

DETERMINANTS OF NON-TAX STATE REVENUE IN FIVE ASEAN COUNTRIES: THE MEDIATING ROLE OF FISCAL ACCOUNTABILITY

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Abstract:

This study analyzes the determinants of non-tax state revenue (NTSR) in five ASEAN countries—Indonesia, Malaysia, Thailand, Vietnam, and the Philippines by incorporating fiscal accountability as a mediating mechanism. Using balanced panel data for the period 2018–2023 and applying multiple linear regression and path analysis, the study examines the effects of economic growth, commodity prices, government effectiveness, digital governance, and trade openness on non-tax revenue performance. The results indicate that government effectiveness is the most significant and robust determinant of NTSR, highlighting the central role of institutional capacity in revenue mobilization. Economic growth does not exert a significant direct effect, while commodity prices are negatively associated with NTSR once fiscal accountability is considered, reflecting vulnerability to external price shocks. Digital governance and trade openness do not directly improve non-tax revenue outcomes; however, fiscal accountability functions as a complementary mechanism that enhances the effectiveness of institutional and structural factors. Overall, the findings emphasize that sustainable non-tax revenue mobilization depends primarily on effective governance and accountability frameworks.

Keyword: Non-Tax State Revenue; Economic Growth; Fiscal Accountability; Government Effectiveness; Digital Governance

1. Introduction

Over the past two decades, fiscal dynamics in Southeast Asia have undergone substantial transformation amid accelerating globalization, recurrent commodity price shocks, and rising public demands for transparency and accountability in public finance. While taxation remains the primary source of government revenue, its effectiveness has increasingly faced structural constraints, including limited tax bases, informality, and political economy considerations. In this context, non-tax revenue—commonly referred to as Non-Tax State Revenue (NTSR)—has emerged as an increasingly strategic component of fiscal capacity, particularly in developing and emerging economies (Musgrave, 1959; Bird, 2015). International evidence indicates that although the contribution of non-tax revenue to gross domestic product (GDP) remains modest relative to taxation, its role in supporting fiscal sustainability and macroeconomic stability has grown steadily over the last decade (OECD, 2025).

Globally, fiscal pressures have intensified in the aftermath of the COVID-19 pandemic, as governments confront rising expenditure needs alongside stagnating tax-to-GDP ratios. The World Bank (2024) reports that global tax ratios have remained largely flat over the past decade, suggesting limited room for revenue expansion through conventional taxation alone. Under such conditions, non-tax revenue offers an alternative fiscal instrument that can expand government resource mobilization without directly increasing the tax burden on households and firms (IMF, 2023). Revenues derived from state-owned enterprises (SOEs), natural resource royalties, administrative fees, fines, and the management of public assets have therefore become increasingly salient in fiscal policy debates, particularly in resource-rich and trade-oriented economies.

These dynamics are especially pronounced in the Association of Southeast Asian Nations (ASEAN), where economic structures remain closely linked to commodity markets and external trade. Several ASEAN countries rely heavily on revenues from extractive industries and SOEs, rendering non-tax revenue highly sensitive to fluctuations in global commodity prices. Episodes of sharp declines and subsequent rebounds in international oil prices over the past decade have demonstrated the vulnerability of non-tax revenue streams to external shocks, particularly in Indonesia, Malaysia, and Vietnam (World

Bank, 2025). Such volatility underscores the importance of understanding the structural and institutional factors that condition the capacity of governments to manage and stabilize non-tax revenue over time.

Importantly, cross-country evidence within ASEAN reveals substantial heterogeneity in the contribution of non-tax revenue to GDP. While countries such as Malaysia and Vietnam consistently record relatively high ratios of non-tax revenue, others—including Indonesia, Thailand, and the Philippines—exhibit more limited and volatile performance (OECD, 2025). These differences cannot be explained solely by economic size or growth trajectories. In fact, several episodes of robust economic growth have not been accompanied by commensurate increases in non-tax revenue, suggesting that macroeconomic performance alone is insufficient to ensure effective revenue mobilization (Cevik & Ricciuti, 2023). This divergence points to the critical role of institutional quality, governance structures, and fiscal accountability in shaping non-tax revenue outcomes.

A growing body of literature emphasizes that the effectiveness of revenue mobilization depends not only on economic fundamentals but also on the quality of public sector governance. Governments with strong institutional capacity, transparent regulatory frameworks, and effective oversight mechanisms tend to manage public assets and SOEs more efficiently, thereby reducing leakage and improving revenue performance (Kaufmann & Kraay, 2021; Acemoglu & Robinson, 2012). Conversely, weak governance and limited accountability increase the risk of inefficiency, rent-seeking, and fiscal losses, particularly in the management of non-tax revenue sources that are often less standardized and less visible than taxation.

In parallel, the rapid expansion of digital governance has introduced new opportunities to strengthen fiscal management. Digitalization of public financial systems—through e-government platforms, integrated treasury systems, and electronic reporting—has been shown to enhance transparency, reduce administrative discretion, and improve the timeliness and accuracy of fiscal information (Dunleavy et al., 2006; Bannister & Connolly, 2022). In several ASEAN countries, notable progress in digital fiscal infrastructure has coincided with improvements in public financial reporting and internal controls, although implementation gaps across sectors and regions remain a persistent challenge (United Nations, 2024).

Trade openness constitutes another structural dimension influencing non-tax revenue performance in ASEAN economies. High levels of trade integration can expand the scope for non-tax revenue through royalties, licensing fees, and service charges related to trade facilitation. At the same time, greater exposure to global markets increases vulnerability to external shocks, potentially amplifying revenue volatility (AMRO, 2022). Empirical evidence suggests that the net fiscal effect of trade openness depends critically on the strength of fiscal institutions and accountability mechanisms that govern revenue collection and management.

At the center of these interrelated dynamics lies fiscal accountability. Beyond its procedural dimension, fiscal accountability represents a governance mechanism that links transparency, public oversight, and institutional responsiveness in the management of public resources (Andrews, 2019). Theoretical and empirical studies increasingly argue that accountability is not merely an outcome of good governance but a mediating mechanism through which economic conditions, institutional quality, digital transformation, and trade exposure translate into effective revenue mobilization (Puji Wibowo & Murwaningsari, 2024). In the absence of strong accountability, gains from economic growth, digitalization, or trade integration may fail to materialize in the form of sustainable non-tax revenue.

Despite the growing relevance of non-tax revenue in fiscal policy, existing empirical studies remain fragmented. Much of the literature focuses either on taxation or on total government revenue, with limited attention to non-tax revenue as a distinct fiscal component. Moreover, cross-country analyses that jointly examine macroeconomic factors, commodity dependence, governance quality, digitalization, and trade openness—while explicitly modeling fiscal accountability as a mediating variable—are notably scarce, particularly in the ASEAN context (Yurdadog et al., 2022; Ayana et al., 2024). Most prior studies rely on static panel approaches that are ill-suited to capturing dynamic adjustments and long-run relationships inherent in fiscal processes.

This study seeks to address these gaps by examining the determinants of non-tax state revenue in five ASEAN countries—Indonesia, Malaysia, Thailand, Vietnam, and the Philippines—through a comprehensive and dynamic analytical framework. Specifically, it investigates how economic growth, commodity prices, government effectiveness, digital governance, and trade openness influence non-tax revenue, while explicitly accounting for the mediating role of fiscal accountability. By employing dynamic panel data techniques, this research captures both short-run dynamics and long-run relationships, offering a more nuanced understanding of revenue mobilization in an evolving fiscal environment.

The contribution of this study is threefold. First, it extends the public finance and institutional economics literature by integrating fiscal accountability as a central mediating mechanism linking economic, institutional, and structural factors to non-tax revenue performance. Second, it provides novel cross-country evidence from ASEAN, a region characterized by heterogeneity in economic structures, governance quality, and digital readiness. Third, it offers policy-relevant insights for strengthening fiscal resilience through governance reforms, digital transformation, and accountability-enhancing mechanisms aimed at optimizing non-tax revenue mobilization.

By situating non-tax revenue within a broader governance-oriented fiscal framework, this study underscores that sustainable revenue mobilization is not solely a function of economic expansion or resource endowments. Rather, it is fundamentally shaped by the capacity of institutions to manage public resources transparently, leverage digital technologies effectively, and ensure accountability in the face of economic volatility and global integration. In doing so, the study provides an evidence-based foundation for modern fiscal policy reform in ASEAN economies.

2. Method

2.1. Object, Time, and Location of the Study

This study examines the determinants of non-tax state revenue (NTSR) in five ASEAN countries—Indonesia, Malaysia, Thailand, Vietnam, and the Philippines. These countries are selected due to their economic relevance within ASEAN, differences in institutional quality and digital governance, and the availability of consistent data. The analysis employs balanced panel data covering the period from 2010 to 2024, allowing the study to capture both cross-country and time-series variations in non-tax revenue performance.

2.2. Data Collection Technique

This study relies exclusively on secondary data obtained from internationally recognized and credible sources to ensure reliability and cross-country comparability. Data on non-tax state revenue, economic growth, trade openness, and commodity prices are sourced from the World Bank and related international databases. Commodity prices are proxied by each country's main export commodity prices. Government effectiveness indicators are obtained from the Worldwide Governance Indicators, while digital governance is measured using the United Nations E-Government Development Index. Fiscal accountability, used as the mediating variable, is proxied by a fiscal transparency index reflecting the degree of government openness and public access to fiscal information.

2.3. Data Analysis Technique

The study adopts a quantitative explanatory approach using multiple linear regression and path analysis to examine both direct and indirect relationships among variables. The dependent variable is non-tax state revenue, measured as a ratio to gross domestic product, while the independent variables include economic growth, commodity prices, government effectiveness, digital governance, and trade openness. Fiscal accountability is specified as the mediating variable. The empirical analysis is conducted in two stages: first, multiple linear regression is applied to estimate direct effects; second, path analysis is used to assess the mediating role of fiscal accountability by comparing direct and indirect effects. All statistical analyses are performed using SPSS. Prior to hypothesis testing, classical assumption tests—normality, multicollinearity, heteroskedasticity, and autocorrelation—are conducted to ensure model validity.

3. Result and Discussion

3.1 Result

Model 1 examines the effects of economic growth, commodity prices, government effectiveness, digital governance, and trade openness on fiscal accountability. Model 2 investigates the effects of economic growth, commodity prices, government effectiveness, digital governance, trade openness, and fiscal accountability on non-tax state revenue (NTSR). The summary of regression results for both models is presented in Table 1.

Table 1. Summary of Regression Analysis Results

Variable	Model 1			
	B	Sig.	B	Sig.
Economic Growth	-0.093	0.680	-0.550	0.731
Commodity Prices	0.005	0.351	-0.110	0.010
Government Effectiveness	-7.492	0.005	19.772	0.000
Digital Governance	1.786	0.890	-14.315	0.126
Trade Openness	-0.186	0.000	0.043	0.214
Fiscal Accountability	–	–	0.033	0.818

R Square	0.789	0.602
Adjusted R Square	0.766	0.677
F-Statistic	38.630	35.390
Prob (F-Statistic)	0.000	0.000

Source: Processed data (2025)

Model 1 results reported in Table 5 indicate that government effectiveness and trade openness have statistically significant effects on fiscal accountability, as reflected by significance values below the 0.05 level. In contrast, economic growth, commodity prices, and digital governance do not exhibit statistically significant effects on fiscal accountability.

The estimation results for Model 2 reveal that commodity prices and government effectiveness significantly influence non-tax state revenue (NTSR), as indicated by their significance levels below 0.05. Meanwhile, economic growth, digital governance, trade openness, and fiscal accountability do not show statistically significant effects on NTSR.

Table 2. Summary of Path Analysis Results

Variable	Direct Effect	Indirect Effect	Comparison
X1 → Z	-0.310		
X2 → Z	0.150		
X3 → Z	-0.196		
X4 → Z	0.014		
X5 → Z	-0.825		
X1 → Y	-0.025		
X2 → Y	-0.432		
X3 → Y	0.706		
X4 → Y	-0.150		
X5 → Y	0.260		
Z → Y	0.046		
X1 → Z → Y		-0.014	> Direct effect
X2 → Z → Y		0.006	> Direct effect
X3 → Z → Y		-0.009	< Direct effect
X4 → Z → Y		0.0006	> Direct effect
X5 → Z → Y		-0.037	< Direct effect

Source: Processed data (2025)

Table 2 presents the direct and indirect effects of the independent variables on the dependent variable. Based on the comparison between direct and indirect effects, the indirect effect of economic growth on non-tax state revenue through fiscal accountability is greater than its direct effect. This finding indicates that fiscal accountability mediates the relationship between economic growth and non-tax state revenue.

Similarly, the effects of commodity prices and digital governance on non-tax state revenue are also mediated by fiscal accountability, as their indirect effects exceed their respective direct effects. These results suggest that improvements in economic conditions, commodity price dynamics, and digital governance translate into better non-tax revenue performance primarily when supported by stronger fiscal accountability mechanisms.

In contrast, fiscal accountability does not play a mediating role in the relationship between government effectiveness and trade openness with non-tax state revenue. This is evidenced by the larger magnitude of direct effects relative to indirect effects for these variables, indicating that their influence on non-tax revenue operates predominantly through direct institutional and structural channels rather than through fiscal accountability.

3.2 Discussion

This study provides empirical evidence on the determinants of non-tax state revenue (NTSR) in five ASEAN countries by explicitly incorporating fiscal accountability as a mediating mechanism. The findings reveal that non-tax revenue performance is not primarily driven by macroeconomic expansion, but rather by institutional quality, exposure to commodity price dynamics, and governance-related factors. These results reinforce the growing consensus in the public finance literature that sustainable revenue mobilization depends less on economic growth per se and more on the effectiveness of state institutions in managing public resources.

One of the most salient findings is the consistently positive and statistically significant effect of

government effectiveness on non-tax state revenue. This result underscores the central role of institutional capacity in determining the state's ability to mobilize revenue from non-tax sources such as state-owned enterprises, natural resource rents, administrative fees, and public asset management. Governments with higher effectiveness are better equipped to reduce inefficiencies, curb rent-seeking behavior, and improve compliance in non-tax revenue collection, which is often less standardized and more discretion-prone than taxation. This finding aligns with institutional economics and governance-based fiscal theories, which emphasize that strong administrative capacity and regulatory quality enhance revenue outcomes by improving oversight and enforcement mechanisms (Acemoglu & Robinson, 2012; Kaufmann & Kraay, 2021). In the ASEAN context, where institutional quality varies substantially across countries, this result suggests that governance reforms may yield substantial fiscal dividends even in the absence of rapid economic growth.

In contrast, economic growth does not exhibit a statistically significant direct effect on non-tax state revenue. This finding suggests that higher aggregate output does not automatically translate into improved non-tax revenue performance. Unlike tax revenue, which tends to rise mechanically with income and consumption, non-tax revenue depends heavily on institutional arrangements governing public assets and service provision. Previous studies similarly document that growth-driven revenue gains are more pronounced for tax revenues than for non-tax revenues, particularly in developing economies where non-tax revenue systems remain underdeveloped or fragmented (Bird, 2015; Cevik & Ricciuti, 2023). The absence of a direct growth effect in this study reinforces the argument that economic expansion alone is insufficient to strengthen non-tax revenue mobilization without complementary institutional reforms.

The role of commodity prices emerges as particularly nuanced. While commodity prices are not significant in the baseline specification, their effect becomes negative and statistically significant once fiscal accountability is introduced into the model. This result indicates that greater reliance on commodity-based revenues may expose non-tax revenue to adverse price volatility, especially when accountability mechanisms reveal underlying fiscal vulnerabilities. The negative association is consistent with the resource-dependence literature, which highlights that commodity price fluctuations can undermine revenue stability and weaken fiscal discipline in the absence of effective stabilization and transparency frameworks (IMF, 2016; World Bank, 2025). For ASEAN economies with significant exposure to extractive industries, this finding implies that higher commodity prices do not necessarily improve non-tax revenue performance in a sustainable manner and may, in fact, increase fiscal fragility when governance frameworks are insufficiently robust.

Trade openness also plays a complex role in shaping fiscal outcomes. The results indicate that trade openness significantly affects fiscal accountability but does not exert a robust positive direct effect on non-tax revenue. This pattern is consistent with earlier empirical evidence showing that trade liberalization can reduce certain forms of government revenue—particularly trade-related fees and charges—unless offset by improvements in domestic revenue administration (Baunsgaard & Keen, 2005). In highly open ASEAN economies, increased integration into global markets may constrain the scope for non-tax revenue generation if governments are unable to diversify revenue sources beyond trade-related activities. This finding underscores the importance of aligning trade policy with broader fiscal and institutional reforms to prevent erosion of non-tax revenue capacity.

The direct effect of digital governance on non-tax revenue is found to be statistically insignificant, suggesting that digitalization alone does not automatically improve revenue outcomes. However, the path analysis reveals small but positive indirect effects operating through fiscal accountability. This result supports the view that digital transformation primarily functions as an enabling mechanism rather than a direct driver of revenue mobilization. Digital systems enhance transparency, reduce information asymmetries, and facilitate public oversight, but their fiscal impact materializes only when embedded within broader accountability and governance structures (Dunleavy et al., 2006; Bannister & Connolly, 2022). In the ASEAN context, where digital government initiatives are advancing at different speeds, this finding implies that investments in digital infrastructure must be accompanied by institutional reforms to translate technological progress into tangible fiscal gains.

Fiscal accountability itself exhibits a positive but statistically insignificant direct effect on non-tax revenue, while mediating several relationships between the explanatory variables and revenue outcomes. The mediation analysis indicates that fiscal accountability operates as a complementary mechanism rather than a dominant transmission channel. This suggests that transparency and accountability enhance the effectiveness of economic and institutional factors but are insufficient on their own to substantially increase non-tax revenue. This result resonates with prior studies arguing that transparency improves fiscal outcomes primarily by reinforcing existing institutional capacities rather than substituting for them (Alt, Lassen, & Rose, 2006; Andrews, 2019). In practical terms, accountability

mechanisms appear to amplify the benefits of good governance and digitalization but cannot compensate for weak administrative capacity or structural vulnerabilities.

Taken together, these findings highlight that non-tax revenue mobilization in ASEAN is fundamentally an institutional challenge rather than a purely economic one. Effective governance, prudent management of commodity-related revenues, and coherent integration of digital and accountability reforms are crucial for strengthening fiscal capacity. The evidence suggests that policy efforts should prioritize improving government effectiveness and institutional coordination while using fiscal accountability and digitalization as supporting mechanisms. By situating non-tax revenue within a governance-oriented fiscal framework, this study contributes to the literature by demonstrating that sustainable revenue diversification requires not only economic resources but also capable, transparent, and accountable public institutions.

4. Conclusions

This study provides empirical evidence that non-tax state revenue performance in ASEAN economies is shaped primarily by institutional capacity rather than by macroeconomic expansion alone. Government effectiveness emerges as the most consistent and significant determinant of non-tax revenue, highlighting the importance of administrative quality and public sector management in mobilizing revenues from non-tax sources. In contrast, economic growth does not exert a direct effect, while reliance on commodity prices introduces fiscal vulnerability, as reflected in the negative association between commodity prices and non-tax revenue once fiscal accountability is considered. These findings underscore that structural economic factors influence revenue outcomes only insofar as they are mediated by the quality of governance and institutional arrangements.

The results further indicate that fiscal accountability operates as a complementary mechanism that enhances, but does not dominate, the transmission of economic, digital, and structural factors into revenue outcomes. Digital governance and trade openness do not automatically improve non-tax revenue performance, suggesting that their fiscal benefits depend on coherent integration with accountability and governance reforms. Overall, the study contributes to the literature by demonstrating that sustainable diversification of government revenue requires capable, transparent, and accountable institutions. For policymakers in ASEAN, strengthening government effectiveness, managing commodity-related risks, and embedding digital reforms within robust accountability frameworks are essential for improving fiscal resilience and long-term revenue sustainability.

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