

# Professional commitment mediates the effects of discipline, environment, and motivation on employee performance at Indonesia's Ministry of Agriculture

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## Abstract

**Purpose:** This study aims to analyze the direct influence of work discipline, work environment, and work motivation on employee performance at the Secretariat of the Directorate General of Plantations, Ministry of Agriculture of the Republic of Indonesia, and the indirect effect through professional commitment as a mediating variable.

**Research Methodology:** The research employs a quantitative method with a mixed design approach combining both verification and descriptive research. Data were collected using a questionnaire distributed to 155 employees at the Secretariat of the Directorate General of Plantations, Ministry of Agriculture. Data analysis was conducted using Multiple Linear Regression Analysis and Path Analysis with Structural Equation Modeling (SEM) PLS software.

**Results:** The results indicate that work discipline, work environment, and work motivation have a significant impact on employee performance, both directly and indirectly through professional commitment as a mediator.

**Conclusions:** The study concludes that improving work discipline, work environment, work motivation, and professional commitment can enhance employee performance in the public sector, particularly within the Secretariat of the Directorate General of Plantations.

**Limitations:** The research is limited to employees of the Secretariat of the Directorate General of Plantations and does not consider other external variables that may influence employee performance.

**Contribution:** This study provides practical guidance for improving employee performance in the public sector through a holistic approach that includes work discipline, work environment, work motivation, and professional commitment. Additionally, the conceptual model developed can be applied to similar institutions.

**Keywords:** *Employee Performance, Professional Commitment, Work Discipline, Work Environment, Work Motivation.*

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## 1. Introduction

Employees are assets to any institution and must be properly cared for (Lin et al., 2024; Shah, Al-Ghazali, et al., 2023). Therefore, effective employee management is essential so that employees can continue to make positive contributions to the institution (Kuntadi et al., 2023; Widyanty et al., 2024). A common challenge faced by institutions is poor performance arising from various employee conditions and behaviors (Abbas et al., 2022a; Ekowati et al., 2023). One behavioral factor contributing

to this is the lack of work discipline (Sutrisno, 2021). Work discipline refers to individual behavior that conforms to applicable rules and procedures, both written and unwritten, within an organization (Kuntadi et al., 2023; Shah, Fahlevi, et al., 2023).

It is also defined as an attitude of respect, humility, and compliance with existing regulations, whereby individuals are ready to perform their duties and accept the consequences if they violate established provisions (Darmadi, 2020; Siswanto, 2021). When employees are disciplined, the institution operates more effectively, targets are achieved on time, and relationships between employees become more harmonious (Rizki & Nurhayaty, 2023). Conversely, indiscipline can delay target achievement and damage an institution's overall reputation (Nasiroh & Nariah, 2024). Previous studies show a significant positive effect of work discipline on employee performance (Abbas et al., 2022b; Setyaningrum et al., 2024).

Work environment is another factor influencing performance because it refers to the conditions under which employees perform their tasks. Hence, the work environment plays a crucial role in enabling employees to fulfill their duties effectively and efficiently. A good work environment can significantly improve employee performance (Darmawan, 2024; Ratnawati & Lestari, 2023). Employees tend to be more productive in a comfortable and safe physical environment because they can work efficiently without being hindered by inadequate facilities or unsafe conditions. In addition, a positive nonphysical environment, such as a supportive institutional culture and harmonious interpersonal relationships, can enhance motivation and engagement, which in turn yields better performance.

Motivation plays a role in boosting productivity and performance so that employees can achieve both personal and institutional targets. Strong motivation also increases energy, creativity, perseverance in the face of challenges, and commitment to tasks, which affect the expected quality and quantity of performance (Suwanto, 2020). Previous research indicates that motivation has a significant influence on employee performance (Herliyanto & Rahayu, 2024). Professional commitment within an institution refers to an individual's involvement in and loyalty to their profession, which shapes their dedication and performance (Fernández-Temprano & Tejerina-Gaite, 2020). Professional commitment is the feeling of affection and pride a person has toward their work as well as belief in the value of the work and the goals of the profession.

The problem identified here is the suboptimal employee performance. Employees tend to not comply with established rules, including those related to attendance. Table 1 shows that the data on employee tardiness at the Secretariat of the Directorate General of Plantations, Ministry of Agriculture of the Republic of Indonesia, in 2023 fluctuated from month to month. Many employees were still late, and, as a result, performance allowances related to attendance were subject to deductions (see Table 1).

Table 1. Tardiness Data Secretariat of the Directorate General of Plantations, Ministry of Agriculture of the Republic of Indonesia (2023)

No	Month	Total Monthly Tardiness (Minutes)	Total Monthly Tardiness (Hours)	Monthly Tardiness Percentage (%)
1	January	7,819	130	72.83
2	February	3,272	55	32.35
3	March	3,669	61	34.17
4	April	7,045	117	98.32
5	May	3,343	56	31.37
6	June	3,697	62	42.91
7	July	3,321	55	32.35
8	August	5,23	87	46.52
9	September	3,692	62	36.47

10	October	3,033	51	27.27
11	November	2,161	36	19.25
12	December	3,698	62	38.39
	Total 2023	49,98	834	512.20

Source: Secretariat of the Directorate General of Plantations, Ministry of Agriculture, Republic of Indonesia.

Other identified issues involve the work environment, including office layout variations across divisions/units with suboptimal placement of work equipment, resulting in a limited room to move. Outdated equipment hinders time efficiency and task completion. Team interactions are largely confined to areas around employees' seats within each division or unit. Therefore, even when sharing the same room, individual interactions are limited. Regarding work motivation, employees frequently report excessive workloads and assignments. They find it difficult to prioritize tasks, which ultimately reduces their motivation to promptly complete assignments. Respect for professional values as practised by employees also needs to be strengthened. Providing responsibility and both material and non-material rewards can help employees perceive greater benefits and pride as well as a sense of career continuity within their workplace.

This study addresses a persistent performance problem within the Secretariat of the Directorate General of Plantations of Indonesia's Ministry of Agriculture. Although prior work suggests that work discipline, work environment, and work motivation are pivotal determinants of employee performance, evidence from Indonesia's public sector—particularly this secretariat—remains limited and fragmented. The mechanisms through which these factors shape performance are not well understood, and it is unclear whether their effects operate directly on performance, indirectly through employees' professional commitment, or both. The antecedents of professional commitment itself—namely, whether discipline, the work environment, and motivation strengthen or weaken it—have not been rigorously tested in this organizational context. These gaps motivate a comprehensive examination of both direct relationships and mediation pathways to clarify how performance can be improved sustainably.

Accordingly, this study aimed to (i) assess the direct effects of work discipline, work environment, and work motivation on employee performance; (ii) evaluate the direct effects of these three factors on professional commitment; (iii) estimate the direct effect of professional commitment on employee performance; and (iv) test whether professional commitment mediates the effects of work discipline, work environment, and work motivation on employee performance at the Secretariat of the Directorate General of Plantations, Ministry of Agriculture, Republic of Indonesia.

## 2. Literature Review

Recent public sector studies in Indonesia have consistently reported that work discipline, work environment, and motivation are salient antecedents of employee performance, albeit investigated using varying model scopes and analytical tools. According to the Ministry of Trade, Agustin, and Wijayanti (2023), using a PLS-SEM approach, a supportive work environment, stronger discipline, and higher motivation have positive and significant effects on performance. Corroborating these results with conventional regression, Rizki and Nurhayaty (2023) found that work environment and discipline significantly improved performance at the Agency for Agricultural Extension and Human Resource Development (BPPSDMP), while Nasiroh and Nariah (2024) specified the physical dimension of the work environment alongside discipline as significant drivers at the Directorate General of Senior Secondary Education.

Broadening the predictor set, Siregar et al. (2023) demonstrated that discipline, motivation, work environment, and employee perceptions jointly and positively affect performance in the Ministry of

Religious Affairs Office, and Darmawan (2024) showed that organizational culture and the work environment significantly raise performance at the Secretariat General for Early Childhood, Primary, and Secondary Education. Studies focusing on pairs of drivers similarly converge: Herlianto and Rahayu (2024) found that motivation and discipline significantly predict performance in the Ministry of Education, Culture, Research, and Technology; Andriansyah and Suhartono (2024) obtained the same result for the Ministry of Youth and Sports; and Ratnawati and Lestari (2023) confirmed the significant effects of discipline and the work environment at the Ministry of Religious Affairs in South Tangerang. Related work by Rizki, Sarboini, and Mauliza (2022) adds that motivation and job satisfaction significantly enhance performance in another Ministry of Religious Affairs office, reinforcing the role of attitudinal resources.

Despite growing interest in public sector human resource management in Indonesia, empirical investigations remain sparse, particularly within the Secretariat of the Directorate General of Plantations at the Ministry of Agriculture. Existing studies in comparable ministries have confirmed that work discipline, work environment, and work motivation are salient predictors of employee performance. However, these studies are predominantly cross-sectional, emphasize direct effects, and rarely interrogate the mechanisms through which those antecedents translate into sustained performance improvements in bureaucratic settings. This leaves a critical gap for organizations, such as the Directorate General of Plantations, where the policy environment, hierarchical routines, and service mandates create distinctive behavioral pressures and incentive structures that may not be adequately captured by direct-effect models alone.

The core novelty of this study lies in introducing professional commitment as an intervening (mediating) variable to explain how discipline, environment, and motivation shape performance outcomes in government organizations. Professional commitment, conceptually distinct from organizational commitment, captures employees' identification with pride in and ethical adherence to the standards of their profession. In a public bureaucracy tasked with delivering public value under legal and procedural constraints, professional commitment can be a pivotal conduit that channels behavioral controls (discipline), contextual resources (work environment), and personal energy (motivation) into consistent role performance, compliance quality, and discretionary effort. By theorizing and testing professional commitment as the pathway linking these drivers to performance, this study advances a processual account of performance formation beyond simple additive models (see Figure 1).

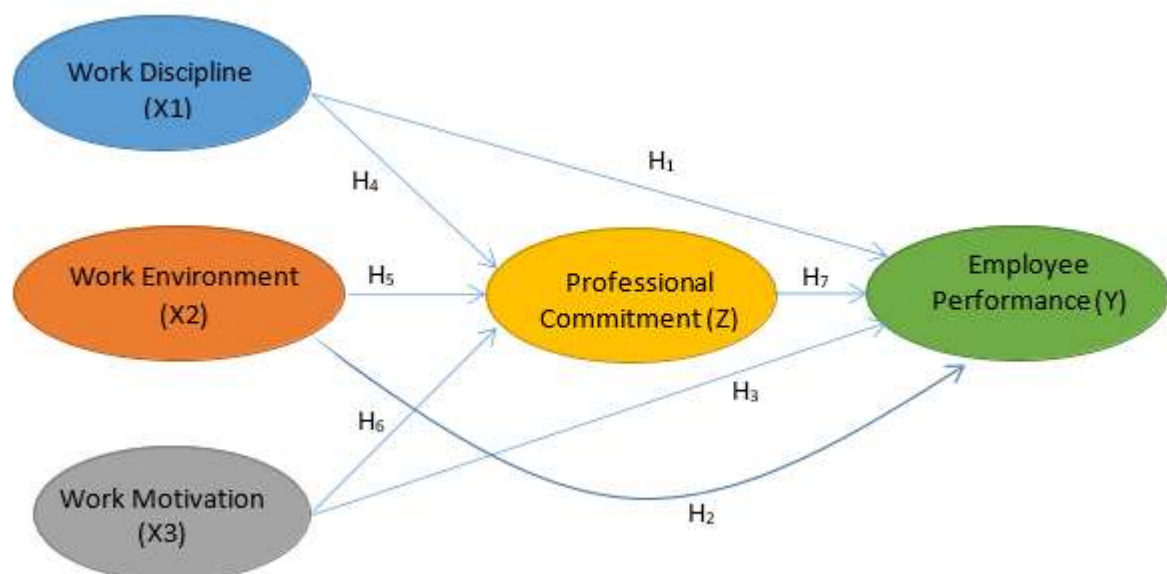


Figure 1. Research Framework

This focus is especially relevant for the Directorate General of Plantations, where work is often distributed across specialized functions with varying task complexity, documentation requirements, and

accountability regimes. Under such conditions, improvements in discipline or facilities alone may not yield durable gains unless employees internalize professional norms that sustain compliant, careful, and proactive behavior. Similarly, motivational interventions that increase short-term effort can dissipate if they do not deepen professional identification and standards. Positioning professional commitment at the center of the causal chain, therefore, responds to the Secretariat's practical need to convert policy-driven reforms and operational upgrades into stable improvements in service delivery and timeliness.

### 3. Research Methodology

This study adopted a quantitative, cross-sectional survey design (Saunders et al., 2009; Sekaran & Bougie, 2013), targeting civil servants and contract staff at the Secretariat of the Directorate General of Plantations, Ministry of Agriculture (Indonesia). The population comprises employees across divisions/sections, and proportional stratified sampling ensures representation by unit and rank. Following power analysis for multiple predictors ( $\alpha = .05$ , power = .80, medium effect  $f^2 = .15$ ), the minimum sample for the most complex endogenous construct (Employee Performance receiving four predictors) is  $\geq 85$ ; to support mediation tests, subgroup robustness, and model complexity, we target  $N = 200\text{--}300$  valid responses (Mangla et al., 2016).

#### 3.1 Data Collection

Data were collected via a self-administered questionnaire using five-point Likert scales (1 = strongly disagree to 5 = strongly agree). Constructs are modeled reflectively: Work Discipline (X1), Work Environment (X2), Work Motivation (X3), Professional Commitment (M), and Employee Performance (Y). Item pools were adapted from Afandi (2021) for discipline and performance, Enny (2019) for the work environment, ERG (Alderfer) operationalization via Kusumaryoko (2021) for motivation, and Fernández-Temprano and Tejerina-Gaite (2020) for professional commitment, with contextual wording for the Indonesian public sector.

#### 3.2 Measurements

The constructs were operationalized as reflective measures using five-point Likert-type scales (1 = strongly disagree to 5 = strongly agree) adapted to the Indonesian public sector context. Item wordings emphasize concise behavioral statements aligned with prior sources: Afandi (2021) for work discipline and employee performance, Enny (2019) for work environment, Alderfer's ERG model as operationalized by Kusumaryoko (2021) for work motivation, and Fernández-Temprano and Tejerina-Gaite (2020) for professional commitment. All indicators were intended for self-administered survey administration and subsequent latent variable modeling. (see Table 2).

Table 2. Measurements

Variable	Dimension	Indicators (sample items)	Scale
Work Discipline (X1) (Afandi, 2021)	Punctuality	(1) I arrive at work on time; (2) I use working hours effectively; (3) I do not skip work without authorization.	1–5 Likert (interval)
	Job Responsibility	(1) I comply with all institutional rules; (2) I meet assigned job targets; (3) I submit my daily work report on schedule.	1–5 Likert (interval)
Work Environment (X2) (Enny, 2019)	Physical Environment	(1) Facilities directly supporting my tasks are adequate; (2) Intermediary supports (IT, document flow, utilities) enable efficient work.	1–5 Likert (interval)
	Non-Physical Environment	(1) Supervisor–staff relations are positive; (2) Coworker relations are cooperative and respectful.	1–5 Likert (interval)

Work Motivation (X3) (ERG per Kusumaryoko, 2021)	Existence Needs	(1) Pay/benefits sufficiently meet basic needs (food, housing, clothing, health); (2) The workplace is clean, comfortable, and free from physical hazards.	1–5 Likert (interval)
	Relatedness Needs	(1) I receive emotional/professional support from supervisors and peers; (2) Teamwork fosters a sense of belonging and loyalty to the organization.	1–5 Likert (interval)
	Growth Needs	(1) I have opportunities for training and career development that enhance skills; (2) My achievements are recognized and rewarded, motivating me to grow.	1–5 Likert (interval)
Professional Commitment (Z Mediator) (Fernández-Temprano & Tejerina-Gaite, 2020)	Affective Commitment	(1) I am proud to be part of this profession; (2) I have a strong desire to keep contributing to this profession.	1–5 Likert (interval)
	Continuance Commitment	(1) Leaving the profession would impose substantial financial/non-financial costs; (2) My current job offers career continuity and benefits.	1–5 Likert (interval)
	Normative Commitment	(1) I feel duty-bound to uphold professional ethics; (2) Remaining in this profession is the right thing to do.	1–5 Likert (interval)
Employee Performance (Y) (Afandi, 2021)	Work Results	(1) Quantity of output meets/exceeds targets; (2) Quality of output is high; (3) Tasks are completed efficiently.	1–5 Likert (interval)
	Work Behaviors	(1) I maintain discipline in carrying out tasks; (2) I take initiative; (3) I work accurately and carefully.	1–5 Likert (interval)
	Personal Traits	(1) I demonstrate leadership when needed; (2) I show creativity in solving problems; (3) I act with honesty/integrity.	1–5 Likert (interval)

All constructs are modeled reflectively with a minimum of three indicators per dimension, wherever feasible. Prior to full deployment, translation/back-translation and expert review are recommended to ensure content validity, followed by a pilot test ( $n \approx 30\text{--}50$ ) to refine the wording. In PLS-SEM, indicator reliability (loadings  $\geq 0.70$ , where possible), internal consistency (Cronbach's  $\alpha$  and composite reliability  $\geq 0.70$ ), convergent validity (AVE  $\geq 0.50$ ), and discriminant validity (HTMT  $< 0.85$ ) should be established. Likert responses are treated as intervals for estimation; reverse-coded items, if any, must be aligned such that higher scores represent higher levels of the construct. Aggregation from dimensions to constructs can be undertaken if theoretically justified in a hierarchical component model; otherwise, the estimation proceeds at the item level with transparent reporting of any item retention or deletion decisions.

### 3.3 Data Analysis

We employed PLS-SEM (e.g., SmartPLS), given the model's predictive orientation and inclusion of a mediator (Hair et al., 2017). The measurement model was assessed using indicator reliability (loadings  $\geq .70$ , where possible), internal consistency (Cronbach's  $\alpha$  and composite reliability  $\geq .70$ ), convergent validity (AVE  $\geq .50$ ), and discriminant validity (HTMT  $< .85$ ; cross-loadings). Multicollinearity was checked using full collinearity VIFs of  $< 3.3$ . The structural model was evaluated using path

coefficients, bootstrapped confidence intervals (5,000 resamples),  $R^2$  for endogenous constructs (M, Y), effect sizes ( $f^2$ ), and predictive relevance ( $Q^2$ ). Mediation (H8–H10) was tested using bias-corrected bootstrapped indirect effects; complementary direct paths (H1–H7) remained in the model to distinguish full vs. partial mediation. Robustness checks include alternative model specifications (e.g., excluding/including controls). To mitigate common-method bias, we applied procedural remedies (anonymity, neutral wording, mixed item order) and statistical checks (Harman’s single-factor test; full collinearity VIFs) (Hair et al., 2019).

## 4. Results and Discussion

### 4.1 Profile Respondents

This study involved 155 civil servants and contract staff at the Secretariat of the Directorate General of Plantations (South Jakarta). Data were collected through a structured questionnaire administered in coordination with the general affair/HR work team (Table 3).

Table 3. Characteristics Respondent

Category	Subcategory	Frequency (n)	Percentage (%)
Gender	Male	69	44.52
	Female	86	55.48
Age (years)	20–25	9	5.81
	26–30	18	11.61
	31–35	23	14.84
	36–40	25	16.13
	41–45	31	20.00
	46–50	22	14.19
	51–55	20	12.90
	>56	7	4.52
Highest Education	High School / Equivalent	11	7.10
	Diploma	27	17.42
	Bachelor (S1)	73	47.10
	Master (S2)	44	28.39
Tenure	1–5 years	27	17.42
	6–10 years	22	14.19
	11–15 years	44	28.39
	16–20 years	20	12.90
	21–25 years	28	18.06
	>25 years	14	9.03

The distribution indicated a predominantly female sample (55.48%). Age composition is centered in mid-career bands, with the modal group at 41–45 years (20.00%), followed by 36–40 years (16.13%), and 31–35 years (14.84%). Educational attainment was relatively high in the public sector, with nearly three-quarters holding at least a bachelor’s degree (S1:47.10%; S2:28.39%). Tenure shows a strong mid-tenure profile, led by 11–15 years (28.39%) and 21–25 years (18.06%), consistent with an experienced workforce embedded in bureaucratic routines and professional norms, respectively. These structural features are salient for interpreting the main model: a mature, educated, and tenure-rich cohort is plausibly associated with higher baseline professionalization, potentially amplifying the role of professional commitment as a mediating mechanism between discipline, the environment, motivation, and performance. Where appropriate, these characteristics can be included as statistical controls to isolate focal effects and enhance the internal validity of the inferences.

## 4.2 Descriptive Statistics

The distribution of responses across all constructs was summarized using item-level means on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). To aid interpretation, mean scores were mapped to the following categories: 1.00–1.80 (very low), 1.81–2.60 (low), 2.61–3.40 (moderate), 3.41–4.20 (high), and 4.21–5.00 (very high). For each variable in the consolidated table below, the number of items, overall mean, observed range of item means (minimum–maximum), categorical interpretation, and the specific lowest and highest items (shown in Table 4).

Table 4. Descriptive Summary of Variables

Variable	Items (n)	Mean (Overall)	Range of Item Means	Interpretation	Lowest Item (Mean)	Highest Item (Mean)
Work Discipline (X1)	6	4.20	3.97–4.51	High	X1.2 Use time effectively (3.97)	X1.5 Always achieves job targets (4.51)
Work Environment (X2)	4	4.12	4.08–4.18	High	X2.4 Coworker relations (4.08)	X2.1 Direct task-related environment (4.18)
Work Motivation (X3)	6	4.05	3.76–4.31	High	X3.1 Pay/benefits cover basic needs (3.76)	X3.4 Teamwork fosters belonging/loyalty (4.31)
Employee Performance (Y)	9	4.29	4.15–4.52	Very High	Y.2 Quantity of output (4.15)	Y.9 Honesty/integrity (4.52)
Professional Commitment (Z)	6	4.32	4.19–4.51	Very High	Z.2 Strong desire to keep contributing (4.19)	Z.6 Remaining in the profession is right (4.51)

Work Discipline, Work Environment, and Work Motivation cluster in the “high” category (means 4.05–4.20), indicating broad agreement with the statements but with scope for incremental improvement. The lowest disciplinary facet concerns efficient time use (X1.2 = 3.97), suggesting that time management practices merit targeted reinforcement despite strong performance target attainment (X1.5 = 4.51). For the work environment, relations among coworkers showed the lowest mean (X2.4 = 4.08) within an otherwise supportive context, implying value in strengthening peer collaboration mechanisms. Motivation presents a mixed profile: existence needs linked to pay and benefits register the lowest mean (X3.1 = 3.76), whereas relatedness and growth needs score very high (X3.4 = 4.31; X3.5 = 4.21).

This pattern suggests that social and developmental drivers are strong, whereas perceptions of economic sufficiency are comparatively weaker. Employee Performance and Professional Commitment both fall in the “very high” category (means 4.29 and 4.32). Within performance, honesty/integrity (Y.9 = 4.52) and leadership/creativity (Y.7–Y.8 ≥ 4.35) are pronounced strengths; quantity of output (Y.2 = 4.15) is the comparatively lowest dimension, indicating potential gains through workload balancing and process efficiency. Within professional commitment, normative conviction (Z.6 = 4.51) and perceived career benefits (Z.4 = 4.38) are especially strong, while affective striving to continue contributing (Z.2 = 4.19) is relatively lower—still high—but indicates room to deepen affective attachment through recognition and meaningful work design.

## 4.3 Measurement Model

Table 5 reports the loading range per construct rather than listing each indicator line by line; complete item-level values remain available in the technical appendix/output. Conventional thresholds were applied as follows (Chin & Dibbern, 2010): outer loading ≥ 0.70 (acceptable item reliability), Cronbach’s  $\alpha$  ≥ 0.70 and CR ≥ 0.70 (internal consistency) (Ringle et al., 2024).



Table 5. Validity and Reliability

Construct (Code)	Indicators	Outer Loading Range	All Loadings $\geq 0.70$	Cronbach's $\alpha$	Composite Reliability (CR)	Interpretation
Work Discipline (X1)	6	0.711 – 0.848	Yes	0.871	0.903	Convergent validity and reliability acceptable
Work Environment (X2)	4	0.742 – 0.851	Yes	0.827	0.884	Convergent validity and reliability acceptable
Work Motivation (X3)	6	0.708 – 0.816	Yes	0.854	0.892	Convergent validity and reliability acceptable
Employee Performance (Y)	9	0.721 – 0.788	Yes	0.905	0.922	Convergent validity and reliability acceptable
Professional Commitment (Z)	6	0.716 – 0.794	Yes	0.839	0.881	Convergent validity and reliability acceptable

Notes: Thresholds: loading  $\geq 0.70$ ,  $\alpha \geq 0.70$ , and CR  $\geq 0.70$ . Figures derived from SmartPLS 4.0 output.

The results indicate that all constructs achieve adequate convergent validity, with every indicator loading at or above 0.70 and loading ranges that are comfortably within the recommended bounds. Internal consistency was high across constructs, with Cronbach's  $\alpha$  between 0.827 and 0.905 and CR between 0.881 and 0.922, satisfying and exceeding conventional criteria. The pattern of CR >  $\alpha$  is consistent with expectations for congeneric measures, and further supports reliability. Given these outcomes, the reflective measurement blocks for Work Discipline (X1), Work Environment (X2), Work Motivation (X3), Employee Performance (Y), and Professional Commitment (Z) can be considered psychometrically sound for subsequent structural (inner model) testing including hypothesis evaluation and mediation analysis.

Discriminant validity was assessed using the three standard assessments applied in variance-based SEM (PLS-SEM) (Fornell & Larcker, 1981), cross-loadings, Fornell–Larcker, and HTMT (see Table 6).

Table 6. Discriminant Validity

Construct	Cross-Loadings Check	Fornell–Larcker ( $\sqrt{\text{AVE}}$ vs max r with others)	Decision (FL)	Max HTMT with Others	Decision (HTMT)
Work Discipline (X1)	All indicators highest on X1	0.780 vs 0.706 (with Y)	Pass	0.802 (with Z)	Pass (<0.90)
Work Environment (X2)	All indicators highest on X2	0.810 vs 0.278	Pass	0.275 (with Z)	Pass (<0.90)
Work Motivation (X3)	All indicators highest on X3	0.761 vs 0.784 (with X1)	Border line*	0.767 (with Z)	Pass (<0.90)
Employee Performance (Y)	All indicators highest on Y	0.755 vs 0.853 (with Z)	Not Pass	0.873 (with Z)	Pass (<0.90)
Professional Commitment (Z)	All indicators highest on Z	0.744 vs 0.853 (with Y)	Not Pass	0.873 (with Y)	Pass (<0.90)

Cross-loadings and HTMT both support discriminant validity: indicators systematically load on their intended constructs, and all HTMT ratios fall below the conservative 0.90 threshold (highest pair Y–Z = 0.873). The Fornell–Larcker criterion is met for X1 and X2, borderline for X3 (closest competitor X1 = 0.784 vs  $\sqrt{\text{AVE}}$  0.761), and not met for the pair Y–Z (both constructs have diagonals below their mutual correlation 0.853). This pattern, HTMT acceptable while FL flags a specific pair, is common in applied PLS-SEM when constructs are theoretically proximate (e.g., Professional Commitment and Employee Performance in public service settings).

#### 4.4 Structural Model

The inner (structural) model was evaluated holistically by merging key statistics—path coefficients with significance tests, effect sizes ( $f^2$ ), and explained variance ( $R^2$ ), into a single summary. Conventional benchmarks guide interpretation: paths are significant at  $t \geq 1.96$  and  $p < 0.05$  (two-tailed, 5% level);  $f^2$  of 0.02/0.15/0.35 indicates small/medium/large effects; and  $R^2$  of 0.19/0.33–0.67/>0.67 reflects weak, moderate, or strong explanatory power. Predictive relevance ( $Q^2$ ) was computed from a set of endogenous constructs.

Table 7. Path Analysis

Endogenous	Exogenous	$\beta$	p-value	Si g.	$f^2$ Categor y	$R^2$	$Q^2$
Employee Performance (Y)	Work Discipline (X1)	0.16 4	0.009	Ye s	Small	0.76 3	0.89 9*
	Work Environment (X2)	0.07 3	0.100	No	Small		
	Work Motivation (X3)	0.13 8	0.022	Ye s	Small		
	Professional Commitment (Z)	0.63 0	0.000	Ye s	Large		
Professional Commitment (Z)	Work Discipline (X1)	0.45 9	0.000	Ye s	Medium	0.57 5	
	Work Environment (X2)	0.17 1	0.002	Ye s	Small		
	Work Motivation (X3)	0.32 9	0.000	Ye s	Small		

The evidence in Table 7 indicates that the model exhibits strong explanatory power for Employee Performance ( $R^2 = 0.763$ ), and moderate explanatory power for Professional Commitment ( $R^2 = 0.575$ ). The predictive relevance was high ( $Q^2 = 0.899$ ), supporting the model's out-of-sample predictive adequacy. Among the direct effects on performance, Professional Commitment  $\rightarrow$  performance was the dominant pathway ( $\beta = 0.630$ ;  $f^2 = 0.714$ , large), overshadowing the smaller yet significant effects of Work Discipline ( $\beta = 0.164$ ;  $f^2 = 0.048$ ) and Work Motivation ( $\beta = 0.138$ ;  $f^2 = 0.038$ ). Work Environment shows a positive but statistically non-significant direct effect on performance ( $\beta = 0.073$ ;  $p = 0.100$ ), suggesting that its primary role may be indirect.

Upstream, Professional Commitment is shaped most strongly by Work Discipline ( $\beta = 0.459$ ;  $f^2 = 0.265$ , medium), followed by Work Motivation ( $\beta = 0.329$ ;  $f^2 = 0.137$ , small), and Work Environment ( $\beta = 0.171$ ;  $f^2 = 0.068$ , small). This pattern aligns with a mechanism in which discipline and motivation enhance professional identification and obligations, which, in turn, exert a large downstream impact on performance. In substantive terms, the structural results support the theoretical positioning of Professional Commitment as a pivotal conduit that translates behavioral controls (discipline), contextual supports (environment), and individual energy (motivation) into sustained performance outcomes. Further mediation testing (reported separately) is therefore well-justified, given the strong  $Z \rightarrow Y$  effect and significant  $X \rightarrow Z$  pathways.

#### 4.5 Discussion

The structural results posit that professional commitment is the principal conduit through which discipline, the work environment, and motivation translate into higher performance in a bureaucratic context. First, the positive and significant effect of work discipline on performance (H1:  $\beta = 0.164$ ;  $p < 0.01$ ) indicates that rule-based behaviors (punctuality, adherence to procedures, and goal attainment) remain foundational performance drivers in ministries, where task interdependence and regulatory compliance are prominent. From the Job Demands–Resources (JD-R) perspective, discipline operates as a self-regulatory resource that reduces process losses (e.g., delays, rework) and enables employees to convert effort into outputs more efficiently. This finding echoes prior Indonesian public-sector evidence showing discipline as a reliable antecedent of performance, and suggests the practical salience of time-management standards, attendance governance, and leader role-modeling of disciplined behaviors (Alhitmi et al., 2023; Fahlevi, 2021).

In contrast, the direct path from work environment to performance was positive but non-significant (H2:  $\beta = 0.073$ ;  $p = 0.10$ ). Therefore, two interpretations are plausible. Substantively, environmental conditions in this setting may be “good enough” and thus show limited marginal returns on performance once discipline and motivation are accounted for—an example of a ceiling or sufficiency effect for physical and social climates. Mechanistically, the influence of the environment may manifest primarily through attitudinal channels rather than immediate performance outputs. This reading is consistent with the significant environment  $\rightarrow$  professional commitment path (H5) and large downstream commitment  $\rightarrow$  performance effect (H7). In short, environmental support appears to strengthen identification with professional standards more than it directly pushes the output metrics (Ekowati et al., 2023; Shah, Al-Ghazali, et al., 2023).

Motivation exerts a positive, significant, direct effect on performance (H3:  $\beta = 0.138$ ;  $p = 0.022$ ), aligning with the self-determination logic that energized, autonomous effort increases both the quantity and quality of work. The descriptive profile—relatively lower means of economic sufficiency but very high means of relatedness and growth—suggests that social and developmental motivators are particularly potent in this ministry, whereas material sufficiency remains a comparatively weaker facet to monitor. Therefore, recognition systems, developmental opportunities, and fair reward mechanisms are practical levers for sustained performance.

The upstream antecedents of professional commitment revealed a clear ranking: discipline (H4:  $\beta = 0.459$ ;  $p < 0.001$ )  $>$ , motivation (H6:  $\beta = 0.329$ ;  $p < 0.001$ )  $>$ , and work environment (H5:  $\beta = 0.171$ ;  $p = 0.002$ ). In a compliance-intensive bureaucracy, consistent disciplined conduct appears to anchor professional identity; employees who reliably meet procedural and timing expectations may internalize professional norms more strongly. Motivation contributes by reinforcing intrinsic interest and perceived growth, and further deepening identification with professional standards. Environmental conditions, while still significant, play a subtler role, likely by making it easier to enact—and therefore to value—professional behaviors daily (Raja et al., 2025).

The largest effect in the model is on the path from professional commitment to performance (H7:  $\beta = 0.630$ ;  $p < 0.001$ ;  $f^2$  large), underscoring the importance of normative and affective bonds with the profession for sustained, high-quality outputs. Commitment functions as a motivational “multiplier,” channeling discipline and personal energy toward consistent task execution, ethical conduct, and discretionary effort. This mechanism is particularly relevant for administrative contexts in which output quality (accuracy, compliance) and reliability are as critical as sheer volume.

Mediation tests substantiate this mechanism. Discipline’s indirect effect on performance via commitment (H8:  $\beta_{\text{ind}} = 0.289$ ;  $p < 0.001$ ) exceeds its direct effect ( $\beta_{\text{dir}} = 0.164$ ), yielding complementary partial mediation. This pattern implies that while disciplined behavior directly improves outputs (e.g., timeliness), a sizeable portion of its performance contribution flows through strengthened professional identification that sustains carefulness, initiative, and integrity. For work environment, the indirect effect via commitment (H9:  $\beta_{\text{ind}} = 0.108$ ;  $p = 0.003$ ) was significant, whereas the direct path to performance was not, indicating full mediation. Environmental resources, therefore, work primarily

by cultivating pride, obligation, and identification with professional values, which in turn elevates performance. Finally, motivation exhibited complementary partial mediation (H10:  $\beta_{ind} = 0.207$ ;  $p < 0.001$ ;  $\beta_{dir} = 0.138$ ), showing that both energized effort and the commitment it engenders matter simultaneously (Abbas et al., 2022b; Kuntadi et al., 2023).

From a policy standpoint, there are three implications. First, interventions that target discipline (clear standards, leader modeling, fair enforcement, and process simplification that makes compliance easy) should be paired with efforts to articulate and socialize professional values—ethics, care, and public service identity—so that disciplined routines become internalized rather than externally enforced alone. Second, environmental upgrades should be designed with a professionalization lens; improvements to layout, workflow tools, and supervisory practices should be framed as enablers of professional standards, thereby maximizing their indirect impact via commitment. Third, motivation policies should balance material adequacy with social and developmental drivers—recognition, feedback, and career pathways—because these not only spur effort, but also fortify professional identification.

Methodologically, the strong  $R^2$  for performance (0.763) and moderate  $R^2$  for professional commitment (0.575), combined with high predictive relevance ( $Q^2 = 0.899$ ), indicate a well-specified model with meaningful explanatory and predictive power. Discriminant validity showed tight coupling between commitment and performance under Fornell–Larcker, HTMT, and cross-loadings, supporting discriminant adequacy, which is reasonable given the theoretical proximity of these constructs in public service settings. The evidence advances a processual account in which discipline, environment, and motivation shape performance most powerfully when converted into professional commitment, an actionable attitudinal resource that ministries can cultivate through integrated HR, leadership, and workplace design strategies.

## 5. Conclusions

This study shows that employee performance at the Secretariat of the Directorate General of Plantations is shaped most powerfully by professional commitment, which exerts a large, positive effect and serves as the primary conduit through which work discipline, work environment, and work motivation translate into outcomes. Discipline and motivation display positive direct effects on performance, whereas the work environment does not, indicating that contextual conditions influence performance mainly by strengthening professional commitment, rather than by acting directly on output. Upstream, discipline has the strongest association with professional commitment, followed by motivation and work environment.

Collectively, these results yield strong explanatory power for performance and moderate explanatory power for professional commitment, with a high predictive relevance for the overall model. Mediation analyses confirm a coherent mechanism: professional commitment significantly mediates the effects of all three antecedents on performance: complementary partial mediation for discipline and motivation (indirect effects exceed but do not replace direct effects) and full mediation for the work environment (indirect effect significant while the direct path is not). Substantively, disciplined conduct, developmental and social forms of motivation, and conducive physical–social settings contribute the most to performance when they cultivate identification with professional standards and ethics. Practically, integrated human resources, leadership, and workplace design initiatives that elevate professional commitment alongside discipline and motivation are likely to produce the most durable performance gains.

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