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Boredom, Cyberloafing, Fairness, and Generation Y (Millennial) Performance in Indonesia's Logistics Sector: The Mediating Role of Organizational Commitment

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Abstract

Introduction: This study examines whether job boredom, cyberloafing, and perceived organizational justice are associated with in-role performance among Generation Y (Millennial) employees in Indonesia's logistics sector and whether organizational commitment mediates these relationships. Novelty: Prior Indonesian logistics studies have largely focused on younger cohorts and have rarely tested boredom, cyberloafing, and fairness simultaneously. This study tests the commitment-based mediation mechanism in a large multi-firm sample and evaluates competing interpretations of cyberloafing (withdrawal vs. short recovery). Methods: A cross-sectional survey was administered at the end of 2024 to non-managerial Generation Y employees (born 1981–1996) in eight logistics companies in Jakarta (n = 623). Measures used 5-point scales. Structural equation modeling (AMOS 23) was used to test direct and indirect effects. Results: Job boredom was negatively associated with organizational commitment and performance. Perceived organizational justice was positively associated with organizational commitment and showed a positive indirect association with performance through commitment. Cyberloafing (measured as frequency of non-work online activity at work) was not significantly associated with commitment or performance in the tested model. Organizational commitment was positively associated with performance and mediated the boredom–performance and justice–performance relationships. Conclusion: The results suggest that, in this setting, commitment is a more reliable pathway linking workplace experience to performance than cyberloafing. Practical implications should be interpreted cautiously given the cross-sectional and self-reported design.

KEYWORDS

job boredom; cyberloafing; perceived organizational justice; organizational commitment; employee performance.

Introduction

Generational cohort differences can shape how employees interpret work demands, manage attention, and engage with digital technology during working hours (Research, 2024). In this study, Generation Y refers to Millennials—employees born between 1981 and 1996—who are now a substantial segment of the workforce and are often described as valuing development opportunities, work–life balance, flexibility, and frequent communication in the workplace (Dimock, 2019; Lyons & Kuron, 2014; Myers & Sadaghiani, 2010; Ng et al., 2010). These expectations matter in digitally connected

workplaces because they can influence how employees respond to routine tasks, evaluate organizational treatment, and regulate personal internet use at work. The issue is salient in logistics firms, where individual performance supports operational reliability and organizational outcomes, and small lapses in attention can accumulate into delays, errors, and coordination failures (Nyathi & Kekwaletswe, 2023). Logistics work is also characterized by time pressure and interdependence alongside repetitive routines, creating conditions in which boredom may emerge, fairness perceptions may become especially salient, and internet access may enable short non-work online activities during idle moments.

Personal internet access at work has become increasingly common in Indonesia. The Indonesian Internet Service Providers Association (APJII) reports that a large share of internet users are workers and that online activity is dominated by social media, news access, public services, and online transactions (*Indonesian Internet Service Providers Association*, 2024). Some of these activities can be work-relevant in logistics (e.g., customer updates or information search); therefore, this study follows the cyberloafing literature in defining cyberloafing as non-work-related personal internet use during working hours (Blanchard & Henle, 2008; Lim, 2002). Employee performance remains critical because it reflects role-consistent behavior that supports organizational effectiveness. Research has shown that job boredom—often driven by routine work and low challenge—can disrupt work functioning and reduce performance (Avcı & Çetin, 2023). In contrast, perceived organizational justice tends to support work outcomes by fostering fair procedures and respectful interpersonal treatment (Hyder et al., 2022). Many studies also identify organizational commitment as a key attitudinal mechanism linking employees' work experience to performance, because committed employees tend to persist toward goals and are less inclined to withdraw (Meyer and Allen, 1991; Lee et al., 2023).

Evidence on cyberloafing, however, remains mixed in ways that matter for managerial decision making. Cyberloafing has been framed as counterproductive behavior that can harm performance and should be controlled (Kamila & Muafi, 2023). In contrast, other work conceptualizes some cyberloafing as a brief coping or recovery activity (e.g., micro-breaks) that can provide short mental detachment without necessarily undermining output (Andel et al., 2019; Sonnentag & Fritz, 2007). These competing interpretations suggest that the performance implications of cyberloafing may be contingent on intensity, work design, and monitoring practices (Henle, 2024).

These issues are particularly consequential in Indonesian logistics firms, where internet access is readily available and many non-managerial roles involve repetitive routines. At the same time, perceived fairness in workloads, rewards, and decision processes can shape whether employees view the organizational system as reliable and worthy of discretionary effort. Millennials' work expectations may amplify these dynamics by increasing sensitivity to monotonous work and inconsistent treatment, thereby shaping their attachment to the organization and their performance.

Although Indonesian research on boredom, justice, and cyberloafing is growing, evidence in logistics settings remains limited. A closely related study by Turnip et al. (2025) examined the same constructs among Generation Z logistics employees. This leaves an open question about whether the same pattern holds for Millennials (Generation Y), who differ from Generation Z in career stage, organizational tenure, and work expectations (Ali & Purwandi, 2016). Moreover, prior studies often examine these predictors in isolation, leaving unclear how boredom, fairness, and cyberloafing jointly relate

to commitment and performance when modeled simultaneously.

Accordingly, this study examines whether job boredom, cyberloafing, and perceived organizational justice are associated with employee performance among non-managerial Generation Y employees in Indonesia's logistics sector and assesses whether organizational commitment mediates these relationships. (S. K. Kim & Jeong, 2021) The research question is: Do job boredom, cyberloafing, and perceived organizational justice relate to Generation Y employee performance, and does organizational commitment mediate these relationships? To address this question, we test a structural equation model that estimates direct paths from boredom, cyberloafing, and justice to organizational commitment and performance, as well as indirect paths through commitment (Guzeller & Celiker, 2020).

By focusing on an operational setting where routine work and digital access coexist, the study contributes in three ways. First, it provides evidence from a large, multi-firm Indonesian logistics sample of Millennials, complementing recent Gen Z evidence. Second, it tests organizational commitment as a mechanism linking boredom and fairness to performance while evaluating whether cyberloafing adds explanatory power once boredom and justice are considered. Third, it speaks to ongoing debate about cyberloafing as withdrawal versus short recovery by interpreting null findings in light of measurement scope and boundary conditions.

Theoretical Background and Hypothesis
Job boredom, Organizational Commitment, and Performance

Job boredom is a negative, low-arousal state characterized by a perceived lack of stimulation and difficulty sustaining attention at work, often arising when tasks are repetitive or provide limited challenge. Self-determination theory (SDT) suggests that when work environments fail to satisfy basic psychological needs (autonomy, competence, and relatedness), employees experience reduced intrinsic motivation and disengagement (Deci & Ryan, 2000). In operational roles with limited task variety, boredom can therefore signal unmet needs for competence development and autonomy, lowering attentional focus and persistence (Tang et al., 2018). Reduced attention and lower persistence are likely to translate into poorer in-role performance, particularly in logistics where accuracy and timeliness are central. Beyond performance, boredom can also shape employees' psychological attachment to the organization. Repeated boredom experiences may indicate that the organization does not provide meaningful work or growth opportunities, undermining affective attachment and willingness to invest in the relationship. Thus, boredom is expected to relate negatively to organizational commitment. Therefore, we propose:

H1: Job boredom is negatively associated with employee performance.

H2: Job boredom is negatively associated with organizational commitment.

Cyberloafing, Organizational Commitment, and Performance

Cyberloafing refers to employees' non-work-related use of the internet or digital devices during working hours (Lim, 2002). The cyberloafing literature distinguishes minor/short activities (e.g., brief social media checks) from more serious or prolonged behaviors (Blanchard & Henle, 2008). Two competing perspectives are relevant. First, a withdrawal/counterproductive perspective views cyberloafing as time theft and disengagement that can reduce performance and signal weaker attachment. From this view, frequent cyberloafing may reflect lower commitment and should relate negatively to in-role performance (Y. Kim et al., 2021). Second, a recovery/coping perspective suggests that some cyberloafing

functions as a micro-break that provides short psychological detachment and restores self-regulatory resources, potentially yielding neutral or even beneficial effects under certain conditions (Andel et al., 2019; Sonnentag & Fritz, 2007). Because the present study does not distinguish duration or motives, we follow the dominant organizational-control framing in formulating directional hypotheses while acknowledging that the empirical association may be contingent on intensity and context (Henle, 2024).

Thus, we hypothesize:

H3: Cyberloafing is negatively associated with employee performance.

H4: Cyberloafing is negatively associated with organizational commitment.

Perceived Organizational Justice, Organizational Commitment, and Performance

Perceived organizational justice refers to employees' perceptions that outcomes (distributive justice), procedures (procedural justice), and interpersonal treatment (interactional justice) are fair (Colquitt, 2001). Social exchange theory posits that employees reciprocate favorable treatment with positive attitudes and behaviors (Blau, 1964). When employees perceive the organization as fair, they are more likely to develop trust and a sense of obligation to reciprocate, strengthening commitment and encouraging reliable performance (Syed et al., 2025). Justice perceptions can be especially consequential in logistics work, where coordination and workload allocation are salient and where employees' acceptance of demanding schedules depends partly on beliefs that decision processes are consistent and respectful. Accordingly, perceived organizational justice is expected to relate positively to both organizational commitment and employee performance (Jehanzeb & Mohanty, 2020).

Therefore, we propose:

H5: Perceived organizational justice is positively associated with employee performance.

H6: Perceived organizational justice is positively associated with organizational commitment.

Organizational Commitment and Employee Performance

Organizational commitment reflects a psychological bond that increases employees' willingness to remain with and invest effort in the organization (Meyer and Allen, 1991). Committed employees tend to internalize organizational goals, persist under operational pressure, and maintain performance standards. In logistics settings, these behaviors are likely to translate into higher in-role performance.

Thus, we hypothesize:

H7: Organizational commitment is positively associated with employee performance.

The Mediating Role of Organizational Commitment

Integrating SDT and social exchange theory implies that workplace experiences shape performance partly through their influence on employees' attachment to the organization. Boredom may undermine commitment by signaling low need satisfaction, which then reduces effortful performance (Mohammad et al., 2019). Conversely, justice may strengthen commitment through reciprocity processes, which then promotes performance. Cyberloafing may also relate to performance through commitment if it reflects withdrawal, but the coping perspective suggests that this pathway may be weak or absent.

Accordingly, we propose the following mediation hypotheses:

H8: Organizational commitment mediates the association between job boredom and employee performance.

H9: Organizational commitment mediates the association between cyberloafing and employee performance.

H10: Organizational commitment mediates the association between perceived organizational justice and employee performance.

Methods

Research Type

This study employed a quantitative approach using a cross-sectional survey design. The unit of analysis was non-managerial Generation Y (Millennial) employees in the logistics sector in Jakarta, Indonesia. Data were collected at the end of 2024 using a structured questionnaire and analyzed using structural equation modeling (SEM) in AMOS 23 to estimate the proposed model and test direct and indirect (mediation) effects.

Population and Sample/Informants

The study population consisted of non-managerial Generation Y employees working in eight logistics companies in Jakarta, Indonesia, operating in freight transportation and warehousing. Respondents were included based on two criteria: they were classified as Generation Y (born 1997–2012) and held non-managerial positions in the participating firms. Questionnaires were distributed through the participating companies to employees at the non-managerial level, yielding 623 completed responses (Table 1). The sample included 359 men (57.62%) and 264 women (42.38%). Respondents were drawn from a broad range of functions in logistics firms, including Operations (n = 137; 21.99%), Marketing (n = 130; 20.87%), Finance (n = 95; 15.25%), Human Resources (n = 91; 14.61%), IT (n = 39; 6.26%), Audit (n = 5; 0.80%), and other departments (n = 126; 20.22%) (Renwick et al., 2013). This functional spread captures perspectives from both frontline execution and supporting administrative roles across the logistics workflow. Respondents also represented different career stages. Tenure ranged from 2–<4 years (n = 213) and 4–<6 years (n = 112) to 6–<8 years (n = 87) and eight years or more (n = 211). This range allows the study to reflect both newer employees and long-serving staff. In terms of education, most respondents held an undergraduate degree (n = 455), followed by an associate degree (n = 109) and a master's degree (n = 58), with one PhD holder (n = 1). Overall, the educational profile indicates a workforce with relatively strong formal qualifications across roles in the participating logistics firms.

Table 1. Respondent Demographics

Variable	Category	Amount	Percentage
Gender	Man	359	57.62
	Female	264	42.38
	Total	**623**	**100.00**
Department	Operation	137	21.99
	Marketing	130	20.87
	Finance	95	15.25
	Human Resources	91	14.61
	IT	39	6.26
	Audit	5	0.80
	Others	126	20.22
	Total	**623**	**100.00**
Years of Service	2 - <4 years	213	34.19
	4 - <6 years	112	17.98
	6 - <8 years	87	13.97

Variable	Category	Amount	Percentage
	8 years and older	211	33.87
	Total	**623**	**100.00**
Education	Associate Degree	109	17.50
	Undergraduate	455	73.03
	Master	58	9.31
	PhD	1	0.16
	Total	**623**	**100.00**

Source: Data Processing Results

Research Location

The study was conducted in Jakarta, Indonesia, involving eight logistics companies operating in freight transportation and warehousing. Jakarta was chosen because it is a major logistics hub, providing a relevant setting to examine employee behavior and performance in the logistics sector.

Instrumentation or Tools

Data were collected using a structured questionnaire. The instrument included measurement items for job boredom, cyberloafing, perceived organizational justice, organizational commitment, and employee performance, with all items rated on a 5-point Likert scale. The questionnaire also contained demographic questions (gender, department, years of service, and education).

Data Collection Procedures

Data were collected through a cross-sectional survey administered via the participating logistics companies in Jakarta (Silva et al., 2023). Questionnaires were distributed to non-managerial Generation Y employees, who completed the survey and provided demographic information. A total of 623 completed responses were collected and used for analysis (Purba, 2019).

Data Analysis

SEM was conducted in AMOS (version 23) in three stages. First, the measurement model was evaluated by examining standardized factor loadings and construct quality; reliability and convergent validity were assessed using commonly applied criteria (e.g., CR ≥ 0.70 and AVE ≥ 0.50) (Fornell & Larcker, 1981; Hair et al., 2010; Kline, 2016). Discriminant validity was assessed using the Fornell–Larcker criterion (Fornell & Larcker, 1981). Second, overall model fit was evaluated using widely reported indices, with commonly used cut-offs such as CFI and TLI ≥ 0.90, RMSEA and SRMR ≤ 0.08, and χ^2/df ≤ 3.00 (Byrne, 2016; Hu & Bentler, 1999; Kline, 2016). Third, hypotheses were tested based on standardized path estimates and statistical significance ($p < 0.05$) (Kline, 2016), and mediation was assessed by examining indirect effects through organizational commitment using bootstrapped confidence intervals where applicable (MacKinnon et al., 2004; Preacher & Hayes, 2008).

Ethical Approval

This study followed standard ethical principles for survey research. Participation was voluntary, and respondents were informed about the study's purpose and their right to stop at any time. Informed consent was obtained before data collection. No personally identifying information was collected, and all responses were kept confidential and used only for academic purposes. The dataset was stored securely and accessed only by the researchers.

Result and Discussion

The results section summarizes the SEM findings for both direct effects (Table 2; Figure 1) and indirect effects through organizational commitment (Table 3). The analysis tests the proposed relationships among job boredom, cyberloafing, perceived organizational justice, organizational commitment, and employee performance, and identifies which hypotheses are supported based on the estimated path coefficients and significance levels (Sharma & Agarwal, 2021).

For direct effects (Table 2), H1 was supported because job boredom negatively affected employee performance (Estimate = −0.407, C.R. = −5.235, $p < 0.001$). Higher boredom is associated with lower performance among Generation Y employees in logistics firms. H2 was supported because job boredom negatively affected organizational commitment (Estimate = −0.380, C.R. = −5.517, $p < 0.001$). Job boredom is linked to weaker employee attachment to the organization. H3 was not supported because cyberloafing did not significantly affect employee performance (Estimate = −0.046, C.R. = −1.106, p = 0.135) (Senevirathne & Kularathne, 2021). Personal internet use during work does not meaningfully explain performance differences in this sample. H4 was not supported because cyberloafing did not significantly affect organizational commitment (Estimate = 0.050, C.R. = 1.324, p = 0.093). Cyberloafing is not strongly related to employees' sense of commitment. H5 was supported because perceived organizational justice positively affected employee performance (Estimate = 0.088, C.R. = 1.749, p = 0.040). Greater perceived fairness is associated with better performance. H6 was supported because perceived organizational justice positively affected organizational commitment (Estimate = 0.424, C.R. = 7.508, $p < 0.001$). Perceived fairness strongly predicts employee commitment in the logistics context. H7 was supported because organizational commitment positively affected employee performance (Estimate = 0.229, C.R. = 3.759, $p < 0.001$). Stronger commitment is associated with higher employee performance.
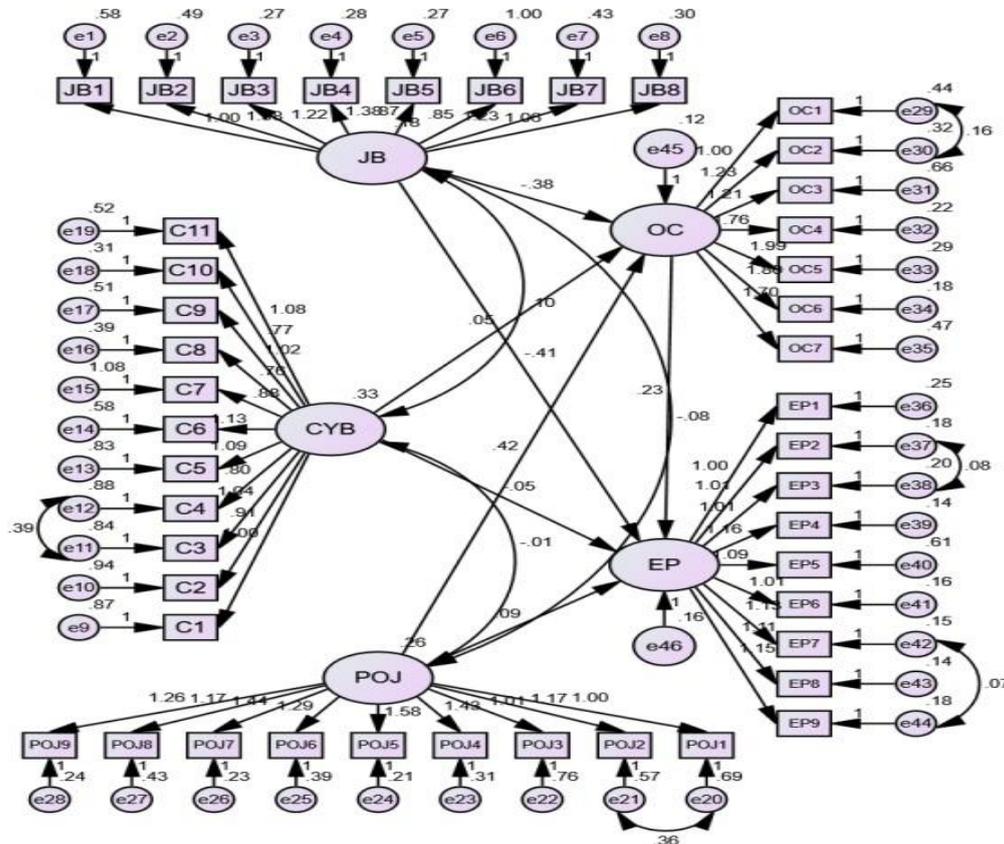
Table 2. Testing Direct Effect Hypotheses

Hypothesis	Estimate	C.R.	p-value	95% CI	Conclusion
H₁. Job Boredom → Employee Performance	-0.407	-5,235	0.000	[-0.559, -0.255]	Supported
H₂. Job Boredom → Organizational Commitment	-0.380	-5.517	0.000	[-0.515, -0.245]	Supported
H₃. Cyberloafing → Employee Performance	-0.046	-1.106	0.135	[-0.128, 0.036]	Unsupported
H₄. Cyberloafing → Organizational Commitment	0.05	1.324	0.093	[-0.024, 0.124]	Unsupported
H₅. Perceived Organizational Justice → Employee Performance	0.088	1.749	0.040	[-0.011, 0.187]	Supported

Hypothesis	Estimate	C.R.	p-value	95% CI	Conclusion
H6. Perceived Organizational Justice → Organizational Commitment	0.424	7.508	0.000	[0.313, 0.535]	Supported
H7. Organizational Commitment → Employee Performance	0.229	3.759	0.000	[0.110, 0.348]	Supported

Note: B = unstandardized regression weight; CI = normal-approximation 95% confidence interval.

Figure 1. Path Diagram of Hypothesis Testing Output Results

Source: Data Processing Results with Amos version 23

Table 3. Testing Indirect Effect Hypotheses

Hypothesis	Estimate	p-value	95% MC CI	Conclusion
H8. Job Boredom → Organizational Commitment → Employee Performance	-0.0870	0.00044042	[-0.148, -0.037]	Supported
H9. Cyberloafing → Organizational Commitment → Employee Performance	0.0114	0.21433714	[-0.005, 0.032]	Unsupported
H10. Perceived Organizational Justice → Organizational Commitment → Employee Performance	0.097	0.00076998	[0.044, 0.158]	Supported

Source: Results of Indirect Effect Hypothesis Testing with Sobel Test

For indirect effects (Table 3), H8 was supported because organizational commitment mediated the effect of job boredom on employee performance (Indirect effect = −0.0870, p = 0.00044042). The indirect coefficient is consistent with the product of the relevant paths (−0.380 × 0.229), indicating that increased boredom lowers commitment and subsequently reduces performance, while the remaining direct path suggests partial mediation (Clemons, 2020). H9 was not supported because organizational commitment did not mediate the effect of cyberloafing on employee performance (Indirect effect = 0.0114, p = 0.21433714). Although the indirect estimate is positive and aligns with the product of the paths (0.050 × 0.229), the effect is not statistically significant, indicating that cyberloafing does not translate into meaningful performance

differences through commitment. H10 was supported because organizational commitment mediated the effect of perceived organizational justice on employee performance (Indirect effect = 0.0970, p = 0.00076998). The indirect coefficient follows the expected pathway (0.424 × 0.229), showing that higher perceived justice strengthens commitment and, in turn, improves performance; the continued presence of a direct effect is consistent with partial mediation.

Interpretation of Key Findings

The findings indicate that job boredom is a meaningful work condition in this context (Putri & Warsindah, 2021). In routine logistics roles with limited task variety, boredom reflects a misalignment between employees' need for stimulation and the nature of daily work. Consistent with self-determination

theory, such misalignment may signal unmet needs for autonomy and competence, which can reduce intrinsic motivation and attentional engagement (Deci & Ryan, 2000). Over time, reduced attentional engagement can lower persistence on repetitive tasks and weaken vigilance in execution—capabilities that are critical in logistics operations where performance depends on accuracy and timing. This interpretation aligns with the observed negative association between job boredom and in-role performance.

The results also show that boredom is negatively associated with organizational commitment. When employees repeatedly experience boredom, they may be less likely to feel emotionally attached to the organization or to perceive their work as worth long-term investment. This can foster psychological withdrawal and lower willingness to sustain extra effort (Sadida & Fitria, 2019). The significant indirect effect through organizational commitment indicates that boredom undermines performance partly by weakening employees' attachment to the organization, while the remaining direct effect suggests additional performance-relevant mechanisms (e.g., attentional lapses) beyond commitment alone.

Perceived organizational justice emerged as a strong correlate of organizational commitment. From a social exchange perspective, fair outcomes, fair procedures, and respectful interpersonal treatment signal that the organization is trustworthy and that effort will be recognized appropriately (Blau, 1964; (Colquitt et al., 2001). In operational environments where tasks are interdependent and workloads fluctuate, fairness can also shape whether employees accept demanding assignments without resentment. In the present model, justice related to performance primarily through commitment: the indirect effect was positive and statistically significant, whereas the direct justice–performance path was small and not statistically significant once boredom, cyberloafing, and commitment were modeled simultaneously. This pattern suggests that, in this setting, fairness translates into performance mainly by strengthening employees' psychological bond with the organization.

Cyberloafing was not significantly associated with either organizational commitment or performance in this sample/model. One plausible interpretation is that the observed cyberloafing reflects brief and relatively low-intensity online checks that occur between tasks (i.e., "minor" cyberloafing), which may function as micro-breaks rather than sustained disengagement. Importantly, the cyberloafing measure captures frequency but not duration, intensity, or motives; therefore, the study cannot distinguish recovery-oriented micro-breaks from more serious forms of cyberloafing. This measurement scope provides a plausible explanation for the null associations and underscores the likelihood of boundary conditions (e.g., workload intensity, monitoring, autonomy) that determine when cyberloafing becomes harmful versus neutral (Henle, 2024).

Overall, the results clarify organizational commitment as a central pathway linking workplace experiences to performance (Polls, 2022). Job boredom and perceived organizational justice—conditions that shape employees' evaluation of the job and the organization—were meaningfully associated with commitment, which in turn was associated with performance. In contrast, cyberloafing, measured broadly as frequency of non-work internet use, showed limited explanatory power for commitment or performance in this operational context.

Comparison with Previous Studies

The negative association between job boredom and performance is consistent with prior research linking boredom to poorer work outcomes in monotonous jobs (Avcı & Çetin,

2023, Wihler et al., 2022). The negative boredom–commitment association also aligns with work describing boredom as a condition that encourages withdrawal and reduces attachment to the organization (Reijseger et al., 2013). The current study extends this evidence to a logistics setting and to a Generation Y workforce in Indonesia, where repetitive routines can intensify boredom responses.

The strong positive justice–commitment association is consistent with organizational justice scholarship and meta-analytic evidence showing that fairness perceptions relate robustly to attitudinal outcomes, including commitment-related constructs (Colquitt et al., 2001). The magnitude observed here may reflect contextual amplification in logistics environments, where coordination and workload interdependence make fairness signals especially consequential for employees' willingness to remain psychologically invested.

The non-significant cyberloafing paths are compatible with research portraying cyberloafing effects as context dependent and potentially neutral when online activity occurs as brief micro-breaks under operational constraints (Andel et al., 2019; Henle, 2024). The result is also broadly consistent with Turnip et al. (2025), who reported weak or non-significant cyberloafing associations in an Indonesian logistics sample of Generation Z employees. Taken together, these findings suggest that, in Indonesian logistics operations, boredom and fairness may be more reliable predictors of commitment and performance than cyberloafing frequency measured broadly (Cruz-Santiago et al., 2020).

Limitations and Cautions

Several limitations should be acknowledged. First, the cross-sectional design restricts causal interpretation; the results indicate associations rather than definitive causal effects. Second, the study relies on self-reported survey data, which can introduce common method variance and social desirability bias, particularly for cyberloafing and self-rated performance. Third, the sample was drawn from eight logistics companies in Jakarta; generalizability to other regions, industries, or organizational contexts should be made cautiously (Susanto, 2023). Fourth, cyberloafing was measured as frequency of non-work online activity, without capturing duration, intensity, or motives; this limits the ability to test the withdrawal versus recovery interpretations directly.

Recommendations for Future Research

Future research should use longitudinal or time-lagged designs and incorporate supervisor-rated or objective performance indicators (e.g., productivity metrics, operational error rates) to strengthen causal inference and reduce common method bias (Story & Castanheira, 2019). Cyberloafing research would benefit from differentiating minor versus serious cyberloafing and measuring intensity (duration) and motives (recovery vs. avoidance) (Qamar et al., 2023). Testable boundary conditions include workload intensity, perceived monitoring, job autonomy, and normative climates regarding internet use (Baños et al., 2020). Finally, comparative designs that directly contrast Generation Y and Generation Z within the same sector would clarify whether cohort differences moderate boredom, justice, and cyberloafing pathways to commitment and performance.

Conclusion

This study examined the relationships among job boredom, cyberloafing, and perceived organizational justice and Generation Y (Millennial) employee performance in Indonesia's logistics sector, with organizational commitment as a mediating mechanism (Sivapragasam & Raya, 2018). In

this sample of non-managerial employees from eight logistics firms in Jakarta, job boredom was negatively associated with commitment and performance, perceived organizational justice was positively associated with commitment and indirectly related to performance through commitment, and cyberloafing frequency was not significantly associated with either commitment or performance in the tested model (Raza et al., 2021).

From a theoretical standpoint, the findings support the view that boredom operates as an indicator of unmet psychological needs in monotonous operational work, consistent with self-determination theory, and that justice functions as a reciprocal signal that strengthens commitment, consistent with social exchange theory. Importantly, the study clarifies that organizational commitment is a more consistent explanatory pathway linking workplace experience to performance than cyberloafing frequency in this operational context.

From a managerial standpoint, the results suggest that logistics firms seeking to improve Millennial employee performance should prioritize job design practices that reduce boredom (e.g., task rotation, job enrichment, opportunities for skill use) and fairness-enhancing practices (e.g., transparent workload allocation, consistent procedures, respectful communication) (Al Samman & Mohammed, 2021). Because the study is cross-sectional and performance is self-reported, these implications should be interpreted as suggestive rather than as evidence of causal interventions (Aboramadan & Kundi, 2020). In addition, the non-significant cyberloafing paths should not be interpreted as proof of "no harm"; instead, they indicate that this study did not detect a direct association between cyberloafing frequency and performance or commitment once boredom and justice were considered. Future longitudinal or experimental research is needed to test the performance impact of specific internet-use policies (Tuncer, 2019).

Overall, the study contributes contextual validation and boundary specification for established organizational behavior theories in an Indonesian logistics setting, and it complements recent Generation Z evidence by demonstrating that, for Generation Y employees, boredom and fairness are more informative predictors of commitment and performance than cyberloafing measured broadly as non-work internet use frequency (Marinakou & Giousmpasoglou, 2019).

Author contributions

The author conceived and designed the study, developed the research model and instrument, collected the data, conducted the data analysis, interpreted the findings, and wrote and revised the manuscript.

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Conflict of interest

The author declares no conflicts of interest.

References

Aboramadan, M., & Kundi, Y. M. (2020). Does transformational leadership better predict work-related outcomes than transactional leadership in the NPO context? Evidence from Italy. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *31*(6), 1254–1267.

Al Samman, A. M., & Mohammed, A. T. I. (2021). The mediating role of job satisfaction and affective commitment in the relationship between internal marketing practices and customer orientation. *International Journal of Organizational Analysis*, *29*(4), 847–872.

Ali, H., & Purwandi, L. (2016). *Indonesia 2020, The Urban Middle Class Millenials*. Alvara Research Center.

Andel, S. A., Kessler, S. R., Pindek, S., Kleinman, G., & Spector, P. E. (2019). Is cyberloafing more complex than we originally thought? Cyberloafing as a coping response to workplace aggression exposure. *Computers in Human Behavior*, *101*, 124–130. https://doi.org/10.1016/j.chb.2019.07.013

Avcı, A., & Çetin, M. (2023). Is it because of boredom or workload? A multilevel investigation of the effects of workload and job boredom on daily work outcomes. *OPUS Journal of Society Research*, *20*(53), 426–437. https://doi.org/10.26466/opusjsr.1240276.

Baños, R., Fuentesal, J., Conte, L., Ortiz-Camacho, M. D. M., & Zamarripa, J. (2020). Satisfaction, enjoyment and boredom with physical education as mediator between autonomy support and academic performance in physical education. *International Journal of Environmental Research and Public Health*, *17*(23), 8898. https://doi.org/10.3390/ijerph17238898

Blanchard, A. L., & Henle, C. A. (2008). Correlates of different forms of cyberloafing: The role of norms and external locus of control. *Computers in Human Behavior*, *24*(3), 1067–1084. https://doi.org/10.1016/j.chb.2007.03.008.

Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). Routledge.

Clemons, J. (2020). *Investigating work engagement and affective commitment through a multi-dimensional work underload scale*.

Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, *86*(3), 425–445. https://doi.org/10.1037/0021-9010.86.3.425

Cruz-Santiago, J. M., Vélez-Vega, A., & Vélez-Alvarado, R. (2020). The predictors of job burnout on job boredom in a sample of workers in the banking industry of Puerto Rico. *Informes Psicológicos*, *20*(1), 167–181. https://doi.org/10.18566/infpsic.v20n1a11

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Dimock, M. (2019). Defining generations: Where Millennials end and Generation Z begins. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50.

Guzeller, C. O. , & Celiker, N. (2020). Examining the relationship between organizational commitment and turnover intention via a meta-analysis. *International Journal of Culture, Tourism and Hospitality Research*, *14*(1), 102–120.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson.

Henle, C. A. (2024). Shifting the literature from who and when to why: Identifying motives driving employees' choice to cyberloaf. *Applied Psychology*, *73*(1), 495–501. https://doi.org/10.1111/apps.12470

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1–55.

Hyder, S., Malik, M. I., Hussain, S., Tasneem, M., Kaleem, M., & Saqib, A. (2022). Organizational justice and employee in-role performance nexus: A dual theory perspective. *Cogent Business and Management*, *9*(1), 1–13. https://doi.org/10.1080/23311975.2022.2124602

Indonesian Internet Service Providers Association. (2024). https://survei.apjii.or.id/survei/group/9

Jehanzeb, K., & Mohanty, J. (2020). The mediating role of organizational commitment between organizational justice and organizational citizenship behavior: Power distance as moderator. *Personnel Review*, *49*(2), 445–468.

Kamila, M. N., & Muafi, M. (2023). The influence of job stress and job boredom on employee performance mediated by cyberloafing behavior: Evidence in Indonesia. *International Journal of Research in Business & Social Science*, *12*(1).

Kim, S. K., & Jeong, Y. (2021). Developing the healthy and competitive organization in the sports environment: Focused on the relationships between organizational justice, empowerment and job performance. *International Journal of Environmental Research and Public Health*, *18*(17). https://doi.org/10.3390/ijerph18179142

Kim, Y., Jeong, S. S., Yiu, D. W., & Moon, J. (2021). Frequent CEO turnover and firm performance: The resilience effect of workforce diversity. *Journal of Business Ethics*, *173*(1), 185–203.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.).

Lee, S. H., Jung, S., & Ha-Brookshire, J. (2023). We are watching you": Investigation of consumer–employee perception gaps and the employee expectations–employer performance gaps. *Fashion and Textiles*, *10*(1). https://doi.org/10.1186/s40691-023-00353-9

Lim, V. K. (2002). The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *23*(5), 675–694. https://doi.org/10.1002/job.161.

Lyons, S., & Kuron, L. (2014). Generational Differences in the Workplace: A Review of the Evidence and Directions for Future Research. *Journal of Organizational Behavior*, *35*, 139–157. https://doi.org/10.1002/job.1913

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, *39*(1), 99–128.

Marinakou, E., & Giousmpasoglou, C. (2019). Talent management and retention strategies in luxury hotels: evidence from four countries. *International Journal of Contemporary Hospitality Management*, *31*(10), 3855–3878.

Mohammad, J., Quoquab, F., Halimah, S., & Thurasamy, R. (2019). Workplace internet leisure and employees' productivity: The mediating role of employee satisfaction. *Internet Research*, *29*(4), 725–748. https://doi.org/10.1108/IntR-05-2017-0191

Myers, K. K., & Sadaghiani, K. (2010). Millennials in the workplace: A communication perspective on millennials' organizational relationships and performance. *Journal of Business and Psychology*, *25*(2), 225–238. https://doi.org/10.1007/s10869-010-9172-7

Ng, E. S. W., Schweitzer, L., & Lyons, S. T. (2010). New generation, great expectations: A field study of the millennial generation. *Journal of Business and Psychology*, *25*(2), 281–292. https://doi.org/10.1007/s10869-010-9159-4

Nyathi, M., & Kekwaletswe, R. (2023). Realizing employee and organizational performance gains through electronic human resource management use in developing countries. *African Journal of Economic and Management Studies*, *14*(1), 121–134. https://doi.org/10.1108/AJEMS-11-2021-0489

Polls, G. (2022). *State of the Global Workplace: 2022 Report*.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891.

Purba, B. (2019). Analisis Pengaruh Kesejahteraan Karyawan terhadap Semangat Kerja Karyawan pada PT. Asuransi Jiwasraya (Persero) Medan. *Jurnal Manajemen Dan Bisnis*, *18*(2), 150–162.

Putri, T., & Warsindah, L. (2021). Pengaruh Green Human Resources Management Terhadap Job Satisfaction Melalui Green Work Engagement, Dan Meaningful Work Pada Industri Manufaktur di Jakarta. *Metrik Serial Humaniora dan Sains*, *2*(2), 77–83.

Qamar, F., Afshan, G., & Rana, S. A. (2023). Sustainable HRM and well-being: systematic review and future research agenda. *Management Review Quarterly*, 1–51.

Raza, S. A., Shaukat, S., & Ahmed, W. (2021). Green HRM and employee attitude: The role of perceived organisational support. *Journal of Business Research*, *135*, 629–634. https://doi.org/10.1016/j.jbusres.2021.02.009

Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management Reviews*, *15*(1), 1–14. https://doi.org/10.1111/j.1468-2370.2012.00345.

Research, B. (2024). *Age range by generation*. https://www.beresfordresearch.com/age-range-by-generation.

Sadida, N., & Fitria, N. (2019). Analisis Kesejahteraan Psikologis Karyawan dan Kualitas Interaksi Bawahan Berdasarkan Kepribadian Atasan. *Humanitas*, *15*(1).

Senevirathne, Y. Y., & Kularathne, H. M. R. (2021). Does cyberloafing adversely affect employee performance? *Asian Journal of Social Science and Management Technology*, *3*(2), 1–6.

Sharma, K., & Agarwal, F. (2021). Impact of green HRM practices on organisational commitment and job satisfaction. *Wesleyan Journal of Research*, *13*(69), 21–28.

Silva, P., Mota, J., & Moreira, A. C. (2023). Budget participation and employee performance in real estate companies: The mediating role of budget goal commitment, trust and job satisfaction. *Baltic Journal of Management*, *18*(2), 226–241.

Sivapragasam, P., & Raya, R. P. (2018). HRM and employee engagement link: Mediating role of employee well-being. *Global Business Review*, *19*(1), 147–161.

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology*, *12*(3), 204–221. https://doi.org/10.1037/1076-8998.12.3.204

Story, J. S. P., & Castanheira, F. (2019). Corporate social responsibility and employee performance: Mediation role of job satisfaction and affective commitment. *Corporate Social Responsibility and Environmental Management*, *26*(6), 1361–1370. https://doi.org/10.1002/csr.1752

Susanto, A. (2023). The Role of Green Human Resources Management (GHRM) on Job Satisfaction and Green Work Engagement (GWE): an Empirical Study on Manufacturing Industries. *Journal of Economics, Finance, and Management Studies*, *6*(03), 1123–1131.

Syed, M. W., Song, H., & Junaid, M. (2025). Impact of sustainable practices on knowledge sharing, relationship commitment, and sustainable performance. *Environment, Development and Sustainability*, *27*(10), 24927–24961.

Tang, G., Chen, Y., Jiang, Y., Paille, P., & Jia, J. (2018). Green human resource management practices: Scale development and validity. *Asia Pacific Journal of Human Resources*, *56*(1), 31–55.

Tuncer, H. B. (2019). *The impact of hrm practices on employee well-being, job satisfaction and individual work performance*.

Turnip, D., Usman, B., & Aseanty, D. (2025). The effect of job boredom, cyberloafing, and perceived organizational justice on employee performance of Generation Z, with mediating role of organizational commitment, in the Indonesia logistics sector. *International Journal of Humanities Education and Social Sciences*, *4*(6). https://doi.org/10.55227/ijhess.v4i6.1763

Wihler, A., Hülsheger, U. R., Reb, J., Menges, J. I., K., N., & Sundaram, D. M. K. (2022). It's so boring or is it? Examining the role of mindfulness for work performance and attitudes in monotonous jobs. *Journal of Occupational and Organizational Psychology*, *95*(1), 131–154. https://doi.org/10.1111/joop.12370Priya