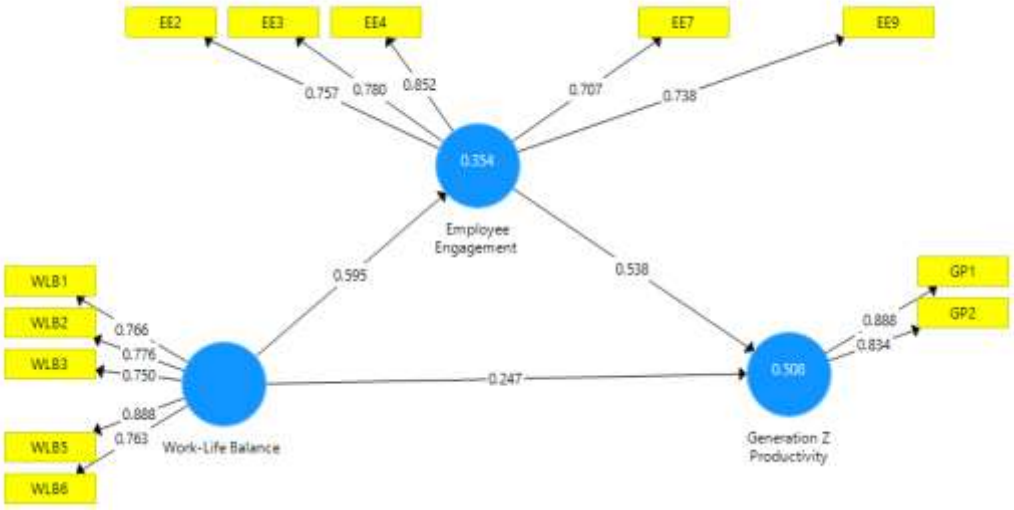

Figure 2. Final Measurement Model

Figure 2 presents the refined measurement model after the elimination of indicators with outer loading values below 0.70 and the re-estimation of the PLS algorithm. The results indicate that all remaining indicators achieved outer loading values ranging from 0.707 to 0.888, exceeding the recommended threshold for indicator reliability[24].. Specifically, the Work-Life Balance construct retained five valid indicators (WLB1, WLB2, WLB3, WLB5, and WLB6), Employee Engagement retained five valid indicators (EE2, EE3, EE4, EE7, and EE9), while Generation Z Productivity retained two valid indicators (GP1 and GP2). These findings demonstrate that all retained indicators adequately represent their respective latent constructs and satisfy the criterion for indicator reliability. Consequently, the refined measurement model was considered appropriate for subsequent evaluations of construct reliability, convergent validity, discriminant validity, and structural model assessment.

Table 3. Cross Loadings

	Employee Engagement _	Generation Z Productivity	Work-Life Balance
EE2	0.757	0.433	0.516
EE3	0.780	0.437	0.433
EE4	0.852	0.499	0.494
EE7	0.707	0.633	0.450
EE9	0.738	0.592	0.384
GP1	0.628	0.888	0.554
GP2	0.547	0.834	0.411
WLB1	0.442	0.379	0.766
WLB2	0.438	0.463	0.776
WLB3	0.458	0.337	0.750
WLB5	0.547	0.544	0.888
WLB6	0.457	0.487	0.763

Table 3 presents the cross-loading values used to assess discriminant validity. According to Hair et al[24]., discriminant validity is established when each indicator has a higher loading on its assigned construct than on the other constructs. The results show that all retained indicators satisfy this criterion. Specifically, the Employee Engagement indicators exhibited the highest loadings on the Employee Engagement construct (0.707–0.852), exceeding their correlations with Generation Z Productivity and Work-Life Balance. Similarly, the Generation Z Productivity indicators demonstrated higher loadings on their respective construct (0.834–0.888) than on the remaining constructs, while the Work-Life Balance indicators achieved

the highest loadings on the Work-Life Balance construct (0.750–0.888). These findings confirm that each indicator adequately represents its intended construct and provide evidence of satisfactory discriminant validity.

Table 4. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Employee Engagement _	0.825	0.825	0.878	0.590
Generation Z Productivity	0.754	0.769	0.852	0.742
Work-Life Balance	0.849	0.860	0.892	0.624

Table 4 presents the results of the construct reliability and convergent validity assessment. All constructs demonstrated satisfactory internal consistency, with Cronbach's Alpha values ranging from 0.754 to 0.849, rho_A values ranging from 0.769 to 0.860, and Composite Reliability values between 0.852 and 0.892, all exceeding the recommended threshold of 0.70[24]. Furthermore, the Average Variance Extracted (AVE) values ranged from 0.590 to 0.742, surpassing the minimum criterion of 0.50. These results indicate that all constructs are reliable and possess adequate convergent validity.

Table 5. Fornell-Larcker Criterion

	Employee Engagement _	Generation Z Productivity	Work-Life Balance
Employee Engagement _	0.768		
Generation Z Productivity	0.685	0.861	
Work-Life Balance	0.595	0.567	0.790

Table 5 presents the Fornell–Larcker criterion used to assess discriminant validity. According to Hair et al[24], discriminant validity is established when the square root of the Average Variance Extracted (AVE) for each construct is greater than its correlations with other constructs. The results show that the square root of the AVE for Employee Engagement (0.768), Generation Z Productivity (0.861), and Work-Life Balance (0.790) exceeds the corresponding inter-construct correlations. Therefore, all constructs satisfy the Fornell–Larcker criterion, confirming adequate discriminant validity.

Table 6. Collinearity Statistics (VIF)

Outer VIF Values	VIF
EE2	1.842
EE3	2.628
EE4	2.898
EE7	1.541
EE9	1.666
GP1	1.310
GP2	1.310
WLB1	2.126
WLB2	1.964
WLB3	1.752
WLB5	3.444
WLB6	2.486

Inner VIF Values

	Employee Engagement _	Generation Z Productivity	Work-Life Balance
Employee Engagement _ Generation Z Productivity		1.548	
Work-Life Balance	1.000	1.548	

Table 6 presents the collinearity statistics assessed using the Variance Inflation Factor (VIF) for both the measurement model (Outer VIF) and the structural model (Inner VIF). According to Hair et al[24]., VIF values below 5.0 indicate the absence of critical multicollinearity issues. The results show that all Outer VIF values ranged from 1.310 to 3.444, while the Inner VIF values ranged from 1.000 to 1.548, all of which are well below the recommended threshold. These findings indicate that multicollinearity is not a concern in either the measurement model or the structural model, confirming that the indicators and predictor constructs are suitable for subsequent hypothesis testing.

Table 7. Model_Fit

	Saturated Model	Estimated Model
SRMR	0.095	0.095
d_ULS	0.707	0.707
d_G	0.337	0.337
Chi-Square	337.895	337.895
NFI	0.691	0.691

Table 7 presents the model fit assessment of the PLS-SEM model. The Standardized Root Mean Square Residual (SRMR) value for both the saturated model and the estimated model is 0.095, indicating an acceptable model fit as it is below the recommended threshold of 0.10[24].. In addition, the model produced d_ULS = 0.707, d_G = 0.337, Chi-Square = 337.895, and NFI = 0.691. Although the NFI value is below the ideal benchmark of 0.90, model fit evaluation in PLS-SEM primarily relies on SRMR rather than covariance-based fit indices. Therefore, the overall results suggest that the proposed model demonstrates an acceptable level of fit and is suitable for further structural model evaluation.

Table 8. R Square

	R Square	R Square Adjusted
Employee Engagement _	0.354	0.350
Generation Z Productivity	0.508	0.502

Table 8 presents the coefficient of determination (R^2) for the endogenous constructs. The results indicate that Work-Life Balance explains 35.4% of the variance in Employee Engagement (R^2 = 0.354; Adjusted R^2 = 0.350), representing a moderate explanatory power. Furthermore, Work-Life Balance and Employee Engagement jointly explain 50.8% of the variance in Generation Z Productivity (R^2 = 0.508; Adjusted R^2 = 0.502). These findings suggest that the proposed structural model has a moderate level of predictive accuracy in explaining the endogenous constructs[24].

Table 9. f Square

	Employee Engagement _	Generation Z Productivity	Work-Life Balance
Employee Engagement _ Generation Z Productivity		0.381	
Work-Life Balance	0.548	0.080	

Table 9 presents the effect size (f^2) of each exogenous construct on the endogenous constructs. According to Hair et al[24], f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effect sizes, respectively. The results show that Work-Life Balance has a large effect on Employee Engagement (f^2 = 0.548),

indicating that it is a substantial predictor of employee engagement. Furthermore, Employee Engagement has a large effect on Generation Z Productivity ($f^2 = 0.381$), demonstrating its important contribution to improving productivity. In contrast, the direct effect of Work-Life Balance on Generation Z Productivity is relatively small ($f^2 = 0.080$), suggesting that its influence on productivity is primarily transmitted through Employee Engagement rather than through a direct relationship.

Hypothesis Testing

Table 10 presents the results of the hypothesis testing based on the bootstrapping procedure. According to Hair et al[24], a hypothesis is supported when the t-statistic exceeds 1.96 and the p-value is less than 0.05. The results indicate that all proposed hypotheses are statistically significant.

Table 10. Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Employee Engagement _ -> Generation Z Productivity	0.538	0.547	0.069	7.769	0.000
Work-Life Balance -> Employee Engagement _	0.595	0.601	0.057	10.396	0.000
Work-Life Balance -> Generation Z Productivity	0.247	0.247	0.072	3.415	0.001

H1. The Effect of Work-Life Balance on Employee Engagement

The results indicate that Work-Life Balance has a positive and significant effect on Employee Engagement ($\beta = 0.595$, $t = 10.396$, $p < 0.001$). Therefore, H1 is supported. This finding suggests that Generation Z part-time working students who are able to maintain a balance between academic responsibilities, work commitments, and personal life tend to exhibit higher levels of employee engagement. A healthy work-life balance enables students to remain energetic, dedicated, and fully involved in their work despite managing multiple roles simultaneously.

H2. The Effect of Employee Engagement on Generation Z Productivity

The results show that Employee Engagement positively and significantly influences Generation Z Productivity ($\beta = 0.538$, $t = 7.769$, $p < 0.001$). Thus, H2 is supported. This finding indicates that students who demonstrate greater enthusiasm, commitment, and concentration toward their work are more likely to achieve higher productivity. Employee engagement therefore represents an important psychological resource that enhances work performance among Generation Z part-time employees.

H3. The Effect of Work-Life Balance on Generation Z Productivity

The results further reveal that Work-Life Balance has a positive and significant direct effect on Generation Z Productivity ($\beta = 0.247$, $t = 3.415$, $p = 0.001$). Accordingly, H3 is supported. This finding implies that students who successfully balance their work and personal lives are better able to maintain productivity, complete work efficiently, and meet organizational expectations. Although the direct effect is smaller than the effect of employee engagement, work-life balance remains an important determinant of productivity among Generation Z part-time working students.

Table 11. Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Work-Life Balance -> Employee Engagement _ -> Generation Z Productivity	0.320	0.328	0.051	6.283	0.000

H4. The Mediating Role of Employee Engagement in the Relationship between Work-Life Balance and Generation Z Productivity

Table 11 presents the results of the specific indirect effect analysis to examine the mediating role of Employee Engagement in the relationship between Work-Life Balance and Generation Z Productivity. The results indicate that the indirect effect is positive and statistically significant ($\beta = 0.320$, $t = 6.283$, $p < 0.001$). Therefore, H4 is supported, indicating that Employee Engagement significantly mediates the relationship between Work-Life Balance and Generation Z Productivity. This finding suggests that improving work-life balance enhances employee engagement, which subsequently leads to higher productivity among Generation Z part-time working students. Furthermore, because the direct effect of Work-Life Balance on Generation Z Productivity remains significant ($\beta = 0.247$, $p = 0.001$), the mediation can be classified as partial mediation. This indicates that Work-Life Balance influences Generation Z Productivity both directly and indirectly through Employee Engagement, highlighting the important role of employee engagement as a psychological mechanism that strengthens the positive effect of work-life balance on productivity.

Discussion

The findings of this study provide empirical evidence that work-life balance plays a significant role in enhancing both employee engagement and Generation Z productivity among part-time working students in Jakarta. The results indicate that students who are able to maintain a balance between academic responsibilities, work commitments, and personal life tend to demonstrate higher levels of engagement, which subsequently contributes to improved productivity. Furthermore, the direct relationship between work-life balance and productivity remains significant, indicating that employee engagement functions as a partial mediator rather than a full mediator. These findings suggest that productivity among Generation Z is influenced not only by their ability to balance multiple roles but also by the psychological attachment they develop toward their work.

The explanatory power of the structural model further strengthens these findings. The coefficient of determination indicates that Work-Life Balance explains 35.4% of the variance in Employee Engagement, while Work-Life Balance and Employee Engagement jointly explain 50.8% of the variance in Generation Z Productivity. This moderate predictive capability suggests that these two constructs constitute key determinants of productivity among Generation Z part-time working students. From a practical perspective, organizations can substantially improve employee productivity by promoting work-life balance and fostering employee engagement through flexible work schedules, manageable workloads, and supportive supervision. Nevertheless, approximately 49.2% of the variance in productivity remains unexplained, indicating that additional factors such as perceived organizational support, leadership style, organizational culture, compensation, and mental health may also influence Generation Z productivity and should be incorporated into future research.

The significant influence of work-life balance on employee engagement supports the theoretical perspective proposed by Greenhaus and Beutell[20], who argued that individuals experiencing lower levels of work–family conflict are more capable of allocating their physical, emotional, and cognitive resources

effectively across multiple life domains. When work and personal responsibilities are well balanced, individuals experience lower stress and emotional exhaustion, enabling them to become more psychologically engaged in their work. This finding is further supported by Greenhaus and Allen[4], who emphasized that work-life balance enhances employee well-being, organizational commitment, and work motivation. For Generation Z part-time working students, balancing academic obligations with employment responsibilities reduces role conflict and creates favorable psychological conditions that strengthen engagement at work.

The positive relationship between work-life balance and employee engagement is also consistent with previous empirical findings. Yuliani and Ekhsan[13] reported that employees experiencing better work-life balance demonstrate higher levels of work engagement because they perceive greater organizational support and experience lower work-related stress. Similarly, Martdinata[14] found that work-life balance contributes positively to employee engagement by increasing job satisfaction and reducing psychological pressure. These findings indicate that organizations employing Generation Z workers should consider work-life balance initiatives as strategic human resource practices capable of strengthening employee engagement and improving overall organizational performance.

The results further demonstrate that employee engagement significantly enhances Generation Z productivity. This finding is consistent with the engagement theory introduced by Kahn[11], which argues that engaged employees invest their cognitive, emotional, and physical energies into their work, thereby improving individual performance. Likewise, Schaufeli and Bakker[12] conceptualized employee engagement as consisting of vigor, dedication, and absorption, all of which encourage employees to perform their work more effectively. Among part-time working students, higher engagement enables individuals to remain motivated despite simultaneously managing academic and occupational responsibilities. Consequently, engaged students are more capable of maintaining work quality, completing tasks efficiently, and meeting organizational expectations.

This finding is also supported by previous empirical studies. Ilham et al[10] concluded that employee engagement significantly improves employee productivity because engaged employees demonstrate stronger commitment, greater initiative, and better work performance. Likewise, Wibowo and Ahmadi[9] reported that psychological factors such as work satisfaction and engagement contribute substantially to employee performance among Generation Z. These studies reinforce the argument that productivity in younger employees depends not only on technical competence but also on their psychological attachment to the organization.

Another important finding concerns the direct relationship between work-life balance and Generation Z productivity. Although this relationship is statistically significant, its effect size is considerably smaller than the indirect pathway through employee engagement. This suggests that work-life balance alone may not be sufficient to maximize productivity unless it is accompanied by high levels of employee engagement. Students who successfully balance academic and occupational responsibilities generally experience lower stress and better emotional well-being, enabling them to perform their work more effectively. Nevertheless, productivity reaches higher levels when balanced working conditions simultaneously foster stronger enthusiasm, dedication, and involvement in work activities. This interpretation is consistent with the effect size analysis, which shows that Work-Life Balance has a large effect on Employee Engagement ($f^2 = 0.548$), whereas its direct effect on Generation Z Productivity is relatively small ($f^2 = 0.080$). In contrast, Employee Engagement demonstrates a large effect on productivity ($f^2 = 0.381$), indicating that engagement represents the primary mechanism through which work-life balance is translated into higher work performance. Practically, these findings imply that organizations should complement work-life balance

initiatives with engagement-building practices, such as meaningful work assignments, recognition, mentoring, and career development opportunities, rather than relying solely on flexible working arrangements.

The mediation analysis further confirms that employee engagement partially mediates the relationship between work-life balance and Generation Z productivity. This finding indicates that work-life balance influences productivity through two complementary mechanisms. First, work-life balance directly enhances productivity by reducing role conflict and improving employees' ability to manage multiple responsibilities. Second, work-life balance indirectly improves productivity by strengthening employee engagement, which subsequently encourages employees to invest greater effort and commitment in their work. The significant indirect effect demonstrates that employee engagement functions as an important psychological mechanism translating favorable working conditions into higher work performance.

An additional methodological issue concerns the refinement of the measurement model through the removal of nine indicators with outer loading values below 0.70. Eliminating weak indicators improved convergent validity, composite reliability, and overall measurement quality, thereby increasing confidence in the structural relationships estimated by the model. However, this refinement also reduced the conceptual coverage of several constructs, particularly Generation Z Productivity, which was ultimately represented by only two indicators (GP1 and GP2). Although a two-indicator construct remains acceptable in PLS-SEM when supported by strong outer loadings, Composite Reliability, and AVE[24], the retained indicators primarily capture work efficiency, while dimensions related to work quality and timeliness are no longer represented. Consequently, the productivity construct in this study should be interpreted as reflecting the efficiency dimension of productivity rather than the entire multidimensional concept. Future studies are therefore encouraged to develop more robust productivity indicators that maintain both strong psychometric properties and broader theoretical coverage.

From a theoretical perspective, this study extends the work-life balance literature by integrating Work–Family Balance Theory[20] with Employee Engagement Theory[11][12] within the context of Generation Z part-time working students. Previous studies have primarily focused on full-time employees, whereas empirical evidence involving university students simultaneously participating in higher education and employment remains limited. Therefore, this study contributes to the literature by demonstrating that employee engagement represents an important explanatory mechanism linking work-life balance with productivity among Generation Z.

From a practical perspective, the findings suggest that organizations employing Generation Z part-time workers should not focus solely on improving productivity through performance targets or financial incentives. Instead, organizations should create supportive work environments that facilitate work-life balance by providing flexible working schedules, manageable workloads, and adequate supervisor support. Such practices are likely to strengthen employee engagement, which in turn enhances productivity. Likewise, higher education institutions may also contribute by implementing more flexible academic policies that enable working students to balance educational and occupational responsibilities without compromising either domain.

5. Conclusion

This study examined the effect of work-life balance on Generation Z productivity, with employee engagement serving as a mediating variable among part-time working students in Jakarta. The findings demonstrate that work-life balance has a positive and significant effect on employee engagement, indicating that students who are able to effectively balance academic responsibilities, work commitments,

and personal life are more likely to exhibit higher levels of enthusiasm, dedication, and involvement in their jobs. Furthermore, employee engagement significantly enhances Generation Z productivity, suggesting that engaged students perform their work more efficiently, maintain higher work quality, and complete tasks more effectively. The results also reveal that work-life balance directly influences productivity, although its effect is weaker than its indirect influence through employee engagement. Mediation analysis confirms that employee engagement partially mediates the relationship between work-life balance and Generation Z productivity, highlighting its important role as a psychological mechanism that strengthens the positive impact of work-life balance on work performance. Theoretically, this study extends the literature by integrating work-life balance and employee engagement theories within the context of Generation Z part-time working students. Practically, the findings suggest that organizations should implement flexible work arrangements, supportive supervisory practices, and employee well-being initiatives to foster engagement and improve productivity.

Despite these contributions, this study has several limitations that should be acknowledged. First, the cross-sectional research design captures respondents' perceptions at a single point in time, limiting the ability to examine changes in work-life balance, employee engagement, and productivity over time or to establish stronger causal inferences. Second, the use of purposive sampling may restrict the generalizability of the findings because respondents were selected based on specific characteristics rather than through probability sampling. Third, the study focused exclusively on Generation Z part-time working students in Jakarta, and therefore the findings may not fully represent Generation Z employees in different geographical regions, industries, or employment arrangements.

Future research is encouraged to employ longitudinal research designs and probability sampling techniques to enhance the robustness and generalizability of the findings. In addition, future studies should expand the scope of respondents by including full-time employees and Generation Z workers from different regions and occupational sectors. Researchers are also encouraged to incorporate additional variables, such as perceived organizational support, job satisfaction, mental health, leadership style, or organizational culture, to provide a more comprehensive explanation of the factors influencing Generation Z productivity.

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