

DETERMINANT OF TAX AUDIT QUALITY WITH AUDIT ENVIRONMENT AS MEDIATORS

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ABSTRACT

This study examines the determinants of tax audit quality by integrating input, process, and output factors with environmental context as a mediating variable. Data were collected from 129 tax auditors in Jakarta using structured questionnaires and analyzed through PLS-SEM. Results indicate that all factors significantly influence audit quality, with environmental factors showing the strongest effect and acting as a partial mediator. These findings highlight the importance of regulatory clarity and organizational culture in strengthening technical and procedural components, offering practical insights for improving tax audit quality and compliance.

Keywords: Tax Audit Quality; Audit Input Factors; Audit Process; Audit Environment; PLS-SEM

INTRODUCTION

Tax audits are a cornerstone of fiscal policy, serving as a mechanism to ensure compliance and safeguard state revenue under a self-assessment system. While this system promotes efficiency, it also introduces agency problems due to information asymmetry between taxpayers and the state (Mersha et al., 2022). Taxpayers often exploit this gap through tax avoidance strategies, (Duhoon & Singh, 2023). A second layer of agency risk arises between the Tax Authority in Indonesia (DJP) as principal and tax auditors as agents who may face conflicting incentives or pressures that compromise independence and objectivity (Bouckova, 2015). This dual agency relationship underscores the complexity of maintaining face persistent challenges: DJP's litigation success rate in tax disputes, as reported

on DJP Annual Report 2024, remains below 50%, averaging only 43.36% from 2022 to 2024. Appeals fluctuate between 33.33% and 38.50%, while lawsuits show higher but inconsistent performance, indicating systemic weaknesses in audit quality that undermine enforcement effectiveness and revenue sustainability. Furthermore, the removal of provisions in Regulation of the Minister of Finance of the Republic of Indonesia Number 15 of 2025 on Tax Audit (PMK-15/2025) means that audit standards are no longer explicitly designated as the benchmark for tax audit quality, complicating efforts to evaluate and improve performance and highlighting the urgency of strengthening audit quality to reduce disputes and enhance compliance.

Table 1. Percentage of DJP Wins in Tax Disputes (2022 – 2024)

| Tax Disputes | 2022 | 2023 | 2024 |
|------------------|--------|--------|--------|
| Appeals | 38.50% | 33.33% | 35.95% |
| Lawsuits | 73.90% | 76.29% | 80.75% |
| Combined average | 44.80% | 41.14% | 44.14% |

Source: DJP Annual Report, 2024

International Auditing and Assurance Standards Board / IAASB (2014) conceptualizes audit quality as a multidimensional construct shaped by input, process, output, and contextual factors. Empirical evidence consistently shows that input factors like auditor competence, ethics, and procedural rigor positively influence audit quality (Syam et al., 2021; Mersha et al., 2022). Other studies emphasize the role of technology adoption and forensic techniques in strengthening audit processes (Handayani & Darma, 2021; Alhadi & Nugrahanto, 2021; Angganis et al., 2023). Others research highlights the complexity of defining audit quality and the influence of litigation risk on auditor behavior (Knechel et al., 2013; El Badlaoui et al., 2021). Despite these insights, most studies focus on input and process dimensions, leaving output and contextual or environmental factors such as regulatory changes and organizational culture underexplored, particularly in tax audits.

This study addresses that gap by integrating the Audit Quality Indicators (AQI) framework from IAASB with General System Theory (GST). GST views audits as part of an open system composed of interconnected components input, process, and output that interact with their environment (Kholil et al., 2014; Montuori, 2011). In tax audits, inputs, processes, and outputs are influenced by external factors such as regulations and organizational culture, and feedback from the environment shapes future audit strategies. By adopting GST and positioning

environmental context as a mediating variable, this research offers a holistic perspective that captures systemic interactions often overlooked in prior studies.

Input factors represent the foundational attributes that manifest the audit quality. According to Syam et al. (2021), these inputs include values, ethics and behavior, knowledge, skills, experience, and the time allocated to complete audit tasks. Empirical studies reinforce this perspective: Indradewa et al. (2019) found that auditor competence and ethical standards (Mersha et al., 2022) significantly enhance audit quality, while Fiki et al. (2021), Angganis et al. (2023), and Alhadi & Nugrahanto (2021) confirmed the positive impact of technical skills and professional training. Sisyadi & Widjaja (2024) also demonstrated that ethical conduct strengthens audit credibility.

H₁: Input factors have a positive effect on tax audit quality.

The audit process encompasses planning, risk assessment, evidence collection and evaluation, and adherence to established procedures—all of which directly impact audit quality. IAASB (2014) emphasizes that process integrity is a core determinant of audit effectiveness. Empirical studies reinforce this perspective: Handayani & Darma (2021) emphasize that access to financial data and the application of digital forensics significantly enhance audit outcomes, while George & Diavastis (2015) demonstrates that utilizing information system tools enables tax auditors to effectively detect

tax infringements; together, these findings suggest that technology-driven approaches play a critical role in improving audit quality. Mersha et al. (2022) found that rigorous quality control and adherence to audit standards lead to more reliable results, while Xiao et al. (2020) emphasize that audit effort enhances audit quality by positively influencing both the audit process and its outcomes, indicating that compliance and effort are critical determinants within the audit process for achieving high-quality audits.

H₂: Process factors have a positive effect on tax audit quality.

Output factors represent the final product of the audit process and serve as a key indicator of audit effectiveness. According to the AQI framework (IAASB, 2014), outputs include audit reports and related information aligned with audit objectives. Kholil et al. (2014) define output as processed input. Knechel (2013) adds that outputs encompass adverse findings, financial statement quality, and peer reviews, and Rajgopal et al. (2021) argue that going concern disclosures should also be considered. Empirical evidence supports these views: Syam et al. (2021) found that clear and comprehensive audit reports significantly influence perceived quality, while El Badlaoui et al. (2021) stressed the importance of going concern disclosures, the literature consistently acknowledges outputs as essential for audit quality. The auditor's report functions as a critical instrument for reinforcing the credibility of financial statements, ensuring compliance with generally accepted accounting principles and accuracy in reporting (Sompong et al., 2017); this assurance is fundamental to enhancing the quality of tax audits, as reliable financial information forms the

basis for effective examination and decision-making.

H₃: Output factors have a positive effect on tax audit quality.

Prior studies have demonstrated that environmental factors such as audit policies, regulatory frameworks, time pressure, organizational culture, and leadership style exert varying influences on tax audit quality. Handayani & Darma (2021) reported that audit policies, particularly in determining priority targets, have a positive and significant effect on audit quality. Similarly, Mersha et al. (2022) found that regulations, legal standards, and professional bodies positively influence audit quality. Organizational culture and leadership style also contribute positively, as noted by Sisyadi & Widjaja (2024). In addition, Sulaiman (2018) highlights that audit regulations play a critical role in shaping the strategies and practices of audit firms and auditors. This indicates that regulatory requirements are not merely compliance mechanisms but act as drivers that influence how auditors approach their work, ultimately affecting the consistency and reliability of audit quality. However, these effects are not always consistent. Fiki et al. (2021) observed that risk-based audit policies do not significantly affect audit quality. The Audit Quality Indicators (AQIs) framework developed by IAASB (2014) suggests that environmental factors shape audit components that determine quality, a view supported by Arens et al. (2017), who emphasized the role of tone at the top, organizational culture, and human resource management.

H₄: Environmental factors positively affect audit quality;

H₅: Environmental factors mediate the relationship between audit input factors, audit processes, or audit outputs with tax audit quality.

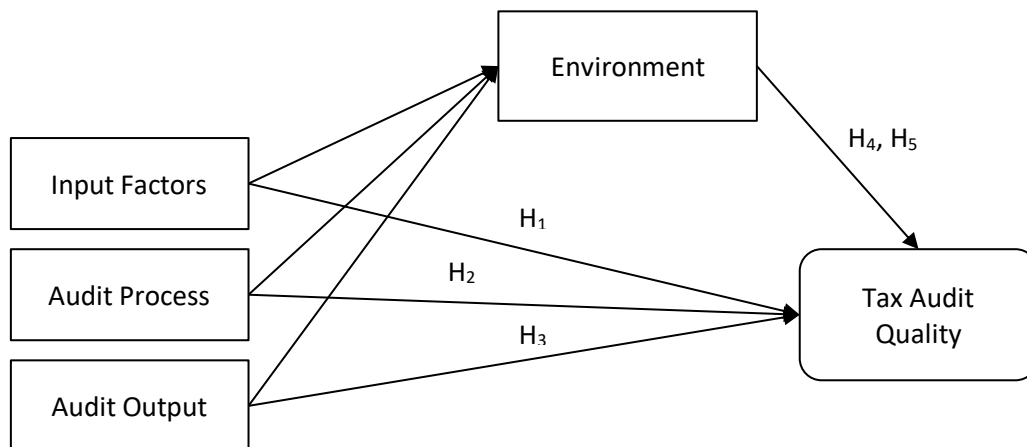


Figure 1. Framework Conceptual
Source: Research Data, 2025

METHODS

An explanatory quantitative methodology was applied to test hypotheses and evaluate relationships among variables using empirical data (Creswell & Creswell, 2018). Based on the positivist paradigm, this approach assumes that reality is objective, observable, and measurable, and employs hypothesis testing to explain or predict variable interactions (Al-Ababneh, 2020; Sihotang, 2023). Data were gathered through a structured survey using closed-ended

questionnaires developed from predefined indicators for each variable. Respondents comprised tax auditors from nine Tax Offices under the Special Regional Office of DJP, Jakarta, selected through purposive sampling based on their experience in handling tax disputes. The sample size was calculated using G*Power software with parameters: effect size $f^2=0.15$, significance level $\alpha=0.05$, statistical power $1-\beta=0.95$, and four predictors, resulting in a minimum of 129 respondents.

Table 2. Definition and Measurement of Variables

| Variable / Construct | Operational Definition | Measurement Indicators (Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree) |
|---------------------------|--|--|
| Input Factors (Input) | Resources inherent to tax auditors, including competence (knowledge, skills, experience), independence, values and ethics, and time allocated for audit activities (Francis, 2011; IAASB, 2014; PMK 15, 2025). | Knowledge of tax regulations; Technical skills; Audit experience; Integrity; Independence; data/information re-sources |
| Process Factors (Process) | All activities, procedures, and judgments performed by tax auditors during the audit process, including planning, testing, evidence collection and evaluation, detection of non-compliance, reporting, and quality control, in accordance with | Compliance with audit standards; Proper documentation; Effective team communication; Supervisor involvement |

| | | |
|-------------------------------------|--|---|
| | audit standards and regulations (Francis, 2011; IAASB, 2014; PMK-15, 2025). | |
| Output Factors (Output) | The final results of the tax audit process reflecting audit quality, including clear and complete audit reports, strong findings based on sufficient evidence and legal basis, and recommendations to improve taxpayer compliance (IAASB, 2014; Knechel et al. ,2013; PMK-15, 2025). | Clarity and completeness of audit report; Accuracy of findings; Legal compliance; Quality of recommenda-tions |
| Environmental Factors (Environment) | External or contextual factors beyond the auditor’s control that directly or indirectly affect audit quality (Mersha et al., 2022; IAASB, 2014; Arens et al., 2017). | Professional values in organization; Regula-tory clarity; Complexity of tax laws; Managerial influence on decisions |
| Tax Audit Quality | The extent to which audit processes and outcomes comply with professional standards, produce valid findings, and contribute to improved taxpayer compliance (Knechel et al., 2013; El Badlaoui et al., 2021., 2011; Mersha et al., 2022). | Adherence to audit standards; Professional skepticism; Accuracy of findings; Contribution to taxpayer compliance |

Source: Research Data, 2025

The research model includes five constructs: input factors (X₁), process factors (X₂), output factors (X₃), environmental factors (Y₁) as a mediating variable, and tax audit quality (Y₂) as the dependent variable. Each construct was operationalized into measurable dimensions and indicators, assessed using a five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5).

Data analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS version 4.0.9, selected for its suitability in predictive and exploratory research involving complex models with multiple latent constructs (Hair et al., 2017). The structural relationships are expressed as:

$$EN = \alpha + \delta_1 INP + \delta_2 PRO + \delta_3 OUT + \varepsilon_1 \dots\dots\dots (1)$$

$$AQ = \alpha + \beta_1 INP + \beta_2 PRO + \beta_3 OUT + \gamma EN + \varepsilon_2 \dots\dots\dots (2)$$

$$C = \beta + \delta \gamma \dots\dots\dots (3)$$

Where:
 EN = Environment
 INP = Input Factors
 AQ = Tax Audit Quality
 PRO = Audit Process
 α = Constant
 OUT = Audit Output

β = Coefficient X
 C = Total Effect
 ε = errors in the estimation of
 γ = Coefficient EN

Hypotheses were tested through path analysis and bootstrapping, with

model evaluation based on indicators such as R^2 , f^2 , Q^2 , VIF, and SRMR.

RESULT AND DISCUSSION

After data collection, 133 responses were obtained, and four were excluded during data cleaning, resulting in a final sample of 129 respondents. The sample comprised supervisors, team leaders, and audit team members, meeting the minimum requirement for PLS-SEM analysis (Hair et al., 2017). Descriptive analysis shows that all constructs lean toward positive responses, with an overall mean of 3.89 on a five-point scale. Tax Audit Quality recorded the highest mean (4.03) with the lowest variability, indicating consistent perceptions of audit quality,

while Input had the lowest mean (3.80) among exogenous variables. The range of item means (3.61–4.19) suggests generally favorable evaluations with minor areas for improvement, particularly in certain environmental aspects (see table 3).

The evaluation of the measurement model focused on convergent validity, discriminant validity, and reliability to ensure that the indicators accurately and consistently represent the latent constructs. Convergent validity was assessed using Average Variance Extracted (AVE) and indicator loadings, with thresholds of $AVE > 0.50$ and loadings > 0.70 (Setiabudhi et al., 2024).

Table 3. Construct-Level Descriptive Statistics

| Construct | Items (k) | N | Scale | Mean | SD | Item Mean Range |
|-------------------|-----------|-----|-------|------|--------|-----------------|
| Input | 9 | 129 | 1–5 | 3.80 | 1.096 | 3.651–3.961 |
| Process | 8 | 129 | 1–5 | 3.82 | 1.034 | 3.705–3.961 |
| Output | 8 | 129 | 1–5 | 3.93 | 1.11 | 3.760–4.163 |
| Environment | 9 | 129 | 1–5 | 3.90 | 1.031 | 3.612–4.155 |
| Tax Audit Quality | 7 | 129 | 1–5 | 4.03 | 0.0882 | 3.806-4.194 |

Source: Research Data, 2025

Results from SmartPLS show that all indicators exceeded the loading threshold and each construct achieved AVE values above 0.50, indicating strong convergent validity. Discriminant validity was confirmed through Heterotrait-monotrait (HTMT) ratios (Henseler et al., 2015), all of which were

below 0.90 (Hair et al., 2021), demonstrating that the constructs are empirically distinct. These findings indicate that the measurement model meets the required validity and reliability standards.

Table 4. Convergent Validity Test

| Variable / Construct | Number of Indicators | Loading Factor Range | AVE | Criterion (Hair et al.,2017) | Validity |
|----------------------|----------------------|----------------------|------|--|----------|
| Input | 9 | 0.785 – 0.931 | 0.70 | Loading ≥ 0.70 ; AVE ≥ 0.50 | Valid |
| Process | 8 | 0.808 – 0.919 | 0.76 | Loading ≥ 0.70 ; AVE ≥ 0.50 | Valid |

| | | | | | |
|----------------------|---|------------------|------|-------------------------------|-------|
| Output | 8 | 0.768 – 0.901 | 0.69 | Loading ≥ 0.70; AVE ≥ 0.50 | Valid |
| Environment | 9 | 0.806 – 0.931 | 0.77 | Loading ≥ 0.70; AVE ≥ 0.50 | Valid |
| Tax Audit Quality | 7 | 0.731 – 0.868 | 0.67 | Loading ≥ 0.70; AVE ≥ 0.50 | Valid |

Source: Research Data, 2025

Table 5. Discriminant Validity Test – HTMT Ratios

| Variable / Construct | Input | Process | Output | Environment | Tax Audit Quality |
|----------------------|-------|---------|--------|-------------|----------------------|
| Input | | | | | |
| Process | 0.585 | | | | |
| Output | 0.591 | 0.639 | | | |
| Environment | 0.67 | 0.693 | 0.665 | | |
| Tax Audit Quality | 0.781 | 0.774 | 0.777 | 0.889 | |

Source: Research Data, 2025

In addition to assessing convergent and discriminant validity, the evaluation of the measurement model also includes testing the reliability of latent constructs. According to Hair et al. (2017), reliability is measured using Composite Reliability (CR) and Cronbach’s Alpha, with both values required to exceed 0.70. The results

show that all constructs achieved CR and Cronbach’s Alpha values above this threshold, indicating strong reliability. Based on these validity and reliability tests, the measurement model can be considered both valid and reliable.

Table 6. Reliability Test

| Construct | Cronbach's <i>alpha</i> | CR | Reliability |
|----------------------|----------------------------|-------|-------------|
| Input | 0.946 | 0.954 | Reliable |
| Process | 0.955 | 0.962 | Reliable |
| Output | 0.935 | 0.947 | Reliable |
| Environment | 0.963 | 0.968 | Reliable |
| Tax Audit Quality | 0.917 | 0.934 | Reliable |

Source: Research Data, 2025

The model’s predictive power and fit were assessed using R², Q², and Standardized Root Mean Square Residual (SRMR). R² indicates the proportion of variance explained, while Q² measures predictive relevance through blindfolding. Hair et al. (2017)

classify R² values of 0.75, 0.50, and 0.25 as substantial, moderate, and weak, and Q² values above 0.35 as strong. Model fit was evaluated using SRMR, where values ≤ 0.08 indicate acceptable fit.

Table 7. Model Evaluation for Tax Audit Quality

| Construct | Metric | Value |
|-------------------|-------------------------|-------|
| Tax Audit Quality | R ² | 0.817 |
| | Adjusted R ² | 0.811 |
| | Q ² | 0.534 |
| | SRMR | 0.08 |

Source: Research Data, 2025

The results above indicate that tax audit quality has substantial explanatory power, with an R² value of 0.817, meaning that the independent variables input, process, output, and environmental factors collectively account for 81.7% of the variance in tax audit quality, while the remaining 18.3% is explained by factors outside this study. This demonstrates that the model is highly robust, though additional variables could further enhance predictive accuracy. Moreover, the Q² value of 0.534 confirms strong predictive relevance, showing that the model not only explains observed data but also performs well in predicting new, unseen observations, which Hair et al. (2017) classify as high. Finally, the

SRMR value of 0.080 meets the recommended threshold for model fit, indicating that the discrepancy between observed and predicted correlation matrices is within acceptable limits. Overall, these findings affirm that the structural model is statistically sound, exhibits strong predictive capability, and fits the empirical data satisfactorily.

All VIF values in Table 8 are below the recommended threshold of 5.0, as suggested by Hair et al. (2017), indicating no multicollinearity issues and confirming that the structural model is statistically valid. This ensures that the estimated path coefficients are reliable and unaffected by collinearity among predictors.

Table 8. Structural Model Evaluation Results

| Hypotheses | Original Sample | T-Statistics | P-Value | VIF | f ² Effect Size | Explanation |
|---------------------------------|-----------------|--------------|---------|------|----------------------------|-------------|
| Input → Tax Audit Quality | 0.23 | 4.17 | 0.000 | 1.88 | 0.16 | Accepted |
| Process → Tax Audit Quality | 0.18 | 3.04 | 0.002 | 2.08 | 0.08 | Accepted |
| Output → Tax Audit Quality | 0.20 | 3.85 | 0.000 | 1.98 | 0.11 | Accepted |
| Environment → Tax Audit Quality | 0.44 | 6.13 | 0.000 | 2.51 | 0.42 | Accepted |

Source: Research Data, 2025

The same table shows that input and process factors both have a significant positive effect on tax audit quality, though with different magnitudes. According to Hair et al. (2021), f² values of 0.02, 0.15, and 0.35

represent weak, medium, and strong effects, respectively.

The input factor exhibits a coefficient of 0.23 (p < 0.05) with a medium effect size (f² = 0.16), meaning improvements in auditor knowledge,

skills, experience, ethics, and behavior strongly enhance audit quality. These findings align with IAASB (2014) and agency theory, which emphasize that competent and ethical auditors not only ensure effective audits but also reduce opportunistic behavior and moral hazard. Prior studies (Mersha et al., 2022; Fiki et al., 2021) support this view, confirming that auditor competence and integrity are critical for high-quality outcomes. These findings also support the view that the most relevant elements of auditor competence in relation to the quality of tax audits are skills, experience and knowledge (Taib et al., 2024).

Process factors also demonstrate a positive and significant influence ($\beta = 0.18$, $p < 0.05$), although the effect size is relatively weak ($f^2 = 0.08$). This suggests that systematic procedures, supervision, and quality control contribute to audit quality but are less impactful than input factors. Consistent with GST and agency theory, structured processes enhance accountability and reduce conflicts of interest, yet professional judgment remains decisive. Previous research (Mersha et al., 2022; Angganis et al., 2023) corroborates these findings, noting that technology and rigorous procedures improve audit quality but cannot fully eliminate judgment-related risks. These findings reinforce previous research conducted by Ghani et al. (2021), which found that control and monitoring activities carried out by senior team member like supervisors have an impact on tax audit quality.

Table 8 shows that the output factor has a positive and significant effect on tax audit quality, with a path coefficient of 0.200 ($p < 0.05$). This indicates that improvements in audit outputs such as clear, accurate, and timely reports are associated with better audit quality. However, the effect size (f^2

$= 0.011$) is very weak according to Hair et al. (2017), who classify f^2 values of 0.02, 0.15, and 0.35 as weak, medium, and strong, respectively. The hypothesis regarding the influence of output on tax audit quality is therefore accepted. These findings support GST and agency theory, where high-quality outputs reduce information asymmetry and enhance transparency. They also align with prior studies by El Badloui et al. (2021) and IAASB (2014), which emphasize that informative, timely, and stakeholder-friendly audit reports improve audit quality, even though their impact may be smaller compared to other factors. Audit output significantly influences audit quality, as it serves as a key reference for stakeholders in evaluating the effectiveness of the audit. A clearly articulated auditor's report, for instance, is likely to enhance perceptions of audit quality by transparently communicating the audit outcomes (Neri & Russo, 2014).

Based on these findings, the environmental factor emerges as the most influential predictor of tax audit quality, with a path coefficient of 0.441 ($p < 0.05$) and a strong effect size ($f^2 = 0.422$), which Hair et al. (2017) classify as strong. The hypothesis for the environmental factor is accepted. This finding reinforces system theory, which views the environment as a supra system affecting all subsystems, and agency theory, where external controls such as regulations and organizational norms help minimize opportunistic behaviour. Consistent with previous research by Mersha et al. (2022); Handayani & Darma (2021), a supportive environment characterized by clear regulations, ethical culture, and proper leadership intervention plays a dominant role in improving audit quality. Organizational factors such as commitment and culture create an environment that shapes auditor behaviour and performance. A

strong organizational culture fosters a sense of belonging and alignment with organizational goals, which, similar to organizational commitment, positively

influences audit quality (Sadiah & Rasmini, 2023).

Table 9. Mediation Test Results

| Hypotheses | Original sample | Sample mean | Std Dev. | T -stat | P values | Explanation |
|---|-----------------|-------------|----------|---------|----------|-------------|
| Input -> Environment-> Tax Audit Quality | 0.14 | 0.13 | 0.04 | 3.43 | 0.00 | Accepted |
| Output -> Environment-> Tax Audit Quality | 0.12 | 0.12 | 0.05 | 2.56 | 0.01 | Accepted |
| Proses -> Environment-> Tax Audit Quality | 0.15 | 0.14 | 0.04 | 4.08 | 0.00 | Accepted |

Source: Research Data, 2025

The results presented in Table 9 indicate that the environmental factor not only has a direct effect on tax audit quality but also serves as a significant mediator between input, process, and output variables and audit outcomes. All three mediation paths are statistically significant, with p-values ranging from 0.000 to 0.001 (<0.05), confirming the robustness of the mediation effect. This suggests that while input, process, and output remain critical components, their influence on audit quality is substantially strengthened when supported by a conducive environment. The indirect effect represents the portion of influence transmitted through the environmental variable, which in this study is positive and significant for all three paths, indicating that the environment plays a meaningful role in amplifying the impact of these factors. When combined with the direct effect, the total effect reflects the overall contribution of each variable to audit quality. The significance of both direct and indirect effects confirms a partial mediation scenario, meaning that input, process, and output affect audit quality directly, but their impact becomes stronger when mediated by the environment.

Theoretically, this finding aligns with the Input Process Output framework for audit quality proposed by IAASB (2014), which emphasizes that auditor competence, ethical culture, and effective processes collectively enhance audit outcomes (Syam et al., 2021). From the perspective of General Systems Theory, the external environment characterized by clear regulations, organizational integrity, and professional leadership optimizes systemic interactions, enabling inputs and processes to function effectively and produce high-quality outputs (Kholil et al., 2014). Similarly, Agency Theory explains the mediating role of the environment as an external control mechanism that mitigates information asymmetry and moral hazard, thereby reinforcing the relationship between the tax authority and auditors. Empirical evidence from prior studies, such as Mersha et al. (2022), supports this view by demonstrating that audit processes and environmental factors significantly influence audit quality in tax administration contexts. These findings contribute to the literature by highlighting the contextual importance of environmental support in improving

tax audit effectiveness and ensuring outcomes that align with state interests.

CONCLUSION

This study concludes that all examined variables input, process, output, and environment positively and significantly influence tax audit quality, with the environment acting as the dominant factor and a partial mediator in the relationships among input, process, and output. These findings confirm the proposed hypotheses and demonstrate that a conducive environment strengthens the impact of technical and procedural factors on audit quality. The implications of this research are twofold. From a theoretical perspective, the results reinforce General Systems Theory (GST) by affirming that tax audits operate as an open system comprising input, process, and output components that interact with the environment, which emerges as the most influential determinant of audit quality and a key mediator. Furthermore, the study supports Agency Theory by showing that control mechanisms embedded in input, process, output, and environmental factors help reduce information asymmetry and opportunistic behavior, ultimately improving audit quality. Practically, these findings provide direction for enhancing tax audit quality through strengthening auditor competence, ethics, and behavior; ensuring consistency and control in audit processes; standardizing audit reports and recommendations; and implementing reforms in regulations, organizational culture, and leadership engagement.

This study has several limitations that should be acknowledged. First, the research only covers tax auditors within a single regional office, namely the Jakarta Special Regional Tax Office, which means the findings should be

interpreted cautiously before generalizing to all units of DJP. Second, the data were collected through perception-based questionnaires, which may introduce bias due to respondents' subjectivity. Third, the research model examined only input, process, output, and environmental variables, while other potential factors such as interaction and incentives were not included in the analysis. These limitations provide opportunities for future research to expand the scope and incorporate additional variables. To improve tax audit quality, both auditors and DJP should implement measurable actions, such as adopting Audit Quality Indicators (AQI) as an objective and transparent tool for quality control in line with international best practices. Future studies are recommended to test the model by adding variables such as component interaction and incentives, which are presumed to influence audit quality; conduct comparative studies across different regional offices to examine the consistency of environmental effects in various contexts; and apply mixed-method approaches (quantitative and qualitative) to gain deeper insights into the mechanisms through which the environment affects tax audit quality.

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