



Research article

Understanding Generation Z employees: The role of motivators, engagement, and performance in organizational success

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ABSTRACT

As Generation Z becomes an increasingly dominant segment of the workforce, understanding its distinct work values, motivational drivers, and engagement patterns is essential for organizational effectiveness in multigenerational contexts. This study aims to examine the structural relationships among Employee Motivators, Employee Engagement, Organizational Citizenship Behavior (OCB), Task Performance, and Organizational Performance among Generation Z employees. Using survey data collected from 424 Generation Z employees working in medium-sized organizations in Bangkok, Thailand, the proposed model was tested using Structural Equation Modeling (SEM). The results show that Employee Motivators have a stronger effect on Employee Engagement than on OCB and Task Performance, with Engaging Leadership emerging as the most influential motivational dimension. While Task Performance, particularly work quantity and task management, has a positive and direct impact on Organizational Performance, OCB, especially sportsmanship, exhibits a negative relationship with Organizational Performance, suggesting that excessive discretionary behavior may reduce efficiency. In addition, Employee Engagement, with "Say" as its strongest dimension, plays a significant mediating role between Employee Motivation and Organizational Performance. These findings extend prior research by demonstrating that OCB may not uniformly enhance performance in the context of Generation Z and by highlighting the central role of engagement in driving organizational outcomes. The study offers practical implications for human resource management by emphasizing leadership practices, engagement-focused strategies, and balanced expectations of discretionary behavior to enhance motivation, performance, and retention among Generation Z employees.

1. Introduction

The contemporary workforce is increasingly characterized by the coexistence of multiple generations, with Generation Z emerging as the most recent and rapidly expanding cohort. Accounting for approximately 30% of the global population and projected to reach 34% by 2030 [1], Generation Z is becoming a critical driver of organizational performance outcomes. Despite its growing prominence, however, scholarly understanding of how Generation Z employees respond to organizational motivators and translate engagement into performance remains fragmented. In particular, limited empirical research has examined the structural relationships among Employee

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Motivators, Employee Engagement, Organizational Citizenship Behavior (OCB), Task Performance, and Organizational Performance within this generation, leaving organizations with insufficient evidence to guide effective human resource strategies.

Born after 1995, Generation Z, often described as digital natives, exhibits distinctive work values, including a strong preference for continuous feedback, meaningful work, and technologically integrated environments [2,3]. At the same time, this cohort demonstrates higher job mobility and a greater propensity to leave organizations when expectations are unmet [4], intensifying challenges related to retention and sustained performance. These characteristics suggest that traditional assumptions about motivation, engagement, and discretionary behavior may not fully apply to Generation Z, underscoring the need for generation-specific empirical investigation.

The relevance of this issue is particularly salient in the context of medium-sized enterprises (SMEs), which play a vital role in Thailand's economic and social development [5]. While Generation Z employees often prefer large organizations that offer structured career pathways [6], SMEs possess distinctive advantages such as flexibility, closer supervisory relationships, and adaptive work structures, that may align well with Generation Z's expectations if managed effectively. Nevertheless, empirical evidence on how motivational and engagement mechanisms operate within SMEs, especially in non-Western urban settings such as Bangkok, remains scarce.

Existing research has extensively examined the relationships between employee motivation, engagement, OCB, task performance, and organizational performance [7–12]. Dominant frameworks generally assume that motivation enhances engagement, engagement promotes discretionary behavior, and OCB uniformly contributes positively to organizational performance [13]. However, much of this literature is generation-agnostic, frequently focuses on large organizations, and often examines these variables in isolation rather than within an integrated structural model. Moreover, the prevailing assumption that OCB is always beneficial has been increasingly questioned, with emerging evidence suggesting that excessive discretionary behavior may generate role overload, inefficiency, and performance trade-offs [14].

Against this backdrop, several important research gaps remain. First, there is a lack of empirical studies explicitly focusing on Generation Z employees and their unique motivational–performance mechanisms. Second, limited evidence exists within the context of medium-sized organizations in emerging economies. Third, few studies simultaneously examine multiple mediating pathways such as Employee Engagement, OCB, and Task Performance, to explain how motivation translates into organizational performance. Finally, the potentially negative or contingent effects of OCB remain underexplored in structural models of performance.

Building on these gaps, this study is expected to contribute to both theory and practice. From a theoretical perspective, it seeks to develop and empirically examine an integrated structural model that captures the relationships among Employee Motivators, Employee Engagement, Organizational Citizenship Behavior (OCB), Task Performance, and Organizational Performance within a Generation Z context. By incorporating multiple mediating mechanisms into a single framework, the study aims to extend existing motivation–performance models and to provide a more nuanced understanding of the role of discretionary behavior, particularly by re-examining the assumption that OCB is uniformly beneficial. From a managerial perspective, the study is expected to offer practical insights for organizations seeking to manage and retain Generation Z employees more effectively. It aims to identify key drivers of engagement and performance, such as leadership practices and employee voice, and to inform the design of human resource strategies that balance performance demands with employee well-being in contemporary organizational settings.

The remainder of this paper is structured as follows. Section 2 presents a comprehensive review of the relevant literature and outlines the conceptual framework and research hypotheses. Section 3 details the research methodology, including the research design, sample characteristics, data collection procedures, and measurement instruments. Section 4 reports the empirical findings with discussion. Finally, Section 5 concludes the paper by summarizing the principal findings and suggesting areas for future research.

2. Literature review

2.1. Generations in the workplace

The primary generational cohorts currently participating in the workforce include Generation X (born between 1965 and 1980), Generation Y, commonly referred to as Millennials (born between 1980 and 1995), and Generation Z (born after 1995). Each generation exhibits distinct work characteristics and values. Generation X is often described as adhering to a “work to live” philosophy, emphasizing work–family balance, personal autonomy, and career development as central aspects of their working life [15]. Kolnhofer-Derecskei [16] compared generational characteristics and reported that Generation X tends to be skeptical, conservative, and independent, whereas Generation Y is generally more open-minded, linguistically skilled, and receptive to others' opinions. Despite these differences, both cohorts place considerable importance on maintaining work–life balance.

Motivational patterns also vary across generations. Generation X employees are primarily motivated by identified regulations associated with individual autonomy, while Millennials tend to be motivated by introjected regulation characterized by rule-based control. In contrast, Generation Z places greater emphasis on intrinsic motivation and, to some extent, amotivation [17]. In addition to these motivational differences, concerns related to Generation Z include a heightened risk of mental health challenges, such as social isolation, anxiety, insecurity, and depression [2].

Given the distinct characteristics and motivational orientations of each generation, there is a growing need for organizations to develop a deeper understanding of Generation Z employees. Such understanding is essential for designing effective leadership and human resource strategies capable of managing a multigenerational workforce and enhancing Organizational Performance.

2.2. Generation Z and implications for new organizational management

Generation Z, individuals born after 1995, is emerging as a dominant workforce segment, bringing distinct expectations and work values that challenge traditional management practices. Unlike previous generations, Generation Z values job flexibility, technological integration, and meaningful work experience [18]. Their increasing presence in the workforce makes them a critical focus for organizations that aim to remain competitive in a rapidly evolving business landscape. As the workforce continues to shift, understanding Generation Z's motivations, expectations, and engagement patterns is essential for fostering a productive and sustainable work environment. Organizations that fail to adapt their management strategies are at risk of high turnover rates, reduced Employee Engagement, and decreased overall performance.

Their workplace behaviors and career aspirations necessitate a shift in organizational management strategies to enhance their motivation, engagement, and retention [19]. One of the most pressing concerns for organizations is attracting and retaining Generation Z employees. Research suggests that Gen Z members are more likely to switch jobs frequently because of their preference for continuous learning and career growth opportunities [20]. Competitive salaries alone are insufficient to retain them; rather, organizations must offer personalized career development programs, work-life balance, and opportunities for upskilling [21]. Furthermore, structured onboarding programs tailored to Gen Z's expectations significantly enhance retention rates and productivity [18].

Effective leadership plays a critical role in engaging Generation Z employees. Unlike older generations, Gen Z expects transparent communication, mentorship, and participative decision making [22]. Transformational leadership, characterized by vision sharing, personalized coaching, and empowerment, has been found to positively impact Gen Z's job satisfaction and engagement [23]. Conversely, hierarchical leadership styles are less effective and may contribute to higher turnover rates among Gen Z employees [24]. Organizational culture must evolve to align with Gen Z's workplace values. Suryaningrum et al. [25] highlighted that inclusive workplace cultures, collaborative environments, and corporate social responsibility (CSR) initiatives strongly influence Gen Z's engagement levels. Additionally, meaningful work, in which employees feel a sense of purpose and contribution, is a crucial motivation for this generation. Therefore, organizations must integrate social impact initiatives and align company missions with Gen Z's values to sustain long-term commitment.

As a digital native, Generation Z expects seamless technological integration in the workplace. Research suggests that organizations implementing AI-driven human resource (HR) management systems, virtual collaboration tools, and e-learning platforms can enhance engagement and productivity [26]. The adoption of hybrid work models, in which employees can alternate between remote and in-office work, has also proven effective in increasing satisfaction among Gen Z workers [27]. Managing a multigenerational workforce presents challenges to balancing diverse expectations. Generation Z differs significantly from Millennials and Generation X in terms of work ethics, feedback expectations, and career aspirations [28]. A study by Iorgulescu [29] indicated that conflicts may arise because of differing communication styles and technological adaptability. To address these challenges, organizations should implement reverse mentoring programs where Gen Z employees share their technological expertise while learning workplace norms from senior employees [30].

Generation Z's entry into the workforce necessitates a paradigm shift in organizational management. Strategies centered on flexible work arrangements, transformational leadership, digital adaptation, and meaningful engagement are critical for successfully integrating this generation into modern workplaces.

This emphasizes the importance of Generation Z and leads to the aim of this research, which is to examine how organizations can optimize management strategies to enhance the engagement, motivation, and performance of Generation Z employees. While existing studies provide valuable insights, further research is needed on long-term retention strategies and how evolving societal expectations influence career trajectories.

2.3. Organizational performance measurement

Organizational Performance encompasses the outcomes achieved through an organization's operations, covering both financial and non-financial aspects. Financial performance indicators include market performance and profitability [31], whereas non-financial measures include corporate reputation, customer satisfaction, product and service value enhancement, knowledge management, and employee retention [32,33]. These performance dimensions enable organizations to leverage their knowledge resources and capabilities to sustain competitive advantages [34]. Since organizational structures and strategies vary, performance measurements must align with each organization's unique goals and requirements [35].

Several established frameworks guide Organizational Performance measurement. Aon Hewitt [7] identified four key performance dimensions: 1) talent, covering retention, absenteeism, and well-being; 2) operational, focusing on productivity and safety; 3) customer, including satisfaction and Net Promoter Score (NPS); and 4) financial, measuring revenue growth, and shareholder returns. The Balanced Scorecard (BSC) by Kaplan and Norton [36] remains widely used to assess performance from four perspectives: financial, customer, internal processes, and learning and growth. By linking strategy with performance outcomes, BSC provides a comprehensive evaluation of success.

The European Foundation for Quality Management (EFQM) model introduces a broader perspective by integrating two dimensions: Enablers and Results. Enablers include leadership, people management, policy and strategy, resources, and processes, all of which contribute to sustainability. The results measure organizational effectiveness through employee satisfaction, customer satisfaction, societal impact, and business performance.

This study adopts Olve et al. [37] model, which integrates the EFQM framework with the four perspectives of the Balanced Scorecard to create a more holistic measurement system. This model enhances traditional performance measurements by

incorporating the elements of strategic management, sustainability, and stakeholder engagement. By combining the structured approach of the Balanced Scorecard with the broader quality-based perspective of EFQM, this model ensures a well-rounded evaluation of Organizational Performance. In addition, the model provides a multidimensional view of performance, considering both financial and nonfinancial factors. Its comprehensive nature aligns well with this study's objective of understanding how Organizational Performance is influenced by factors such as employee motivation, engagement, Organizational Citizenship Behavior (OCB), and Task Performance. By utilizing this integrated approach, organizations can better adapt to evolving workforce dynamics, including the expectations of Generation Z employees. This study leverages this model to offer actionable insights into optimizing performance measurement practices to promote long-term success and sustainability.

2.4. Employee motivation

Employee motivation refers to the force that drives individuals to achieve goals. Motivation can stem from intrinsic factors, such as personal aspirations and self-fulfillment, or extrinsic factors, such as organizational incentives, recognition, and career advancement opportunities [38–40]. Understanding what motivates employees is crucial for enhancing their engagement, citizenship behavior, and performance, ultimately contributing to overall organizational success.

Several foundational theories have explained employee motivation. Maslow's Hierarchy of Needs [41] suggests that human needs evolve from physiological to self-actualization, emphasizing the role of fulfillment in motivation. Alderfer's ERG Theory [42] refines this by positing that the need for existence, relatedness, and growth can coexist rather than follow a strict hierarchy. McClelland's Achievement Motivation Theory [43] highlights three primary drivers – power, affiliation, and achievement – as critical motivators. Herzberg's Two-Factor Theory [44] differentiates between motivators that enhance job satisfaction and hygiene factors that prevent dissatisfaction, thus reinforcing the importance of both intrinsic and extrinsic rewards.

Expanding on these traditional frameworks, Aon Hewitt [7] introduced a comprehensive Employee Motivation Model, identifying five key dimensions: Agility, Engaging Leadership, Talent Focus, The Work, and The Basics. The model aligns well with the expectations of Generation Z employees, who prioritize flexibility, meaningful work, and continuous learning opportunities [4]. As organizations adapt to an evolving workforce, understanding the direct and indirect relationships between motivation and organizational outcomes is crucial.

Studies have highlighted employee motivation as a key determinant of organizational success, influencing performance, productivity, and overall job satisfaction. Organizations that invest in motivational strategies, such as career development programs and workplace well-being initiatives, see significant improvement in Employee Engagement and reduced turnover rates [45]. Research also suggests that motivation is not a one-size-fits-all concept; it is influenced by personal aspirations, organizational culture, and leadership effectiveness [46]. Motivation also plays a crucial role in managing organizational change. Employees who are intrinsically motivated are more adaptable to change, which is vital for companies undergoing transitions [47]. Moreover, a well-structured motivational system within an enterprise can enhance not only individual performance but also customer satisfaction and financial outcomes [48].

Motivated employees are more likely to engage in their work, demonstrate enthusiasm, and align their personal goals with organizational objectives, leading to increased Employee Engagement [49,50]. Motivation also encourages employees to exhibit discretionary behaviors that contribute to organizational success and strengthen their Organizational Citizenship Behavior [13,51,52]. Additionally, motivation drives persistence and productivity, enhancing Task Performance through greater effort, efficiency, and problem-solving abilities [53,54]. Finally, motivation influences overall Organizational Performance by improving key mediators, such as engagement, citizenship behavior, and task efficiency, which together lead to better financial and non-financial outcomes, including lower turnover and higher productivity [55,56]. Based on these theoretical and empirical insights, this study proposes the following hypothesis:

Hypothesis 1. Employee Motivators have a significant direct effect on Employee Engagement.

Hypothesis 2. Employee Motivators have a significant direct effect on Organizational Citizenship Behavior.

Hypothesis 3. Employee Motivators have a significant direct effect on Task Performance.

Hypothesis 4. Employee Motivators have a significant indirect effect on Organizational Performance through Employee Engagement.

Hypothesis 5. Employee Motivators have a significant indirect effect on Organizational Performance through Organizational Citizenship Behavior.

Hypothesis 6. Employee Motivators have a significant indirect effect on Organizational Performance through Task Performance.

2.5. Employee engagement

Employee Engagement, as defined by Mowday et al. [57], refers to employees' willingness to contribute to organizational goals and their desire to remain a part of the organization. It represents a positive psychological state within the workplace [58,59] and involves multidimensional commitment that enables employees to engage in their work both physically, emotionally, and cognitively [60]. The concept of Employee Engagement has evolved significantly over the years, and various models have been developed to understand its drivers and impact on organizational success. Recent research has highlighted the importance of engagement as a multidimensional

construct influenced by psychological, organizational, and social factors [61]. Traditionally, engagement has been defined through emotional, cognitive, and behavioral components, emphasizing employees' willingness to invest efforts in organizational success [62].

The Aon Hewitt model of engagement, characterized by “Say, Stay, Strive”, has gained prominence as a practical framework for measuring and enhancing engagement [7]. This model defines engagement through three key behaviors:

Say: Employees advocate positively for the organization.

Stay: Employees exhibit a strong desire to remain with the company.

Strive: Employees go beyond the minimum requirements in their roles.

Several studies support the relevance of this model. Research indicates that organizations that foster a supportive work environment, provide career development opportunities, and recognize employee contributions have higher engagement levels [63]. Furthermore, engagement is linked to key outcomes such as lower turnover intentions, improved psychological well-being, and enhanced Organizational Performance [64].

Studies indicate that engagement significantly improves organizational outcomes, with a 22% increase in profitability and 21% increase in productivity [65]. Engaged employees enhance performance through increased commitment, proactive behavior, and innovation, leading to higher operational efficiency, customer satisfaction, and employee retention [66]. Organizations that cultivate engagement experience lower turnover rates and greater adaptability to changing work environments, particularly in the context of Generation Z, which prioritizes meaningful work and continuous development [4]. Given these insights, this study proposes the following hypothesis:

Hypothesis 7. Employee Engagement has a significant direct effect on Organizational Performance.

2.6. Organizational Citizenship Behavior

Organizational Citizenship Behavior (OCB) refers to voluntary behaviors exhibited by employees that go beyond formal job requirements to contribute positively to the organization [13]. These behaviors, while not explicitly tied to rewards or penalties, create a more cooperative work environment and enhance overall organizational efficiency [67]. OCB is crucial for fostering teamwork, helpfulness, and collaboration, facilitating smoother operations, and greater adaptability in organizations. Smith et al. [68] categorized OCB into Altruism, which involves directly assisting colleagues, and Generalized Compliance, which includes broader cooperative behaviors like punctuality. Organ [13] later expanded this model to five dimensions: altruism (helping others with work-related issues), courtesy (pre-venting conflicts and respecting colleagues), sportsmanship (tolerating difficulties without complaints), Civic Virtue (actively participating in organizational matters), and conscientiousness (exceeding job expectations and ensuring workplace order).

Recent research highlights that OCB plays a fundamental role in improving Organizational Performance by enhancing productivity, strengthening teamwork, and reinforcing positive workplace culture [69]. Employees, particularly those from Generation Z, are more likely to exhibit OCB when they perceive that the organization's values align with their own, fostering long-term commitment and efficiency [70]. However, excessive OCB can contribute to stress and burnout, potentially reducing engagement levels [71].

Beyond role overload and burnout, widely cited mechanisms through which excessive Organizational Citizenship Behavior (OCB) may reduce task performance and overall productivity, additional organizational conditions may further explain this negative relationship. Specifically, an excessive emphasis on OCB may encourage employees to prioritize helping colleagues over fulfilling their core job responsibilities, thereby undermining operational efficiency and effectiveness [72]. Moreover, persistent organizational expectations for OCB may generate perceptions of inequity, as employees who engage less frequently in discretionary behaviors may feel undervalued or unfairly evaluated. Such perceptions can negatively influence job attitudes, motivation, and performance outcomes. Given these considerations, this study proposes the following hypothesis:

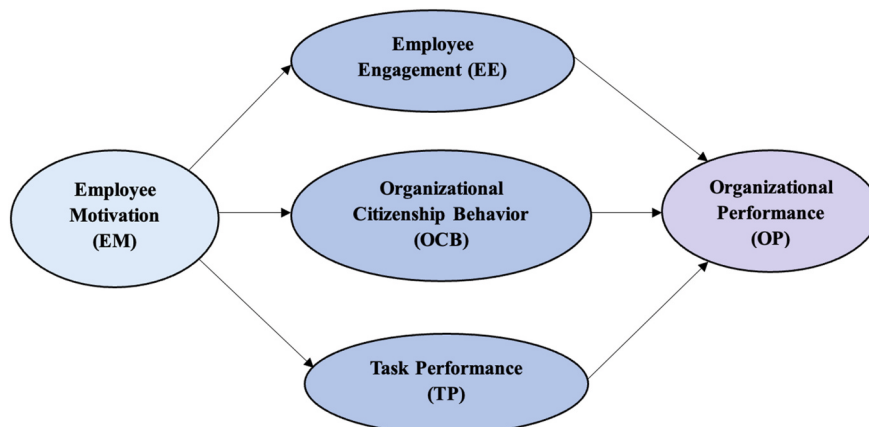


Fig. 1. Conceptual framework.

Hypothesis 8. Organizational Citizenship Behavior has a significant direct effect on Organizational Performance.

2.7. Task performance

Task Performance is a key dimension of Work Performance, which refers to an individual's execution of specific tasks that support an organization's goals. It includes decision-making, problem-solving, and evaluation criteria, all of which contribute to organizational success [73]. Unlike contextual performance, which involves discretionary behaviors, Task Performance focuses on behaviors that are directly controlled by employees and necessary for job completion [74]. Research has identified multiple dimensions of Task Performance, including job-specific task proficiency, general task proficiency, and adaptive performance, which refer to employees' ability to respond effectively to change [75]. Task Performance encompasses quality, quantity, and planning, which determine overall productivity [76]. Studies indicate that when employees effectively execute their tasks, organizational outcomes improve through enhanced efficiency and goal achievement [77]. The Koopmans et al. [78] model is used in this study because of its broad applicability across various professions and its emphasis on contemporary performance indicators relevant to Generation Z employees, such as problem-solving and adaptability. Given the established relationship between Task Performance and organizational outcomes, this study proposes the following hypothesis:

Hypothesis 9. Task Performance has a significant direct effect on Organizational Performance.

Drawing from the preceding literature, the conceptual framework of this study is illustrated in Fig. 1.

3. Research methodology

3.1. Population and sample

The purpose of this study is to test the structural equation model of Organizational Performance and explore how organizations can enhance the motivation, engagement, and performance of Generation Z employees. The research population consisted of Generation Z Thai nationals who were currently employed and working in Bangkok. According to the 2021 Bangkok Population Report (Strategic Administration Division, Office of Strategy and Evaluation) [79], 592 individuals aged 20-27 years old resided in Bangkok's 50 districts. Additionally, data from the 2022 Business and Industrial Census [80] report that Bangkok is home to 2977 medium-sized organizations distributed across all 50 districts. These organizations provide a relevant setting for analyzing the impact of Employee Motivators, engagement, and performance within the Generation Z workforce. The respondents represented a range of organizational levels, including operational, managerial, board, and executive positions. As the sample included managerial-level respondents and above, the assessment of Organizational Performance is expected to reflect informed evaluations that extend beyond purely individual-level perceptions.

The appropriate sample size for structural equation modeling (SEM) depends on several factors. As SEM relies on advanced statistical techniques to analyze relationships within a model, the required sample size is typically determined based on the number of variables included. According to Hair et al. [81], the recommended sample size for SEM is at least 10-20 times the number of observed variables. With 37 variables in this study's model, the minimum required sample size was 370 respondents, while an ideal range was extended up to 740 participants to ensure robust statistical analysis and model validation. For data collection, a proportional quota sampling technique was employed to enhance the representativeness of the sample. Quotas were established based on the distribution of medium-sized organizations across the 50 districts of Bangkok, ensuring that the sample reflected the structural composition of the reference population within the constraints of a cross-sectional design.

3.2. Research instrument and data collection

This study utilized measurement tools from Kaplan and Norton [36] and Olve et al. [37] to assess Organizational Performance. The evaluation was conducted using a 12-item questionnaire based on a 5-point Likert scale. Participants were asked to indicate their level of agreement with various statements, including "The organization's policies and strategies can guide the organization to achieve its goals."

To assess employee motivation, a 21-item questionnaire with a 5-point Likert scale was employed. This questionnaire incorporated elements from Aon Hewitt [7] alongside additional items developed by the researchers. Participants were required to express their agreement with statements such as "The internal operations of your organization receive good support and cooperation from all departments."

Employee Engagement was evaluated using a 9-item scale, which was adapted from Aon Hewitt [7]. Respondents rated their agreement with statements, including "You work with dedication, utilizing your abilities beyond just completing tasks in every job."

The OCB assessment of Organizational Citizenship Behavior was conducted using a 15-item scale adapted from Podsakoff et al. [82]. Participants were asked to indicate their agreement with statements like "You assist others who have a heavy workload."

Task Performance was measured using a 12-item questionnaire adapted from Koopmans et al. [78], with some additional items developed by the researchers. Respondents were required to rate their level of agreement with statements such as "The quality of your work meets the assigned expectations."

To ensure the reliability and validity of the research instrument, a pre-test was conducted with a pilot group of 30 participants. The internal consistency of the questionnaire was assessed using Cronbach's Alpha coefficients. The results yielded a Cronbach's Alpha

value of 0.951, which exceeds the recommended threshold of 0.70, thereby confirming the high reliability of the instrument. To mitigate the risk of common method bias (CMB) associated with self-reported data, both procedural and statistical remedies were applied. Procedurally, respondents were assured of anonymity and confidentiality, and the questionnaire was carefully designed to reduce ambiguity and evaluation apprehension. Statistically, Harman's single-factor test was conducted [83], with results indicating that a single factor accounted for less than 50% of the total variance, suggesting that CMB is not a significant concern in this study [84] and the data are deemed appropriate for subsequent SEM analysis.

Descriptive statistical analysis was conducted using personal data obtained from the questionnaires, including gender, age, and monthly income. Basic statistics, such as frequency and percentage, were calculated to summarize the demographic profiles of the respondents.

The results of the analysis are presented in Table 1.

4. Results and discussion

4.1. Confirmatory factor analysis (CFA)

Confirmatory factor analysis (CFA) was employed to assess whether the measurement of a construct aligned with the researcher's conceptualization of that construct. In this study, a first-order confirmatory analysis was conducted for all constructed variables within the structural framework of the model. Based on confirmatory factor analysis (CFA) for each variable, the observed variables related to Organizational Performance, employee motivation, Employee Engagement, Organizational Citizenship Behavior, and Task Performance exhibited factor loadings greater than 0.55. This indicates that all the items demonstrated strong measurement reliability.

4.2. Structural equation modeling

A measurement model was developed to examine the impact of knowledge-oriented leadership and human resource development on sustainable competitive advantage mediated by the component factors of organizational innovation. Structural Equation Modeling (SEM) was employed in this study because it is particularly well suited for examining complex theoretical models involving multiple latent constructs and both direct and indirect relationships. Unlike traditional regression-based approaches, SEM allows the simultaneous estimation of multiple dependent relationships while explicitly accounting for measurement error, thereby improving the accuracy and validity of parameter estimates [85]. In this study, key variables such as Employee Motivators, Employee Engagement, Organizational Citizenship Behavior, Task Performance, and Organizational Performance are conceptualized as latent constructs measured by multiple observed indicators. SEM is therefore appropriate because it integrates confirmatory factor analysis and path analysis within a single analytical framework, enabling the assessment of both the measurement model and the structural model concurrently. This is particularly important when testing mediation effects, as SEM provides a more rigorous evaluation of indirect relationships than stepwise regression methods. Furthermore, SEM enables the comparison of alternative model specifications and the evaluation of overall model fit, which supports theory testing and model parsimony. Given the study's objective to examine a structural system of relationships among motivational, behavioral, and performance-related constructs, SEM provides a robust and theoretically consistent methodological approach.

The study assessed the goodness-of-fit criteria for Structural Equation Modeling, and the results are presented in Fig. 2.

Structural equation Modeling (SEM) demonstrated a good fit, as shown in Table 2. The model was found to exceed the required goodness-of-fit threshold by analyzing the index values and their respective acceptance criteria. This indicates that the proposed model aligns well with the empirical data.

Hypothesis testing for Structural Equation Modeling (SEM) was performed by analyzing the regression coefficient results for each

Table 1
Descriptive statistics of the samples (n = 424).

	Frequency	Percentage
Gender		
Male	150	35.38
Female	274	64.62
Age		
20-22 years old	29	6.84
23-25 years old	107	25.24
Over 25 years old	288	67.92
Average Income (per month)		
Less than \$575	137	32.31
\$575 – 1150	249	58.73
More than \$1150	38	8.96
Job Position		
Operational Level	369	87.0
Managerial Level	45	10.6
Board Level	8	1.9
Executive Level	2	0.5

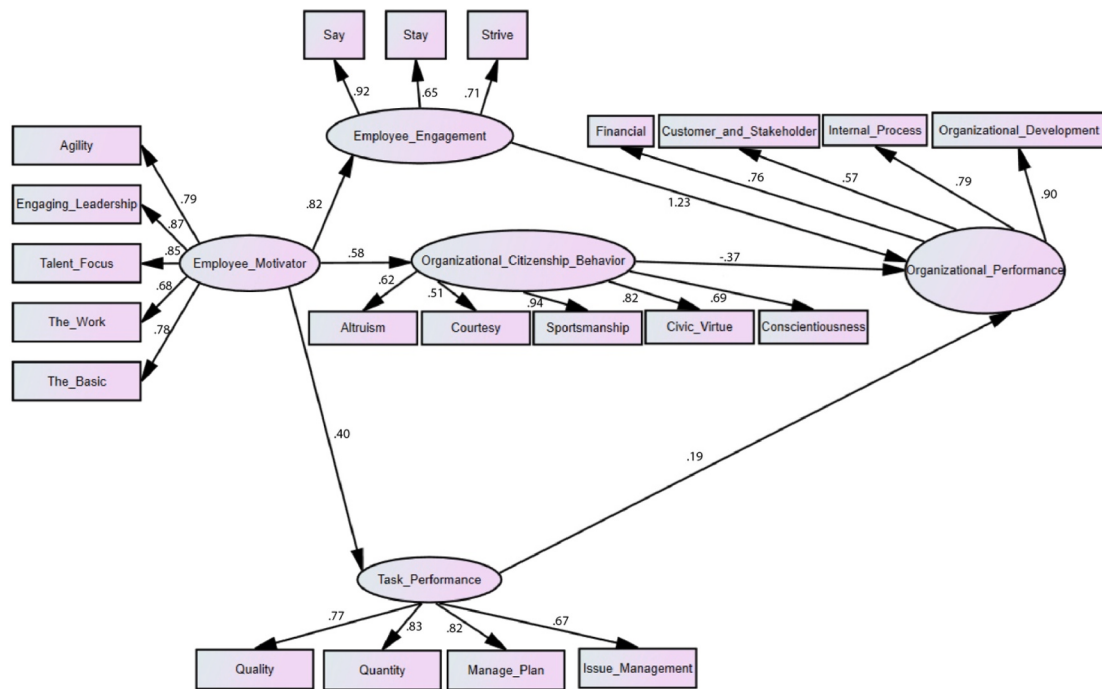


Fig. 2. Results of the structural equation model.

Table 2
Goodness of fit of structural equation Modeling.

Statistics to measure consistency	Degree acceptance	Result
Probability	≥ 0.05	0.23
CMIN/DF	≤ 2.00	1.10
GFI	≥ 0.90	0.97
CFI	≥ 0.90	0.99
TLI	≥ 0.90	0.99
IFI	≥ 0.90	0.99
RMSEA	≤ 0.05	0.02

pathway. The statistical significance of these relationships was assessed using a probability value, with $p < 0.05$ indicating a significant effect. The direct effects of these variables are summarized in Table 3, and Standardized Regression Weights among observed variables are presented in Table 4.

The results of the hypothesis testing for direct effects, as presented in Table 3, indicate that all specified hypotheses (Hypotheses 1, 2, 3, 7, 8, and 9) are supported. This conclusion is based on critical ratio (CR) values exceeding the recommended threshold of 2.00 and corresponding p-values below 0.05. Overall, the findings reveal statistically significant relationships between independent and dependent variables. Notably, however, Organizational Citizenship Behavior (OCB) exhibits a negative effect on Organizational Performance.

Table 3
Direct effects among variable research.

Variable			Std. Regression Weight	Estimate	S.E	C.R.
EM	→	EE	0.82***	1.22	0.08	15.66
EM	→	OCB	0.58***	0.47	0.05	8.73
EM	→	TP	0.40***	0.28	0.04	7.06
EE	→	OP	1.23***	0.84	0.08	10.61
OCB	→	OP	-0.37**	-0.46	0.16	-2.96
TP	→	OP	0.19**	0.28	0.11	2.50

Notes: EM = Employee motivation, EE = Employee Engagement, OCB = Organizational Citizenship Behavior, TP = Task performance, OP = Organizational Performance.

***: $p \leq 0.01$, ** $p \leq 0.05$, and * $p \leq 0.10$.

Table 4
Standardized Regression Weights among observed variables.

			β
EM	→	The Basic	0.78
EM	→	The Work	0.68
EM	→	Talent Focus	0.85
EM	→	Engaging Leadership	0.87
EM	→	Agility	0.79
EE	→	Say	0.92
EE	→	Stay	0.65
EE	→	Strive	0.71
OCB	→	Conscientiousness	0.69
OCB	→	Civic Virtue	0.82
OCB	→	Sportsmanship	0.94
OCB	→	Courtesy	0.51
OCB	→	Altruism	0.62
TP	→	Quality	0.77
TP	→	Quantity	0.83
TP	→	Issue Management	0.67
TP	→	Manage Plan	0.82
OP	→	Financial	0.76
OP	→	Customer and Stakeholder	0.57
OP	→	Internal Process	0.79
OP	→	Organizational Development	0.90

Notes: EM = Employee motivation, EE = Employee Engagement, OCB = Organizational Citizenship Behavior, TP = Task performance, OP = Organizational Performance.

Table 4 reports the standardized regression weights of the observed variables, providing insight into the relative strength of the relationships within each latent construct. The results show that Sportsmanship ($\beta = 0.94$), “Say” ($\beta = 0.92$), and Organizational Development ($\beta = 0.90$) demonstrate comparatively stronger effects than the other indicators. These findings suggest that OCB, particularly the Sportsmanship dimension, warrants closer examination due to its substantial association with Organizational Performance. The negative direction of this relationship highlights a potential concern for organizations and underscores the need to interpret OCB not solely as a uniformly beneficial behavior but as a construct whose effects may vary depending on contextual and structural conditions.

In contrast to Organ [13], who conceptualized Organizational Citizenship Behavior (OCB) as inherently beneficial to organizations, the present findings indicate that OCB may negatively affect Organizational Performance when excessive Sportsmanship contributes to employee overload and psychological stress. Based on data collected from medium-sized organizations in Thailand, this result suggests that relatively smaller workforce sizes and closer interpersonal relationships may intensify discretionary role expectations, thereby increasing pressure on employees. In addition, cultural norms emphasizing harmony and consideration for others may further encourage excessive expressions of Sportsmanship in the workplace. This finding is consistent with the caution raised by Bolino and Turnley [14] regarding the pressure associated with discretionary behaviors, while extending their arguments by providing empirical evidence from a Generation Z sample in Thai medium-sized organizations.

Importantly, prior research indicates that the consequences of OCB are contingent upon contextual and individual factors. For example, Becton et al. [86] found that employees exhibiting high levels of OCB in conjunction with high task complexity were less likely to experience voluntary turnover, suggesting that task complexity may function as a critical boundary condition. Furthermore, the effects of OCB appear to differ across its dimensions. Miao and Kim [87] demonstrated that employees who engaged less in organization-domain OCB tended to report lower job satisfaction regardless of task complexity, whereas employees reporting higher levels of organization-domain OCB experienced greater job satisfaction, particularly when performing highly complex tasks.

Taken together, these findings suggest that the negative effect of OCB on Organizational Performance observed in this study may be conditional rather than universal, potentially moderated by task complexity and the specific dimension of OCB enacted by employees. Although the present study does not empirically test a moderated mediation model, the results are consistent with emerging evidence indicating that excessive or misaligned OCB may impose hidden performance costs under certain organizational conditions.

The positive effects of Employee Motivators on Employee Engagement, Organizational Citizenship Behavior (OCB), and Task Performance can be attributed to the central role of motivation in strengthening employees’ commitment and encouraging discretionary effort beyond formal job requirements, thereby enhancing organizational effectiveness. Highly motivated employees tend to exhibit higher levels of engagement, characterized by enthusiasm, dedication, and persistence in pursuing organizational objectives. However, prior research suggests that the strength and nature of these relationships vary across generational cohorts. For example, Wahyu et al. [88] found that Generation Y demonstrates higher levels of OCB and motivation, largely influenced by servant leadership, than Generation X. Conversely, Generation Z has been shown to exhibit the lowest levels of OCB, with gratitude exerting a comparatively weaker influence than in Generation X and Generation Y [89].

Employee Engagement among Generation Z also differs significantly from that of other generations [90]. Cognitive values are particularly salient for Generation X and Generation Y, whereas Generation Y places greater emphasis on prestige [91]. Consistent with these generational distinctions, the results in Table 4 indicate that “Say,” as a dimension of Employee Engagement, plays a particularly

important role within the Generation Z model. This finding suggests that opportunities for expression and voice are especially relevant for engaging Generation Z employees, although their effects should be interpreted within the broader structural model and organizational context. Overall, Employee Engagement among Generation Z is shaped by both intrinsic factors, such as opportunities for personal development and job satisfaction, and extrinsic factors, including recognition and rewards. Notably, the present findings indicate that Engaging Leadership is the most influential motivational factor, as it significantly enhances Employee Engagement and exerts strong effects on OCB and Task Performance.

Previous studies have shown that workplace values and attitudes exert a significant direct influence on employee performance among Generation X and Generation Y cohorts [91]. Similarly, prior research indicates that highly motivated employees demonstrate superior problem-solving abilities, greater persistence, and higher overall job performance [92]. In contrast, the present study reveals a distinct pattern for Generation Z. Although Employee Motivators significantly influence Task Performance, their effect is comparatively weaker than their influence on Employee Engagement and OCB. As shown in Table 4, Task Performance among Generation Z is more strongly driven by Workload Quantity and Structured Management Planning. This finding suggests that, for Generation Z employees, clear task structures and manageable workloads play a particularly critical role in supporting performance. Motivation contributes to performance primarily when it is reinforced by effective planning and task clarity. These findings extend the existing literature by demonstrating that the pathways linking motivation to performance vary across generations.

Tables 3 and 4 collectively indicate that Employee Engagement exerts the strongest influence on Organizational Performance among Generation Z employees. In particular, “Say” emerges as the most influential engagement dimension, while Organizational Development is identified as the most critical performance dimension. This pattern suggests that when Generation Z employees are encouraged to express ideas and opinions, they are more likely to contribute to organizational development initiatives, thereby enhancing overall performance. These results are consistent with prior research demonstrating that organizations with high levels of employee engagement benefit from increased profitability, reduced turnover, and improved customer satisfaction [93]. At the same time, the present study extends existing research by highlighting employee voice as a central mechanism through which engagement translates into organizational development and performance within a Generation Z context, underscoring the strategic importance of participative and development-oriented management practices.

With respect to the relationship between Task Performance and Organizational Performance, employees who demonstrate high levels of task performance contribute to organizational success by effectively executing job responsibilities, exhibiting problem-solving skills, and maintaining high-quality outputs [73]. However, the findings of the present study reveal that, despite its positive contribution, Task Performance exerts the weakest influence on Organizational Performance when compared with Employee Engagement and OCB. This pattern suggests that, while task execution remains important, it is not the primary mechanism through which organizational performance is enhanced in this context. Rather, relational and discretionary factors appear to play a more prominent role in driving organizational outcomes among Generation Z employees.

The findings regarding the indirect relationships among the variables are summarized in Table 5.

The empirical results presented in Table 5 support the indirect influence of Employee Motivation on Organizational Performance and underscore the importance of mediating mechanisms in shaping this relationship. Hypotheses 4, 5, and 6 propose that Employee Motivation indirectly affects Organizational Performance through Employee Engagement, Organizational Citizenship Behavior (OCB), and Task Performance. The findings indicate that Employee Motivation enhances Employee Engagement (1.01), OCB (−0.21), and Task Performance (0.08), resulting in a total indirect effect of 0.88. These results are consistent with prior research emphasizing the mediating role of engagement in translating motivation into performance outcomes [94]. However, the present study identifies distinct patterns in the relative influence of observed variables within the Generation Z context.

Specifically, the negative indirect effect operating through OCB may reflect generational differences in discretionary work behaviors, suggesting that excessive Sportsmanship or voluntary effort among Generation Z employees may impose additional workload stress, thereby reducing efficiency. With respect to Task Performance, the findings indicate that Workload Quantity is a key influencing factor for Generation Z employees, implying that this cohort tends to concentrate on clearly defined task requirements and may be less inclined to engage in discretionary work beyond formal job responsibilities. Moreover, a comparison of the mediating pathways reveals that Employee Engagement serves as the strongest mechanism linking motivation to Organizational Performance, while Task Performance plays a supportive yet meaningful role. Overall, the empirical evidence supports Hypotheses 4, 5, and 6, confirming that Employee Motivation among Generation Z employees influences Organizational Performance through multiple mediating mechanisms with differing magnitudes and directions.

To assess model robustness, an alternative path specification was examined in which Employee Engagement influenced Organizational Performance indirectly through Organizational Citizenship Behavior. In this robust model, the path from Employee

Table 5
Indirect effects among research variables.

Variable	Indirect Effect
EM → EE → OP	$0.82 \times 1.23 = 1.01$
EM → OCB → OP	$0.58 \times (-0.37) = -0.21$
EM → TP → OP	$0.40 \times 0.19 = 0.08$

Notes: EM = Employee motivation, EE = Employee Engagement, OCB = Organizational Citizenship Behavior, TP = Task performance, OP = Organizational Performance.

Engagement to OCB remained positive and statistically significant ($\beta = 0.88$), reinforcing the theoretical linkage between engagement and discretionary workplace behavior. In contrast to the full model, the direct effect of OCB on Organizational Performance became positive ($\beta = 0.74$), indicating that the effect of OCB on performance is sensitive to model specification.

This change in sign suggests the presence of potential suppression effects or competing pathways in the full model and highlights the complex and context-dependent role of OCB in organizational settings. When modeled alongside multiple performance-related demands, excessive OCB may generate additional workload pressures that negatively affect organizational performance. However, when specified as a primary mediating mechanism between engagement and performance, OCB demonstrates its expected positive contribution.

Consistent with this interpretation, the indirect effect of Employee Engagement on Organizational Performance via OCB in the robustness model was positive and substantial.

($\beta = 0.65$). Collectively, these findings indicate that although the functional role of OCB varies across model specifications, Employee Engagement remains a robust and central predictor of Organizational Performance through OCB, thereby supporting the theoretical coherence and parsimony of the proposed model.

5. Conclusions

As Generation Z continues to emerge as a dominant segment of the workforce, understanding the key drivers of their motivation, engagement, and performance is increasingly important for organizational sustainability and long-term success. This study examined the structural relationships among Employee Motivators, Employee Engagement, Organizational Citizenship Behavior (OCB), Task Performance, and Organizational Performance within medium-sized enterprises in Bangkok. The findings contribute to both theoretical and practical perspectives by clarifying how motivational mechanisms shape workplace behaviors and organizational outcomes among Generation Z employees.

The results provide several important contributions to human resource management literature. First, the study confirms that Employee Motivators play a critical role in enhancing Employee Engagement, underscoring the importance of both intrinsic and extrinsic motivational factors. When employees perceive opportunities for career development, skill enhancement, recognition, and work–life balance, they are more likely to demonstrate higher levels of engagement and commitment. Notably, Engaging Leadership emerged as the most influential motivational factor. This finding highlights the importance of leadership development initiatives, particularly for managerial-level employees, to foster supportive leadership practices that enhance engagement, job satisfaction, and organizational commitment.

Second, the study demonstrates that Task Performance has a significant effect on Organizational Performance. For Generation Z employees, task performance is primarily driven by Workload Quantity and Structured Management Planning, suggesting that clear task structures, goal clarity, and effective performance management systems are essential. Organizations are therefore encouraged to emphasize work planning, time management, and output monitoring while ensuring that employees receive adequate training, constructive feedback, and sufficient resources to sustain optimal performance.

A particularly noteworthy contribution to this study is the identification of a negative relationship between OCB and Organizational Performance. Although OCB has traditionally been viewed as uniformly beneficial, the findings indicate that excessive discretionary behavior, especially Sportsmanship, may lead to role overload, inefficiency, and burnout among Generation Z employees. This result challenges conventional assumptions regarding OCB and underscores the importance of establishing appropriate boundaries for discretionary behavior. Organizations should therefore promote balanced OCB by recognizing employee contributions while preventing excessive informal demands that may detract from core responsibilities.

Overall, the findings offer meaningful practical implications for organizations seeking to effectively manage and retain Generation Z employees. The results indicate that leadership and talent-focused motivators are particularly influential for this generation, and that Employee Engagement, especially the “Say” dimension, serves as the strongest driver of Organizational Performance. Accordingly, organizations should prioritize leadership practices that encourage open communication, provide frequent and constructive feedback, and actively incorporate employee voice into decision-making processes. Additionally, clear career progression pathways and opportunities for skill utilization are essential for fostering long-term commitment. By cultivating a culture of transparency, recognition, and inclusion, and by leveraging digital tools and performance management systems to support continuous feedback and development, organizations can enhance engagement, productivity, and retention among Generation Z employees while sustaining organizational performance.

Despite its contributions, this study has several limitations that should be acknowledged regarding research design. First, the study was conducted among Generation Z employees working in medium-sized enterprises in Bangkok, which may limit the generalizability of the findings to other organizational sizes, industries, or geographic contexts. In addition, although the study focuses on Generation Z, it does not include a comparative sample from other generational cohorts, such as Generation X or Generation Y. Consequently, the findings should be interpreted as providing insights specific to Generation Z rather than as definitive evidence of generational uniqueness. Future research is encouraged to adopt cross-generational or multi-group designs to examine whether the proposed relationships differ across cohorts. Finally, the cross-sectional design limits the ability to capture changes in motivation, engagement, and performance over time. Longitudinal and qualitative approaches, such as interviews or focus groups, may provide deeper insights into how employees' attitudes and behaviors evolve throughout their careers.

Another potential avenue for future research is the role of leadership styles and digital transformation in shaping Gen Z employees' workplace behaviors. Given that technological advancements are reshaping modern work environments, exploring how remote work, AI-driven decision-making, and hybrid work models influence employee motivation and performance would provide valuable insights

for business leaders to adapt to the future of work.

This study underscores the critical role of motivation, engagement, and performance in shaping organizational outcomes within the Generation Z workforce. The findings challenge the conventional view that OCB is always beneficial; instead, they highlight potential drawbacks when voluntary behaviors become excessive. The results also reinforce the importance of employee motivation and Task Performance in driving organizational success.

By adapting human resource strategies to meet the evolving expectations of Generation Z employees, organizations can create a workforce that is highly engaged, productive, and resilient in an increasingly dynamic business environment. Implementing customized motivation programs, structured performance management frameworks, and digital workforce solutions will be essential for fostering sustainable Employee Engagement and long-term organizational success. Future research should continue exploring the evolving dynamics of motivation and engagement to ensure that businesses remain agile and responsive to the changing workforce landscape.

CRediT authorship contribution statement

Thipsuda Ueranant: Writing – original draft, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Taweesak Kritjaroen:** Writing – review & editing, Supervision, Methodology, Investigation, Formal analysis, Conceptualization. **Winai Homsombat:** Writing – review & editing, Validation, Supervision, Methodology, Investigation, Formal analysis, Conceptualization.

Ethics approval

This study was reviewed and deemed exempt from ethics approval by Research Ethics and Compliance Division, Research, Innovation, and Partnerships Office (RIPO), King Mongkut's University of Technology Thonburi, Thailand, with the reference number: KMUTT-IRB-COE-2023-112, dated April 20, 2023.

Consent approval

All participants were informed that consent to participate in the study and publish their data would be assumed on completion and submission of the study questionnaire.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2026.e45168>.

Data availability

The data that support the findings of this study are available from the corresponding author upon request.

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