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Authentic Leadership, Organizational Culture, and Learning in Shaping Readiness for Change: The Moderating Role of Internal Locus of Control

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Abstract

This study investigates the interplay between authentic leadership, organizational culture, and their effects on organizational learning and employees' readiness to embrace change. Furthermore, it examines how internal locus of control can modify these dynamics. Data were collected from 555 employees in Indonesia's chemical sector, with 240 participants selected via stratified proportional random sampling. Using SmartPLS 3.2.8, structural equation modeling was employed to test the hypothesized relationships. The measurement model was first evaluated for reliability and validity, confirming that the indicators and constructs were robust. Findings reveal that authentic leadership and a strong organizational culture significantly enhance organizational learning, while their direct impact on readiness for change is minimal. Organizational learning, however, serves as a meaningful mediator in these relationships, and employees with a higher internal locus of control demonstrate greater responsiveness to learning in fostering readiness for change. The results underscore the importance of promoting authentic leadership and cultivating a supportive organizational culture to strengthen learning processes, with individual control beliefs further amplifying the effectiveness of change initiatives.

Keywords: Authentic leadership, Organizational culture, Internal locus of control, Organizational learning, Readiness for change

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Introduction

In contemporary organizations, the ability to adapt and respond to ongoing change is critical for survival and competitiveness. Rapid technological advancement, shifting market demands, and evolving socio-economic conditions require companies to cultivate a workforce that is prepared and willing to embrace change [1-3]. Organizational readiness for change (RC) reflects this preparedness, encompassing employees' mindset, skills, and motivation to implement new strategies effectively [4]. Without sufficient readiness, even well-designed change initiatives risk failure, as highlighted by McKinsey & Company (2017), which found that approximately 70% of organizational transformations do not achieve their objectives due to inadequate preparation [5].

RC is shaped by both organizational and individual factors. At the organizational level, leadership and culture are pivotal. Leadership that demonstrates authenticity—through self-awareness, ethical consistency, transparency, and balanced decision-making—can foster trust and resilience among employees, enhancing their openness to change [6-8]. Despite its growing recognition, empirical evidence on the impact of authentic leadership (AL) on RC remains scarce, leaving gaps in understanding its influence on cultivating a change-ready workforce [9, 10].

Organizational culture (OC) is another critical factor shaping RC. Culture is defined by the shared beliefs, values, and norms that guide employee behavior and decision-making [11, 12]. A culture that supports learning, adaptability, and innovation can strengthen employees' capacity to engage with change, while rigid or misaligned cultural norms can undermine transformation

efforts [13, 14]. Both AL and OC contribute to organizational learning (OL), which enables employees to acquire and apply knowledge that supports successful change implementation [15, 16].

At the individual level, personality traits, particularly internal locus of control, influence how employees respond to change. Individuals with an internal locus of control believe they can affect outcomes through their own actions, which makes them more receptive and proactive when organizational changes occur [17, 18]. Research suggests that internal locus of control can also enhance the positive effect of OL on RC, amplifying the benefits of a learning-oriented environment on employees' readiness to adapt [19, 20].

this study seeks to examine how authentic leadership and organizational culture influence organizational learning and readiness for change, while also considering the moderating role of internal locus of control. By exploring these relationships, the research aims to provide insights into strategies for fostering a workforce that is both capable and willing to embrace change in dynamic organizational settings.

Despite extensive research on readiness for change (RC), the interplay between authentic leadership (AL), organizational culture (OC), organizational learning (OL), and internal locus of control remains insufficiently explored. This study addresses this gap by examining these variables in an integrated framework. Specifically, the study seeks to answer the following questions: How do AL and OC influence OL? To what extent do AL and OC contribute to RC? How does OL affect RC? How does OL mediate the relationship between AL, OC, and RC? Finally, what role does internal locus of control play in moderating the OL–RC relationship? The overarching aim is to provide a nuanced understanding of the mechanisms and conditions that facilitate change readiness in organizational settings.

Theoretical foundation and hypothesis development

Social cognitive learning theory

Social cognitive learning theory (SCLT) emphasizes the role of observational learning, cognition, and self-regulation in human development [21, 22]. Over time, Bandura refined the framework into social cognitive theory, highlighting the reciprocal interaction between personal, behavioral, and environmental factors in shaping human behavior [23]. This perspective provides a lens to understand how employees acquire skills, attitudes, and behaviors necessary for organizational change.

Key principles of SCLT indicate that individuals can learn through observation without immediately demonstrating behavioral change [24, 25]. Learning is guided by goal-directed processes, self-regulation, and cognitive engagement, which collectively influence how employees respond to organizational initiatives [26]. Within this study, SCLT underpins the relationships between AL, OC, OL, and RC, while also providing a rationale for examining how internal locus of control shapes individual responses to organizational learning and change initiatives.

Authentic leadership, organizational culture, and organizational learning

Authentic leadership is defined by ethical consistency, self-awareness, and relational transparency, enabling leaders to act in accordance with their values while fostering trust and openness within the organization [27-29]. By demonstrating genuine concern and integrity, authentic leaders create conditions conducive to learning, where employees are encouraged to share knowledge, engage collaboratively, and reflect critically on their work [30, 31].

Organizational culture, as the shared system of values, norms, and practices, also plays a critical role in facilitating learning [32, 33]. Cultures that support psychological safety, open communication, and teamwork enable employees to actively participate in collective learning processes, which strengthens organizational capabilities [34, 35]. Guided by SCLT, both AL and a strong OC are expected to enhance OL, as employees learn through observation, social reinforcement, and interaction with leaders and peers [36, 37].

Based on this theoretical background, the following hypotheses are proposed:

H1a: Authentic leadership has a positive effect on organizational learning.

H1b: Organizational culture positively influences organizational learning.

Authentic leadership, organizational culture, and readiness for change

Leaders who demonstrate authenticity foster trust and a psychologically safe environment, where employees feel supported and valued [38]. Such an environment encourages openness to change, as employees are more willing to explore new approaches, adopt new behaviors, and engage actively in transformation initiatives [39, 40]. Authentic leaders model commitment to change, provide consistent support, and reinforce adaptive behaviors, which in turn increases employees' confidence and readiness for change [41].

Similarly, an organizational culture that values innovation, learning, and continuous improvement enhances employees' willingness to embrace change. When employees perceive that the culture supports experimentation, risk-taking, and collaboration, they are more likely to engage constructively with organizational transitions [42, 43]. Observational learning

within such a culture further strengthens RC, as employees internalize positive change behaviors modeled by leaders and peers [44, 45].

Accordingly, the study proposes the following hypotheses:

H2a: Authentic leadership has a positive effect on readiness for change.

H2b: Organizational culture positively affects readiness for change.

Organizational learning and readiness for change

Organizational learning (OL) serves as a cornerstone for enabling organizations to manage change effectively. It involves developing capabilities and acquiring knowledge that allow employees to respond to shifting demands and challenges [46, 47]. By encouraging experimentation, reflection, and knowledge sharing, OL helps organizations build flexibility and resilience, enhancing their ability to adapt to both internal and external pressures [48, 49]. In practice, this continuous learning process allows organizations to anticipate potential challenges, refine strategies, and respond proactively to evolving conditions.

OL also plays a crucial role in shaping employees' readiness for change (RC). Drawing on social cognitive learning theory [21], employees learn not only from formal training but also through observing the behavior of peers and leaders. This modeling effect reinforces adaptive behaviors, strengthens confidence, and fosters a culture that embraces innovation and change. Empirical evidence suggests that organizations emphasizing learning tend to experience higher employee engagement, motivation, and commitment during transitions, resulting in smoother implementation of change initiatives [50-52].

Hypothesis 3 (H3): Organizational learning positively impacts readiness for change.

Organizational learning as a mediator

Organizational learning may also serve as a mediator between organizational factors such as leadership and culture, and readiness for change. By embedding learning processes into the organization, leaders and cultural frameworks can indirectly influence how prepared employees are to implement change. OL enhances organizational agility, enabling employees to respond quickly to dynamic environments and improving overall adaptability [48, 53].

Social cognitive learning theory provides insight into this mediating role, as it emphasizes that behavioral modeling and observational learning facilitate knowledge acquisition and application within the organization. Leaders who demonstrate adaptive behaviors, coupled with a culture that promotes knowledge sharing, reinforce learning behaviors that increase employees' readiness for change.

Hypothesis 4a (H4a): Organizational learning mediates the relationship between authentic leadership and readiness for change.

Hypothesis 4b (H4b): Organizational learning mediates the relationship between organizational culture and readiness for change.

Internal locus of control as a moderator

While OL strengthens RC, the degree to which employees benefit from learning processes may depend on individual differences, particularly internal locus of control. This trait reflects the belief that one can influence outcomes through personal effort and decision-making [54, 55]. Employees with a high internal locus of control are more proactive, self-motivated, and inclined to apply knowledge effectively, whereas those with a lower internal locus of control may rely on external circumstances to determine results [17, 56].

From a social cognitive perspective, employees with a strong internal locus of control are likely to engage actively with learning opportunities, set personal goals, and participate in change initiatives with greater confidence [21]. In environments that encourage continuous learning and innovation, such individuals tend to embrace challenges, improve their competencies, and contribute to organizational adaptability more effectively [57-59].

Hypothesis 5 (H5): Internal locus of control positively moderates the effect of organizational learning on readiness for change.

The conceptual framework synthesizing these relationships is presented in **Figure 1**.

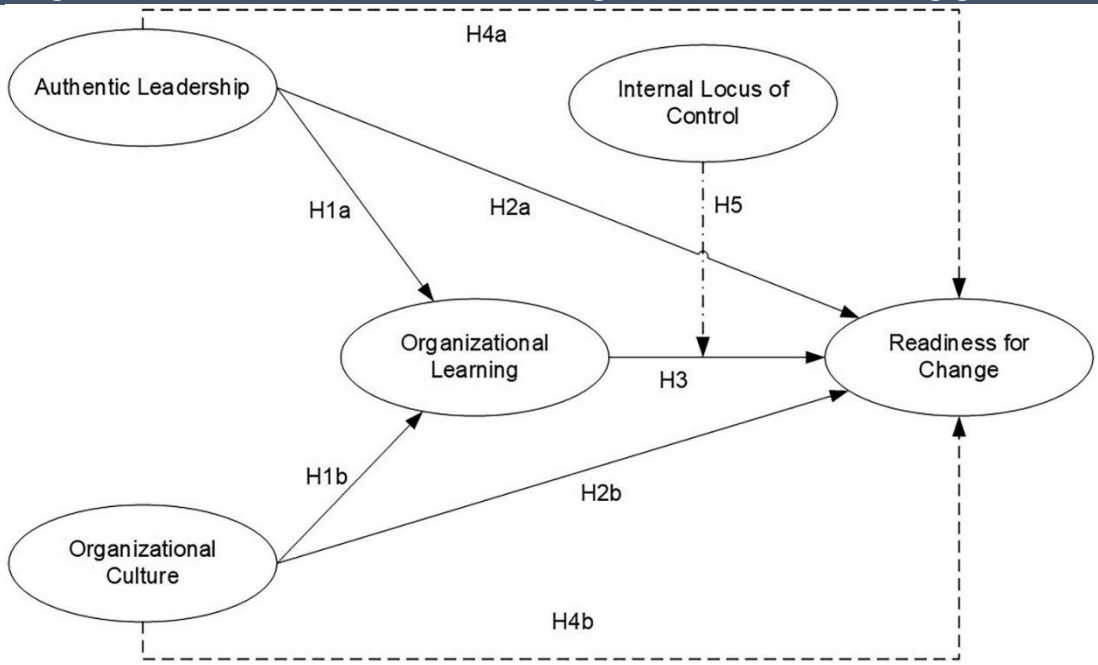

Figure 1. Conceptual model. *Source:* author's construct.

Data and sample

This research adopted a quantitative design, employing a survey methodology to empirically test the proposed hypotheses. Data were collected using a cross-sectional approach via an online, self-administered questionnaire. The study targeted employees working in Indonesia's chemical-related sectors, including fertilizers, petrochemicals, and other chemical industries, during the period from February to March 2024.

The total population comprised 555 employees. Due to practical constraints, it was not feasible to survey every individual in the population, necessitating the use of a sampling strategy. To ensure representative coverage across the workforce, stratified proportional random sampling—a form of probability sampling—was employed. This method divides the population into distinct sub-groups (strata) and randomly selects samples from each group proportionally, thereby preserving the demographic and organizational diversity of the population.

This population was deemed suitable for the study because the chemical, fertilizer, and petrochemical sectors are critical components of Indonesia's economy. Understanding the perceptions and attitudes of employees in these industries provides valuable insights into organizational behavior and readiness for change, with potential implications that extend beyond the immediate sectors. The stratified proportional approach further enhances the reliability and generalizability of the study's findings by capturing perspectives from all relevant sub-groups within the population.

We determined the sample size using the Slovin Formula with a precision of 5%, as follows:

$$n = \frac{555}{1 + 555(0.05)^2} = 232.46\ employees \quad (1)$$

Participants and data collection

This study employed a quantitative research design, using an online survey to gather cross-sectional data from employees in Indonesia's chemical, fertilizer, and petrochemical sectors between February and March 2024. The total population included 555 employees. To ensure representativeness, stratified proportional random sampling was applied, which divides the population into homogeneous subgroups before randomly selecting participants in proportion to subgroup sizes.

The minimum sample size, calculated statistically, was approximately 233 employees. To ensure adequacy, 240 participants were included in the final analysis. Respondents were invited via their respective organizational communication channels and provided with a detailed explanation of the study's objectives and procedures. Participation was voluntary, and no personal identifiers, such as names, were collected to maintain confidentiality.

Due to the online format, informed consent was obtained verbally. Participants were briefed on their rights, including the freedom to withdraw at any time without repercussions. This approach was deemed appropriate for the low-risk nature of the study and was approved by the institutional review board. The study design prioritized ethical standards, data privacy, and participant safety throughout the research process.

Research instruments

Data were collected using a structured questionnaire, adapted from previously validated scales and translated into Indonesian to ensure clarity and cultural appropriateness. Responses were recorded using a five-point Likert scale, where 1 = strongly disagree and 5 = strongly agree.

Authentic Leadership (AL) was operationalized as leaders' demonstration of self-awareness, moral integrity, transparency, and balanced decision-making, promoting ethical behavior and positive development among subordinates [60-62]. Four items captured AL behaviors, such as "My leader seeks feedback to improve self-awareness" and "My leader considers alternative perspectives before making decisions." Cronbach's alpha for this scale was 0.82.

Organizational Culture (OC) reflects the collective values, beliefs, and norms shared within an organization [11]. Four dimensions—clan, mission, adaptive, and bureaucratic—were measured [63]. Sample items included "The organization emphasizes a family-like supportive environment" and "Employees are encouraged to follow established policies to ensure consistency." CA = 0.85.

Internal Locus of Control (ILC) measures individuals' perceptions of personal control over outcomes in life [55]. Three indicators—ability, effort, and interest—were assessed. Example items included, "I consistently strive to achieve my goals" and "I actively seek the most effective solutions to challenges." Reliability was CA = 0.78.

Organizational Learning (OL) captures processes through which an organization continuously acquires and applies knowledge to enhance performance and adapt to changes [16]. Four indicators—management commitment, experimentation culture, systems thinking, and risk-taking—were measured [64, 65]. Sample items included "Managers involve employees in critical decisions" and "Employees are encouraged to take calculated risks." CA = 0.83.

Readiness for Change (RC) reflects employees' positive attitudes, beliefs, and intentions toward change [66, 67]. Emotional, cognitive, and intentional dimensions were measured. Sample items included "I view organizational change as beneficial" and "I am willing to adopt changes in my work practices." CA = 0.87.

Control Variables included demographic factors—age, gender, education, and tenure—to account for potential confounding effects on the relationships between AL, OC, internal locus of control, OL, and RC [68].

The instrument underwent rigorous validation through forward-backward translation, expert review, and pilot testing with 30 participants to ensure clarity, cultural relevance, and comprehension. Reliability was verified via Cronbach's alpha (≥0.6) and validity through item-total correlations (≥0.3), confirming the internal consistency and appropriateness of the measures [69-71].

Data analysis

The current study employed partial least squares structural equation modeling (PLS-SEM) using SmartPLS version 3.2.8 to evaluate the proposed hypotheses. This analytical technique is particularly effective for investigating complex relationships among multiple latent constructs, such as authentic leadership, organizational culture, organizational learning, internal locus of control, and readiness for change. Unlike traditional regression methods, PLS-SEM accommodates both reflective and formative constructs and allows for the simultaneous assessment of direct, indirect, and moderating effects. The analysis is divided into two stages: the measurement model, which examines the validity and reliability of the constructs and their indicators, and the structural model, which evaluates the hypothesized relationships between latent variables. PLS-SEM is especially appropriate for studies with relatively small to moderate sample sizes and is robust for non-normal data distributions, making it suitable for the present sample of chemical industry employees in Indonesia.

Results

The dataset was analyzed using IBM SPSS version 24 for descriptive statistics and SmartPLS version 3.2.8 for structural modeling. **Table 1** summarizes the demographic characteristics of the respondents, including gender, age, educational attainment, job position, and tenure. This descriptive overview provides context for the sample and lays the foundation for subsequent PLS-SEM analysis. Following the demographic analysis, the study evaluated the measurement model to verify construct reliability and validity, ensuring that all indicators accurately reflect their respective latent variables. Once confirmed, the structural model was examined to test the hypothesized paths, including the mediating effect of organizational learning and the moderating effect of internal locus of control on readiness for change.

Table 1. Respondent characteristics

Respondent characteristics		Frequency	Percentage (%)
Gender	Male	211	88
	Female	29	12
Age	≤27 years	10	4
	28–34 years	51	21
	35–41 years	110	46

	42–48 years	54	23
	>48 years	15	6
Position	Senior vice president	5	2
	Vice president	10	4
	Superintendent	42	18
	Supervisor	105	44
	Foreman	37	15
	Main executor	39	16
	Middle executor	2	1
Education	High school	38	16
	Diploma	26	11
	Bachelor	117	49
	Masters	58	24
	Doctor	1	0
Length of work	≤4 years	6	3
	5–11 years	63	26
	12–18 years	108	45
	19–25 years	59	24
	>25 years	4	2

Source: field data (2024).

Understanding the demographic and professional profiles of the respondents is essential, as it provides insight into the composition of employees within Indonesia's industry, trade, and services sectors, particularly in fertilizers, petrochemicals, and related chemical industries. Examining these characteristics offers valuable context for interpreting the findings and can inform more targeted strategies aimed at enhancing organizational learning and readiness for change. Additionally, **Table 2** presents descriptive statistics, including means and standard deviations, for the study variables. The analysis indicates that respondents generally reported high levels across all measured constructs, reflecting strong engagement with the dimensions under investigation.

Table 2. Description of respondents' answers

Variable	*N*	Min	Max	Mean	Std
Authentic leadership	240	1	5	4.162	0.718
Organizational culture	240	1	5	4.269	0.683
Internal locus of control	240	1	5	4.459	0.567
Organizational learning	240	1	5	4.116	0.686
Readiness for change	240	1	5	4.397	0.544

Source: field data (2024).

The analysis revealed that employees reported relatively high levels of authentic leadership, organizational culture, internal locus of control, and organizational learning, with average scores exceeding 3.5. This pattern indicates that employees are generally operating in an environment where leadership is perceived as authentic, the organizational culture supports adaptive practices, individuals feel a sense of personal control over outcomes, and opportunities for learning and knowledge sharing are present. Collectively, these conditions suggest that employees are well-positioned to respond effectively to organizational changes, enhancing their readiness to embrace transformations.

Evaluation of the measurement model

In this study, authentic leadership, organizational culture, internal locus of control, organizational learning, and readiness for change were treated as reflective constructs. The assessment of the measurement model focused on verifying indicator reliability, internal consistency, convergent validity, and discriminant validity to ensure the robustness of the constructs [72]. Reliability was examined using both Cronbach's alpha (CA) and composite reliability (CR). The results indicated strong internal consistency for all constructs: authentic leadership (CA = 0.942, CR = 0.958), organizational culture (CA = 0.945, CR = 0.960), internal locus of control (CA = 0.917, CR = 0.948), organizational learning (CA = 0.905, CR = 0.933), and readiness for change (CA = 0.908, CR = 0.942). These values exceed the generally accepted threshold of 0.70, confirming satisfactory reliability [73].

Convergent validity was assessed using the average variance extracted (AVE), with all constructs surpassing the 0.50 benchmark: authentic leadership (0.851), organizational culture (0.858), internal locus of control (0.858), organizational learning (0.778), and readiness for change (0.845) [74]. Discriminant validity was confirmed using the Heterotrait–Monotrait Ratio (HTMT), ensuring that constructs are empirically distinct from one another **(Table 4)**.

Table 3. Measurement model

Variable	Code	Indicators	Loading	*p* Value	Cronbach's alpha	Composite reliability	AVE
Authentic leadership	AL1	Self-awareness	0.905	<0.001	0.942	0.958	0.851
	AL2	Transparency	0.914	<0.001			
	AL3	Moral	0.937	<0.001			
	AL4	Balanced processing	0.933	<0.001			
Organizational culture	OC1	Clan culture	0.946	<0.001	0.945	0.960	0.858
	OC2	Mission culture	0.922	<0.001			
	OC3	Adaptive culture	0.920	<0.001			
	OC4	Bureaucratic culture	0.918	<0.001			
Internal locus of control	ILC1	Ability	0.937	<0.001	0.917	0.948	0.858
	ILC2	Interest	0.930	<0.001			
	ILC3	Effort	0.912	<0.001			
Organizational learning	OL1	Management commitment	0.909	<0.001	0.905	0.933	0.778
	OL2	Opennes and experiment culture	0.874	<0.001			
	OL3	System thinking	0.873	<0.001			
	OL4	Risk taking	0.872	<0.001			
Readiness for change	RC1	Emotional	0.932	<0.001	0.908	0.942	0.845
	RC2	Cognitive	0.914	<0.001			
	RC3	Intentional	0.912	<0.001			

Source: field data (2024).

Table 4. Variables correlation (HTMT). (Table view)

	AL	OC	ILC	OL	RC	Age	Edu	Gen
AL								
OC	0.772							
ILC	0.617	0.685						
OL	0.822	0.818	0.709					
RC	0.536	0.609	0.771	0.715				
Age	0.023	0.033	0.047	0.061	0.034			
Edu	0.022	0.134	0.024	0.023	0.035	0.276		
Gen	0.042	0.057	0.106	0.082	0.082	0.219	0.079	
LoW	0.071	0.122	0.097	0.168	0.078	0.665	0.136	0.240

Source: field data (2024).

According to the results presented in **Table 4**, all constructs exhibit HTMT values below the 0.90 threshold, confirming that discriminant validity has been achieved [75, 76].

Evaluation of the structural model

The structural portion of the PLS-SEM analysis was assessed through the R-squared (R^2) values of the endogenous constructs, which indicate the proportion of variance in the dependent variables explained by the predictors. Higher R^2 values suggest that the model has stronger explanatory power and predictive capability for the constructs under study.

Following Chin's [77] guideline, R^2 values are interpreted as follows: 0.67 indicates substantial explanatory power, 0.33 represents moderate, and 0.19 denotes weak explanatory capacity. Based on the results shown in **Table 5**, both organizational learning and readiness for change demonstrate substantial R^2 values, indicating that the independent variables account for a considerable proportion of the variance in these outcomes. The detailed results of the structural model are summarized in **Table 6** and visually represented in **Figure 2**.

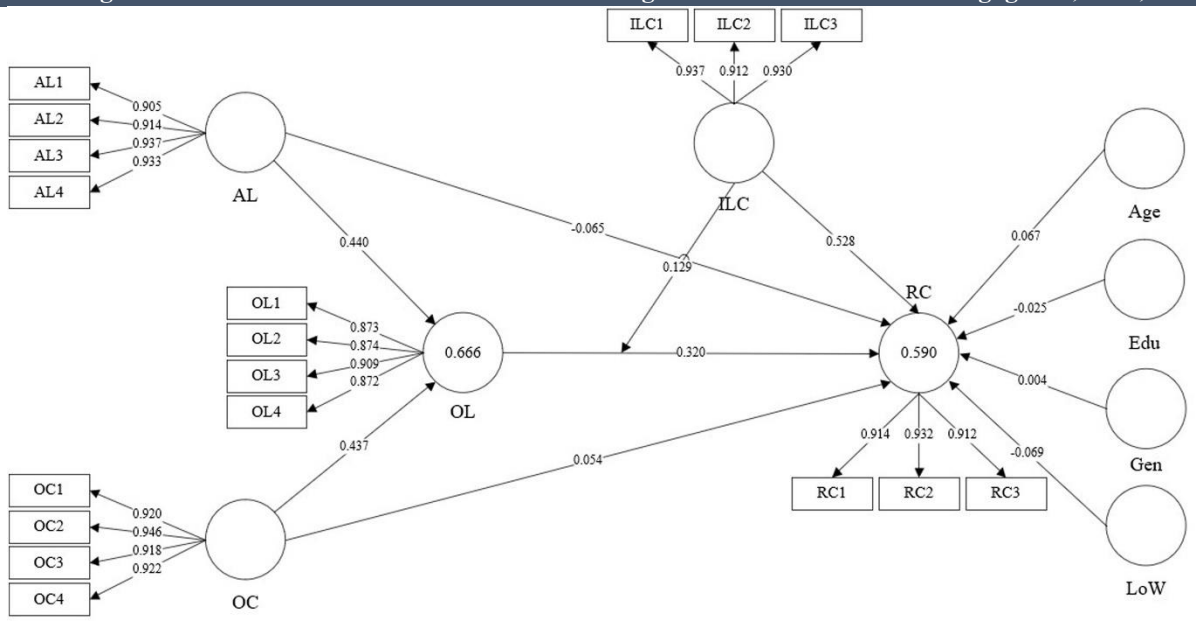

Figure 2. PLS-SEM structural model results. *Source:* field data (2024).

Table 5. *R*-square value of dependent variables

Construct	R^2	Adj. R^2
OL	0.666	0.663
RC	0.586	0.577

Source: field data (2024).

Table 6. Hypothesis testing results

Hypothesis	Relationship	Coefficients	*p* Value	Decision	f^2	VIF
H1a	AL → OL	0.440	<0.001**	Supported	0.272	2.135
H1b	OC → OL	0.437	<0.001**	Supported	0.268	2.135
H2a	AL → RC	−0.066	0.463^{ns}	Not Supported	0.224	2.849
H2b	OC → RC	0.056	0.582^{ns}	Not Supported	0.212	2.101
H3	OL → RC	0.314	0.003**	Supported	0.271	2.542
	ILC → RC	0.528	<0.001**		0.340	1.995
	Age → RC	0.067	0.265^{ns}		0.006	1.959
	Education → RC	−0.025	0.595^{ns}		0.001	1.177
	Gender → RC	0.004	0.922^{ns}		0.000	1.104
	Length of work → RC	−0.069	0.202^{ns}		0.006	1.886
Indirect or mediating/moderating						
H4a	AL → OL → RC	0.138	0.005**	Supported		
H4b	OC → OL → RC	0.137	0.008**	Supported		
H5	OL*ILC → RC	0.129	0.015*	Supported		

*Significant at 5%, **Significant at 1%, ^{ns}not significant.
Source: field data (2024).

Prior to testing the structural model, the data were assessed for multicollinearity to ensure independent variables were not excessively correlated. Variance inflation factor (VIF) scores ranged from 1.104 to 2.849, indicating that multicollinearity was not a concern, as all values were comfortably below the conventional threshold of 10 [75]. The relative impact of each predictor was examined through effect size (f^2) analysis, where values of 0.02, 0.15, and 0.35 correspond to small, medium, and large effects, respectively [78]. Results indicated that both authentic leadership (AL) and organizational culture (OC) exerted moderate effects on organizational learning (OL), with f^2 values of 0.272 and 0.268. In contrast, neither AL nor OC directly influenced readiness for change (RC) to a statistically significant extent, although their effect sizes suggested moderate contributions (0.224 and 0.212). OL demonstrated a medium effect on RC (f^2 = 0.271), while internal locus of control (ILC) emerged as a strong predictor, with a large effect size of 0.340. Control variables, including age, gender, education, and tenure, showed negligible effects but were retained to account for potential confounding influences. Excluding these controls did not meaningfully alter the core findings, confirming the robustness of the model.

The PLS-SEM analysis revealed that six of the eight proposed hypotheses were supported. Direct relationships confirmed include H1a (AL → OL, β = 0.440, p < 0.001), H1b (OC → OL, β = 0.437, p < 0.001), and H3 (OL → RC, β = 0.314, p = 0.003). OL was found to mediate the relationship between leadership and culture on RC, supporting H4a (AL → OL → RC,

β = 0.138, p = 0.005) and H4b (OC → OL → RC, β = 0.137, p = 0.008). Furthermore, ILC positively moderated the OL–RC relationship (H5, β = 0.128, p = 0.015). Hypotheses H2a (AL → RC) and H2b (OC → RC) were not supported, suggesting that leadership and culture do not directly drive change readiness in this context.

Discussion

This study offers an integrated perspective on the interplay of leadership, culture, learning, and individual traits in shaping organizational readiness for change. The findings underscore that AL, characterized by self-awareness, moral integrity, and transparency, fosters a climate conducive to learning and innovation. Leaders exemplifying these qualities provide behavioral models that employees observe and emulate, supporting learning processes in line with social cognitive learning theory [21]. Similarly, a culture that prioritizes collaboration, knowledge sharing, and continuous development reinforces these learning behaviors, embedding them into daily organizational practices.

Notably, the lack of direct effects of AL and OC on RC highlights that leadership and culture alone are insufficient to drive readiness. Instead, their influence is realized through the facilitation of OL. Organizational learning serves as the mechanism by which employees acquire the skills, knowledge, and confidence necessary to adapt to change. Participation in learning activities enables employees to internalize adaptability and innovation, equipping them with cognitive and emotional tools to navigate transitions successfully.

The moderating role of ILC demonstrates that individual differences further shape change outcomes. Employees with a strong internal locus of control perceive themselves as capable of influencing outcomes, motivating them to actively engage in learning opportunities and embrace change initiatives. These individuals often act as catalysts within the organization, promoting adaptability and enhancing overall readiness.

Together, these findings suggest that cultivating OL and recognizing individual agency are critical for enhancing RC. Leadership and culture create the conditions for learning, but it is the combination of active engagement, knowledge acquisition, and personal initiative that ultimately drives successful adaptation to organizational change.

The relationship between organizational learning and readiness for change is strongly influenced by individual traits, particularly the internal locus of control. Employees who believe they can influence outcomes are more likely to engage actively in learning opportunities, embrace new responsibilities, and adapt more readily to organizational changes. These individuals often take initiative in skill development, perceive change as a chance for personal and professional growth, and demonstrate proactive learning behaviors that strengthen their capacity to navigate shifting work environments. Recognizing such personal differences is crucial, as employees with a strong internal locus of control frequently serve as catalysts for change within the organization.

Interestingly, the study found that authentic leadership and organizational culture did not directly impact readiness for change. This finding contrasts with some prior research, which often suggested a direct link. The result may be explained by the specific context of industries such as fertilizers and petrochemicals, where rapid technological shifts, regulatory demands, and hierarchical structures can make employees more cautious or resistant to change, regardless of supportive leadership or organizational culture. In these settings, learning mechanisms appear to play a more critical role in preparing employees for change. Without an established process for knowledge acquisition and skill development, even strong leadership and a positive culture may not be sufficient to foster readiness.

Organizational learning, therefore, functions as the key pathway through which leadership and culture influence employees' readiness for change. While leadership behaviors and cultural values create conditions conducive to learning, it is through engagement in learning that employees acquire the skills, confidence, and mindset required to respond effectively to change. This aligns with social cognitive theory, which emphasizes that individuals must not only observe behaviors but also actively process and apply learned knowledge in practice. Learning becomes the critical bridge connecting leadership, culture, and change readiness.

From a practical perspective, these findings underscore the importance of fostering a learning-oriented environment rather than relying solely on leadership or culture. Organizations should develop leadership programs that focus on guiding learning, modeling flexibility, and encouraging innovation. Likewise, cultivating a culture that promotes collaboration, knowledge sharing, and experimentation can embed learning into everyday practices.

Moreover, acknowledging the role of individual traits such as internal locus of control is essential. Employees who feel empowered to influence outcomes are more likely to embrace learning opportunities and adapt to change, often acting as internal advocates for organizational transformation. Providing avenues for skill development, autonomy, and professional growth can strengthen this effect, enhancing overall readiness for change.

The study presents an integrated model where organizational learning serves as the central mechanism linking leadership and culture to readiness for change, moderated by internal locus of control. This framework highlights that fostering change readiness requires not only effective leadership and supportive culture but also a sustained focus on learning and employee

empowerment. Organizations that invest in both structural and individual capabilities are better positioned to navigate continuous change successfully.

Conclusion

This research examined how authentic leadership (AL), organizational culture (OC), and organizational learning (OL) interact to influence readiness for change (RC), with a focus on the moderating effect of internal locus of control. The findings highlight several important insights for organizations aiming to improve change preparedness.

The study revealed that AL plays a critical role in fostering organizational learning. Leaders who demonstrate authenticity, ethical integrity, and transparency create an environment where employees are more likely to engage in learning and knowledge-sharing behaviors. While AL did not show a direct impact on readiness for change, its influence through OL was substantial, suggesting that leadership contributes to change readiness primarily by promoting a culture of learning.

Similarly, OC was found to strengthen organizational learning, but its direct effect on RC was not significant. This indicates that cultural values alone are insufficient to prepare employees for change unless they are reinforced through consistent learning practices. In practice, organizations can enhance change readiness by embedding cultural principles into daily learning activities and knowledge management processes.

Organizational learning emerged as the key mechanism linking both leadership and culture to change readiness. Employees develop the skills, knowledge, and confidence necessary to embrace change primarily through learning opportunities. Moreover, individuals with a strong internal locus of control were better able to leverage these learning experiences to adapt to change, demonstrating higher levels of readiness. This emphasizes that empowering employees to feel capable of influencing outcomes can significantly strengthen organizational change efforts.

Overall, the study underscores that preparing organizations for change requires more than leadership or culture alone. Effective change readiness arises when leadership and cultural values are translated into actionable learning processes, supported by employees' belief in their own capacity to drive outcomes.

Limitations and Future Research

Several limitations should be considered when interpreting these findings. First, the study focused on employees in specific chemical-related industries in Indonesia, which may limit the applicability of the results to other sectors or cultural contexts. Future research could explore diverse industries or cross-country comparisons to broaden the relevance of these findings.

Second, the study relied on self-reported data, which introduces the potential for bias, such as social desirability or common method variance. Using additional sources of data, including supervisor assessments, peer evaluations, or objective performance metrics, could improve the robustness of future studies.

Third, the cross-sectional design prevents strong causal conclusions. Longitudinal or experimental designs would be valuable to examine how AL, OC, and OL influence RC over time. Additionally, future research could investigate other moderating or mediating factors, such as technological change, digital transformation initiatives, or organizational structure, to gain a more nuanced understanding of what drives change readiness in complex environments.

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Ethics statement: This research was conducted in strict accordance with the ethical guidelines and regulations set forth by the Faculty of Administrative Sciences, Brawijaya University. The study protocol was reviewed and approved by the Faculty's Ethics Committee, as evidenced by the Ethical Approval Letter No. 01559/UN10.F0301/B/PP/2024. This approval is valid from 9 February 2024 to 9 February 2025. All participants involved in the study were informed about the research objectives, procedures, potential risks and benefits. Informed consent was obtained from all participants before data collection commenced. The confidentiality and anonymity of all participants were maintained throughout the study, and data were handled in compliance with ethical standards to ensure the privacy and rights of participants.

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