

A Study of Digital Start-Ups: The Mediating Effect of Employee Dynamic Capability on Change Leadership and Sustainable Employee Performance

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Abstract

This study addresses the challenge of sustaining employee performance in digital start-ups, where rapid technological change, uncertainty, and highly dynamic work environments often affect employees' productivity, engagement, and well-being over time. Despite the growing importance of sustainable employee performance, limited attention has been given to the mechanisms through which leadership influences long-term employee outcomes in digital start-ups. In particular, the role of employee dynamic capability as an adaptive mechanism linking change leadership and sustainable employee performance remains underexplored. Therefore, this study examines the effect of change leadership on sustainable employee performance in digital start-ups, with employee dynamic capability as a mediating variable. This study employs a quantitative research design, where data were collected from 329 employees working in digital start-ups and analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results reveal that change leadership has a strong and significant positive effect on sustainable employee performance. The mediation analysis indicates that employee dynamic capability partially mediates the relationship between change leadership and sustainable employee performance. These findings highlight the importance of leadership practices that not only drive immediate performance outcomes but also strengthen employees' long-term adaptive capabilities. The study contributes to the literature by integrating leadership and dynamic capability perspectives in explaining sustainable employee performance within the context of digital start-ups. Practical implications suggest that organizations should invest in change-oriented leadership development and foster environments that support continuous learning and flexibility.

Keywords: change leadership; digital start-ups; employee dynamic capability; sustainable employee performance

Received: 7 May 2026

Revised: 26 July 2026

Published: 31 August 2026

1. Introduction

Digital start-ups have become a significant driver of modern economic growth by leveraging technological innovation and agile business models to create new value. As highlighted by Skala (2019), digital start-ups operate in highly dynamic environments characterized by continuous innovation, experimentation, and rapid change. Despite their strong growth potential, these organizations continue to face substantial challenges in sustaining employee stability and motivation. High failure rates (Mattsson & Andersson, 2019), coupled with intense competition and uncertain market conditions, often contribute to job insecurity, employee burnout, and declining morale (Mansour & Nogues, 2022). As a result, sustaining employee performance has become a critical concern for digital start-ups seeking long-term organizational success. Although prior studies have emphasized the importance of effective leadership and adaptive organizational strategies in addressing these challenges (Conway & Hemphill, 2019), many digital start-ups

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still struggle to translate such approaches into sustainable employee outcomes. Sustainable employee performance is not merely the continuation of high performance over time but refers to employees' capability to continue performing effectively in the future while maintaining health, motivation, and employability (Van der Heijden, B. I. J. M., & De Vos, 2015). Accordingly, although sustainability has an inherently temporal dimension, the present study measures employees' current perceptions of this capability using validated psychometric indicators.

On the empirical side, studies on sustainable employee performance (SEP) are scarce, especially for digital start-ups. Most work examines at straightforward links between SEP and things like company policies or outside forces (1.g., Chin et al., 2023; Jiang et al., 2017; Khanam, 2023), but it overlooks what makes digital start-ups unique, like constant uncertainty, breakneck innovation, and ever-shifting team structures that set them apart from old-school businesses. Plus, while researchers nod to the role of healthy, productive teams in keeping performance going (Khanam, 2023), they rarely dig into the how the step-by-step processes that help sustain it over time. That's a big empirical hole: we need models that blend company-wide and personal factors to explain sustainable performance in these chaotic digital start-up settings.

There is also a major theory gap around how change leadership boosts sustainable employee performance via employees dynamic capabilities. Leadership is a proven game-changer for worker results, and dynamic capabilities are key for adapting and innovating (Alwali, 2023; Wali et al., 2022; Yu et al., 2022). However, the interrelationships among these variables remain insufficiently understood. In particular, limited research has examined how change leadership enables employees to develop adaptive capabilities, integrate knowledge, and continuously reconfigure their competencies, thereby fostering sustainable employee performance.. As Jia-Chi et al. (2016) highlight, we need more on how leadership at the org level interacts with individual capabilities. Employee Dynamic Capability was operationalized using the scale developed by Bieńkowska and Tworek (2020) and further refined by Tworek (2023). The instrument conceptualizes EDC as employees' capability to adapt to environmental changes, continuously acquire and integrate new knowledge, solve emerging work-related problems, and reconfigure existing competencies to meet evolving organizational demands.

To fill this gap, this study leans on organizational learning theory (Argyris, C., & Schön, 1978; March, 1991), which says success comes from generating, grabbing, and using knowledge through continuous learning. In digital start-ups, leaders are crucial for building a culture that sparks experimentation, idea-sharing, and reflection. This setup helps employees grow dynamic capabilities, making them more resilient in wild, fast-changing environments. By focusing on workers at private digital start-ups buzzing with innovation and flux (Colombelli et al., 2023). So, this research uncovers how change leadership effect sustainable employee performance through employee dynamic capabilities over time.

2. Literature Review

2.1 Underpinning Theory of Organizational Learning Theory

Organizational Learning Theory provides a strong theoretical foundation for explaining the relationship between change leadership, employee dynamic capability, and sustainable employee performance in digital start-ups. The theory emphasizes that organizations achieve long-term effectiveness through continuous learning, knowledge sharing, adaptation, and the development of new competencies in response to environmental change. Foundational scholars argue that organizations learn when individuals acquire, transfer, and apply knowledge to improve organizational actions and outcomes (Argyris, C., & Schön, 1978; March, 1991). In highly dynamic digital start-up environments characterized by technological disruption, uncertainty, and rapid market shifts, organizational learning becomes essential for maintaining sustainable employee performance.

The mediating role of employee dynamic capability can also be explained through organizational learning theory. Employee dynamic capability refers to employees' ability to integrate, build, and reconfigure their competencies in response to environmental changes (Teece, 2018). In digital start-ups, employees are frequently required to learn new digital skills, adapt to evolving technologies, and solve emerging problems quickly. Organizational learning processes supported by change leadership enhance employees' opportunities to develop these adaptive capabilities through continuous learning, collaboration, and knowledge exchange. Employees who possess strong dynamic capabilities are better able to adjust their work behaviors, maintain productivity, and sustain high levels of performance despite rapid organizational and technological changes.

Therefore, organizational learning theory explains that change leadership indirectly influences sustainable employee performance through the development of employee dynamic capability. Change leaders cultivate a learning environment that promotes knowledge acquisition, adaptability, and capability reconfiguration, enabling employees to sustain their performance in the fast-changing context of digital start-ups. In this relationship, employee dynamic capability acts as a critical mechanism through which organizational learning processes translate leadership practices into sustainable employee outcomes.

2.2 Change Leadership and Sustainable Employee Performance

Change leadership significantly impacts sustainable employee performance by fostering adaptability, enhancing motivation, and creating a supportive organizational climate. Sustainable employee performance refers to employees' ability to maintain consistent productivity, engagement, and well-being despite ongoing organizational changes (Geldenhuys et al., 2014; Yu et al., 2022). Unlike traditional leadership styles, change leadership focuses on driving transformation, reducing resistance to change, and aligning employees with evolving organizational goals (Oygander, 2020). Given that digital transformation and organizational shifts are increasingly frequent, it is critical to understand how change leadership directly influences employees' ability to sustain high performance over time.

Change leaders create a psychologically safe space for experimentation and reflection, encouraging employees to question assumptions (double-loop learning) and tweak routines on the fly (single-loop learning) (Lei et al., 2019), it builds mental agility. Employees learn to spot patterns in chaos, adapt their skills dynamically, and view change as a growth (Mirza et al., 2022). Change leadership boosting motivation and engagement via shared vision and goal alignment (Oygander, 2020). Organizational learning theory explains this as knowledge creation and sharing: employees internalize collective goals, co-create solutions, and feel psychologically invested. This alignment cuts burnout, sustains energy, and keeps engagement high, even as demands evolve (Oygander, 2020; Yu et al., 2022).

Moreover, change leadership reduces resistance to change by addressing employee concerns and fostering positive attitudes toward transformation. Employees who perceive change as an opportunity rather than a threat are more likely to invest in long-term organizational goals and sustain their performance levels (Caulfield & Senger, 2017). By ensuring that employees receive guidance and support throughout the transition, change leaders play a pivotal role in preventing burnout and sustaining high performance over time.

H1. Change leadership has positive impact towards sustainable employee performance

2.3 Change Leadership and Employee Dynamic Capability

Employee dynamic capability refers to an individual's ability to continuously develop new skills, adapt to changing environments, and effectively respond to evolving challenges (Surty & Scheepers, 2020). In rapidly transforming workplaces, organizations rely on change leaders to create conditions that enable employees to enhance their decision-making agility, problem-solving skills, and capacity for innovation (AlAnazi et al., 2022). Given the increasing demand for employees who can thrive in uncertain and evolving work environments, understanding how change leadership directly influences employee dynamic capability is crucial.

Change leadership plays a key role in monitoring and interpreting the environment, allowing employees to stay informed about industry trends and challenges. Change leaders envision new possibilities for the organization, encourage creative problem-solving, and promote innovative solutions to achieve objectives (Oygander, 2020). By setting a long-term vision and negotiating support for necessary changes, change leadership enables employees to develop skills that support continuous improvement and adaptation.

Psychological safety is a critical mechanism through which change leadership fosters dynamic capability. Leaders who practice open communication, promote innovation, and encourage working together fosters a workplace where employees feel comfortable trying new ideas and taking risks (Suriyankietkaew & Avery, 2016). This psychological security allows employees to engage in trial-and-error learning, enhancing their ability to adjust to new technologies, processes, and strategic shifts (Fernández-Mesa et al., 2013).

Change leadership helps employees recognize the need for change and cognitively process it in a way that fosters dynamic capability. By clearly stating the need for change, outlining its consequences, and presenting available options, change leaders act as cognitive tuners, helping employees make informed decisions and adjust their behaviors accordingly (Ghavifekr, 2019). Employees under strong change leadership do not merely react to change; they anticipate it, prepare for it, and embrace it as an opportunity for growth.

H2. Change leadership has positive impact towards employee dynamics capability

2.4 Employee Dynamic Capability and Sustainable Employee Performance

As organizations face rapid technological advancements, evolving market demands, and workplace transformations, employees must develop dynamic capabilities to sustain their performance. These capabilities enable individuals to not only cope with change but actively leverage it as an opportunity for growth (Wang et al., 2024). Employee dynamic capability ensures knowledge adaptability and continuous learning, which are crucial for sustaining performance in the digital era (Wang et al., 2024). Employees who possess learning agility can rapidly acquire and apply new skills, allowing them to remain effective contributors to organizational success even amid uncertainty and evolving demands. This interplay between flexibility and sustained productivity ensures that employees thrive in dynamic, technology-driven environments (Alwali, 2023).

Employee dynamic capability involves active engagement in change-related processes, reinforcing sustainable performance outcomes. Employees who receive change-related support, assess implementation effectiveness, and consolidate successful transitions exhibit higher levels of responsibility, commitment, and performance stability (Buchanan et al., 2007; Herold et al., 2008; Oreg et al., 2011). When employees actively participate in evaluating and refining change efforts, they become more accountable for their roles and long-term performance.

H3. Employee dynamics capability has positive impact towards sustainable employee performance

2.5 Employee Dynamics Capability Mediate Change Leadership on Sustainable Employee Performance

Employee dynamic capability serves as a key mechanism that enables individuals to effectively respond to change, refine their skills, and sustain long-term performance (Habeeb, 2020). Given that organizations frequently undergo strategic transformations, it is essential to understand how change leadership fosters employee dynamic capability and, in turn, sustains performance.

Change leadership facilitates a structured change process by establishing a clear vision, consistent communication, and structured implementation strategies (Dumas & Beinecke, 2018). Leaders align human resource practices with change initiatives, provide necessary training, and engage employees in change-related activities, ensuring that employees develop the skills and adaptability needed for continuous improvement. Through regular communication and structured change interventions, employees become more responsive and capable of handling uncertainty and complexity (Onyeneke & Abe, 2021).

Moreover, employee dynamic capability plays a mediating role in the relationship between change leadership and sustainable performance. Employees with high dynamic capability can actively learn, adjust their behaviors, and implement creative solutions to challenges (Habeeb, 2020). When change leaders respect individual needs, provide emotional support, and foster psychological safety, employees develop a stronger connection to change initiatives and sustain their performance over time (Abrell-Vogel & Rowold, 2014).

H4. Employee dynamics capability mediate the effect of change leadership towards sustainable employee performance

3. Method

This study adopts a quantitative research design using a deductive approach. As noted by Saunders, Philip & Thornhill (2019), quantitative research is appropriate for examining theoretical relationships through systematic data collection and statistical analysis. Data for this study were collected a single-method survey and analyzed using Structural Equation Modelling (SEM) with Partial Least Squares (PLS-SEM). The quantitative approach is considered suitable for achieving the study's objectives, particularly in examining complex relationships among variables. The proposed model includes mediation relationships and latent constructs measured through multiple indicators, making PLS-SEM an appropriate analytical technique for handling complex structural relationships (Hair et al., 2021). While sustainable employee performance (SEP) conceptually reflects employees' capability to maintain effective performance over time, this study does not directly observe performance longitudinally. Instead, SEP is operationalized as a latent psychological capability measured through validated self-report indicators developed in previous research (Van der Heijden, B. I. J. M., & De Vos, 2015; Van der Heijden et al., 2020). Consequently, the findings should be interpreted as associations between organizational factors and employees' current perceptions of sustainable performance capability rather than empirical evidence of future performance trajectories.

The sample size was determined using G*Power version 3.1.9.7, selected for its precision in statistical power analysis and ability to calculate minimum sample requirements based on effect size. A minimum sample size of 119 respondents was sufficient to represent the population. However, to ensure sufficient data collected, a total of 400 questionnaires were distributed, and 343 responses were returned, yielding a response rate of 85.75%. After screening for incomplete and inconsistent responses, 329 valid questionnaires were retained for analysis. Therefore, the sample size of 329 substantially exceeds the recommended threshold, suggesting sufficient statistical power to detect meaningful effects and ensuring the robustness of the PLS-SEM analysis (Hair et al., 2014). The unit of analysis in this study is individual employees working in digital start-up companies.

Measurement instruments were adopted from established studies to ensure validity and reliability. Sustainable employee performance was measured using a ten-item scale developed by (Ji et al., 2021). Change leadership was assessed an eight-item scale adapted from Holten et al. (2020) and Yukl (1999). Employee dynamic capability was measured using six items developed by (Bieñkowska & Tworek, 2020). All constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Data analysis was conducted using PLS-SEM 4.1.0, which is widely recognized for its ability to simultaneously estimate complex relationships between latent constructs and their indicators (Hair et al., 2021). This technique is particularly appropriate for analyzing unobservable variables measured multiple indicators. The PLS-SEM approach comprises two main components: the measurement model and structural model. The measurement model which assesses the relationships between constructs and their indicators, and the structural model (inner model), which evaluates the relationships among latent constructs. The structural model is evaluated path coefficients, which indicate the strength and direction of relationships between variables. Hypothesis testing is conducted by examining t-values and p-values obtained through bootstrapping procedures. At a 0.05 significance level, the critical t-values are 1.65 for one-tailed tests and 1.96 for two-tailed tests. Statistical significance is determined based on p-values of less than 0.01, 0.05, and 0.10. Additionally, effect sizes are assessed using Cohen's f^2 criteria to evaluate the magnitude of predictor contributions within the model.

4. Result

4.1 Evaluation of Measurement Models

The evaluation of the measurement model assesses the quality of the constructs' measurement instruments and distinguishes between reflective and formative approaches. This study adopts a reflective measurement model grounded in established theory and prior research. The evaluation examines validity through convergent and discriminant validity and reliability using composite reliability and Cronbach's alpha. These assessments provide the basis for subsequent hypothesis testing. Following Kock (2015), common method bias was assessed using the full collinearity variance inflation factor (VIF). According to Kock (2015), full collinearity VIF values below 3.3 indicate that common method bias is unlikely to threaten the validity of the results. all latent constructs exhibited full collinearity VIF values below the recommended threshold of 3.3, suggesting that common method bias is not a serious concern in this study.

4.1.1. Convergent Validity Test

According to Jr et al. (2008), convergent validity is established when each construct has a factor loading greater than 0.50. Detailed results of the convergent validity test are presented in Table 1.

Table 1 indicates that all indicator loadings exceed the recommended threshold of 0.50, confirming adequate indicator reliability. Convergent validity is further supported by average variance extracted (AVE) values exceeding 0.50 for all constructs. Based on these results, all measurement items are deemed valid and retained for subsequent analysis. Additionally, reliability analysis demonstrates satisfactory internal consistency, as both Cronbach's alpha and composite reliability values surpass the acceptable threshold of 0.60. According to Podsakoff et al. (2003), Harman's single-factor test was conducted by loading all measurement items into an exploratory factor analysis. The results indicated that the first factor accounted for less than 50% of the total variance, suggesting that common method bias was not a serious concern.

4.1.2. Discriminant Validity

Discriminant validity was assessed using the Heterotrait–Monotrait (HTMT) ratio. The HTMT ratio indicates that all constructs have values below the 0.90 threshold, which is considered acceptable for conceptually similar constructs

(Hair et al., 2021). The relatively low inter-construct correlations are expected, given the conceptual relatedness among variables within the model. Moreover, the HTMT criterion is regarded as more robust than the Fornell–Larcker criterion (Henseler et al., 2015). Although minor issues may appear in the Fornell–Larcker assessment, the HTMT results confirm adequate discriminant validity, as all values in Table 2 remain below 0.90. Therefore, the measurement model demonstrates acceptable validity and is suitable for further analysis.

Table 1. Result of Convergent Validity

Variable	Indicators	loading	CA	CR	AVE
Change Leadership	CL1	0.782	0.912	0.913	0.619
	CL2	0.747			
	CL3	0.813			
	CL4	0.801			
	CL5	0.803			
	CL6	0.762			
	CL7	0.816			
	CL8	0.767			
Employee Dynamic Capability	EDC1	0.615	0.796	0.803	0.597
	EDC2	0.677			
	EDC3	0.763			
	EDC4	0.712			
	EDC5	0.742			
	EDC6	0.709			
Sustainable Employee Performance	SEP1	0.650	0.896	0.907	0.521
	SEP2	0.818			
	SEP3	0.559			
	SEP4	0.712			
	SEP5	0.614			
	SEP6	0.763			
	SEP7	0.761			
	SEP8	0.778			
	SEP9	0.759			
	SEP10	0.757			

Table 2. Discriminant validity: Heterotrait–Monotrait (HTMT)

	CL	EDC	SEP
CL	0.787		
EDC	0.684	0.705	
SEP	0.561	0.662	0.721

4.2 Evaluation of Structural Model

4.2.1 Model Fit and Predictive Relevance

The study assessed multicollinearity using the variance inflation factor (VIF). All VIF values were below the threshold of 5, ranging from 1.431 to 2.502, indicating no multicollinearity issues in the model (Hair et al., 2014). Model fit was evaluated using the standardized root mean square residual (SRMR), which yielded a value of 0.066. This value is below the recommended threshold of 0.08, indicating a good model fit (Henseler et al., 2016), as presented in Table 3. The Normed Fit Index (NFI) of 0.814 also approaches acceptable levels, providing additional support for the model’s adequacy.

Table 3. Model Fit and Predictive Relevance

Construct	R-Square	Q-Square	f-Square	SRMR	NFI
EDC	0.468	0.415	0.880	0.066	0.814
SEP	0.616	0.566	0.464		

Note(s): Results derived from the authors’ analysis using Smart PLS 4.0. SRMR < 0.08 and NFI $\approx$ 0.814 suggesting adequate model fit.

Table 3 presents the coefficient of determination (R^2) indicates the proportion of variance in the endogenous construct explained by its predictors. The R^2 value for sustainable employee performance (SEP) is 0.616, suggesting that approximately 61.1% of the variance in SEP is explained by change leadership (CL) and employee dynamic capability (EDC), thereby demonstrating strong explanatory power. While, The R^2 value for employee dynamic capability (EDC) is 0.468, suggesting that approximately 46.8% of the variance in EDC is explained by CL, thereby classified a moderate explanatory power.

The structural model is further evaluated using predictive relevance (Q^2). A Q^2 value greater than zero indicates that the model has predictive relevance for a given endogenous construct. In this study, the Q^2 value for employee dynamic capability is 0.415 and sustainable employee performance is 0.566 as seen in Table 3. It exceeds the threshold, confirming that the model possesses strong predictive relevance.

Additionally, effect size (f^2) is assessed to determine the individual contribution of each exogenous construct to the R^2 value of the endogenous variable. According to Cohen, effect sizes are categorized as small (0.02), medium (0.15), and large (0.35). The effect size of change leadership (CL) on sustainable employee performance (SEP) is 0.464, indicating a strong practical effect. The effect size of change leadership (CL) on employee dynamic capability (EDC) is 0.880, reflecting a strong effect. In contrast, The effect size of employee dynamic capability (EDC) on sustainable employee performance (SEP) is 0.099, reflecting a small effect. These findings highlight the differing magnitudes of influence exerted by the predictor variables within the structural model.

4.2.2 Hypothesis Test Results

Hypothesis testing was performed using Structural Equation Modelling (SEM) with the Partial Least Squares (PLS) method, specifically employing Warp PLS. A positive path coefficient indicates a positive effect of exogenous variables on endogenous variables, while a negative path coefficient denotes a negative effect. Significance levels are classified as follows: p-value < 0.01 (1% significance), p-value < 0.05 (5% significance), and p-value < 0.1 (10% significance). The hypothesis testing results are illustrated in Table 4.

Table 4. Coefficient of Latent Variable

Path Relationship	Path Coefficient	Standard Deviation (STDEV)	t Statistics	P Value	Result
CL → SEP	0.578	0.064	9.840	<0.001***	Supported
CL → EDC	0.684	0.059	10.757	<0.001***	Supported
EDC → SEP	0.267	0.051	5.219	<0.001***	Supported
CL → EDC → SEP	0.182	0.041	4.478	<0.001***	Supported

*Significant at level 0.1 (2-tailed)

** Significant at the 0.05 level (2-tailed)

*** Significant at level 0.01 (2-tailed)

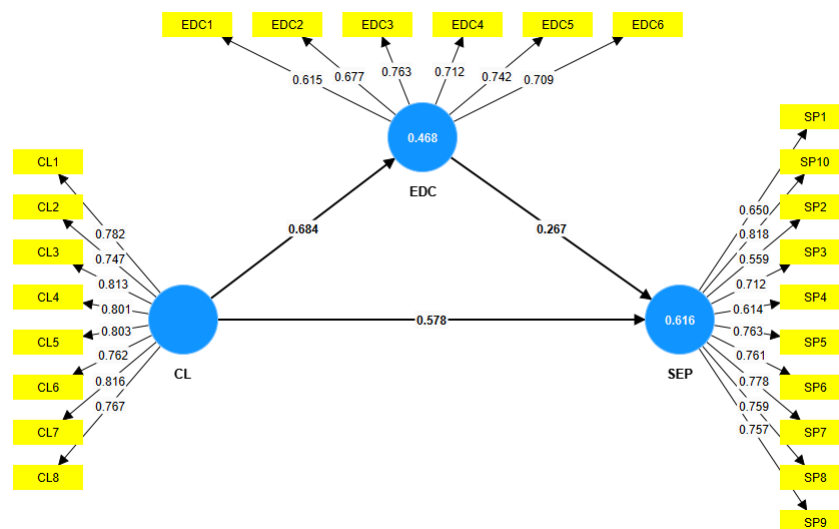


Figure 1. Research Hypothesis Test

Table 4 presents the results of the hypothesis testing. The findings indicate that change leadership (CL) has a significant positive effect on sustainable employee performance (SEP), as evidenced by a path coefficient of ($\beta = 0.578, t = 9.840$), so, hypothesis 1 is supported. Similarly, change leadership (CL) demonstrates a significant positive effect on employee dynamic capability (EDC), with a path coefficient of ($\beta = 0.684, t = 10.757$). Therefore, hypothesis 2 is also supported.

The third, employee dynamic capability (EDC) has a significant positive effect on sustainable employee performance (SEP), with a path coefficient of ($\beta = 0.267, t = 5.219$), so, hypothesis 3 is supported. The result for mediating effect shows that employee dynamic capability (EDC) partially mediate the effect of change leadership (CL) on sustainable employee performance (SEP), with a path coefficient of ($\beta = 0.182, t = 4.478$), hypothesis 4 is supported.

5. Discussion

Leadership that focuses on managing and facilitating change serves as a central driver of sustained employee outcomes in highly dynamic environments. Sustainable employee performance as the ability to maintain productivity, engagement, and well-being over time is particularly critical in digital start-ups characterized by uncertainty, rapid innovation, and continuous transformation (Geldenhuis et al., 2014; Yu et al., 2022). The contrast finding proven that leadership (share orientation) does not significant effect of sustainable performance (Chin et al., 2023; Dey et al., 2022).

A key mechanism underlying this relationship is employee dynamic capability, which partially mediates the effect of change leadership on sustainable employee performance. This indicates that change leadership not only has a direct impact on performance but also strengthens employees' ability to adapt, learn, and respond to evolving demands. In digital start-ups, where business models and technologies change rapidly, such capabilities enable employees to sustain consistent performance levels and enhance resilience in the face of ongoing disruption (Caulfield & Senger, 2017; Geldenhuis et al., 2014).

Change leadership creates a learning-oriented environment that strengthens employee dynamic capability. Through open communication, collaboration, and experimentation, leaders cultivate psychological safety, enabling employees to take risks and engage in innovative behaviors (Suriyankietkaew & Avery, 2016). This environment promotes continuous learning and skill development, allowing employees to update their knowledge and remain adaptable in response to technological and organizational changes (Fernández-Mesa et al., 2013).

From the perspective of organizational learning theory, the relationship between change leadership and sustainable employee performance can be understood as a continuous process of knowledge creation, sharing, and application (Oygander, 2020). Change-oriented leaders do not merely direct employees through transitions; they actively cultivate environments where learning becomes embedded in daily work practices (Yu et al., 2022). In such contexts, employees are encouraged to exchange insights, experiment with new approaches, and collectively solve emerging problems. This process enables individuals to internalize organizational goals and align their personal contributions with broader strategic objectives.

In addition, change leadership enhances cognitive flexibility and decision-making agility. By encouraging employees to challenge conventional approaches and anticipate future disruptions, leaders foster an adaptive mindset that supports effective responses to complex and evolving conditions (AlAnazi et al., 2022; D'amato & Roome, 2009). These competencies are core components of dynamic capability and represent a critical pathway through which leadership influences sustainable performance. Change leadership brings to organizational transformation. Leaders establish clear visions, maintain consistent communication, and implement processes that align organizational goals with employee development (Dumas & Beinecke, 2018). Through training, collaboration, and active involvement, employees acquire and apply new knowledge, enhancing their ability to function effectively in dynamic work environments (Onyeneke & Abe, 2021; Surty & Scheepers, 2020).

Overall, the findings indicate that employee dynamic capability is an important though not exclusive mechanism linking change leadership to sustainable employee performance. Change leadership influences performance both directly, by shaping employee attitudes and motivation, and indirectly, by developing adaptive capabilities. This highlights the importance for digital start-ups to invest in leadership practices that simultaneously enhance performance and build long-term employee adaptability in rapidly evolving environments.

6. Conclusion and Future Research Agenda

This study shows that strong change leadership is key to helping employees in digital start-ups keep performing well over the long haul in terms of productivity, engagement, and well-being. Leaders who handle change effectively don't just boost these areas directly; they also build employees dynamic capabilities (like adapting, learning, and pivoting quickly), which indirectly make a big difference too. The partial mediation found means these capabilities explain a lot of how leadership drives results, especially in fast-paced tech environments where things shift constantly. But there's still a direct link, pointing to other factors like motivation, buy-in, and clear goals.

Drawing on organizational learning theory, this study shows that sustainable employee performance in digital start-ups is really about continuous learning, not just chasing short-term output. The theory explains that by continuously acquiring and applying knowledge, people can adapt smoothly to fast-changing environments (March, 1991). Change leaders spark an adaptive mindset, promote continuous learning, and create space for trial-and-error, which helps employees stay steady amid the chaos. Ultimately, the research underscores that lasting performance isn't just about quick wins from leaders; it's about nurturing those deeper adaptive skills in the team.

This study employed a cross-sectional design, which limits the ability to establish causal relationships among change leadership, employee dynamic capability, and sustainable employee performance. Although the mediation model is theoretically grounded in organizational learning theory, the temporal ordering of the variables cannot be fully verified using a single-point data collection approach. Future studies should adopt longitudinal research designs to examine how employee dynamic capability develops over time and contributes to sustainable employee performance in rapidly evolving digital start-up environments.

Looking ahead, future studies could dig into what might amp up or dial down these effects, like company culture, digital vibes, tech disruptions, or different leadership styles (think transformational or agile). It also be great to compare this across industries, company sizes, or cultures to see how widely it applies. Digital start-ups are a unique beast, so testing if the same dynamics hold in steadier, more traditional setups would be super insightful. This study extends organizational learning theory by identifying employee dynamic capability as a critical micro-foundational mechanism through which change leadership enhances sustainable employee performance. The findings demonstrate that employees' abilities to sense, adapt, and reconfigure competencies serve as an important pathway linking leadership-driven change initiatives with long-term performance outcomes in digital start-up organizations.

Acknowledgement

Communication of this research is made possible through monetary assistance by Universiti Tun Hussein Onn Malaysia and the UTHM Publisher's Office via Publication Fund E15216.

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