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Career Growth, Lean Leadership, and Turnover Intention: The Mediating Role of Employee Engagement Among Generation Z in the FMCG Industry

Yoan Nita Estera[1], Yenny Maya Dora[2]
[1]Universitas Widyatama, Bandung, Indonesia, estera.3520@widyatama.ac.id
[2]Universitas Widyatama, Bandung, Indonesia, yenny.maya@widyatama.ac.id

Corresponding Author: estera.3520@widyatama.ac.id[1]

Abstract: High turnover among Generation Z employees has become a critical challenge for the fast-moving consumer goods (FMCG) industry, disrupting operational continuity and increasing organizational costs. Although career growth and leadership are recognized determinants of turnover intention, limited evidence explains how career growth and human-centered lean leadership reduce turnover intention through employee engagement among Generation Z employees in the FMCG industry. Grounded primarily in Social Exchange Theory and the Job Demands–Resources framework, this study develops and tests an engagement-based retention model. Data from 344 Generation Z production employees at an FMCG company in West Java, Indonesia, were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that career growth and lean leadership significantly enhance employee engagement and reduce turnover intention, with engagement serving as the principal mechanism linking both resources to retention; for lean leadership, the indirect effect exceeds the direct effect. The proposed model demonstrates strong explanatory power for both employee engagement and turnover intention. Importance–Performance Map Analysis (IPMA) identifies career growth, particularly promotion speed and remuneration growth, as the highest priority for improvement. Theoretically, this study contributes to the retention literature by integrating career growth, human-centered lean leadership, and employee engagement into a comprehensive retention model, while offering actionable insights for transparent career systems and human-centered leadership practices.

Keywords: Career Growth, Lean Leadership, Employee Engagement, Turnover Intention, Generation Z.

INTRODUCTION

The fast-moving consumer goods (FMCG) industry operates under intense efficiency pressures, leading many organizations to adopt lean principles derived from the Toyota Production System (Said et al., 2024; Liker, 2021). However, lean implementation depends not only on efficient processes but also on employees who sustain continuous improvement, making employee retention a strategic source of competitive advantage (Salvadorinho et al.,

2024). High employee turnover reduces operational performance by increasing recruitment, replacement, and training costs (Bothma & Roodt, 2013; Zhang & Long, 2024). This challenge has become more pronounced with the growing presence of Generation Z (born 1997–2012), who expect clear career opportunities, meaningful work, and supportive leadership (Francis & Hoefel, 2018).

Recent evidence consistently indicates that Generation Z has a higher propensity to leave than previous generations. Deloitte (2022, 2025) reported that roughly 40% intended to change jobs, Gallup (2026) noted declining engagement, and Randstad (2026) found Generation Z had the highest attrition of all generations. In Indonesia, where Generation Z comprises 27.94% of the population (BPS, 2021), Nami and Prianthara (2024) reported a 68% turnover-intention probability. Because replacement costs may reach 30–250% of annual salary (Said et al., 2024), high turnover creates substantial organizational waste and disrupts value-stream continuity (Liker, 2021).

This paradox is evident at an FMCG plant in Majalengka, West Java, where Generation Z represents approximately 62% of the workforce, and turnover increased from 3.64% in 2023 to 4.56% in 2025, exceeding the company's 2% internal threshold (Company HR Report, 2025). Exit interviews identify limited career growth as the primary reason for leaving despite structured career-development programs and gemba-based lean leadership already in place. This reveals a gap between what organizations formally provide and what employees actually perceive. Whereas career-development programs represent the organization's structured investment, career growth reflects employees' subjective perception of real advancement (Weng & Hu, 2009) - a distinction that is particularly consequential for Generation Z employees.

Research Gap

Prior studies have largely examined these variables in isolation (Weng & McElroy, 2012; Wang et al., 2024; Atiku & Van Wyk, 2024; Gašić & Berber, 2023), and integrative retention models remain scarce (Dwidienawati et al., 2025). More importantly, the literature reveals three unresolved inconsistencies. First, leadership's effect on turnover is contested; some report a direct effect (Alkarabsheh et al., 2022), while others find it operates only indirectly through psychological mechanisms (Gaan & Shin, 2022); this is untested for human-centered lean leadership (van Dun & Uittenbogaard, 2017). Second, career growth's direct effect on turnover diverges, being strong in some studies (Weng & McElroy, 2012) yet weak and attitudinally mediated in others (Al Balushi et al., 2022). Third, prior research relies mainly on commitment and job satisfaction as mediators (Anh Do et al., 2023), leaving the mediating role of employee engagement largely underexplored, particularly among Generation Z employees in the Indonesian FMCG industry (Novanantha & Febriansyah, 2025). This study resolves these inconsistencies within a single engagement-based model in the Indonesian FMCG context.

Theoretical Foundation

The proposed model is primarily grounded in Social Exchange Theory (SET) and the Job Demands–Resources (JD–R) framework, complemented by Organizational Support Theory (OST) and Job Embeddedness Theory (JET), forming an integrated theoretical framework that explains how career growth and human-centered lean leadership may reduce turnover intention through employee engagement (Blau, 1964; Eisenberger et al., 1986; Mitchell et al., 2001; Bakker & Demerouti, 2017). OST specifies that career growth and lean leadership practices such as gemba, coaching, and respect for people are perceived as organizational support, which is theorized to activate a felt obligation to reciprocate (Eisenberger et al., 1986; Dombrowski & Mielke, 2013; Aij & Teunissen, 2017). This reciprocation operates through two complementary pathways: SET explains why employees reciprocate organizational support

through positive attitudes (Blau, 1964; Cropanzano & Mitchell, 2005; Jun & Eckardt, 2025), while JD–R explains how these job resources convert into work engagement (Bakker & Demerouti, 2017; Mazzetti & Schaufeli, 2022.

Recent HRM research suggests that development opportunities and supportive organizational practices strengthen employee engagement when employees perceive them as credible signals of organizational care and investment (Saks, 2022; Dachner et al., 2021). Engagement, in turn, serves as an important psychological mechanism through which organizational resources influence turnover intention (Cave et al., 2023). JET then translates engagement into retention by strengthening organizational embeddedness - deepening person-organization fit, reinforcing relational links, and amplifying the perceived sacrifice of leaving (Mitchell et al., 2001; Hom et al., 2017). In sum, support is perceived (OST), reciprocated through attitudinal and motivational mechanisms (SET, JD–R), and consolidated into lower turnover intention through embeddedness (JET), providing a coherent framework for retaining Generation Z talent (Eisenberger et al., 1986; Cropanzano & Mitchell, 2005; Bakker & Demerouti, 2017; Hom et al., 2017).

Contribution, Hypotheses, and Objective

Building on the integrated framework above, this section develops the hypotheses linking career growth and human-centered lean leadership to employee engagement and turnover intention among Generation Z.

Employees perceive career growth and supportive leadership as signals that the organization values them (OST; Eisenberger et al., 1986), creating an obligation to reciprocate through positive attitudes (SET; Blau, 1964). JD–R explains the mechanism: career growth and human-centered lean leadership -gemba presence, coaching, empowerment, and respect for people - act as motivational resources that fuel vigor, dedication, and absorption, thereby strengthening engagement (Bakker & Demerouti, 2017; Dombrowski & Mielke, 2013; van Dun & Uittenbogaard, 2017). This is especially salient for Generation Z, who prioritize advancement, meaningful work, and supportive leadership (Francis & Hoefel, 2018)).

These resources also reduce turnover intention. Job Embeddedness Theory holds that they strengthen person–organization fit and raise the perceived sacrifice of leaving, lowering turnover directly (Mitchell et al., 2001; Hom et al., 2017), while engaged employees are less prone to the withdrawal that precedes voluntary turnover (Otoo, 2024; Osta, 2025). Employee engagement is therefore expected to be the primary mechanism translating these resources into retention. Based on these theoretical arguments and supported by previous empirical findings, the following hypotheses are proposed:

H1: Career growth positively influences employee engagement.
H2: Lean leadership positively influences employee engagement.
H3: Career growth negatively influences turnover intention.
H4: Lean leadership negatively influences turnover intention.
H5: Employee engagement negatively influences turnover intention.
H6: Employee engagement mediates the relationship between career growth and turnover intention.
H7: Employee engagement mediates the relationship between lean leadership and turnover intention.

This study makes three contributions. Theoretically, it offers an integrated retention model that positions employee engagement as the central mechanism linking career growth and human-centered lean leadership to lower turnover intention. Empirically, it examines these relationships among Generation Z employees in the underexplored Indonesian FMCG industry.

Methodologically, it employs PLS-SEM with the Zhao et al. (2010) mediation typology and Importance–Performance Map Analysis (IPMA) to identify managerial priorities.

METHOD

This study employed a quantitative descriptive-verificative design and analyzed the data using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4.1.1.8, an approach highly suited for complex, prediction-oriented models (Hair et al., 2022). The population comprised Generation Z production employees including operators, inspectors, technicians, and foremen at the Majalengka Plant of an FMCG company in West Java. Generation Z employees accounted for approximately 62% of the plant workforce, or 2,464 of 3,733 employees. A non-probability purposive sampling technique was used based on five inclusion criteria: Generation Z (born 1997–2012, aged 18–29 years), a minimum tenure of six months, working actively within production roles, permanent or contract status, and willingness to participate (Sekaran & Bougie, 2020). The minimum sample size was estimated using the inverse square root method (Kock & Hadaya, 2018; Hair et al., 2022). Based on an expected minimum path coefficient of 0.20, a significance level of 5%, and statistical power of 80%, at least 155 respondents were required. Data were collected through an anonymous online questionnaire between May and June 2026, yielding 344 valid responses, which is well above the recommended minimum.

All constructs were measured on a five-point Likert scale, with items adapted from established and validated instruments. Career growth was measured using the Career Growth Scale (Weng & Hu, 2009); lean leadership using the Lean Leadership Scale (Mulders, 2016) based on Dombrowski and Mielke (2013); employee engagement using the UWES-9 (Schaufeli et al., 2006); and turnover intention using the TIS-6 (Bothma & Roodt, 2013), rooted in Mobley's (1977) turnover-process model and modeled as a unidimensional reflective construct (Hom & Griffeth, 1991). Adaptation involved contextualizing items to the FMCG production setting, applying forward–backward translation to ensure semantic equivalence, and conducting a content-validity review. Before the main survey, the instrument was pilot-tested with 30 respondents sharing similar characteristics with the target population, demonstrating acceptable validity (Pearson's $r > 0.361$) and reliability (Cronbach's $\alpha > 0.70$) (Sekaran & Bougie, 2020). Table 1 presents the operationalization of the study variables.

Table 1. Operationalization of Variables and Instruments

Variable	Dimension	Items	Source
Career Growth (X_1)	Career goal progress; professional ability development; promotion speed; remuneration growth	15	Weng & Hu (2009)
Lean Leadership (X_2)	Improvement culture; self-development; qualification; gemba; hoshin kanri	15	Mulders (2016)
Employee Engagement (Z)	Vigor; dedication; absorption	9	Schaufeli et al. (2006)
Turnover Intention (Y)	Thinking of quitting; intention to search; intention to quit	6	Bothma & Roodt (2013)

Source : Weng & Hu (2009); Mulders (2016); Schaufeli et al. (2006); Bothma & Roodt (2013)

Data were analyzed in two stages. The first stage evaluated the measurement model through convergent validity (AVE > 0.50), reliability (Cronbach's α, rho_c, and rho_A > 0.70), and discriminant validity (HTMT < 0.90). The second stage evaluated the structural model through collinearity (VIF < 5), model explanatory power (R^2), effect size (f^2), predictive relevance ($Q^2 > 0$), and path coefficients. Statistical significance was tested using a bootstrapping procedure with 5,000 subsamples ($t > 1.96$; $p < 0.05$). Next, mediation effects were classified based on the typology of Zhao et al. (2010). Model suitability was evaluated

using Standardized Root Mean Square Residual (SRMR < 0.08), while Importance–Performance Map Analysis (IPMA) was used to identify improvement priorities from a managerial perspective (Ringle & Sarstedt, 2016).

Because the study relied on self-reported data collected from a single source, common method bias (CMB) was minimized through procedural remedies, including respondent anonymity, the use of validated measurement scales, and carefully worded, non-leading questionnaire items (Podsakoff et al., 2003). Statistically, Kock's (2015) full-collinearity assessment showed that all VIF values were below the recommended threshold of 3.3, indicating that CMB was unlikely to threaten the validity of the findings. Furthermore, all inner VIF values were below the threshold of 5, confirming the absence of multicollinearity among the predictor constructs (Hair et al., 2022).

RESULTS AND DISCUSSION

Respondent Characteristics

The study involved 344 respondents. Most were male (75.0%, 258), aged 18–25 years (55.2%, 190), senior-high educated (94.2%, 324), and on contract status (83.4%, 287). By tenure, 29.9% had worked for less than one year and 28.8% for one to three years. This pattern indicates high turnover in the early career phase, which is theoretically the most critical stage (Hom et al., 2017). The profile reflects the shift-based Generation Z production workforce that is typical of Indonesian FMCG manufacturing. The respondent characteristics are summarized in Table 2.

Table 2. Respondent Profile (n = 344)

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	258	75.0
	Female	86	25.0
Age	18 - 25 years	190	55.2
	26 - 29 years	154	44.8
Tenure	< 1 year	103	29.9
	1–3 years	99	28.8
	3–5 years	45	13.1
	> 5 years	97	28.2
Education	Senior high (SMA/SMK)	324	94.2
	Diploma (D1/D3)	1	0.3
	Bachelor (D4/S1)	19	5.5
Status	Contract	287	83.4
	Permanent	57	16.6

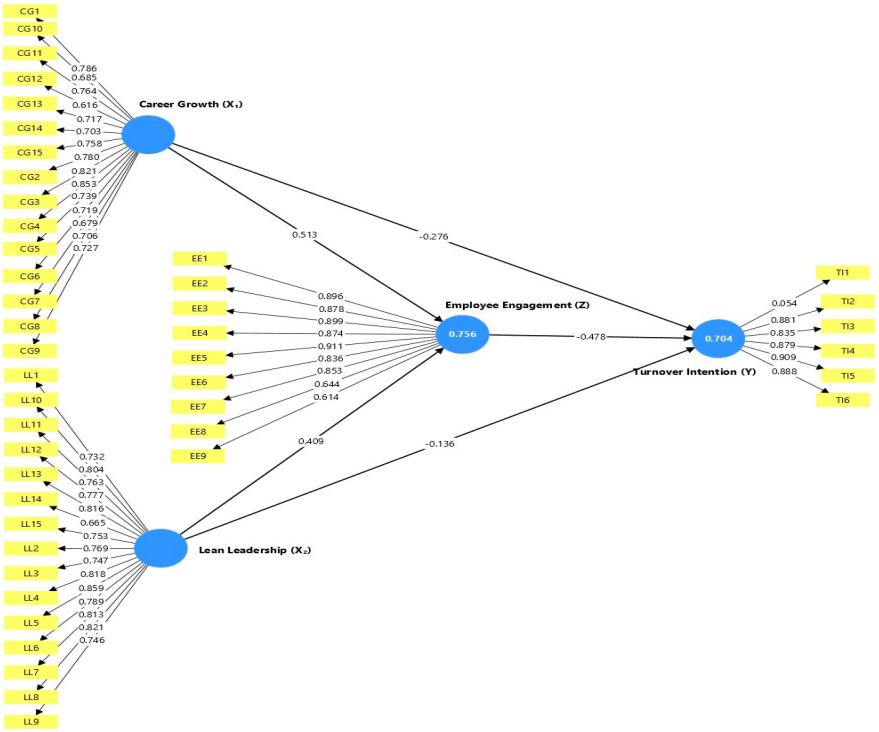
Source: primary data processed by the authors, (2026)

Descriptive Statistical Analysis

Descriptive analysis shows that employee engagement obtained the highest mean (3.948, high), followed by lean leadership (3.859, high) and career growth (3.638, high), while turnover intention was low (2.333). However, career growth reveals a perception gap. The professional ability development (PAD) dimension was the strongest (CG6 = 4.273), whereas promotion speed (3.329) and remuneration growth (3.356) were the weaknesses, with CG12 as the lowest item (3.151). This points to a developmental paradox: employees are strong in learning but slow in career realization.

In this study, the data were processed using SmartPLS through two stages: the measurement model (outer model) and the structural model (inner model). The variables are Career Growth (X_1), Lean Leadership (X_2), Employee Engagement (Z), and Turnover Intention (Y). After the structural model was specified, each measurement item (indicator) was linked to

its corresponding variable for testing in SmartPLS. The research model structure that explains the relationships among the variables is presented in Figure 1.



Source: primary data processed with SmartPLS 4 (2026)

Figure 1. PLS Structural Model

Measurement Model (Outer Model)

Convergent Validity

The outer-model results show that the indicators of career growth, lean leadership, employee engagement, and turnover intention meet the criteria for convergent validity and reliability. All constructs have an AVE above 0.50 (0.546–0.772) and Composite Reliability above 0.70 (0.944–0.959), as shown in Table 3. The instruments therefore represent the measured constructs validly and reliably (Hair et al., 2022). Turnover intention obtained the highest AVE (0.772), while career growth, a 15-item multidimensional construct, obtained the lowest (0.546), which still met the ≥0.50 threshold (Hair et al., 2022).

Table 3. Convergent Validity (AVE) Results

Construct	AVE	Criterion	Decision
Career Growth (X_1)	0.546	≥ 0.50	Valid
Lean Leadership (X_2)	0.688	≥ 0.50	Valid
Employee Engagement (Z)	0.608	≥ 0.50	Valid
Turnover Intention (Y)	0.772	≥ 0.50	Valid

Source: primary data processed with SmartPLS 4 (2026)

Construct Reliability

Construct reliability measures the internal consistency of indicators in measuring a latent construct, where values above 0.70 indicate that the measurement is reliable (Hair et al., 2022). As shown in Table 4, all constructs demonstrate high reliability. Cronbach's alpha ranges from 0.926 to 0.953, composite reliability from 0.944 to 0.959, and rho_A from 0.929 to 0.955. All values are well above the 0.70 threshold. rho_A was also reported because it provides a consistent estimate of construct reliability. Unlike Cronbach's alpha, which often

underestimates reliability, and CR, which may overestimate it, rho_A offers a more balanced assessment of internal consistency (Dijkstra & Henseler, 2015).

Table 4. Construct Reliability Results

Variable	Cronbach's Alpha	CR (rho_c)	rho_A	Criterion	Decision
Career Growth (X_1)	0.940	0.947	0.942	≥ 0.70	Reliable
Lean Leadership (X_2)	0.953	0.959	0.955	≥ 0.70	Reliable
Employee Engagement (Z)	0.941	0.951	0.951	≥ 0.70	Reliable
Turnover Intention (Y)	0.926	0.944	0.929	≥ 0.70	Reliable

Source: primary data processed with SmartPLS 4 (2026)

Discriminant Validity

Discriminant validity was confirmed through cross-loading. This criterion is met when an indicator loads more strongly on the construct it measures than on other constructs. Each indicator loaded most strongly on its own construct Career Growth (0.616–0.853), Employee Engagement (0.614–0.911), Lean Leadership (0.665–0.859), and Turnover Intention (0.835–0.909) and consistently exceeded its cross-loadings on other constructs.

Discriminant validity is further evaluated using the Heterotrait-Monotrait Ratio (HTMT), which is the most reliable criterion in PLS-SEM (Henseler et al., 2015). All HTMT values fall below the 0.90 threshold (Hair et al., 2022) and range from 0.777 (Lean Leadership–Turnover Intention) to 0.877 (Employee Engagement–Career Growth). These results confirm that the four constructs are empirically distinct and satisfy discriminant validity.

Table 5. Heterotrait-Monotrait Ratio (HTMT)

Construct Pair	HTMT	Decision
Employee Engagement ↔ Career Growth	0.877	Valid
Turnover Intention ↔ Employee Engagement	0.871	Valid
Lean Leadership ↔ Employee Engagement	0.845	Valid
Turnover Intention ↔ Career Growth	0.829	Valid
Lean Leadership ↔ Career Growth	0.815	Valid
Turnover Intention ↔ Lean Leadership	0.777	Valid

Source: primary data processed with SmartPLS 4 (2026)

Structural Model (Inner Model)

Structural collinearity was acceptable, with all inner VIF values ranging from 2.488 to 4.093, below the threshold of 5 (Hair et al., 2022). The model is therefore free from multicollinearity, and the path coefficients can be interpreted validly. Table 6 summarizes the explanatory power, predictive relevance, and effect sizes.

Table 6. R-Square, Q^2, and Selected Effect Sizes (f^2)

Parameter	Value	Category
R^2 Employee Engagement	0.756	Strong
R^2 Turnover Intention	0.704	Strong
Q^2 Employee Engagement	0.487	Strong predictive relevance
Q^2 Turnover Intention	0.134	Moderate predictive relevance
f^2 Career Growth → Engagement	0.433	Large
f^2 Lean Leadership → Engagement	0.275	Medium
f^2 Engagement → Turnover Intention	0.188	Medium

Parameter	Value	Category
f^2 Career Growth → Turnover Intention	0.072	Small
f^2 Lean Leadership → Turnover Intention	0.020	Small

Source: primary data processed with SmartPLS 4 (2026)

Explanatory and Predictive (R^2 and Q^2)

Beyond statistical significance, the model demonstrates strong explanatory and predictive quality. With an R^2 of 0.756, career growth and lean leadership explain 75.6% of the variance in employee engagement, exceeding the 0.75 benchmark for substantial explanatory power (Hair et al., 2022). Within the proposed model, career growth and lean leadership jointly explain a substantial proportion of the variance in employee engagement. The R^2 for turnover intention (0.704) shows that career growth, lean leadership, and employee engagement together explain 70.4% of its variance, again strong, with the remaining 29.6% attributable to factors beyond the model. Predictive relevance was assessed through the blindfolding-based Q^2 statistic: both values are positive, 0.487 for employee engagement (strong) and 0.134 for turnover intention (small-to-moderate). The lower value for turnover intention is theoretically reasonable, as employees' intention to leave is influenced by various personal, organizational, and labour-market factors beyond the model; a moderate level of predictive relevance is therefore both realistic and adequate. Overall, the strong R^2 values and positive Q^2 values confirm that the model is explanatorily powerful and demonstrates predictive relevance.

Effect Size (f^2)

The effect-size (f^2) analysis shows that the strongest relationships in the model are concentrated on the paths leading to employee engagement. Career growth has the largest effect on employee engagement ($f^2 = 0.433$), which makes it the principal determinant of work engagement. The effects of lean leadership on engagement ($f^2 = 0.275$) and of engagement on turnover intention ($f^2 = 0.188$) are medium. In contrast, the direct effects of career growth ($f^2 = 0.072$) and lean leadership ($f^2 = 0.020$) on turnover intention are small. The pattern indicates that employee engagement is an important transmission mechanism for both antecedents. This mechanism is particularly prominent for lean leadership, whose indirect effect exceeds its direct effect. The minimal direct effect of lean leadership further reinforces employee engagement as the key mechanism linking organizational resources to Generation Z retention.

Model Fit

Overall model fit was assessed using several indices (Table 7). The SRMR of 0.061 is below the 0.08 threshold, indicating good fit, while d_ULS (2.572) and d_G (1.476) fall within acceptable bounds (Henseler et al., 2016). The Goodness-of-Fit index of 0.475 exceeds the 0.36 cut-off for a strong model, and both Q^2 values are positive, which confirms predictive relevance. The NFI (0.806) is marginal relative to the 0.90 ideal, but this is common in PLS-SEM, where fit is judged on a combination of indices rather than a single measure (Hair et al., 2022). Overall, the model shows adequate-to-strong fit and is suitable for interpretation.

Table 7. Model Fit Indices

Index	Criterion	Value	Result
SRMR	< 0.08	0.061	Fit
d_ULS	< HI95%	2.572	Fit
d_G	< HI95%	1.476	Fit
NFI	> 0.90	0.806	Marginal
GoF	≥ 0.36 strong	0.475	Strong

Index	Criterion	Value	Result
Q^2 (Employee Engagement)	> 0	0.487	Strong
Q^2 (Turnover Intention)	> 0	0.134	Small-to-moderate

Source : primary data processed with SmartPLS 4 (2026)

Path Coefficients and Hypothesis Testing

Hypotheses were tested through bootstrapping with 5,000 subsamples, using a t-statistic > 1.96 and a p-value < 0.05 at the 5% significance level (Hair et al., 2022). As summarized in Table 8, all hypothesized direct paths are significant. Career growth has the largest positive effect on employee engagement (β = 0.513; t = 12.465), followed by lean leadership (β = 0.409; t = 9.652), indicating that better career growth and lean leadership practices raise engagement. Employee engagement is the strongest factor that lowers turnover intention (β = −0.477; t = 8.416), followed by career growth (β = −0.276; t = 4.592) and lean leadership (β = −0.136; t = 2.427; p = 0.015). These results support hypotheses H1 through H5.

The indirect-effect results show that employee engagement significantly mediates the relationship between career growth and turnover intention (β = −0.245; t = 7.165) and between lean leadership and turnover intention (β = −0.195; t = 6.070). Because the direct and indirect effects are both significant and point in the same direction, the mediation is classified as complementary partial mediation. Hypotheses H6 and H7 are therefore accepted. Notably, the indirect effect of lean leadership on turnover intention (β = −0.195) exceeds its direct effect (β = −0.136). This shows that lean leadership reduces the intention to leave mainly by strengthening employee engagement.

Table 8. Hypothesis Testing Results

H	Path	β	t-stat	p	Decision
H1	Career Growth → Employee Engagement	0.513	12.465	0.000	Accepted
H2	Lean Leadership → Employee Engagement	0.409	9.652	0.000	Accepted
H3	Career Growth → Turnover Intention	−0.276	4.592	0.000	Accepted
H4	Lean Leadership → Turnover Intention	−0.136	2.427	0.015	Accepted
H5	Employee Engagement→Turnover Intention	−0.477	8.416	0.000	Accepted
H6	CG → EE → Turnover Intention	−0.245	7.165	0.000	Accepted (partial)
H7	LL → EE → Turnover Intention	−0.195	6.070	0.000	Accepted (partial)

Source: primary data processed with SmartPLS 4 (2026)

Importance-Performance Map Analysis (IPMA)

IPMA translates the statistical results into managerial improvement priorities by mapping each construct on importance (total effect) and performance (a standardized 0–100 score) (Ringle & Sarstedt, 2016). With employee engagement as the target (Table 9), career growth shows the highest importance (total effect = 0.513) but the lowest performance (66.853). In contrast, lean leadership has lower importance (total effect = 0.409) but higher performance (71.558). This indicates that raising employee engagement is achieved more effectively by improving career growth, which has the largest effect and the most room for improvement.

Table 9. IPMA at Construct Level, Target: Employee Engagement

Construct	Total Effect	Performance
Career Growth	0.513	66.853
Lean Leadership	0.409	71.558

Source: primary data processed with SmartPLS 4 (2026)

With turnover intention as the target (Table 10), career growth again shows the highest importance, with a total effect of −0.521, followed by employee engagement (−0.477). However, career growth records the lowest performance (66.853), while employee engagement records the highest (73.581). This indicates that career growth is the most strategic factor for lowering turnover intention and the top managerial improvement priority. Improving its quality is expected to have the greatest impact on reducing the intention to leave.

Table 10. IPMA at Construct Level, Target: Turnover Intention

Construct	Total Effect	Performance
Career Growth	−0.521	66.853
Employee Engagement	−0.477	73.581
Lean Leadership	−0.331	71.558

Source: primary data processed with SmartPLS 4 (2026)

The lowest indicator-level performance scores were observed for items representing promotion speed and remuneration growth dimensions of career growth CG12 (53.779), CG9 (56.686), CG14 (58.212), and CG13 (58.358) while the strongest is found in professional ability development (CG6 = 81.831; CG7 = 81.686). This reveals a gap between already-strong competence development and still-low perceptions of career progress and reward growth. The pattern confirms that improving promotion speed, career-path clarity, and promotion fairness offers the greatest potential to raise engagement and reduce turnover intention among Generation Z.

Discussion

Career growth was the strongest determinant of employee engagement ($\beta = 0.513$; $f^2 = 0.433$), and the only relationship with a large effect size. Consistent with Social Exchange Theory and Organizational Support Theory, this finding suggests that perceived career growth signals organizational investment and encourages employees to reciprocate through higher levels of engagement (Eisenberger et al., 1986). Notably, career growth remained dominant predictor despite the relatively low IPMA performance of promotion speed and remuneration growth, suggesting that Generation Z employees may be motivated more by credible future career opportunities than by immediately realized career rewards. These findings extend Weng and Hu's (2009) conceptualization by highlighting the prospective signalling value of career growth and refine previous evidence from Indonesia (Safirah & Widigdo, 2025; Dwidienawati et al., 2025) by suggesting that its motivational value derives not only from achieved career outcomes but also from employees' perceptions of meaningful future career progression within the organization.

Lean leadership significantly enhanced employee engagement ($\beta = 0.409$; $f^2 = 0.275$), indicating that its role extends beyond operational performance. Consistent with the Job Demands–Resources framework, practices such as gemba presence, coaching, and respect for people function as relational job resources that support a more engaging work environment (van Dun & Uittenbogaard, 2017). From the perspective of Organizational Support Theory, these practices also signal organizational support that employees reciprocate through engagement (Eisenberger et al., 1986). This helps explain why lean leadership, traditionally examined as a driver of operational excellence (Aij & Teunissen, 2017; Bijl et al., 2019), also promotes engagement. Conceptually, this study extends the literature on lean leadership by showing that lean leadership functions not only as an operational capability but also as a human resource management mechanism that strengthens employee engagement and is therefore able to reduce turnover intention. Nevertheless, career growth exerted a stronger influence,

suggesting that supportive leadership enhances engagement but cannot fully substitute for clear career development opportunities among Generation Z employees.

Career growth directly reduced turnover intention (β = −0.276), though its small direct effect size (f^2 = 0.072) offers an important theoretical insight rather than signalling a weak relationship. From the perspective of Job Embeddedness Theory, career growth strengthens employees' attachment to the organization by raising the perceived value of future opportunities and reinforcing person–organization fit, thereby making departure more costly (Mitchell et al., 2001). Consistent with this, the stronger indirect effect through employee engagement indicates that career growth reduces turnover primarily by fostering a positive psychological connection with the organization rather than through a direct pathway alone. These findings extend Weng and McElroy (2012) and more recent evidence (Qassim, 2026) by identifying engagement as the key mechanism through which career growth translates into retention, underscoring that career opportunities lower turnover only when they are internalized as engagement.

The most theoretically consequential finding concerns lean leadership's direct effect on turnover intention, which was significant but the smallest in the model (β = −0.136; f^2 = 0.020). Importantly, its indirect effect through employee engagement (β = −0.195) exceeded its direct effect, indicating that human-centered lean leadership influences turnover intention primarily through engagement rather than through a direct pathway. Interpreted through Social Exchange Theory and Organizational Support Theory, supportive lean practices are perceived as signals of organizational support that employees reciprocate through engagement (Blau, 1964; Eisenberger et al., 1986), while the Job Demands-Resources framework explains how these relational resources deepen psychological attachment and reduce exit intentions (Bakker & Demerouti, 2017). This specifies rather than merely confirms the pattern Gaan and Shin (2022) reported for Generation Z. The study's pivotal contribution is thus to establish employee engagement not as a secondary mediator but as the central mechanism through which human-centered lean leadership retains Generation Z in a manufacturing context.

Employee engagement was the strongest predictor of lower turnover intention (β = −0.477; f^2 = 0.188), and both indirect effects were significant, indicating complementary partial mediation (CG→EE→TI: β= −0.245; LL→EE→TI: β = −0.195). Critically, for lean leadership the indirect effect exceeded the direct effect (−0.195 > −0.136), establishing engagement as the primary mechanism through which career growth and lean leadership reduce turnover intention. This elevates engagement from a statistical mediator to the theoretical centre of the retention process. This finding reinforces recent evidence that employee engagement is the principal mechanism through which turnover intention is reduced, Osta (2025), working within the same Job Demands–Resources logic, found that higher engagement significantly lowers the intention to leave in Lebanese SMEs, while Otoo (2024) demonstrated that engagement mediates the effect of job resources on turnover intentions among 934 pharmaceutical employees.

The present study extends prior research by demonstrating that, among Generation Z manufacturing employees, employee engagement is not merely a conduit for job resources but the primary mechanism through which career growth and lean leadership reduce turnover intention. For lean leadership, the indirect effect through engagement exceeds the direct effect, underscoring the pivotal role of engagement. These findings also help explain why established career systems and mature lean practices may fail to improve retention when they are not translated into stronger employee engagement, thereby extending the retention literature by positioning engagement as the central mechanism linking organizational resources to turnover intention.

Theoretical Contribution

This study makes three theoretical contributions. This study integrates Organizational Support Theory, Social Exchange Theory, the Job Demands–Resources framework, and Job Embeddedness Theory into a unified model of employee retention. Within this framework, organizational support is perceived (OST), transformed into employee engagement through reciprocal and motivational processes (SET and JD-R), and ultimately strengthened into retention through job embeddedness (JET), extending prior research that has largely relied on a single theoretical perspective. Second, it repositions lean leadership from an operational capability to a motivational-relational antecedent of retention, extending a literature that has largely stopped at efficiency outcomes. Third, it establishes employee engagement not merely as a significant mediator but as the dominant mechanism linking career growth and lean leadership to lower turnover intention evidenced by lean leadership's indirect effect exceeding its direct effect. Together, these contributions advance the retention literature by specifying the mechanism and hierarchy of effects that govern Generation Z retention in FMCG manufacturing sector.

Contextualizing the Findings in Indonesian FMCG Manufacturing

The findings should also be interpreted within the Indonesian FMCG manufacturing context. Indonesia's high power distance and strong collectivism (Hofstede, 2011) help explain why human-centered lean leadership and employee engagement are pivotal to retention. In a culture where supportive hierarchical leadership is the norm, human-centered practices such as gemba presence, coaching, and respect for people represent a marked departure that makes perceived organizational support especially salient, strengthening reciprocation through engagement. Collectivism further explains why engagement rather than individual rewards operates as the dominant mechanism, since psychological attachment to the work and team is a powerful retention force in group-oriented settings. At the same time, the low performance of promotion speed and remuneration growth reflects structural constraints common in labor-intensive manufacturing, where compressed hierarchies and contract-based employment limit advancement. This explains why career growth emerged as the highest-priority improvement area and why effective retention in Indonesian FMCG must combine transparent career systems with human-centered leadership that fosters engagement.

CONCLUSION

This study demonstrates that career growth and lean leadership reduce turnover intention among Generation Z employees primarily by strengthening employee engagement. Career growth emerged as the strongest motivational resource, suggesting that employee engagement is shaped not simply by the presence of formal career development programs, but by employees' belief that opportunities for career advancement, skill development, promotion, and remuneration growth are realistic and achievable. Lean leadership also supports retention, with its indirect effect through employee engagement exceeding its direct effect on turnover intention. Thus, human-centered leadership retains employees by fostering a supportive, participative, developmental, and meaningful work environment rather than merely directing task execution.

Theoretically, these findings extend the integration of Social Exchange Theory and the Job Demands–Resources Theory by demonstrating that employee engagement is the primary mechanism through which organizational resources are translated into employee retention. The study also refines career-growth research by emphasizing the motivational importance of credible future opportunities and extends the human-centered lean perspective by demonstrating the strategic role of lean leadership in employee retention. Practically, FMCG organizations should strengthen transparent and attainable career paths while developing

leaders' capabilities in coaching, employee involvement, respect for people, problem-solving support, and continuous learning. Aligning credible career-growth systems with human-centered leadership can foster sustainable engagement and reduce turnover intention among Generation Z employees.

This study is limited by its cross-sectional design, reliance on self-reported data, and focus on a single company. Future research should adopt longitudinal and multi-source designs, examine career growth and human-centered lean practices across different organizations and regions, investigate the moderating role of organizational culture, test affective commitment as an additional mediator alongside employee engagement, compare retention mechanisms across generations, and validate the proposed model in industries beyond FMCG.

REFERENCE

Aij, K. H., & Teunissen, M. (2017). Lean leadership attributes: A systematic review of the literature. Journal of Health Organization and Management, 31(7–8), 713–729. https://doi.org/10.1108/JHOM-12-2016-0245

Al Balushi, A., Thumiki, V., Nawaz, N., Jurcic, A., & Gajenderan, V. (2022). Role of organizational commitment in career growth and turnover intention in public sector of Oman. PLOS ONE, 17(5), e0265535. https://doi.org/10.1371/journal.pone.0265535

Alkarabsheh, O. H. M., Jaaffar, A. H., Wei Fong, P., Attallah Almaaitah, D. A., & Mohammad Alkharabsheh, Z. (2022). The relationship between leadership style and turnover intention of nurses in the public hospitals of Jordan. Cogent Business & Management, 9(1), 2064405. https://doi.org/10.1080/23311975.2022.2064405

Anh Do, T. T., Nguyen, H. T., & Pham, T. (2023). Antecedents of turnover intention among Gen Z in Vietnam: The mediating role of affective commitment. Cogent Business & Management, 10(2), 2267811. https://doi.org/10.1080/23311975.2023.2267811

Atiku, S. O., & Van Wyk, E. (2024). Leadership practices and work engagement in higher education: The mediating role of job demands-resources. SAGE Open, 14(1). https://doi.org/10.1177/21582440241233378

Badan Pusat Statistik (BPS). (2021). Hasil sensus penduduk 2020. BPS. https://sensus.bps.go.id

Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. Journal of Occupational Health Psychology, 22(3), 273–285. https://doi.org/10.1037/ocp0000056

Bijl, A., Ahaus, K., Ruël, G., Gemmel, P., & Meijboom, B. (2019). Role of lean leadership in the lean maturity–second-order problem-solving relationship: A mixed methods study. BMJ Open, 9(6), e026737. https://doi.org/10.1136/bmjopen-2018-026737

Blau, P. M. (1964). Exchange and power in social life. Wiley.

Bothma, C. F. C., & Roodt, G. (2013). The validation of the turnover intention scale. SA Journal of Human Resource Management, 11(1), 1–12. https://doi.org/10.4102/sajhrm.v11i1.507

Cave, A. H., Roberts, M. J. D., & Muralidharan, E. (2023). Examining antecedents of repatriates' job engagement and its influence on turnover intention. *The International Journal of Human Resource Management, 34*(19), 3687–3720. https://doi.org/10.1080/09585192.2022.2145911

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. Journal of Management, 31(6), 874–900. https://doi.org/10.1177/0149206305279602

Dachner, A. M., Ellingson, J. E., Noe, R. A., & Saxton, B. M. (2021). The future of employee development. *Human Resource Management Review, 31*(2), Article 100732. https://doi.org/10.1016/j.hrmr.2019.100732

De Smet, A., Dowling, B., Mugayar-Baldocchi, M., & Schaninger, B. (2022). Great attrition or great attraction? The choice is yours. McKinsey Quarterly. The Great Renegotiation and new talent pools | McKinsey

Deloitte. (2022). The Deloitte global 2022 Gen Z and millennial survey. Deloitte. The Deloitte Global 2022 Gen Z and Millennial Survey | Deloitte Global

Deloitte. (2025). The Deloitte global 2025 Gen Z and millennial survey. Deloitte. Deloitte Global Gen Z and Millennial Survey 2026

Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. MIS Quarterly, 39(2), 297–316.

Dombrowski, U., & Mielke, T. (2013). Lean leadership: Fundamental principles and their application. Procedia CIRP, 7, 569–574. https://doi.org/10.1016/j.procir.2013.06.034

Dwidienawati, D., Ratnasari, E. D., Nugraha, I. O., Maharani, A., & Arsan, M. F. (2025). The influence of well-being, leadership, career development, and engagement on Generation Z. WSEAS Transactions on Business and Economics, 22, 30–40. https://doi.org/10.37394/23207.2025.22.4

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*(3), 500–507. https://doi.org/10.1037/0021-9010.71.3.500

Francis, T., & Hoefel, F. (2018). True Gen: Generation Z and its implications for companies. McKinsey & Company. Generation Z characteristics and its implications for companies | McKinsey

Gaan, N., & Shin, Y. (2022). Generation Z software employees turnover intention. Current Psychology. https://doi.org/10.1007/s12144-022-03847-9

Gallup. (2026). State of the Global Workplace. In *Employee Engagement Insights for Business Leaders Worldwide*.

Gašić, D., & Berber, N. (2023). The mediating role of employee engagement in the relationship between flexible work arrangements and turnover intentions among highly educated employees in the Republic of Serbia. Behavioral Sciences, 13(2), 131. https://doi.org/10.3390/bs13020131

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). Sage.

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. Industrial Management & Data Systems, 116(1), 2–20. https://doi.org/10.1108/IMDS-09-2015-0382

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture, 2*(1), Article 8. https://doi.org/10.9707/2307-0919.1014

Hom, P. W., & Griffeth, R. W. (1991). Structural equations modeling test of a turnover theory: Cross-sectional and longitudinal analyses. Journal of Applied Psychology, 76(3), 350–366.

Hom, P. W., Lee, T. W., Shaw, J. D., & Hausknecht, J. P. (2017). One hundred years of employee turnover theory and research. *Journal of Applied Psychology, 102*(3), 530–545. https://doi.org/10.1037/apl0000103

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. International Journal of e-Collaboration, 11(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal, 28*(1), 227–261. https://doi.org/10.1111/isj.12131

Human Resources Department, Company A. (2025). *Employee turnover and exit interview report, 2023–2025*

Jun, M., & Eckardt, R. (2025). Training and employee turnover: A social exchange perspective. Group & Organization Management. https://doi.org/10.1177/23409444231184482

Liker, J. K. (2021). *The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer* (2nd ed.). McGraw-Hill Education.

Mazzetti, G., & Schaufeli, W. B. (2022). The impact of engaging leadership on employee engagement and team effectiveness: A longitudinal, multi-level study on the mediating role of personal- and team resources. *PLOS ONE, 17*(6), Article e0269433. https://doi.org/10.1371/journal.pone.0269433

Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablynski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal, 44*(6), 1102–1121. https://doi.org/10.2307/3069391

Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. Journal of Applied Psychology, 62(2), 237–240. https://doi.org/10.1037/0021-9010.62.2.237

Mulders, M. (2016). *Lean leadership: A practical guide*. Van Duuren Management.

Nami, N. P. S., & Prianthara, I. B. T. (2024). Analysis key variables and Generation Z turnover intention scenarios: MICMAC and Bayesian network approaches. *JBTI: Jurnal Bisnis: Teori dan Implementasi, 15*(3), 320–342. https://doi.org/10.18196/jbti.v15i3.24821

Novanantha, E., & Febriansyah, H. (2025). Key drivers of Gen Z employee retention in Indonesia's heavy equipment industry. Journal Integration of Management Studies, 3(3), 352–360. https://doi.org/10.58229/jims.v3i3.361

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Osta, A. M. (2025). The impact of employee engagement on intention to leave in SMEs in Lebanon: The moderating role of normative commitment. Cogent Business & Management, 12(1), 2501208. https://doi.org/10.1080/23311975.2025.2501208

Otoo, F. N. K. (2024). Does employee engagement mediate the nexus of job resource and employee turnover intentions? IIMT Journal of Management, 1(2), 130–170. https://doi.org/10.1108/IIMTJM-10-2023-0032

Qassim, A. A. (2026). Career development and turnover intention: Investigating affective commitment's mediating role among telecommunications employees in Egypt. Problems and Perspectives in Management, 24(1), 363–381. https://doi.org/10.21511/ppm.24(1).2026.25

Randstad. (2026). Workmonitor 2026 global report. Randstad. https://www.randstad.com/workmonitor/?utm_source

Ringle, C. M., & Sarstedt, M. (2016). Gain more insight from your PLS-SEM results: The importance-performance map analysis. Industrial Management & Data Systems, 116(9), 1865–1886. https://doi.org/10.1108/IMDS-10-2015-0449

Safirah, N. A., & Widigdo, A. M. N. (2025). Effect of green work-life balance and career development on turnover intention with employee engagement as a mediating variable. *European Journal of Business and Management Research, 10*(4), 203–211. https://doi.org/10.24018/ejbmr.2025.10.4.2779

Said, H. B. M., Rashid, S. B., & Jin, J. C. K. (2024). *Employee turnover intentions in the fast-moving consumer goods companies from a human resource management perspectives in Malaysia*. *International Journal of Academic Research in Business and Social Sciences, 14*(11), 1902–1921. https://doi.org/10.6007/IJARBSS/v14-i11/23061

Saks, A. M. (2022). Caring human resources management and employee engagement. *Human Resource Management Review, 32*(3), Article 100835. https://doi.org/10.1016/j.hrmr.2021.100835

Salvadorinho, J., Ferreira, C., & Teixeira, L. (2024). A technology-based framework to foster the lean human resource 4.0 and prevent the great resignation: The talent management lift. Technology in Society, 77, 102510. https://doi.org/10.1016/j.techsoc.2024.102510

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. Educational and Psychological Measurement, 66(4), 701–716.

Sekaran, U., & Bougie, R. (2020). Research methods for business: A skill-building approach (7th ed.). Wiley.

van Dun, D. H., & Uittenbogaard, P. (2017). *Lean leaders inspiring employee engagement in a healthcare setting*. Paper presented at the 24th International Annual EurOMA Conference 2017, Edinburgh, United Kingdom.

Wang, Q., Shang, Z., Zuo, C., Fan, H., Xu, C., Cai, Z., & Shi, W. (2024). Proactive personality and turnover intention: The mediating role of career aspiration and the moderating effect of organizational career management. Behavioral Sciences, 14(9), 800. https://doi.org/10.3390/bs14090800

Weng, Q., & Hu, B. (2009). The structure of career growth and its impact on employees' turnover intention. Industrial Engineering and Management, 14(1), 14–21.

Weng, Q., & McElroy, J. C. (2012). Organizational career growth, affective occupational commitment and turnover intentions. In *Journal of Vocational Behavior* (Vol. 80, Number 2, pp. 256–265). https://doi.org/10.1016/j.jvb.2012.01.014

Zhang, H., & Long, C. S. (2024). The influence of human resource management practices on employees' turnover intention: A conceptual model. International Journal of Academic Research in Business and Social Sciences, 14(2), 1–12. https://doi.org/10.6007/IJARBSS/v14-i2/20512

Zhao, X., Lynch, J. G., Jr., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. Journal of Consumer Research, 37(2), 197–206. https://doi.org/10.1086/651257