

JURNAL EKONOMI KUANTITATIF TERAPAN

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ABSTRAK

Penelitian ini menganalisis dampak fiskal dari penunjukan pejabat kepala daerah oleh pemerintah pusat pada periode 2022-2023 akibat *Pilkada Serentak*. Menggunakan data panel dari 508 kabupaten/kota serta metode *staggered difference-in-difference*, studi ini mengestimasi dampak kausal penjabat kepala daerah terhadap pendapatan asli daerah (PAD) dan belanja pemerintah daerah. Hasil menunjukkan bahwa penunjukan penjabat tidak signifikan mempengaruhi PAD, tetapi menurunkan belanja daerah. Temuan ini dijelaskan oleh perbedaan akuntabilitas, insentif, dan latar belakang kepala daerah dimana penjabat lebih akuntabel secara vertikal ke pemerintah pusat, berorientasi pada karier birokrasi, dan umumnya tidak memiliki pengalaman politik lokal. Penjabat kepala daerah cenderung patuh secara administratif, namun konservatif dalam kebijakan fiskal dan kurang responsif terhadap kebutuhan daerah. Studi ini menekankan perlunya evaluasi kebijakan penunjukan penjabat agar tidak menggerus otonomi daerah dan agenda desentralisasi ke depan.

Kata kunci: Pemerintah Daerah, Perpajakan Pemerintah Daerah, Pengeluaran Pemerintah Daerah

Klasifikasi JEL: H11, H71, H72

ABSTRACT

This study examines the fiscal effect of interim local executives appointed by the central government in Indonesia during 2022-2023 due to *Pilkada Serentak*. Using panel data from 508 districts and staggered difference-in-difference design, this study estimates the causal impact of interim local executives on own-source revenue and local government spending. Results show no significant effect on own-source revenue, but a decline in local government spending under interim leadership. These outcomes are explained by differences in accountability, incentives, and local executive background, where interim executives are vertically accountable to the central government, driven by bureaucratic career goals, and often lack local political experience. Interim local executives tend to be administratively obedient, but conservative in fiscal policy and less responsive to regional needs. These findings highlight potential trade-offs in appointing interim leaders and call for a careful review of their use in future election cycles to protect local autonomy and decentralization goals.

Keywords: Regional Government, Local Government Taxation, Local Government Expenditures

JEL Classification Codes: H11, H71, H72

INTRODUCTION

Between 1999 and 2023 Indonesia underwent several institutional changes in the selection on local executive leaders. The post-*Reformasi* decentralization –initiated by Law No. 22/1999—assigned direct fiscal responsibilities to local governments, which were initially led by centrally appointed heads. Beginning in 2001, a wave of regional proliferation created many new districts, often temporarily governed by centrally appointed interim executives. In 2005, the introduction of direct local elections further enhanced electoral accountability.

Existing literature establishes that different institutional arrangements likely influence local fiscal behavior. For example, the 1999 decentralization reforms were associated with a near doubling of regional spending (Brodjonegoro & Martinez-Vazquez, 2004). While the 2005 shift to direct elections did not significantly impact regional tax revenues, it coincides with reduced infrastructure spending and improved spending efficiency in education, health, and infrastructure

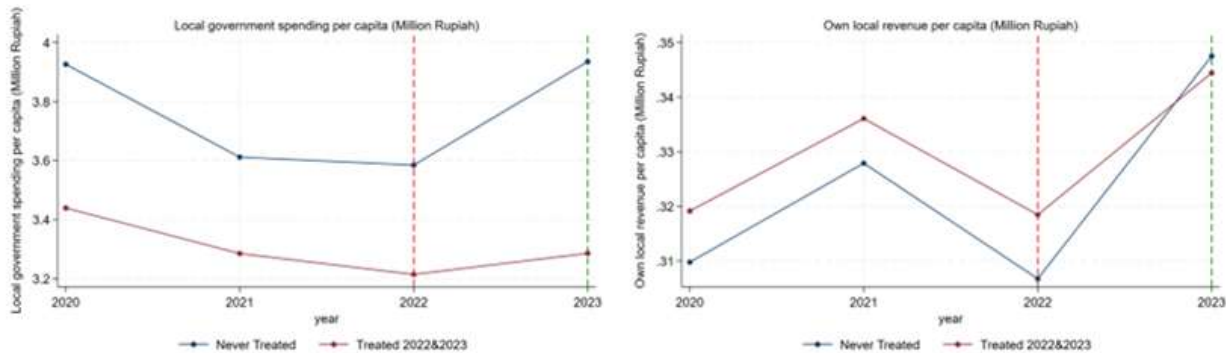
(Lewis, 2018). Moreover, recent evidence suggests that interim local executives in newly created districts tend to generate lower regional tax revenues compared to democratically elected counterpart (Lewis, 2022).

Another recent institutional shift occurred in 2022–2023 due to postponed local elections under the *Pilkada Serentak* framework (i.e. regional head elections which are held simultaneously on the same date across Indonesia regions), resulting in leadership vacuums across 247 districts. To address this, the central government has appointed interim executives. Consequently, two distinct types of local leadership emerged: elected executives and centrally appointed interim executives. Unlike previous instances driven by administrative splitting, this nationwide, systematic appointment of interim officials creates a unique opportunity to isolate the effect of executive selection mechanisms on fiscal outcomes. Preliminary evidence suggests that interim-led regions experienced lower per capita government spending and reduced own-source revenues, raising

concerns about potential shifts in fiscal behavior stemming from changes in executive selection (Figure 1). These

early findings underscore the need for more rigorous empirical validation.

Figure 1: Trends of local government spending, own-source revenue



Source: Ministry of Finance, 2024

Thus, this study seeks to examine how the transition from elected to centrally appointed interim executives affects local fiscal outcomes, particularly own-source revenue and public spending. Prior studies have examined transitional conditions arising from reforms (Lewis, 2005), regional proliferation (Fitriani et al., 2005), and shifts to direct elections (Lewis, 2018, 2022) on regional fiscal outcomes. This study is closely linked to Lewis (2022), who explored related issues during regional proliferation from 2001–2016, specifically local taxes; however, there remains limited evidence on the fiscal

impact of interim executive appointments during the 2022–2023 leadership transitions driven by *Pilkada Serentak* scheduling.

To explain the fiscal difference outcomes, this study synthesizes three theoretical frameworks: the principal-agent model, political selection theory, and the political budget cycle (PBC). These frameworks posit that fiscal behavior is a function of accountability, career incentives, and professional background:

First, the principal-agent framework highlights how accountability and incentives differ

between politicians versus bureaucrats. Alesina & Tabellini (2007, 2008) developed a model where society assigns policy tasks to either a politician or bureaucrat. Policy outcomes depend on policymakers' efforts, talent, and stem from different incentives. Politicians aim to secure reelection thus driven by electoral accountability. On the other hand, bureaucrats aim to advance their career thus they want to signal their talent and competence. Thus, this framework provides theoretical expectations for empirical analysis: regions led by interim executives may reduce discretionary local spending and focus instead on executing nationally mandated programs.

Second, political selection theory emphasizes that competitive and transparent selection mechanisms foster higher-quality politicians who are more accountable and effective in public policy, whereas flawed selection processes can hinder public service delivery and governmental effectiveness (Besley, 2005). Several studies show that these different selection paths affect fiscal behavior. Jung (2023) found that

younger politicians tend to allocate more spending on economic and cultural affairs, indicating that career stage influence spending priorities. Career incentives, proxied by the age threshold for the last promotion-eligible term, can lead to increased tax extraction (Li & Yu, 2023).

Third, political budget cycle theory explains how electoral timing affects fiscal policy, typically showing that elected officials increase spending, especially on social programs, ahead of elections (Sjahrir et al., 2013). While interim executives are not subject to local elections, they remain useful instruments for central political strategy. Their bureaucratic loyalty and lack of electoral constraints make them suitable agents for distributing centrally planned benefits in politically strategic ways.

This study adopts a revised PBC logic, in which the central government—not voters—acts as the principal, using interim executives to implement fiscal strategies aligned with national election agendas. This introduces the concept of an “indirect political budget cycle,” where appointed officials facilitate

electoral goals set by the central government, rather than by local political competition.

Taken together, these theories and empirical findings suggest that differences in accountability structures, incentive systems, and professional background shape the fiscal behavior of elected and interim local executives.

RESEARCH METHODOLOGY

To identify the effect of interim executives on own-source revenue and local spending, this study uses district-level panel data from 2020 to 2023, sourced from the Ministry of Finance (MoF), Ministry of Home Affairs (MoHA), Statistics Indonesia (BPS), and the General Elections Commission (KPU). The sample includes 508 districts, of which 247 were led by centrally appointed interim executives in 2022 or 2023 due to *Pilkada Serentak*.

The selection of the 2020–2023 period is critical for achieving identification in a Difference-in-Differences (DiD) framework. This window provides a controlled pre-treatment baseline (2020–2021) and a

clear post-treatment observation period (2022–2023), allowing for a robust assessment of fiscal shifts immediately following the leadership transition. While DiD analysis often favors longer time series, recent methodological discourse suggests that the validity of causal inference in policy evaluation depends less on the total duration of the panel and more on the stability of the trends and the comparability of treated and control units during the pre-treatment window (A. Baker et al., 2026; Herrera, 2026). By focusing on this specific timeframe, we mitigate the risk of contamination from previous institutional reforms or long-term structural shocks, thereby isolating the localized fiscal impact of the nationwide, simultaneous appointment mechanism.

This study focuses on own-source revenue and local spending as outcomes. Own-source revenue is chosen for its direct link to the local government authority. Expenditure is used as an outcome because it can provide insight into how local government budgets are allocated for public service delivery. Both are key fiscal outcomes as

suggested by Persson & Tabellini (2003). A binary treatment variable is used to indicate whether a district is led by interim executives as other similar empirical studies such as those of Persson & Tabellini (2003), Coate & Knight (2011), and Enikolopov (2014), who conduct empirical studies to prove the proposition of Alesina & Tabellini (2008)

Given the staggered nature of interim executive appointments, this study applies a difference-in-differences (DiD) framework with multiple estimators follows empirical steps summarize by Freedman et al. (2023). While standard TWFE is commonly used to analyze causal inference of a treatment effect, recent econometric literature demonstrates that it can produce biased estimates in the presence of treatment effect heterogeneity over time, as it may implicitly assign negative weights to certain observations (de Chaisemartin & D'Haultfœuille, 2020; Goodman-Bacon, 2021). To mitigate these risks, we adopt the robust estimators proposed by Sun & Abraham (2021) and Callaway & Sant'Anna (2021), alongside an event

study approach, following the empirical synthesis by Freedman et al. (2023) to ensure that our results are not driven by the timing of appointments or the specific dynamics of the treatment effect. The estimator consists of static two-way fixed effect (TWFE), event study TWFE, the Sun & Abraham (2021) event study estimator and the Callaway & Sant'Anna (2021) (CSDID) estimator. Diagnostic of static TWFE estimator is done by using Bacon decomposition (Goodman-Bacon, 2021) and De Chaisemartin & D'Haultfœuille decomposition (de Chaisemartin & D'Haultfœuille, 2020). Those diagnoses are done to assess potential bias from treatment heterogeneity and negative weighting.

The static difference-in-difference follows equation (1):

$$fo_{it} = \alpha_i + \lambda_t + \delta^{DD} NE_{it} + \varepsilon_{it} \quad (1)$$

fo_{it} denotes the fiscal outcome (log of own-source revenue per capita and log of expenditure per capita) in a specific district (subscript i) and time (subscript t). This model also incorporates the district effect (α_i) and time effect (λ_t) and extended to include other variables, such as covariates, island-specific time trends,

and dynamic treatment effect estimation (A. C. Baker et al., 2022). Under the assumptions of parallel trends, no anticipation, and homogeneous treatment effects across time and units, the estimator δ^{DD} yields causal estimates.

The core empirical specification is adapted from Lewis (2022) and Lewis & Dong (2025):

$$fo_{it} = \beta_0 + \sum_{e=K}^{-2} \delta_e NE_{it}^e + \sum_{e=0}^L \tau_e NE_{it}^e + z'_{it} \beta_1 + w_i + \theta_t + \varepsilon_{it} \quad (2)$$

The empirical specification, represented by equation 2, is estimated via three main approaches: a TWFE-based event study, the Sun & Abraham (2021) event study estimator and the Callaway & Sant'Anna (2021) (CSDID) estimator. District-level data is used from 2015–2023, the subscript i denotes the district and the subscript t denotes the year. The outcome, fo_{it} , is the fiscal outcome variable (log of own-source revenue per capita and expenditure per capita). NE_{it} is a binary treatment indicator when the district is led by interim executives. z'_{it} represents social, economic, fiscal, political cycle, and institutional covariates. These covariates help explain

fiscal outcomes and account for pretreatment differences across districts.

To control confounding factor that may affect the estimation, this study includes several covariates drawn from previous studies (Lewis, 2018, 2022; Lewis & Dong, 2025) and additional covariates reflecting social, economic, fiscal, political cycle, and institutional. Social variables include the log of population density, and the log population density squared as a proxy of urbanization. Economic variables include the log per capita district GDP and share industry as percentage of nominal GDP reflecting the condition and economic structure. Fiscal variables include log per capita transfer (as intergovernmental aid can contribute to fiscal outcomes) and fiscal capacity index (as a measure of local financial ability). Political cycle consists of the share APBN spending in district as percentage of GDP, share of capital spending (%total), share of goods spending (%total), share of grants spending (%total), and share of social assistance spending (%total). Institutional covariates consist of number of days APBD stipulation

compared to deadline (a measure of compliance with formal regulations (institutions) and efficiency of governance processes) and districts age (proxy for the level of maturity and development of local government institutions over time). These covariates help explain fiscal outcomes and account for pretreatment differences across districts.

This study also adds island-specific time trends to partial out unobserved island-specific trend effects in the regression using dummies for Sumatra, Java/Bali, Kalimantan, and Sulawesi, where Eastern Indonesia is excluded to avoid collinearity. w_i and θ_t are the district fixed effect and the time fixed effect, respectively. ε_{it} is the error term. K and L are constants. The value of e between -K and -2 indicates the years before the first appointment of an interim local executive head, where e = -1 is the base year (omitted) that serves as the basis for comparing all estimated effects; e = 0 indicates the year of the first appointment of an interim local executive head; and e > 0 and $\leq L$ indicate the years after the first appointment.

Moreover, to ensure robustness, this study also performs sensitivity analyses using two alternative anticipatory windows: 2018–2023 and 2021–2023. These tests help confirm that the main findings are not driven by arbitrary choices of pre-treatment horizons. Additionally, the analysis disaggregates fiscal outcomes by expenditure types—capital, goods and services, personnel, social assistance, and grants—to detect whether interim executive appointments affect specific spending components differently. Finally, to assess the robustness of control variable inclusion, this study conducts covariate sensitivity tests by estimating the models with no covariate and different subsets of covariates—grouped by social, economic, fiscal, political cycle, institutional, and island-specific time trends.

RESULT AND DISCUSSION

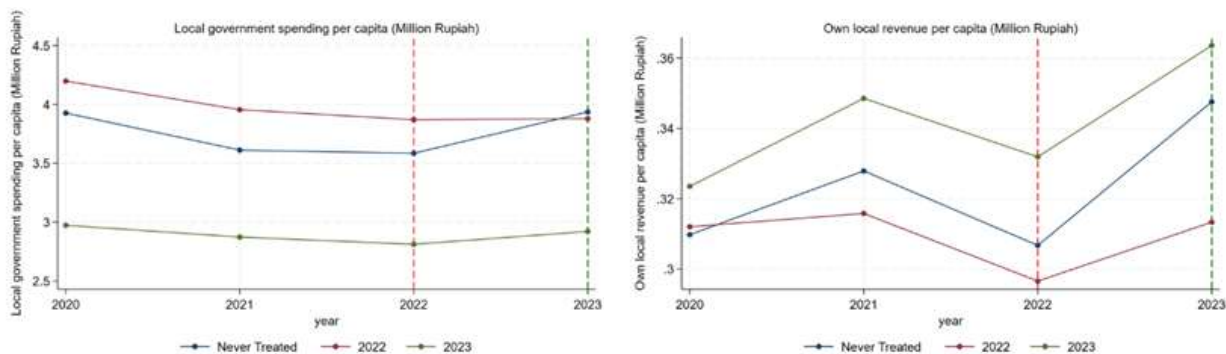
Descriptive statistics

Figure 1 illustrates initial patterns of own-source local revenue per capita, and local government spending per capita across three cohorts: districts

treated in 2022, in 2023, and those never treated. From these figures, we observed broadly similar pretreatment trends across groups, supporting the assumption of parallel trends. There are visible deviations from posttreatment: interim executives in 2022 are associated with a decrease in district own revenue and spending but increased local own-source revenue and had a relatively

unclear effect on local government spending in 2023. This raises the expectation that implementation had different impacts in different years. In addition, briefly, local on-source revenue and local government spending have a similar trend pattern between cohorts before the implementation of interim local executives.

Figure 2: Trends of local government spending and own-source revenue, by cohort



Source: Ministry of Finance, BPS, 2024 (author calculation)

Table 1 further presents descriptive statistics, with a note that all fiscal and economic variables are measured in constant terms. Own-source revenue is slightly lower in 2022-treated districts (0.31 million IDR) than in 2023-treated (0.34 million IDR) and never-treated (0.32 million IDR) districts. Interestingly, local spending is highest in

2022-treated districts (3.98 million IDR) but lowest in 2023-treated (2.90 million). This indicates the initial expectation that there is a different impact in the treated 2022 group and 2023 group than in the never-treated group for all outcomes. Furthermore, for covariate, some variables show that the average is relatively varied and different between

groups. Differences in covariates treatment. This underscores the need for highlight that treated and control including covariate in causal estimation. districts may differ even before

Table 1: Descriptive statistics by cohort/group treatment year

	Never Treated			Treated in 2022			Treated in 2023		
	Obs	Mean	Std. Dev	Obs	Mean	Std. Dev	Obs	Mean	Std. Dev
Outcomes									
Own local revenue per capita (Million Rupiah)	1,044	0.32	0.32	376	0.31	0.23	612	0.34	0.30
Local government spending per capita (Million Rupiah)	1,044	3.76	3.57	376	3.98	3.01	612	2.90	1.68
Covariates									
Intergovernmental transfer per capita (Million Rupiah)	1,044	3.17	3.42	376	3.39	2.96	612	2.31	1.56
Population density (person/km2)	1,044	837.42	1,861.99	376	780.40	2,085.26	612	1,258.96	2,431.76
Real GDP per capita (Million Rupiah)	1,044	40.20	38.94	376	30.13	22.51	612	35.42	42.76
Share of GDP on Manufacturing Sector (%GDP)	1,044	0.13	0.14	376	0.11	0.14	612	0.14	0.15
Day APBD stipulation compared to deadline	1,044	30.39	20.22	376	34.54	28.02	612	28.55	15.19
District Age	1,044	43.41	24.66	376	38.44	22.78	612	48.56	23.33
Fiscal Capacity Index	1,044	1.30	0.83	376	1.18	0.81	612	1.27	0.81
Share APBN expenditure (%GDP)	1,044	0.03	0.03	376	0.05	0.06	612	0.03	0.04
Share capital spending	1,044	0.17	0.06	376	0.17	0.06	612	0.17	0.06
Share of goods spending (%Total Spending)	1,044	0.28	0.06	376	0.27	0.06	612	0.29	0.06
Share of grants spending (%Total Spending)	1,044	0.04	0.02	376	0.03	0.02	612	0.03	0.02
Share of social assistance spending (%Total Spending)	1,044	0.01	0.01	376	0.01	0.01	612	0.01	0.01

Source: BPS, MoF, 2024

Static DiD and its decomposition

The baseline TWFE estimation suggests that interim local executives have no statistically significant effect on local government spending but are associated with a statistically significant 3.9% decrease effect on own-source

revenue (Table 2 panel A). These results rely on strong assumptions, including parallel trends, no anticipation, and homogeneous treatment effect assumptions across time and units which may not hold under staggered treatment timing.

Table 2: Two-way fixed effect estimation results and its decomposition

Dependent variable:	Natural log of local own source revenue per capita	Natural log local government spending per capita		
Panel A: Two-way fixed effect estimation results				
Interim local executive	-0.039** (0.019)	-0.008 (0.005)		
Observations	2,032	2,032		
R ²	0.119	0.686		
Adjusted R ²	0.111	0.683		
Panel B: Bacon decomposition				
	Beta	Weight	Beta	Weight
Total	-0.039	1.000	-0.008	1.000
Timing_Groups	-0.008	0.174	-0.003	0.174
2022_Never	-0.038	0.307	-0.06	0.307
2023_Never	-0.021	0.433	-0.036	0.433
Within	-0.195	0.085	0.316	0.085
Panel C: De Chaisemartin & D'Haultfœuille decomposition				
	# ATTs	Σ Weights	# ATTs	Σ Weights
Positive Weight	337	1.00	337	1.00
Negative Weight	4	-0.00	4	-0.00
Summary measures of the regression's robustness to heterogeneous treatment effects				
TWFE coefficient (β_fe)	-0.039		-0.008	
min α(Δ) compatible with β_fe and Δ_TR = 0	0.086		0.017	

Dependent variables are listed across the top row. Estimation results use covariates consist of social, economic, fiscal, political cycle, institutional aspects

and island-specific time trends. Standard errors clustered at the district level and reported in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$

Table 2 panel B shows the Bacon decomposition, which breaks the TWFE estimate into four types of comparisons: between different treatment timing groups, treated in 2022 vs never treated, treated in 2023 vs never treated, and within-group before-after treatment. Most of the weight (about 74%) comes from comparisons with never-treated districts, which are considered valid. However, 17.4% comes from comparisons between different timing groups, which may cause bias. Only 8.5% comes from within-group changes (i.e. units within the same timing group that may exhibit effective treatment variation driven by differences in covariates rather than the treatment itself). This means the TWFE estimate mainly relies on differences between groups, making it sensitive to the assumption that all groups would have had similar trends without the treatment.

When compared to existing literature, our decomposition results align with the patterns observed in studies that utilize similar diagnostic frameworks to validate TWFE robustness. Research by Zeng (2025),

Gordanier et al. (2020), Wang & Zhong (2023), and Xu et al. (2024) consistently demonstrates that reliable TWFE estimates are characterized by high weights (typically ranging from 70% to 93%) assigned to "treated vs. never-treated" comparisons. While our weight for these valid comparisons (74%) is slightly lower than the figures reported in these studies, it remains within a range that suggests the baseline estimate is not exclusively driven by problematic timing-to-timing comparisons. Nevertheless, the presence of 17.4% weight from timing-group comparisons distinguishes our results from the exceptionally robust findings of Wang & Zhong (2023) or Xu et al. (2024), underscoring the importance of employing robust estimators to supplement our baseline regression.

Table 2 panel C presents the results of the de Chaisemartin & D'Haultfœuille decomposition, which directly checks for negative weighting—a common source of bias in conventional TWFE estimators. Each outcome includes four negatively weighted observations indicating potential small bias. Further, the

robustness to treatment effect heterogeneity is assessed using the min $\sigma(\Delta)$ value. A higher value suggests the TWFE estimate is more resilient to heterogeneity across groups and time. The TWFE estimates for own-source revenue and social assistance show moderate robustness ($\sigma = 0.086$ and 0.098 , respectively), implying that large differences in treatment effects would be needed to reverse the estimate's sign. In contrast, local government spending shows low robustness ($\sigma = 0.017$), meaning even minor treatment effect variation could distort the result. In summary, the TWFE estimates appear structurally sound and somewhat robust to heterogeneity effects in local own revenue and food assistance outcome, but low robustness on local government spending. Thus, for more causally robust results, it is advisable to compare them with estimators that are more resistant to heterogeneity of treatment effects (i.e. Sun and Abraham (2021) estimator and the Callaway and Sant'Anna (2021) estimator) to explicitly account for treatment effect heterogeneity and test the parallel trends assumption.

These results are consistent with the broader econometric discourse regarding the fragility of TWFE in the presence of heterogeneous effects. Studies such as (de Chaisemartin & D'Haultfœuille, 2020, 2023) have famously demonstrated that when negative weights are prevalent—as seen in the re-evaluations of Hotz & Xiao (2011) and Gentzkow et al. (2011)—the original TWFE findings can vanish or invert entirely upon the application of robust estimators. In contrast, research by Zeng (2025) highlights that researchers often encounter cases where negative weights are negligible, thereby bolstering confidence in the original TWFE coefficients. In our analysis, the presence of negative weights and the low σ value for government spending underscore the cautionary principle emphasized by de Chaisemartin & D'Haultfœuille: reliance on standard TWFE is risky when treatment effects are not constant across groups and time. Therefore, our reliance on multiple robust estimators is not merely a supplementary check, but a necessary condition for establishing causal validity.

Impact on own-source revenue

The estimate in Table 3 shows that interim executives have no significant effect on own-source revenue when using more robust dynamic estimators. While the basic TWFE model finds a small negative effect (-3.9%), this is not supported by dynamic models, which

show no significant impact. The pre-treatment tests also confirm that trends were similar before treatment (p-values: TWFE = 0.267, SA = 0.288, CSDID = 0.669). Overall, the dynamic models, especially the CSDID estimator, suggest that interim appointments do not significantly affect local own-source revenue.

Table 3: Event study estimation directly elected executive versus appointed executive on local own-source revenue

Dependent variable: Natural log of local own-source revenue

	TWFE	Event study TWFE	Event study Sun Abraham	CSDID
Lead 3		0.061 (0.040)	0.050 (0.034)	
Lead 2		0.018 (0.024)	0.014 (0.020)	-0.029 (0.030)
Lead 1				0.009 (0.026)
Lag 0		-0.025 (0.023)	-0.023 (0.019)	0.011 (0.021)
Lag 1		-0.077* (0.042)	-0.045 (0.036)	-0.010 (0.036)
Overall Effect	-0.039** (0.019)		-0.034 0.024	0.005 (0.021)
Time fixed effects	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes
Pre-trend chi-square		1.325	2.491	1.560
Pre-trend test p value		0.267	0.288	0.669
Number of Observation	2,032	2,032	2,032	2,032

Lead periods refer to the time before treatment, and lag periods are after treatment. Standard errors are clustered at the district level. The estimation includes controls for social, economic, fiscal, political, institutional, and island trends. Pre-trend tests use different Stata commands:

xteventtest for TWFE, test for Sun & Abraham, and estat pretrend for CSDID. For Sun & Abraham, the overall effect is averaged over the first and second years after treatment using lincom. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

The absence of a significant effect can be explained by several explanations through differences in accountability, incentives, and executive background, as well as institutional rigidity. First, own-source revenue is structurally rigid in Indonesia, with limited authority at district level (Lewis, 2018). Interim executive officials do not have the opportunity to reform regulations on the local budget. Most interim executives are often appointed in the middle or toward the end of the year, whereas the local budget is typically formulated and finalized at the beginning of the fiscal year. These timing and regulatory constraints reduce the window for making substantive revenue policy changes during their tenure.

Second, insights from other studies emphasize that structural changes in government forms rarely lead to immediate policy shifts. Immediate changes in policy outcomes should not be expected simply from altering the structure of local government. If structural reforms do influence governance, such effects are likely to

emerge gradually over time (Morgan & Kickham, 1999).

Third, although interim executives formally retain the authority to propose mid-year revisions to local fiscal policy, they often lack the willingness to reform policy both due to the incentive and the background. Institutional constraints, such as those of *Permendagri Nomor 84 Tahun 2022* concerning the guidelines for preparing the 2023 APBD, restrict the extent to which interim officials can deviate from preset fiscal frameworks. Moreover, interim executives are often mandated to align more closely with central government priorities, which may limit their willingness to engage in discretionary or politically sensitive tax policy changes.

Fourth, the background of interim executives often lacks deep familiarity with local political dynamics and may be less equipped or motivated to navigate politically sensitive tax reforms. Their technocratic background fosters a preference for stability and procedural compliance, rather than entrepreneurial fiscal leadership.

Further, the primary source of regional income in Indonesia is intergovernmental transfers and village funds. In contrast, own-source revenue contributes only a modest share to total regional income, averaging around 11.4% to 12.9% during the 2020–2023 period. Within own-source revenue, the main components are local taxes (4.4%–5.9%) and other income (6.1%–6.7%), the latter comprising revenue from regionally owned enterprises and other legitimate local sources. The authority of local governments to raise taxes remains relatively limited.

According to *Undang-Undang Nomor 28 Tahun 2009* on Regional Taxes and Levies, districts and municipalities are restricted to collecting specific taxes such as hotel, restaurant, entertainment, advertisement, street lighting, non-metal and rock minerals, parking, groundwater, bird's nest, rural and urban land and building taxes (PBB-P2), and land and building acquisition fees (BPHTB). All of these must be enacted through local regulations (Perda).

In 2022, *Undang-Undang Nomor 1 Tahun 2022* on Central and Regional

Fiscal Relations introduced a revised framework for local taxation. Under this law, district governments may impose taxes including PBB-P2, BPHTB, taxes on specific goods and services (PBJT), advertisement tax, groundwater tax (PAT), non-metallic mineral tax (MBLB), bird's nest tax, as well as surcharges on vehicle tax (PKB) and vehicle title transfer fees (BBNKBK). Regional heads have discretion to determine rates for PBB-P2, advertisement tax, PAT, and the surcharges (Opsen) on PKB and BBNKBK. While this reform theoretically opened opportunities for interim executives to increase own-source revenue through more active tax administration or new tax initiatives, the empirical findings show no significant effect on own-source revenue following interim appointments.

In summary, despite institutional change in leadership, interim executives behave cautiously on revenue side, constrained by regulation, timing, and low incentives.

Impact on local government spending

Error! Reference source not found. presents the impact of interim local executives on local government spending. The TWFE estimation indicates that interim local executives have a statistically insignificant effect on local government spending. Meanwhile, more robust dynamic estimators, CSDID estimators confirm the negative effect with magnitude of 3.3% indicating the negative impact of interim local executive on local government spending.

Spending decreased by around 1.9% in the first year of interim executive appointments and 7.2% in the following year. The validity of these estimates is relatively robust on the presence of pretreatment effects. Pre-trend tests are acceptable across most models, although CSDID shows a borderline result (p-value = 0.097) that can be seen in a weak statistically significance difference in Lead 2 before the first treatment occurs.

Table 4: Event study estimation of the effect of directly elected executives versus appointed executives on local government spending
Dependent variable: Natural log of local government spending

	TWFE	Event study TWFE	Event study Sun Abraham	CSDID
Lead 3		0.010 (0.011)	0.003 (0.010)	
Lead 2		0.002 (0.006)	-0.001 (0.006)	0.023* (0.012)
Lead 1				-0.005 (0.008)
Lag 0		-0.006 (0.006)	-0.009* (0.005)	-0.019** (0.008)
Lag 1		-0.009 (0.011)	-0.009 (0.010)	-0.072*** (0.017)
Overall Effect	-0.008 (0.005)		-0.009 0.006	-0.033*** (0.009)
Time fixed effects	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes
Pre-trend chi-square		0.482	0.302	6.315
Pre-trend test p value		0.618	0.860	0.097
Number of Observation	2,032	2,032	2,032	2,032

Lead periods refer to the time before treatment, and lag periods are after treatment. Standard errors are clustered at the district level. The estimation includes controls for social, economic, fiscal, political, institutional, and island trends.

Pre-trend tests use different Stata commands: `xteventest` for TWFE, `test for Sun & Abraham`, and `estat pretrend` for CSDID. For Sun & Abraham, the overall effect is averaged over the first and second years after treatment using

lincom. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

This spending decline reflects the constraints faced by interim leaders and can be explained by a combination of accountability structures, incentive constraints, and background mismatches. First, interim executive operates under heightened vertical accountability to the central government rather than to local constituents. Regulatory frameworks such as *Permendagri* No. 4/2023 impose quarterly evaluations and strict administrative oversight, incentivizing cautious and risk-averse behavior. This top-down accountability diminishes their responsiveness to local fiscal priorities. These rules encourage greater caution in carrying out government administration and budgetary decisions.

Second, interim executives are motivated less by electoral considerations and more by career incentives within the bureaucratic hierarchy. As noted by Alesina & Tabellini (2007), bureaucrats often seek to build a reputation for competence and reliability to advance within hierarchical

career structures, which often results in conservative fiscal behavior and lower discretionary spending.

Third, many interim executives come from technocratic backgrounds with limited experience in local politics. This limited experience may hinder their ability to coordinate with the DPRD, which can unilaterally block policy proposals or development projects. Finally, the political selection process also plays an important role: because interim executives do not fully originate from the region they govern, the likelihood of political friction with DPRD increases, particularly during the preparation and amendment of local budgets, resulting in lower spending.

These findings suggest that interim executive function more as compliant administrators than fiscal leaders, resulting in lower local government spending due to limited incentives, reduced discretion, and limited engagement with local stakeholders.

Robustness check

To ensure the reliability of the main findings, this study performs several robustness checks (1) disaggregated expenditure by type, (2) alternative anticipation windows, and (3) covariate sensitivity tests.

Table 5 presents the estimation results for spending by type. The results shows that interim executives significantly reduced capital spending (−16.4%) and goods and services spending (−3.2%). Meanwhile, there was no significant effect on personnel, social assistance, or grant expenditures.

Table 5: CSDID estimation of the effect of directly elected executives versus appointed executives on the expenditure by type

Dependent Variable:	Natural log of capital spending per capita	Natural log of goods & services spending per capita	Natural log of personnel spending per capita	Natural log of social assistance spending per capita	Natural log of grants spending per capita
Lead 2	-0.026 (0.045)	0.037 (0.030)	0.019 (0.016)	-0.080 (0.273)	0.752*** (0.215)
Lead 1	-0.050* (0.030)	-0.022 (0.016)	0.010 (0.013)	-0.085 (0.141)	0.321*** (0.109)
Lag 0	-0.098*** (0.028)	-0.017* (0.010)	-0.000 (0.006)	-0.017 (0.092)	0.029 (0.042)
Lag 1	-0.338*** (0.053)	-0.071*** (0.019)	0.008 (0.013)	-0.240 (0.174)	0.066 (0.078)
Overall Effect	-0.164*** (0.030)	-0.032*** (0.011)	0.002 (0.007)	-0.077 (0.098)	0.039 (0.044)
Time fixed effects	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes
Pre-trend chi-square	3.563	6.960	4.669	5.644	14.567
Pre-trend test p value	0.313	0.073	0.198	0.130	0.002
Number of Observation	2,032	2,032	2,032	1,762	2,019

Dependent variables are listed across the top row. Lead periods indicate before treatment, and lag periods indicate after treatment. Standard errors are clustered at the district level. The estimation includes controls for social, economic, fiscal, political, institutional, and island trends. Pre-trend tests for CSDID use the estat pretrend command. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

The negative effect on capital spending and goods & services spending likely stem from interim executives' administrative caution and political limitations. Capital expenditure is closely associated with infrastructure and often vulnerable to corruption (Lewis, 2018). Interim executives are subject to strict oversight, including quarterly evaluations (Permendagri No. 4/2023), which may discourage engagement in rent-seeking projects. Their limited political capacity and outsider status can also complicate negotiations with DPRD, hindering project execution. For goods spending, their focus on fiscal restraint may lead to reduced operational expenditure.

The absence of effects on other spending types may reflect structural constraints: personnel expenditure is protected by rules forbidding staff reassignments, while social and grant spending are sourced partially from local fiscal revenue that hard to mobilize by interim executives thus limiting discretionary adjustments to local needs.

These findings contrast with Ade (2014), who analyzed the shift from

council-appointed to directly elected mayors. Ade (2014) found that direct elections significantly increased per capita personnel expenditure, arguing that elected mayors leverage administrative staffing as a strategic tool for vote maximization and electoral support. While council-appointed mayors shared these incentives, direct accountability to voters amplified the necessity for administrative performance and staff support. In our context, the lack of an electoral mandate reverses this incentive structure. Unlike Ade's directly elected mayors, our interim executives prioritize central government compliance over local electoral base-building. Consequently, interim executives adopt a conservative fiscal stance, reflecting their lack of political capital, the mandate-driven nature of their tenure, and the limited fiscal autonomy characteristic of subnational government within the Indonesian framework.

For comparison of the impact of interim executive, the estimated costs of Pilkada Serentak were Rp 4.2 trillion in 2017, Rp 18.5 trillion in 2018, Rp 20.4

trillion in 2020, and Rp 37.52 trillion for the 2024 cycle (Muhid et al., 2024). The postponement of local elections from 2022 and 2023 to 2024 is expected to yield electoral cost savings of approximately Rp 5.58 trillion (i.e., Rp 43.1 trillion—the total of 2017, 2018, and 2020—minus Rp 37.52 trillion). This consolidation covers approximately 34.5 million voters in 2022 and 95 million in 2024, resulting in a nominal per capita efficiency gain of around Rp 43,089, or approximately Rp 25,147 in real terms after adjusting for the 2024 GDP deflator.

However, the analysis also reveals that under interim executive leadership in 2022–2023, real per capita government spending declined by 3.3%, equivalent to approximately Rp 65,771. This includes a 16.4% decrease in capital spending (around Rp 54,836) and a 3.2% reduction in goods and services spending (approximately Rp 19,299). These findings suggest that while electoral cost savings were achieved, the appointment of interim executives may have negatively impacted local development in the short term.

Next, to address concerns about potential anticipation effects and assess robustness across different time spans, the study re-estimates effects using two alternative windows: 2018–2023 and 2021–2023. Table 6 reports consistent results across time windows (2018–2023, 2020–2023, and 2021–2023). Across all specifications no significant effect on own-source revenue, and significant spending reductions (~3.3 %). These results remain stable, reinforcing the internal validity of causal claims.

First, regarding local own-source revenue, the estimated overall treatment effects are statistically insignificant across all time windows, consistently yielding a coefficient of approximately 0.005 with standard errors around 0.021. These results confirm the main finding that the appointment of interim executives does not significantly influence local revenue generation. Furthermore, the pre-trend tests for the 2020–2023 ($p = 0.669$) and 2021–2023 ($p = 0.921$) windows are clearly statistically insignificant difference in pretreatment period, supporting the parallel trends assumption. The 2018–2023 window

shows a borderline pre-trend p-value ($p = 0.054$), which may reflect some pre-treatment variation, but the stability of

the estimates across specifications enhances confidence in the null result.

Table 6: CSDID estimation of the effect of directly elected executives versus appointed executives by window of time

Dependent Variable:	Natural log of local own-sourced revenue per capita			Natural log of local government spending per capita		
	18-23	20-23	21-23	18-23	20-23	21-23
Lead 4	0.124 (0.080)			0.007 (0.033)		
Lead 3	0.018 (0.019)			0.018* (0.009)		
Lead 2	0.019 (0.024)	-0.029 (0.030)		0.015 (0.012)	0.023* (0.012)	
Lead 1	0.009 (0.026)	0.009 (0.026)	0.003 (0.031)	-0.005 (0.008)	-0.005 (0.008)	-0.018* (0.009)
Lag 0	0.011 (0.021)	0.011 (0.021)	0.011 (0.021)	-0.019** (0.008)	-0.019** (0.008)	-0.019** (0.008)
Lag 1	-0.010 (0.036)	-0.010 (0.036)	-0.010 (0.036)	-0.072*** (0.017)	-0.072*** (0.017)	-0.072*** (0.017)
Overall Effect	0.005 (0.021)	0.005 (0.021)	0.005 (0.021)	-0.033*** (0.009)	-0.033*** (0.009)	-0.033*** (0.009)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Pre-trend chi-square	13.819	1.560	0.010	10.062	6.315	3.750
Pre-trend test p value	0.054	0.669	0.921	0.185	0.097	0.053
Number of Observation	3,048	2,032	1,524	3,048	2,032	1,524

Dependent variables are listed across the top row. Lead periods indicate before treatment, and lag periods indicate after treatment. Standard errors are clustered at the district level. The estimation includes controls for social, economic, fiscal, political, institutional, and island trends. Pre-trend tests for CSDID use the estat pretrend command. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

Second, for local government expenditure, the results remain robust and statistically significant across all time windows. The estimated overall

effect is a consistently yield a negative effect of 3.3 % suggesting that interim executives reduce spending levels regardless of anticipatory window

length. The pre-trend tests yield acceptable p-values across all time windows (ranging from 0.053 to 0.185), further reinforcing the credibility of the estimated effect. These findings support the interpretation that the appointment of interim executives leads to a conservative fiscal stance, likely reflecting risk aversion, central government oversight, and coordination challenges with local legislatures.

Thus, it can be concluded that from the three existing window timings and outcomes, it is found that the validity of the parallel trend assumption is limited to observations in a specific time frame. For example, for the outcome own-source revenue, the parallel trend is only met in the window timings of 2020-2023 and 2021-2023 (p value = 0.669 and p value = 0.921), and for the outcome spending, the parallel trend is only met in 2018-2023 (p value = 0.185). However, in summary, the direction, magnitude, and statistical significance of the treatment effects remain stable across various anticipatory windows. This strengthens the internal validity of the causal interpretation and suggests that

the findings are not sensitive to specific modelling assumptions regarding treatment timing. It also reinforces the conclusion that interim executives do not affect own-source revenue and reduce local spending.

While the validity of the parallel trend assumption varies across specifications, the overall direction, magnitude, and significance of the treatment effects remain stable. This stability is crucial; as Herrera (2026) notes, when working with existing data—which often offers limited pre-treatment observations—transparency regarding diagnostic limitations is paramount. Furthermore, Baker et al. (2026) demonstrate that robust estimators can effectively leverage multiple pre-treatment periods and comparison groups to identify the Average Treatment Effect on the Treated (ATT) even when individual diagnostic tests have low power. Given that our estimates remain consistent across various windows and leverage the full breadth of available pre-treatment data, we conclude that the observed reduction in spending is a credible consequence of

interim leadership, likely reflecting a shift toward risk-aversion and increased central oversight.

Table 7: Sensitivity of covariate choice of CSDID estimation on local own-source revenue

Dependent variable: Natural log of local own-source revenue

	Main	(-Soc)	(-Eco)	(-Fis)	(-Pol)	(-Ins)	(-Isl)	No cov
Lead 2	-0.029 (0.030)	-0.032 (0.030)	-0.032 (0.030)	-0.024 (0.031)	-0.026 (0.022)	-0.029 (0.029)	-0.028 (0.029)	-0.017 (0.024)
Lead 1	0.009 (0.026)	0.015 (0.028)	0.003 (0.025)	0.005 (0.026)	0.003 (0.021)	0.007 (0.024)	0.013 (0.027)	0.008 (0.021)
Lag 0	0.011 (0.021)	0.011 (0.021)	0.005 (0.020)	0.006 (0.021)	0.003 (0.020)	0.006 (0.020)	0.012 (0.020)	-0.018 (0.020)
Lag 1	-0.010 (0.036)	-0.012 (0.036)	-0.010 (0.036)	-0.015 (0.035)	-0.023 (0.036)	-0.026 (0.035)	-0.015 (0.036)	-0.053 (0.034)
Overall Effect	0.005 (0.021)	0.005 (0.022)	0.001 (0.021)	-0.000 (0.021)	-0.004 (0.022)	-0.002 (0.021)	0.005 (0.021)	-0.028 (0.021)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pre-trend chi-square	1.560	2.230	1.376	1.106	1.490	1.376	1.715	2.727
Pre-trend test p value	0.669	0.526	0.711	0.776	0.685	0.711	0.634	0.436
Number of Observation	2,032	2,032	2,032	2,032	2,032	2,032	2,032	2,032

Lead periods indicate before treatment, and lag periods indicate after treatment.

Standard errors are clustered at the district level. The main estimation includes full controls for social (Soc), economic (Eco), fiscal (Fis), political (Pol), institutional (Ins), and island trends (Isl) whereas subsequent columns are omitted with each of these type of control variables. Pre-trend tests for CSDID use the estat pretrend command. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

Recent methodological literature on Difference-in-Differences (DiD) emphasizes the importance of carefully selecting control variables to ensure credible identification (Caetano &

Callaway, 2024). To evaluate the robustness of this study's findings to covariate selection, the group-time average treatment effects (ATT(g,t)) are re-estimated under multiple alternative

model specifications. The main specification (Column 2 in

Table 7–Table 8) includes district and year fixed effects, along with all covariates that has been explained before. Subsequent specifications systematically exclude one category of covariates at a time: Column 3 omits social variables, Column 4 excludes economic variables, Column 5 drops fiscal variables, Column 6 excludes political cycle controls, Column 7 omits institutional controls, Column 8 removes island time trends, and Column 9 excludes all covariates entirely.

Regarding local own-source revenue (Table 7), the empirical results remain statistically insignificant across all model specifications, confirming that the appointment of interim executives does not significantly influence local revenue mobilization. This robustness is supported by our covariate selection,

which aligns with the literature emphasizing that fiscal outcomes are heavily driven by underlying structural factors—such as urbanization, wealth, and industrialization—rather than governance alone ((Campbell, 1968; Persson & Tabellini, 2003). By controlling for economic condition—including population density, construction costs, and GRDP per capita (Lewis & Dong, 2025)—as well as institutional and political factors (Persson & Tabellini, 2004), we isolate the interim leadership effect from these established determinants. The consistency of the null results, coupled with favorable pre-trend tests (p-values ranging from 0.436 to 0.776), suggests that revenue generation in Indonesian districts is largely resilient to changes in the executive selection mechanism.

Table 8: Sensitivity of covariate choice of CSDID estimation on local government spending

Dependent variable: Natural log of local government spending

	Main	(-Soc)	(-Eco)	(-Fis)	(-Pol)	(-Ins)	(-Isl)	No cov
Lead 2	0.023* (0.012)	0.023* (0.012)	0.026** (0.012)	0.021* (0.012)	0.018** (0.008)	0.021* (0.012)	0.023** (0.012)	0.029*** (0.009)
Lead 1	-0.005 (0.008)	-0.008 (0.009)	-0.003 (0.008)	-0.005 (0.008)	-0.005 (0.007)	-0.004 (0.008)	-0.005 (0.008)	-0.001 (0.007)

	Main	(-Soc)	(-Eco)	(-Fis)	(-Pol)	(-Ins)	(-Isl)	No cov
Lag 0	-0.019** (0.008)	-0.018** (0.009)	-0.026*** (0.009)	-0.021** (0.009)	-0.023*** (0.008)	-0.017** (0.009)	-0.015* (0.009)	-0.032*** (0.010)
Lag 1	-0.072*** (0.017)	-0.074*** (0.016)	-0.077*** (0.016)	-0.072*** (0.016)	-0.075*** (0.016)	-0.071*** (0.017)	-0.072*** (0.017)	-0.092*** (0.017)
Overall Effect	-0.033*** (0.009)	-0.034*** (0.009)	-0.040*** (0.009)	-0.035*** (0.009)	-0.037*** (0.009)	-0.032*** (0.009)	-0.030*** (0.009)	-0.048*** (0.011)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pre-trend chi-square	6.315	5.905	6.618	5.785	9.136	5.790	7.208	12.750
Pre-trend test p value	0.097	0.116	0.085	0.123	0.028	0.122	0.066	0.005
Number of Observation	2,032	2,032	2,032	2,032	2,032	2,032	2,032	2,032

Lead periods indicate before treatment, and lag periods indicate after treatment. Standard errors are clustered at the district level. The main estimation includes full controls for social (Soc), economic (Eco), fiscal (Fis), political (Pol), institutional (Ins), and island trends (Isl) whereas subsequent columns are omitted with each of these type of control variables. Pre-trend tests for CSDID use the estat pretrend command. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

The impact of interim executive on spending reductions persists across all specifications (Table 8). This consistency indicates that the negative effect of interim executives on spending is robust to covariate variation. While socioeconomic factors and intergovernmental aid are known to provide the primary resources for public service delivery, our findings suggest that interim executives impose a systematic "conservative fiscal stance" that operates independently of these

structural covariates. Even after accounting for electoral cycles—which Köppl-Turyna (2016) identifies as a major driver of spending volatility—the reduction in expenditure remains significant. The stability of the effect, particularly when controlling for the institutional variables highlighted by Persson & Tabellini (2004), reinforces the interpretation that interim executives are constrained by administrative caution and central government oversight. These results suggest that while local revenue

is determined by long-term structural characteristics, expenditure levels are highly sensitive to the political and institutional status of the district head.

From Table 7–Table 8, we can conclude that the inclusion of covariates influences the validity of the parallel trend assumption. While the full specification with all covariates generally improves model robustness, each outcome variable exhibits sensitivity to different covariate groups. For instance, Tables 7 and 8 show that excluding fiscal covariates results in better pre-trend balance compared to the full model, as indicated by higher pre-trend p-values. These findings highlight the importance of covariate selection in Difference-in-Differences models, particularly when using the CSDID estimator.

CONCLUSION

The synchronization of the 2022–2023 Pilkada Serentak necessitated the nationwide appointment of interim executives across 247 districts, creating a unique institutional landscape that warrants rigorous investigation. This study examines the fiscal implications of

this transition, specifically analyzing how the shift from elected to centrally appointed leadership affects own-source revenue and local government expenditure. Utilizing a district-level panel dataset from 2020 to 2023 and applying robust Difference-in-Differences (DiD) estimators—including Callaway & Sant’Anna (2021) and Sun & Abraham (2021)—we address the research gap regarding the fiscal divergence caused by non-elected bureaucratic agents. This empirical approach allows us to isolate the causal effect of executive selection from broader structural trends and regional heterogeneities, providing a timely assessment of how central appointment mechanisms influence local fiscal autonomy.

The empirical results demonstrate that while interim executives do not significantly alter own-source revenue—likely due to the institutional rigidities and structural constraints inherent in local tax systems—they exert a measurable downward pressure on government expenditure. This reduction in spending reflects a shift in executive

behavior: interim officials operate primarily as administrative agents of the central government, prioritizing vertical compliance, bureaucratic caution, and technocratic execution over the discretionary fiscal leadership typical of elected officials. Consequently, while this model ensures tight alignment with national administrative directives, it risks eroding the decentralization agenda by constraining the local flexibility necessary to address specific constituent needs. Given these findings, policymakers should critically re-evaluate the widespread reliance on interim appointments in future electoral cycles, balancing the benefits of administrative uniformity against the potential loss of responsiveness and local fiscal autonomy.

Giving this issue, policymakers should reconsider widespread application of interim appointments in future electoral cycles. Policymakers must weigh the administrative efficiency gained against the erosion of local autonomy and the decentralization agenda designed to enhance responsiveness to local priorities.

This study has several limitations. It focuses only on short-term effects (2022–2023) and does not include variables that reflect the underlying mechanisms driving interim executive behavior from accountability, incentives, and background characteristics such as age, tenure, education, or participation in the 2024 local elections that may explain interim executive behavior. Future research should incorporate these factors to better understand how individual characteristics influence the fiscal outcomes of interim local leadership.

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