

POPULATION ECOLOGY AND LECTURER PERFORMANCE: THE ROLES OF CULTURE, LMX, COMMITMENT, AND OCB

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ABSTRACT: This study examines the relationships among perceived organizational culture, leader–member exchange (LMX), organizational commitment, organizational citizenship behavior (OCB), and lecturers' performance in Indonesian higher education. It contributes to population ecology theory by reframing inertia as an individual-level perceptual and relational mechanism under regulatory pressure rather than a firm-level survival outcome. Drawing on the population ecology perspective, the study treats organizational stability and adaptation as contextual forces shaped by coercive regulations that structure routines and norms. Using cross-sectional data and covariance-based structural equation modeling (CB-SEM; N = 240), the findings show that perceived organizational culture positively influences LMX, organizational commitment, and OCB, which in turn enhance lecturer performance. The results demonstrate how individual adaptive behaviors reflect the inertia–adaptation balance within regulated academic systems. Practically, the study informs university leaders on leveraging culture and leader–member relations to sustain lecturer performance amid regulatory constraints.

Keywords: Perceived Organizational Culture; LMX; Organizational Commitment; OCB, Organizational Performance

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INTRODUCTION

Recent regulatory reforms in Indonesian higher education have fundamentally altered the conditions under which lecturers and universities operate. The implementation of Permendikbud No. 44 of 2024 on lecturers' profession, career, and income, alongside Permendikbud No. 500 of 2024 on minimum performance standards and scientific publication criteria, represents a coercive institutional intervention that systematically evaluates and differentiates lecturers and campuses based on performance. Through these regulations, the state effectively introduces a selection mechanism intended to enhance national competitiveness by reshaping academic labor and organizational routines within higher education institutions. Under such conditions, universities and lecturers are compelled to adapt rapidly or face declining legitimacy and sustainability.

From a population ecology perspective, this regulatory environment resembles a selection context in which organizational survival depends not only on structural resources but also on the capacity of internal actors to respond to external pressures. Population ecology has traditionally examined organizational birth, growth, and death at the population level, including university mergers, closures, and cross-border expansion through online education. However, in highly regulated academic systems such as Indonesia, lecturer performance constitutes a critical micro-foundation of organizational survival. Lecturer competence directly affects study program accreditation, which in turn determines institutional reputation and viability. Thus, individual adaptive behavior becomes consequential for organizational continuity.

This study draws on the inertia sub-perspective of population ecology to explain how organizations respond to coercive regulatory change not through rapid structural transformation, but through routinized behaviors, cultural stability, and constrained adaptation. Inertia is particularly salient in higher education institutions where decision-making authority, hierarchical power structures, and financial dependency limit organizational responsiveness (as reflected in interviews with heads of study programs at private universities and polytechnics in Serang City, Indonesia; see Appendix 1). Informants described slow strategic responses, strong dependence on foundations or owners, and limited managerial accountability, resulting in delayed adaptation to regulatory demands.

These conditions create organizational cultures characterized by waiting, risk avoidance, and procedural rigidity, which shape how lecturers interpret regulatory expectations and adjust their work behaviors. Interview evidence further indicates divergent adaptive patterns among lecturers: younger lecturers tend to prioritize compliance with external performance indicators, while senior lecturers rely more heavily on relational exchanges and informal cooperation to maintain relevance and stability (Appendix 1). Such dynamics suggest that adaptation under regulatory pressure is mediated through organizational culture and leader–member relationships rather than through formal restructuring alone, consistent with the inertia argument that organizations preserve routines while selectively adjusting individual behaviors.

Building on this logic, the present study integrates organizational culture, leader–member exchange (LMX), organizational commitment, and organizational citizenship behavior (OCB) to explain lecturer performance under regulatory constraint. Organizational culture provides the normative context that shapes acceptable behavior (Schein, 2010), while leadership practices influence how cultural expectations are enacted in daily exchanges. Prior research shows that national culture moderates the relationship between LMX and OCB (Rockstuhl et al., 2012), and that organizational culture fosters both organizational commitment and discretionary behaviors (Hassanian et al., 2022; Carlos Pinho et al., 2014). Following Porter et al. (2018), this study bridges organizational behavior and leadership research to explain performance outcomes, using lecturer performance as a proxy for organizational effectiveness in higher education.

This study aims to adopt a population ecology lens at the micro level, this study advances HRM theory in two ways. First, it reconceptualizes inertia as a perceptual and relational mechanism operating through culture and leader–member exchange under coercive regulation. Second, it demonstrates how individual adaptive behaviors aggregate into performance outcomes that sustain organizational legitimacy in regulated academic systems. Using survey data from 240 lecturers and covariance-based structural equation modeling (SEM), this study empirically tests the relationships among organizational culture, LMX, organizational commitment, OCB, and lecturer performance.

THEORETICAL REVIEW

The theoretical foundation of this study rests on the premise that recent regulatory interventions by Kemdiktisaintek, particularly Permendikbud No. 44 and No. 500 of 2024, have instituted a coercive institutional environment that progressively reshapes academic work in Indonesian higher education. These regulations do not merely specify performance indicators; they recalibrate evaluative routines, career expectations, and normative standards that structure lecturers' daily activities. The rapid diffusion of these expectations is facilitated by increasingly direct channels of interaction between the government and campuses as well as between the government and individual lecturers, reducing interpretive discretion and accelerating the internalization of regulatory norms. As a result, adaptation is not optional but compulsory, with performance functioning as the primary basis for differentiation and survival at both individual and organizational levels.

The population ecology perspective is employed in this study not as an empirical model of organizational birth or death, but as a contextual reasoning framework that explains how macro-level selection pressures constrain micro-level behavior. Unlike adaptation-oriented perspectives that emphasize organizational learning and managerial agency (Pfeffer, 1982), population ecology assumes that environmental forces shape organizational trajectories in largely exogenous and predictable ways (Ford, 2016). This assumption is particularly salient in the Indonesian higher education sector, where universities and study programs possess limited capacity to influence regulatory direction or timing. The scheduled implementation of these policies beginning in August 2025 (BKD ganjil-academic performance record) further reinforces the ecological logic of selection operating across the academic population, rendering institutional compliance and performance non-negotiable conditions for legitimacy.

Although population ecology has traditionally focused on population-level outcomes such as organizational growth, decline, and mortality, its core mechanisms operate through organizational routines that are enacted by individuals. Coercive regulations shape accreditation systems, research mandates, and evaluation criteria, which in turn structure leadership practices, resource allocation, and performance monitoring within institutions. These organizational routines provide the immediate context through which lecturers perceive organizational culture and interpret leader-member exchanges. Accordingly, this study does not claim that population ecology operates at the individual level *per se*; rather, it theorizes that individual perceptions and behaviors represent the microfoundations through which ecological pressures are transmitted and stabilized within organizations.

This logic is further specified through the inertia sub-perspective of population ecology. Inertia refers to the tendency of organizations to preserve existing structures, routines, and interpretive frameworks despite environmental change (Hannan & Freeman, 1984). Such stability arises not from irrational resistance, but from historically successful practices, cognitive routines, and institutionalized norms that limit the speed and scope of adaptation. In higher education institutions, inertia is reinforced by hierarchical governance, efficiency-oriented procedures, preference for the status quo, resistance to uncertainty, and dependence on accumulated organizational experience (Hannan & Freeman, 1984; König et al., 2012; Campeau, 2019). These forces render rapid transformation difficult, even under strong regulatory pressure.

Organizational inertia manifests in multiple forms. Structural inertia reflects constraints associated with organizational size, complexity, and formal arrangements (Hannan & Freeman, 1984; Riggs, 2014). Political inertia preserves existing power relations and decision-making authority (Campeau, 2019), including family- or seniority-based governance structures (Teofilus et al., 2022). Cognitive inertia constrains interpretation and sensemaking by privileging established ways of thinking (McGuire, 1960). Among these forms, cultural inertia is particularly consequential in academic organizations, as deeply embedded norms and shared assumptions shape behavior largely outside conscious awareness (Schein, 2010). Cultural forces thus stabilize patterns of interaction between lecturers and leaders, even as external demands intensify.

In this study, organizational culture is conceptualized as the primary carrier of inertia through which regulatory pressure influences lecturer behavior. Culture encapsulates shared meanings about performance, authority, and acceptable conduct, providing continuity amid environmental turbulence. To capture this collective phenomenon empirically, the study adopts Chan's (1998) referent-shift composition logic, measuring organizational culture through

individual perceptions framed at the collective level (e.g., references to “my faculty” rather than “I”). This approach allows individual-level data to represent shared organizational realities without conflating levels of analysis. Within this cultural context, leader–member exchange (LMX) serves as a relational mechanism through which cultural expectations are enacted, shaping organizational commitment and discretionary behaviors such as organizational citizenship behavior (OCB). Prior research demonstrates that culture and leadership jointly influence commitment and OCB (Rockstuhl et al., 2012; Hassanian et al., 2022; Carlos Pinho et al., 2014), and that these behaviors are central to performance outcomes in professional settings.

Population ecology is applied within micro-level HRM boundaries, so that this study advances theory in two important ways. First, it reframes inertia not as organizational stagnation, but as a perceptual and relational mechanism that channels adaptation through culture and leader–member relationships under coercive regulation. Second, it demonstrates how individual adaptive behaviors aggregate into performance outcomes that sustain organizational legitimacy in highly regulated academic systems. In doing so, the study extends population ecology into the domain of HRM without violating its macro-level assumptions, offering a theoretically grounded explanation of how regulatory selection pressures are enacted through everyday organizational life.

Hypothesis Development

Culture is both a “here and now” dynamic phenomenon and a coercive background structure that influences us in multiple ways (Schein, 2010). Organizational culture is an overarching concept that encompasses the ‘way of life’ within any organization (Porter et al., 2018). At the core of every culture are assumptions about the appropriate way for individuals to relate to each other to make the group safe, comfortable, and productive (Schein, 2010). An example of the three sentences above is a case of bullying in the office. Porter et al. (2018) stated that bullying can more easily occur when the organizational culture allows or encourages such conduct. If bullying is considered the norm, new managers will behave accordingly (Porter et al., 2018). This has been explained by Bandura (1973) regarding Social Learning Theory. Bandura argues that people observe the concern of others and mimic behavior that appears to benefit them. Therefore, integrating oneself into an organization where bullying is ‘normal’ would likely lead one to also bully others. Schein (2010) divides culture based on its jurisdictional area, as shown in table 1.

Table 1. Culture level as in Schein (2010)

Culture	Category
Macrocultures	Nations, ethnic and religious groups, occupations that exist globally.
Organizational culture	Private, public, non-profit, government organizations.
Subcultures	Occupational groups within organizations
Microcultures	Microsystems within or outside organizations
	ethnic

Source: Schein (2010)

The difficulty in measuring culture according to him is because researchers do not distinguish between levels of culture. Schein stated that culture has levels consisting of artifacts, espoused values, basic underlying assumptions. In the context of this research, organizational culture is a culture that applies in a campus where this culture is part of macrocultures (culture determined by Kemdiktisaintek). While culture is typically theorized as an organizational property, it can be operationalized perceptually when data aggregation is infeasible (Chan, 1998). In this study, perceived organizational culture refers to individual lecturers’ perceptions of their institution’s value, norms and practices. A positive perceived culture promotes collaboration, psychological safety, and alignment with institutional goals (Lok & Crawford, 2004a). Meanwhile, to measure perceived organizational culture we use the artifact level (visible and tangible structure or process) namely a strong culture of appreciation and recognition; the level of espoused values such as clear values and transparent communication; and the level of basic underlying assumptions, namely supporting innovation for change (adaptation to external pressures), and supporting interdepartmental cooperation (for internal integration).

However, humans have perception and are naturally free to engage in social exchange with anyone. This exchange is voluntary and motivated by the benefits they expect to get, and usually they get it from others (Blau, 2017). In organizational theory, this social exchange occurs between supervisors and their members, heads of study programs and lecturers, and is called LMX (Graen & Uhl-Bien, 1995). Values and norms that are held together and become a "way of life" in the organization, provide a number of similarities that are the reasons for the formation of a mutually beneficial leader-member relationship. Indeed, there is research that places organizational culture as a moderator (Rockstuhl et al., 2012). However, we remain convinced that the organizational culture is a determinant for a lecturer to create and maintain a relationship with their head of study program or not.

Organizational culture which have clarity of goals, values, and norms and their conformity to the daily practices of the organization, will be considered by members of the organization as material for their organizational commitment. Mowday et al. (1979) stated that organizational commitment is the relative strength of an individual's identification with and involvement in a particular organization. They focused on measuring attitudinal commitment (Mowday et al., 1979) As a form of attitude, commitment emphasizes attachment to the employing organization, including its goals and values, while satisfaction emphasizes the specific task environment where an employee performs his or her duties. To measure it, and adapted in this study, three factors 1) a strong belief in and acceptance of the organization's goals and values; (2) a willingness to exert considerable effort on behalf of the organization; and (3) a strong desire to maintain membership in the organization. Empirical support for the influence of organizational culture on organizational commitment is provided by Lok & Crawford (2004) and Carlos Pinho et al. (2014). The mental situation related to organizational culture underlies LMX and organizational commitment, experienced by both lecturers and heads of study programs. Thus, and regarding measurement procedure by Chan (1998), we propose hypotheses to be tested.

H1: Perceived organizational culture influences LMX

H2: Perceived organizational culture influences organizational commitment

LMX formed by perceived organizational culture, will then determine how a lecturer acts in the organization as a form of expression that he/she is a citizen/member of the organization, can be committed, and is driven by his/her performance. The theories underlying LMX are role theory and social exchange theory (Yuan et al., 2023). Yuan et al. (2013) stated that the role-making negotiation process related to leaders' and followers' collaboration on work tasks is largely predicated on economic exchanges, whereby both parties are concerned with the fairness of transactions and thus act in a calculative way. In comparison, with role routinization, leaders and followers can enjoy high-quality social exchanges, which go beyond exchanges of resources in their dyadic relationships. However, the results of the study by Martin et al. (2016) stated that their findings support social exchange and self-determination theory as well as theoretical models of LMX that emphasize that LMX is a trust-building process but not role theory.

Martin et al. (2016) stated that there are four issues of LMX theorization, namely the issue of main influence, mediation, moderator, and direction of influence. They stated that the study of the LMX-performance relationship has reached empirical results on the influence of LMX on multidimensional performance, the rater perspective of LMX (leader vs member), and the type of measure (subjective vs objective). They found that the influence of LMX on performance was higher in member raters than in leader raters. On the topic of the role of managers as agents vs individuals, increasing supervisor's organizational embodiment (SOE) will strengthen the association between leader-member exchange and affective organizational commitment (Eisenberger et al., 2010). Other researchers also found that LMX differentiation was positively related to team performance and affective team commitment in teams (Le Blanc & González-Romá, 2012). In the context of small and medium hotels in India, the influence of LMX on organizational commitment is also empirically supported (Garg & Dhar, 2014). Similar results were also obtained in the context of a sample of 2-star to 5-star hotels in China (Luo et al., 2014).

The existing definitions related to OCB revolve around the phrases "extra-role," "unrewarded by the formal system," or "beyond the job,". However, Organ (1997) himself prefers the addition of other researchers that OCB is more fruitful called "contextual performance". If we look at the work of Podsakoff et al. (2000), it appears that the conceptualization of the definition of OCB which later became the our basis for the conceptualization of OCB dimensions, was

carried out by researchers with very diverse results. Podsakoff et al. (2000) summarized the similarities and differences of the concept of OCB by including it in their dimensions: helping behavior, sportmanship, organizational loyalty, organizational compliance, individual initiative, civic virtue, self-development. For example, Dennis W. Organ's proposal (1988, 1990a, and 1990b) included in the helping behavior dimension are altruism, courtesy, peacemaking, cheerleading. While other researchers only have one dimension such as Moorman & Bakley in 1995 (interpersonal helping dimension). It appears that researchers have a tendency or focus on a certain side of the OCB concept. Finally, (Podsakoff et al., 2000) stated that OCB is an exciting and dynamic field of research. In our research, the measurement of OCB uses altruism, courtesy, peacemaking, conscientiousness, and civic virtue, from the work of Podsakoff et al. (2000)

Bowler et al., (2010) proposed a theoretical model with propositions of LMX influence on OCB motivation of both leaders, members, and coworkers. Bowler et al. (2010) implemented the division of research domains based on the sample proposed by Graen & Uhl-Bien (1995). While introducing their relationship-based LMX scale - which was adopted in our research -, they stated that careful sampling from multiple domains within the same investigation should account for more of the potential leadership contribution, and thus increase the predictive validity and practical usefulness of our studies. Harris et al. (2014) implemented (Graen & Uhl-Bien, 1995) on the idea of multilevel LMX. They tested it empirically and found that the influence of individual LMX on OCB and turnover intentions was weaker when group LMX differentiation or employees' LMX relational separation is higher, rather than lower (Harris et al., 2014). Empirical evidence from (Rockstuhl et al., 2012), and without considering the domain and multilevel of LMX, strengthens the statement that LMX influences OCB, as hypothesized.

H3: LMX has an effect on organizational commitment

H4: LMX influences OCB

H5: LMX has an effect on employee performance

We state that high organizational commitment will encourage employees to demonstrate OCB. Why? Because employees who feel emotionally attached, feel obligated, and have a strong desire to stay in the organization tend to be more willing to make extra efforts to achieve organizational goals. This extra effort is in the form of altruism, courtesy, conscientiousness, and civic virtue, which are part of OCB. High OCB will contribute to the performance of a lecturer. In addition to LMX, OCB is a variable that is important in this research. The reason is that organizational culture is a perception construct, while to become performance, some construct are needed to bridge this situational perceptions with attitudes and self-motivation. This mediation idea is based on the ordering of the structural model specifications of researchers who get support for the mediation role of OCB such as Indarti et al. (2017) and Lestari et al. (2023). Some only find empirical supports for the influence of OCB on performance (Harwika, 2016), and thus add to the hypotheses.

H6: Organizational commitment has an effect on OCB

H7: OCB has an effect on employee performance

Performance in our research uses the individual difference perspective (Sonnentag & Frese, 2002) which explains for example the results of Campbell's studies in 1990 and 1993. (Sonnentag & Frese, 2002) stated that Campbell describes the performance components as a function of three components: (1) declarative knowledge, (2) procedural knowledge and skills, and (3) motivation. We measure performance using these 3 components. Figure 1 below is the framework of this study which contains the theoretical model proposed to be tested. We integrate the discipline of organizational behavior (organizational culture, organizational commitment, and OCB) with leadership (LMX) to explain organizational performance with a focus on the study of lecturer performance.

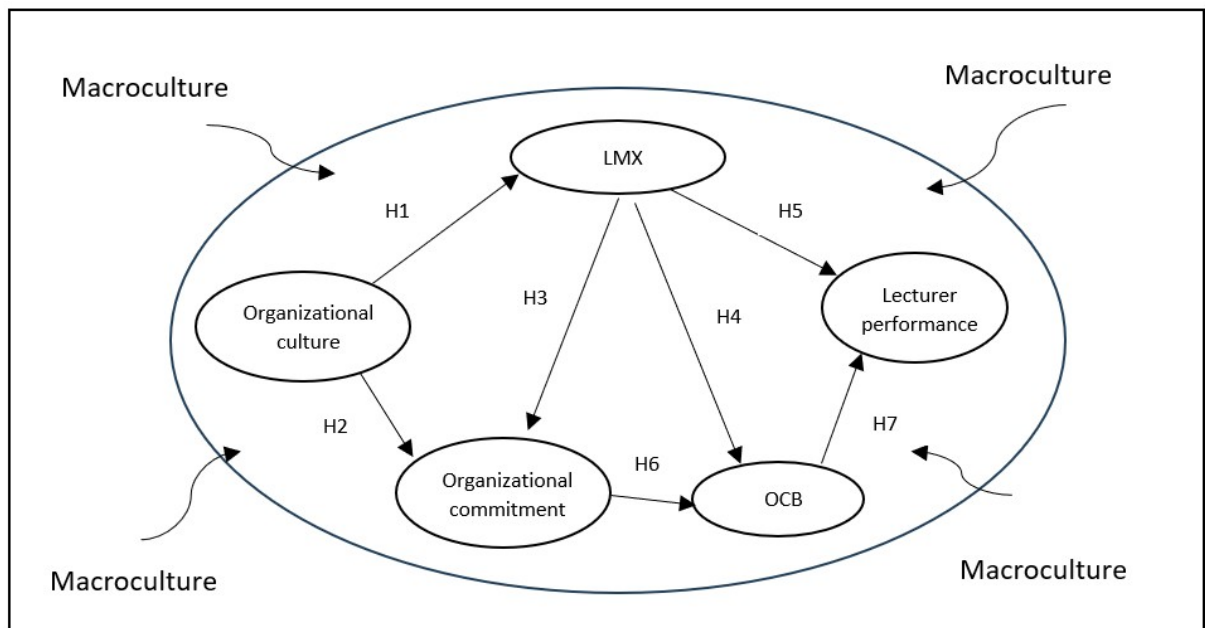


Figure 1. Conceptual Framework
Source: Analyzed data

RESEARCH METHOD

The Nature of Data

This study uses a quantitative approach with hypothesis testing, (Sekaran & Bougie, 2016) call it the hypothetico-deductive method. Recalling the premise of this research modeling, namely the culture that is enforced by the Kemdiktisaintek (Permendikbud No. 44 and No. 500 of 2024) in a revolutionary manner, is absorbed into the daily behavior of lecturers on campus. This premise is supported by the ease of interactive communication GtoC and GtoL, and is in accordance with the assumption (inertia theory) that decision makers are autonomous. In order to survive in the Kemdiktisaintek ecosystem and culture, lecturer dan campus must behave according to the values and norms of the Kemdiktisaintek and at the same time the organizational culture that applies on his campus, and must perform positively so that his campus remains alive. Thus, the unit of analysis of our research is and individual and is cross-sectional designed. This data will then be analyzed using SEM analysis tools in accordance with the purpose of verifying the theory. All of the SEM procedures in this research are generally known procedures, but for Goodness of Fit (GoF), according to Wijanto (2008) in (Wibowo & Indarti, 2020) Data were analyzed using LISREL 8.80 (CB-SEM) with Maximum Likelihood Estimation (MLE). We used χ^2 (Chi-Square), Root Mean Square Error of Approximation (RMSEA), and Goodness of Fit Index (GFI) for absolute fit indices. We used Normed Fit Index (NFI) & Comparative Fit Index (CFI) for incremental fit indices. We used χ^2/df , Parsimony Goodness of Fit Index (PGFI), and Parsimony Norm Fit Index (PNFI) to asses model parsimony. The significance of structural paths was assessed using standardized estimates (β) and t-values ($p=0.05$).

Common Method Bias Assesment

Common method bias (CMB) was assessed using Harman's single-factor test implemented through confirmatory factor analysis (CFA) within the covariance-based SEM framework (Podsakoff et al., 2003). Following established practice, all observed indicators were constrained to load onto a single latent factor ("Singlefa") and the resulting model fit was compared against the hypothesized measurement model (see also Fuller et al., 2016). The single-factor model exhibited a substantially poorer fit ($\chi^2/df = 5.80$; GFI = 0.65; CFI = 0.92; RMSEA = 0.17) relative to the measurement model ($\chi^2/df = 1.42$; GFI = 0.92; CFI = 0.99; RMSEA = 0.042). This Table 2 marked deterioration in fit indicates that a single latent factor does not account for the majority of

covariance among the indicators, suggesting that common method bias is unlikely to pose a serious threat to the validity of the study's findings (Kline, 2023).

Table 2. Type of CB-SEM GoF and its meaning

Type of CB-SEM Goodness of Fit	Indexes and cut off/criteria	Meaning
Absolute	χ^2 insignificant ($p > 0.05$) GFI ≥ 0.90 RMSEA ≤ 0.08	Indicates how well the model reproduces the observed covariance matrix.
Incremental	NFI=CFI ≥ 0.90 or preferably ≥ 0.95	Shows how much better the proposed model fits the data compared to the null (independence) model χ^2/df : assesses model efficiency relative to degrees of freedom.
Parsimony	$\chi^2/df \leq 3$ PGFI ≥ 0.50 PNFI ≥ 0.50	PGFI: evaluates the degree of model fit adjusted for model simplicity. PNFI: indicates how well the model fits after accounting for model parsimony compared to the null model.

Source: Analyzed data

Scale Validity and Reliability

Convergent validity was evaluated through the Standardized Loading Factor (SLF), Composite Reliability (CR), and Average Variance Extracted (AVE). Indicators with SLF values greater than 0.70 were retained, confirming that each observed variable adequately represented its corresponding latent construct. In addition, all constructs achieved CR values above 0.70 and AVE values greater than 0.50, demonstrating acceptable internal consistency and convergent validity (Joseph F. Hair et al., 2019). Discriminant validity was examined using the Fornell–Larcker criterion, which requires that the square root of each construct's AVE exceeds its correlations with other constructs.

Population and sampling

The target population comprised all lecturers registered in the national higher education database (PDDikti) administered by Kemdiktisaintek. Using purposive sampling, data were collected from lecturers affiliated with public and private universities, polytechnics, and higher education institutions across ten LLDIKTI regions in Indonesia, ensuring variation in institutional type, governance structure, and regional context. Initial field engagement involved in-depth interviews, on-site observations at selected university and polytechnic campuses, and online institutional observation to establish contextual familiarity. Primary data were subsequently collected through a self-administered online questionnaire. Respondent eligibility was verified through cross-checking with the PDDikti database and institutional websites. Of the 271 responses obtained, 31 were excluded due to duplicate submissions, non-registration in PDDikti, insufficient educational qualifications, or age criteria, resulting in a final sample of 240 lecturers, including heads of study programs. Because both academic leaders and lecturers operate within the same organizational culture and are subject to identical regulatory pressures, no role-based distinction was introduced in the SEM analysis.

Variables measurement

All constructs were measured using established and widely validated instruments to ensure comparability and reproducibility. Organizational culture was measured using items derived from Schein (2010). Leader–member exchange (LMX) was assessed using the scale developed by Graen and Uhl-Bien (1995). Organizational commitment was measured by adapting the three-

component framework proposed by Mowday et al. (1979). Organizational citizenship behavior (OCB) was operationalized based on the comprehensive construct review by Podsakoff et al. (2000). Lecturer performance was measured using the three-component performance model originally proposed by Campbell, as synthesized by Sonnentag and Frese (2002). All items, wording adaptations, and scale anchors are reported in the Appendix to facilitate replication.

To address the research question concerning the quality of LMX between heads of study programs and lecturers, an additional rater-based assessment was conducted. Consistent with the dyadic conceptualization of LMX (Graen & Uhl-Bien, 1995), the sample was divided into two subsamples comprising 31 heads of study programs and 209 lecturers. Measurement equivalence was assessed by testing the validity and reliability of the LMX items separately for each rater group using SPSS 24. Only the LMX indicators retained in the SEM model (X1, X2, X3, and X7) were included in this procedure. All items demonstrated satisfactory validity and reliability across both rater groups, with detailed results reported in the Appendix.

Inter-rater LMX assessments were examined using univariate descriptive statistics, with values of 3.5 or higher interpreted as positive relational quality. This approach reflects the study's conceptualization of LMX as a relational perception shaped by shared exposure to organizational culture and macro-level regulatory norms rather than by continuous interpersonal interaction alone. While this operationalization necessarily abstracts from face-to-face dyadic exchange, it remains consistent with the study's theoretical framing of LMX as a culturally embedded relational mechanism under coercive institutional conditions.

RESULT

In figure 2, the CB-structural model is employed using LISREL 8.80 software. The scores listed are the calculated t-statistic values that aim to convince readers that our model is reliable in representing the phenomenon. All lines are significant because there are no calculated t-statistic numbers in red. Visually, it can also be concluded that all tested influence hypotheses, both latent variables-observed variables and interlatent variables, are empirically supported (accepted).

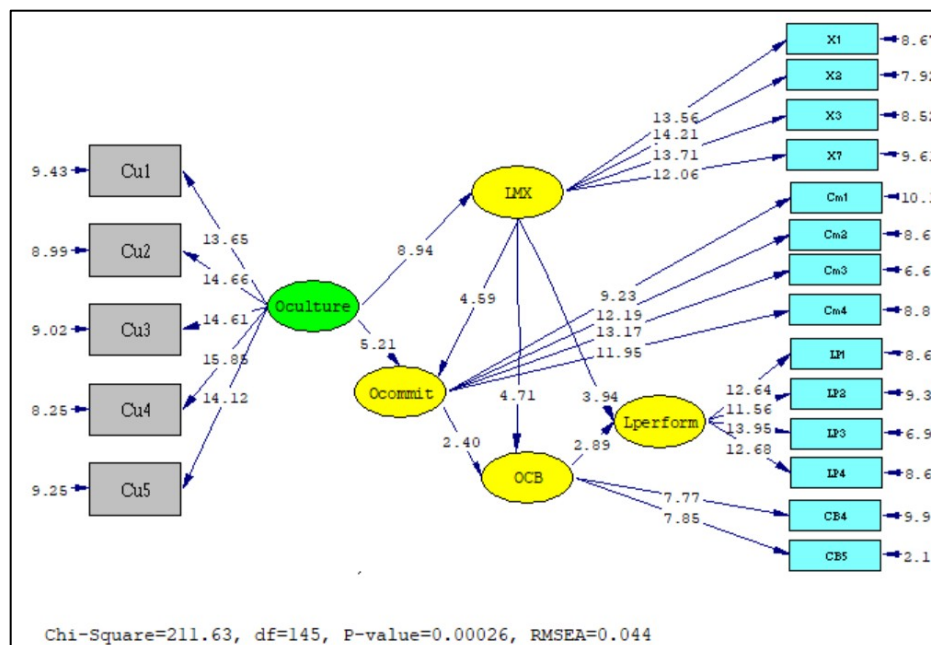


Figure 2. SEM Structural Model

Notes: t-statistics are reported; black paths indicate significant relationships; red paths indicate nonsignificant relationships.

Source: Lisrel Path Output

Model absolute fit is good (GFI=0.91, RMSEA=0.044), model incremental fit is good (CFI=0.99, NFI=0.98), and model parsimony is good ($\chi^2/df = 1.41$, PGFI=0.70, PNFI=0.83). As for the statistical distribution test χ^2 (Chi-Square), the value is significant, namely p-value = 0.00026. We suspect that purposive sampling is the cause of the results of this statistical test χ^2 (we expect the null hypothesis to be accepted/value insignificant)

Validity and Reliability

Table 2 shows the calculation results of SLF, CR, and AVE, from the latent variables of the study are shown. All SLF are valid because their values \geq 0.70 according to the requirements of Rigdon & Ferguson, (1991) in Wijanto (2015). Except for CB4, SLF \geq 0.54 and this also remains good according to Igbaria, et al. (1997) in Wijanto (2015). Thus, all observed variables in our model, validly represent their respective latent variables. As for reliability, all latent variables have a CR value of \geq 0.70 (Wijanto, 2015). Regarding discriminant validity, authors use both AVE and Fornel-Larcker criterion. AVE coefficient describes internal intercorrelation, namely the correlation between indicators in the model (Widhiarso, 2009). The construct discriminant validity in our model is also good because all have a value of \geq 0.50.

Table 3 Validity and reliability

Latent variables	Observed variables (OV)	Standardized loading factor (SLF)	Errors	Construct reliability (CR)	Average Variance Extracted (AVE)
Perceived Organizational culture	Cu1	0.77	0.41	0.90	0.65
	Cu2	0.81	0.35		
	Cu3	0.8	0.35		
	Cu4	0.85	0.28		
	Cu5	0.79	0.38		
LMX	X1	0.83	0.32	0.89	0.67
	X2	0.86	0.26		
	X3	0.84	0.3		
	X7	0.75	0.44		
	Cm1	0.61	0.62		
Organizational commitment	Cm2	0.8	0.36	0.86	0.60
	Cm3	0.88	0.23		
	Cm4	0.79	0.38		
	CB4	0.54	0.7		
OCB	CB5	0.91	0.18	0.70	0.56
	LP1	0.79	0.38		
Lecturer performance	LP2	0.73	0.47	0.87	0.63
	LP3	0.86	0.26		
	LP4	0.79	0.38		

Source: Adapted Statistical Report

Fornel-Lacker criterion of discriminat validity

Table 3 presents the correlations among the latent constructs, with the square roots of the Average Variance Extracted (\sqrt{AVE}) shown on the diagonal. According to the Fornell–Larcker criterion (Fornell & Larcker, 1981), discriminant validity is established when the square root of each construct's AVE exceeds its correlations with any other construct in the model. As shown in the table, the \sqrt{AVE} values for LMX (0.82), organizational commitment (0.78), organizational citizenship behavior (0.75), lecturer performance (0.79), and perceived organizational culture (0.80) are all greater than their inter-construct correlations. This indicates that each construct shares more variance with its own indicators than with other constructs, thus confirming discriminant validity. The highest inter-construct correlation was found between organizational commitment and perceived organizational culture ($r = 0.74$), indicating a strong but acceptable

relationship that does not threaten discriminant validity. Therefore, all latent constructs demonstrate adequate discriminant validity based on the Fornell–Larcker criterion.

Table 4. Fornel-Lacker test result

Constructs	LMX	O.commit	OCB	L.perform	O.culture
LMX	0.82				
O.commit	0.72	0.78			
OCB	0.73	0.64	0.75		
L.perform	0.66	0.51	0.63	0.79	
O.Culture	0.71	0.74	0.58	0.49	0.80

Hypothesis testing results

Table 3 finally reports all calculated t-statistic values are greater than 1.96 (at $\alpha = 0.05$), so all influences are stated to be significant and therefore all hypotheses proposed are stated to be accepted. All influences are positive in direction as seen in the estimates value.

Table 5. Hypothesis testing results

Hypothesis	Paths	Estimates	t-statistics	Status	Decision
H1	Oculture--> LMX	1.01	8.94	Significant	Accepted
H2	Oculture--> Ocommit	0.75	5.21	Significant	Accepted
H3	LMX--> Ocommit	0.46	4.59	Significant	Accepted
H4	LMX--> OCB	0.6	4.71	Significant	Accepted
H5	LMX--> Lperform	0.42	3.94	Significant	Accepted
H6	Ocommit--> OCB	0.21	2.4	Significant	Accepted
H7	OCB--> Performance	0.28	2.89	Significant	Accepted

Source: Lisrel Adapted Output

LMX Quality

As previously stated, this research adds an analysis of LMX quality between the head of study program and lecturers as reported in the Table 6. This measurement uses the basis of the relationship-based as proposed by (Graen & Uhl-Bien, 1995) while we are using a scale from it.

Table 6. Descriptive statistics of Leader vs Member rating on LMX

Items	X1			X2			X3			X7		
Status	L	M	Mean	L	M	Mean	L	M	Mean	L	M	Mean
Mean	6.13	5.76	5.94	6.26	5.73	5.99	6.23	5.89	6.06	6.16	5.87	6.01
Std. Deviation	0.76	1.08	0.92	0.73	1.18	0.95	0.80	1.03	0.92	0.78	1.02	0.90
Minimum	4.00	1.00		5.00	1.00		4.00	2.00		4.00	1.00	
Maximum	7.00	7.00		7.00	7.00		7.00	7.00		7.00	7.00	

Notes: X1, X2, X3, X7 are LMX items, L=leader, M=member, all medians and mode are 6.

Source: Analyzed data

In table 4, the assessment of all items by both groups is in the positive category because it is greater than 3.5. (the available values are 1, 2, 3, 4, 5, 6, 7). The total average (combined head of study program and lecturer) for the assessment of all LMX items ranged from 5.94 to 6.06. This value is very high. However, if separated, the average value of all LMX items for the head of study program is the smallest at 6.13, while the average highest value for lecturers is only 5.89. Another interesting thing, of the 31 study program heads, all rated the lowest LMX quality at only 4. Meanwhile, some lecturers rated it as low as 1. The highest LMX quality assessment by both was also at 7. In terms of dispersion, the LMX assessment of study program heads had a narrow range, while lecturers had a wide one.

The quality of LMX between the head of study program and lecturers in this study is very high. And between these two groups, the head of study program's LMX assessment is higher than the lecturers. It could be that when filling in, the head of study program is infected with social desirability bias because their reputation as the head of study program is at stake.

DISCUSSION

The influence of perceived organizational culture on LMX (H1) and on organizational commitment (H2) is empirically supported. This influence is positive, meaning (in H1) if positive perceptions about organizational culture increase, then LMX will also increase. And vice versa. Leader and member are certainly surrounded by values and norms that apply in the organization. To play a role according to the status held, organizational culture is certainly an individual consideration to foster relationships that benefit his career. Whether he is a head of study program or a lecturer. High LMX indicates mutual trust, respect, and obligation based on work (Graen & Uhl-Bien, 1995)

Hypothesis 2 is empirically supported. Organizational culture has a positive effect on organizational commitment. This means that if positive perceptions about organizational culture increase, then organizational commitment will also increase. And vice versa. Attachment to the organization is closely related to how lecturers perceive the suitability of organizational values to themselves. Organizations that maintain the same values will certainly strengthen the emotional bond of lecturers and their feelings that they have chosen the right career path. Although very few studies have paid attention to this relationship, the results of our H2 test strengthen previous research (Lok & Crawford, 2004b)(Carlos Pinho et al., 2014).

Hypothesis 3 (H3) of this research is empirically supported. The influence of LMX on the formation of organizational commitment is positive. This means that if LMX is increased, organizational commitment will also increase, and vice versa. Increasing the quality of LMX between the head of study program and lecturer, shows the existence of mutual trust, respect, obligation between the two. The existence of an agreement with other people, both leaders and members, will increase expectations for career advancement and encourage emotional bonds that indicate commitment to the organization. LMX in this study is very high, both total LMX and LMX from the head of study program and from the lecturer side, therefore the increase in organizational commitment is supported by empirical data. The results of our research strengthen previous research by (Eisenberger et al., 2010)and (Le Blanc & González-Romá, 2012). In the context of small and medium hotels in India (Garg & Dhar, 2014)and 2 to 5 star hotels in China (Luo et al., 2014).

Hypothesis 4 of this research is empirically supported. The influence of LMX on the formation of OCB is positive. This means that if LMX is increased, OCB will also increase, and vice versa. OCB is a voluntary behavior that is not officially a person's performance, while the quality of LMX is related to showing mutual trust in the careers of the parties. Therefore, the high quality of LMX in this research will encourage members/lecturers to behave "exceed" than their job descriptions. Above average attendance rates will often appear in Indonesian campus organizations. The results of H4 strengthen previous research by (Rockstuhl et al., 2012)and Harris et al. (2014)

Hypothesis 5 of this research is empirically supported. The influence of LMX on lecturer performance is positive. This means that if LMX is increased, lecturer performance will also increase, and vice versa. Lecturers who feel they have high LMX with the head of study program tend to increase their performance because they have to prove what they were offering when building relationships with the head of study program. This idea explains the findings of Martin et al. (2016) about the influence of LMX on higher performance in rater members than rater leaders. In addition, mutual trust as the basis of LMX also supports increased lecturer performance. With high trust, lecturers will receive assignments that can be adjusted to their competencies. Other researchers found that LMX differentiation was positively related to team performance and affective team commitment in teams (Le Blanc & González-Romá, 2012).

Hypothesis 6 of this research is empirically supported. The influence of organizational commitment on OCB is positive. This means that if organizational commitment is increased, OCB will also increase, and vice versa. Organizational commitment is an employee's attitude related to emotional attachment, feeling obligated, and a strong desire to remain in the organization. . High organizational commitment encourages lecturers to make extra efforts to achieve organizational goals. These extra efforts are in the form of altruism, courtesy, conscientiousness which are part of OCB in this research. The results of our hypothesis 6 test, strengthen the previous results by (Indarti et al., 2017)and (Lestari et al., 2023)

Hypothesis 7 of this research is empirically supported. The influence of OCB on performance is positive. This means that if OCB is increased, performance will also increase, and vice versa. This result is not surprising because OCB is also called contextual performance, which is also a performance that can increase organizational effectiveness even though it is not officially recorded as performance. The idea of increasing effectiveness because the performance of existing tasks may not reflect all areas of work needed to achieve organizational goals. The results of our research support the statement that OCB has a positive effect on lecturer performance. This study strengthens the results of previous studies by (Harwiki, 2016). (Indarti et al., 2017) and (Lestari et al., 2023).

CONCLUSION AND FURTHER STUDY

This study examined the relationships among organizational culture, leader–member exchange (LMX), organizational commitment, organizational citizenship behavior (OCB), and lecturer performance through the lens of cultural inertia within population ecology. All hypothesized relationships were supported, indicating that organizational culture functions as an inertial mechanism through which coercive regulatory pressures are translated into relational exchange, attitudinal attachment, and discretionary behavior. By extending population ecology into the micro domain of HRM, the findings demonstrate how environmental selection pressures are enacted through individual perceptions and leader–member interactions rather than through rapid structural change. This integration advances HRM theory by linking organizational behavior and leadership mechanisms to performance outcomes in highly regulated academic contexts.

From a practical perspective, the results underscore the importance for university leaders to strengthen organizational culture and leader–member relationships as Indonesian higher education institutions prepare for the implementation of Permendikbud No. 44 and No. 500 of 2024. Aligning cultural norms and leadership practices with regulatory expectations can help sustain lecturer performance under intensified evaluation regimes. The study is limited by the individual-level operationalization of organizational culture and the use of purposive sampling, which constrain generalizability. Future research should employ multilevel or longitudinal designs and advanced measurement approaches, such as person–item mapping or latent variable scoring, to improve construct alignment and capture adaptive dynamics over time.

ETHICAL DISCLOSURE

All participants provided written informed consent prior to participation. They were informed about the study's purpose, their voluntary participation, the right to withdraw at any time, and the confidentiality of their responses.

CONFLICT OF INTERESTS

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Appendix 1. Interview process of informants
Source: Authors' Documentation