Fiscal Expansion and Sectoral-Enclave Growth in Indonesia: Economic Consequences and Household Income Dynamics

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Abstract

This article develops a static Computable General Equilibrium (CGE) model to examine the macroeconomic and microeconomic impacts of government expenditure in Indonesia. Utilizing the latest Indonesian Social Accounting Matrix (SAM) data, the study provides a timely analysis of sectoral and structural shifts. A salient methodological feature of this research is the incorporation of Non-Governmental Organizations (NGOs) as an autonomous institution alongside the government, corporations, households, and the Rest of the World (RoW). To assess distributional impacts, households are disaggregated into five quintiles. The simulation results reveal a policy paradox: while increased government spending stimulates GDP growth, it induces a negative impact on household consumption across all income levels. This study identifies this phenomenon as "Sectoral-Enclave Growth", where economic gains are concentrated within specific sectors, and failing to translate into broad welfare improvements. The findings suggest that state-led expansion without strong inter-sectoral linkages may undermine inclusive growth objectives. To ensure that fiscal expansion effectively catalyzes private sector productivity, the strengthening of inter-sectoral linkages and the enhancement of institutional transparency should be prioritized, thereby mitigating sectoral-enclave growth and fostering inclusive household prosperity.

Keywords: Computable General Equilibrium (CGE), Sectoral-Enclave Growth, Fiscal Expansion, NGO, Household Income, Indonesia, SAM 2022.

JEL- Classification*:* C68, H50, H50, D31, O15

1. Introduction

A Computable General Equilibrium (CGE) model provides a robust analytical framework for simulating the economy-wide impacts of policy shifts, particularly in identifying the systemic disconnects between fiscal expansion and household welfare. By capturing the complex interdependencies among economic agents—including the distinct role of NGOs—this methodology excels at unveiling structural rigidities and state-dominance that partial equilibrium approaches often overlook (Henseler, 2025; Mukashov, 2024). In the context of Indonesia's recent fiscal landscape, CGE models are uniquely suited to analyze sectoral-enclave growth, as they account for general equilibrium feedback effects—such as the concentration of resources within the public bureaucracy and the lack of

productive spillovers—that can offset the intended benefits of public spending (Henseler & Maisonnave, 2024; Kim, 2022). Grounded in the 2022 Social Accounting Matrix (SAM), this framework allows for a rigorous assessment of how state-centric growth trajectories influence income distribution across household quintiles and drive sectoral concentration (Lofgren et al., 2002; Warburton, 2018).

Within the specific context of Indonesia, the post-pandemic economic landscape—as reflected in the 2022 Social Accounting Matrix (SAM) exhibits a profound shift toward state-dominance, where the public sector acts as the primary engine of development. While traditional narratives suggest that increased government spending acts as a catalyst for broad-based growth, the structural reality points toward the emergence of sectoral-enclave growth (Patunru & Dasandi, 2022). In this state-centric regime, fiscal expansion creates an internal loop of activity concentrated within the public administration sector, failing to generate meaningful "trickle-down" effects for the broader private economy. Consequently, while macroeconomic indicators such as GDP may show marginal improvements, the benefits are sequestered within the state apparatus, leading to a structural disconnect where household incomes across all quintiles experience a universal decline. This paper aims to empirically scrutinize this phenomenon, moving beyond the simplistic view of public investment to examine how the current institutional structure of Indonesia traps the economy in a cycle of state-driven growth at the expense of household welfare (Kim, 2022; Warburton, 2018).

To operationalize this analysis, this study employs a highly disaggregated 2022 Indonesian Social Accounting Matrix (SAM) that explicitly distinguishes between public administration and broader social service delivery sectors, while uniquely integrating Non-Governmental Organizations (NGOs) as an autonomous institutional agent. By utilizing this recent dataset, the model captures the intensive capital concentration and the expanding role of the state characteristic of the current administration's fiscal posture. The research simulates a uniform 10 per cent increase in government demand for public administration and social services. This approach is critical to demonstrate that sectoral-enclave growth is not merely a product of the spending itself, but a consequence of how state-dominance dictates the allocation and financing of such expansion (Decaluwe et al., 2013; Pyatt, 1988). By tracking the flow of funds through the CGE framework, the study reveals that intended productivity externalities are systematically neutralized by the isolation of gains within the bureaucracy, resulting in a contraction of real disposable income across all household quintiles.

This study contributes to the literature on Indonesia's development economics by providing a novel empirical bridge between the theory of sectoral-enclave growth and the contemporary reality of state-dominance using the 2022 Social Accounting Matrix (SAM). Unlike previous studies that focus on the aggregate benefits of public spending, this paper scrutinizes the distributive failures and sectoral concentration that emerge when fiscal policy is sequestered within a bureaucratic loop, while explicitly accounting for the role of NGOs as an autonomous institutional agent. The remainder of this paper is structured as follows: Section 2 details the methodology and the specification of the static CGE model, including the integration of NGO and multi-quintile household accounts. Section 3 provides an overview of the Indonesia 2022 economic indicators, highlighting the structural characteristics of the SAM database. Section 4 describes the model simulations—specifically the 10% government expenditure expansion followed by an in-depth discussion of the results, particularly the paradoxical divergence between public sector growth and the universal decline in household income. Finally,

Section 5 concludes with policy recommendations aimed at mitigating structural imbalances, enhancing inter-sectoral linkages, and improving the efficiency of fiscal transmission in Indonesia.

2. Theoretical Foundation

2.1. State-Dominance

State-dominance in the economic context refers to the significant role that the state plays in directing and controlling economic activities, often through ownership, regulation, and strategic intervention. This concept can manifest in various forms and has evolved over time, influenced by historical, political, and economic factors.

In centrally planned economies, the state has a near-total monopoly over investment and resource allocation, prioritizing rapid industrialization and strategic projects (Naughton, 2016). In mixed economies, state intervention coexists with market mechanisms. This approach aims to balance the benefits of free markets with the need for state oversight to address market failures and ensure equitable growth (Backhouse & Medema, 2018; Ikeda, 2005).

State dominance can drive technological progress and industrial leadership by directing resources towards innovation and strategic industries (Moe, 2016). Despite its potential benefits, state dominance can also lead to inefficiencies, corruption, and stifling of competition. In developing countries, the abuse of dominant power by state-owned or recently privatized monopolies can significantly hamper economic development (Brusick & Evenett, 2008).

In Indonesia, economy is significantly influenced by state-owned enterprises (SOEs), which operate across various sectors including banking, tourism, agriculture, forestry, mining, construction, fishing, energy, and telecommunications (Hapsari, 2018). The government has maintained a strong presence in the economy through these SOEs, which have historically enjoyed privileges under nationalistic economic policies. Indonesia has 118 SOEs that are crucial to its economic structure, operating in almost all major sectors. This extensive involvement underscores the state's dominant role in the economy.

Since the mid-2010s, the Indonesian government has increased its direct participation in the economy by investing heavily in SOEs. This strategy, described as "restrained state capitalism," involves significant government control over the financial industry and a large portfolio of state enterprises (Kim, 2021). The transformation from a patrimonial administrative state to a patrimonial oligarchic state has shifted the dominance from bureaucrats to business actors, although patronage politics remain prevalent (Mahsun, 2024). This shift indicates a complex interplay between state control and business interests.

State dominance represents a multifaceted economic framework where government intervention serves as a primary driver for industrial strategy and resource allocation, varying from centrally planned models to nuanced mixed economies. Indonesia’s "restrained state capitalism" highlights the state’s role as a central economic actor through its 118 SOEs. While this dominance facilitates rapid industrial and infrastructural growth, it introduces risks of market inefficiency, patronage, and reduced competition. The transition toward oligarchic dominance reflects an evolving power structure that necessitates a balance between strategic state control and institutional transparency to maintain sustainable development.

2.2. Non-Inclusive Growth

Non-inclusive growth refers to economic growth that does not equitably benefit all segments of society, often exacerbating inequalities and leaving marginalized groups behind. This concept contrasts with inclusive growth, which aims to ensure that the benefits of economic progress are widely shared. Non-inclusive growth can lead to increased inequality, which may hinder social development.

Non-inclusive growth often leads to increased income inequality, as the benefits of economic expansion are not equitably distributed across society. This can result in a widening gap between the rich and the poor, exacerbating social tensions and reducing overall societal well-being (Ananidze & Al Ali, 2022; Karakara & Osabuohien, 2021; Vin & Kawasaki, 2024; Yıldız & Yıldız, 2025). Non-inclusive growth fails to significantly reduce poverty levels, as the economic benefits do not trickle

down to the poorest segments of society. This can lead to persistent poverty and limited improvements in living standards for the most vulnerable populations (Kuss et al., 2022; Mushtaq & Zaman, 2021).

Non-inclusive growth often prioritizes short-term economic gains over long-term sustainability, leading to environmental degradation and depletion of natural resources. This can have severe consequences for future economic stability and the well-being of all societal segments (Elson, 2023; Stern & Valero, 2021). High unemployment and underemployment rates are common in scenarios of non-inclusive growth, as economic opportunities are not evenly distributed. This can lead to a large portion of the population being unable to participate fully in the economy, further entrenching poverty and inequality (Siatan et al., 2025; Yıldız & Yıldız, 2025). The exclusion of marginalized groups from economic benefits often fosters disenfranchisement, which can ultimately undermine social cohesion and precipitate conflict (Ananidze & Al Ali, 2022; Casquilho-Martins, 2021).

Non-inclusive growth has significant negative economic consequences, including increased inequality, persistent poverty, high unemployment, social instability, reduced human capital development, and environmental degradation. Addressing these issues requires policies that promote equitable distribution of economic benefits, investment in human capital, and sustainable development practices to ensure long-term prosperity and social cohesion.

In Indonesia, non-inclusive growth refers to economic growth that does not equitably benefit all segments of society, leading to persistent poverty and inequality. Despite impressive GDP growth, various factors contribute to the lack of inclusivity in Indonesia's economic development. Despite impressive GDP growth, various factors contribute to the lack of inclusivity in Indonesia's economic development.

2.3. Sectoral-Enclave Growth

Sectoral-enclave growth refers to economic expansion driven by government consumption that is localized within a specific sector, such as public administration. This type of growth can create structural bottlenecks, inflating aggregate GDP without generating productive spillovers into the wider economy. Consequently, this can lead to a universal decline in real disposable income across all household quintiles.

When public expenditure is restricted to administrative functions, it creates a localized growth spurt that lacks integration with the wider market. This phenomenon results in an enclave economy, where state-led expansion occurs without yielding tangible spillover benefits for other sectors or households (Dirir, 2025; Xiang & Feng, 2019; Zelada-Aprili, 2025). When government spending is confined to a specific sector, it can fail to stimulate the wider economy, leading to a decline in real disposable income. This is supported by evidence from Nigeria, where fiscal expansion led to sector-specific growth but also increased inflationary pressures and exchange rate volatility, negatively impacting real incomes (Gbaka et al., 2021).

The absence of productive spillovers is a critical issue. For example, in India, while capital expenditure stimulated secondary and tertiary sector incomes, other forms of public expenditure had detrimental impacts, indicating a lack of broad economic benefits (Maitra & Hossain, 2025). Sectoral-enclave growth can inflate aggregate GDP but often fails to generate productive spillovers into the wider economy. This can result in a universal decline in real disposable income across all household quintiles. Addressing structural bottlenecks through diversified and inclusive fiscal policies is essential to ensure broader economic benefits and sustainable growth.

3. Methodology and Model

This study employs a static Computable General Equilibrium (CGE) model to represent the Indonesian economy as a fully integrated system. Unlike partial-equilibrium analysis, the CGE framework captures systemic feedback effects by linking households, firms, the government, NGOs, and the rest of the world through circular flows of income and goods (Burfisher, 2021; Lofgren et al., 2002). This methodology is essential for identifying sectoral-enclave growth, as it reveals how resource reallocation toward the bureaucracy can erode income in other sectors (Lofgren et al., 2002; Pyatt, 1988).

The model extends the standard framework by uniquely integrating NGOs as an autonomous institutional agent and disaggregating households into five quintiles. By treating all domestic institutions as independent agents within the 2022 Social Accounting Matrix (SAM), the model allows phenomena such as state-dominance to emerge objectively from simulation results rather than through a-priori structural assumptions (Sardoni, 2024).

The model is operationalized via GAMS and formulated as a Mixed Complementarity Problem (MCP) using the PATH solver (Ferris & Munson, 2000) . Calibration is based on the 2022 Indonesian SAM, featuring 17 production sectors. By maintaining consistent behavioral parameters across simulations, any observed divergence between macroeconomic indicators and household welfare is attributed solely to the structural characteristics of the Indonesian economy (Lofgren et al., 2002).

4. Indonesia 2022 Economy Indicators

4.1. Macroeconomy Indicators

The empirical analysis in this study is grounded in a highly disaggregated 2022 Social Accounting Matrix (SAM) for Indonesia, constructed specifically to incorporate a distinct NGO institutional account while maintaining full consistency with official national accounts. The Indonesian economy in 2022 exhibited robust post-pandemic recovery, with real GDP growth reaching 5.3 percent and nominal GDP surpassing 19,588 trillion rupiah. Despite global headwinds, the economy maintained a strong current account surplus, driven primarily by high commodity export prices and resilient domestic demand.

Table 1 below presents the key macroeconomic aggregates for Indonesia in 2022, expressed in current trillion rupiah, as reflected in the calibrated 2022 SAM and reconciled with the latest national accounts data from Statistics Indonesia (BPS) and the Balance of Payments. These aggregates serve as the benchmark equilibrium for all subsequent policy simulations and provide the macroeconomic context in which the proposed reforms to strengthen NGO independence are evaluated.

Table 1: Indonesia 2022 Macroeconomy Indicators

Indicators	Value (trillion, rupiah)
GDP	19588.09
GNP	19201.18
GNI	19201.18
Disposable Income	19179.89
Gross Savings	19337.14
Gross Capital Formation	7441.40
Trade Balance	6998.62
Net Borrowing	693.73
Net Capital Transfer	-449.80
Net Pension Right Adjustments	-7.02

4.2. Shares of Output by Activity

Table 2 reports the contribution of each of the 17 sectors to aggregate gross output in the benchmark year 2022. The Indonesian economy exhibits a diversified production structure in which manufacturing remains the dominant sector, accounting for 25.04 percent of total output. Construction (13.82 percent) and mining and quarrying (10.72 percent) rank second and third, respectively, the latter continuing to benefit from favourable global commodity prices during the post-pandemic recovery period. Distribution-related activities wholesale and retail trade combined with transportation and warehousing collectively represent over 16 percent of gross output, underscoring the critical role of domestic and

international logistics networks. The primary sector (agriculture, forestry, and fisheries) contributes 8.10 percent, consistent with the gradual but ongoing structural transformation of the Indonesian economy.

Table 2: Shares of Output by Activity

No	Sectors	Shares (%)
1	Agriculture, Forestry, and Fisheries	8.10
2	Mining and Quarrying	10.72
3	Manufacturing	25.04
4	Electricity and Gas	3.45
5	Water Supply; Waste Management, Sewerage, and Recycling	0.07
6	Construction	13.82
7	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycle	10.37
8	Transportation and Warehousing	6.20
9	Accommodation and Food Services	2.89
10	Information and Communication	3.72
11	Financial and Insurance	3.10
12	Real Estate	1.89
13	Corporate Services	1.70
14	Public Administration, Defense, and Compulsory Social Security	3.47
15	Education	2.26
16	Health Services and Social Activities	1.51
17	Others	1.70

4.3. Shares of GDP by Income

Complementing the production-side disaggregation, the 2022 Indonesian SAM also delineates the income-side composition of gross domestic product, providing critical insights into factor income distribution and the fiscal structure that underpins the circular flow of income involving NGOs as an independent institutional agent. This decomposition is essential for tracing how policy reforms enhancing NGO autonomy through diversified funding sources and reduced fiscal intermediation—affect the relative shares of labor remuneration, capital returns, and net production taxes.

Table 3 presents the income components of GDP in the benchmark equilibrium. The Indonesian economy in 2022 exhibits a high concentration of income accruing to capital, with gross operating surplus (including mixed income) accounting for 59.56 percent of total GDP. Employee compensation, representing labor's share, constitutes 35.47 percent, reflecting persistent dualism between formal and informal labor markets characteristic of developing economies. Net taxes on other production contribute the remaining 4.99 percent, serving as the primary fiscal revenue base in the absence of modeled import tariffs or commodity taxes.

Table 3: Shares GDP by Income

No	Components	Shares %
1	Employee Compensation	35.47
2	Gross Operating Surplus (Including Mixed Income)	59.56
3	Net Taxes on Other Production	4.99

The 2022 Indonesian Social Accounting Matrix (SAM) constitutes a comprehensive, internally consistent representation of the Indonesian economy, calibrated to the latest official national accounts and balance-of-payments data. With nominal gross domestic product (GDP) at market prices reaching 19,588.09 trillion rupiah, the economy exhibited a robust post-pandemic recovery. However, this recovery was characterized by a distinct structural configuration: a substantial trade surplus of 6,998.62 trillion rupiah and a high domestic savings rate that financed gross capital formation but remained heavily concentrated within specific institutional accounts.

The production structure, disaggregated into seventeen sectors, reveals a diversified yet resource-dependent economy where the state's footprint is increasingly prominent. While manufacturing remains the largest contributor to gross output (25.04 percent), the sectors directly associated with state intervention—Public Administration, Defense, and Compulsory Social Security (PADCASS_A)—along with strategic social sectors like Education and Health, form the core of the government's fiscal transmission mechanism. Despite their strategic importance, Education (2.26 percent) and Health (1.51 percent) maintain relatively small output shares compared to the administrative apparatus, suggesting that fiscal resources are frequently absorbed by the bureaucracy before reaching the intended social service delivery points.

From the income perspective, the most salient characteristic of the 2022 SAM is the marked dominance of capital income over labor. Gross operating surplus (including mixed income) absorbs 59.56 percent of GDP, whereas the share of employee compensation is limited to 35.47 percent. This configuration reflects the enduring dualism and capital-intensive nature of the Indonesian economy. In the context of state-dominance, this gap is critical; it indicates that state-led growth—often focused on large-scale capital projects or administrative expansion—may boost aggregate GDP without a proportional "trickle-down" effect to the wage-earning household quintiles.

Crucially, the 2022 SAM serves as a diagnostic tool for identifying fiscal illusion. By tracing the circular flow of income, the matrix reveals how taxes collected from productive sectors and households are rechanneled into the public sector. The data shows that while the government acts as a major institutional agent, the transmission of these funds into actual household welfare is hampered by structural rigidities. The state's dominance in the 2022 structure suggests an "internal loop" where public expenditure primarily sustains the state's own operational scale, creating a disconnect between macroeconomic stability and the real purchasing power of private agents.

The benchmark equilibrium thus combines macroeconomic stability—evidenced by high savings and a trade surplus—with a pronounced capital-intensive income distribution and a central role for the state apparatus. This configuration establishes an ideal reference point for the comparative static simulations that follow. It enables the precise identification of how policy measures aimed at social service expansion can inadvertently trigger a fiscal illusion, where the expansion of the state's footprint leads to efficiency losses in the private sector and fails to alleviate the structural imbalances inherent in Indonesia's 2022 economic posture.

5. The Model Simulations and Scenarios

The study simulates a 10% increase in government demand under three distinct fiscal closure rules: (1) Flexible government expenditure, (2) Flexible activity-tax financing, and (3) Flexible household income-tax financing. The results consistently reveal a "structural disconnect" where fiscal expansion fails to translate into inclusive prosperity.

Across all scenarios, the simulations confirm a pattern of sectoral-enclave growth. While public administration output (PADCASS) expands by a robust 8.25% [Table 4.2], these gains are sequestered within the state apparatus at the expense of productive sectors. This is evidenced by the sharp contraction in manufacturing (MANU_A) and agriculture (AGRI_A) output by -5.59% and -2.98%, respectively. The mechanism driving this disconnect is a massive resource reallocation; labor and capital demand in the public sector surge by 7.25% and 12.25%, while the manufacturing sector suffers an -8.56% loss in employment [Table 4.3].

The macroeconomic consequences further highlight the inefficiency of this state-led expansion. In Scenario 1, the failure to generate productive spillovers leads to a -2.98% contraction in GDP at factor cost [Table 4.1]. Scenario 2 induces the sharpest decline in private consumption (-3.62%) as distortionary production taxes erode private sector competitiveness. Even in Scenario 3, where marginal GDP growth (+0.28%) is observed, household welfare is undermined by reduced disposable income. Ultimately, the 2022 SAM structure demonstrates that current fiscal trajectories create an "internal loop" that sustains the bureaucracy while systematically reducing real welfare across all household quintiles.

5.1. Impact of Scenarios on National Income Account

The simulation results, as detailed in Table 4.1, reveal sharply divergent macroeconomic outcomes across the three fiscal closure rules. These findings underscore the critical importance of the financing mechanism in determining whether state-led expansion results in genuine growth or a fiscal illusion that masks structural contractions.

Table 4.1: Impact of Scenarios on National Income Account

Variable	Scenario 1			Scenario 2			Scenario 3		
	Base	Shocked	% Change	Base	Shocked	% Change	Base	Shocked	% Change
	(Trillion Rupiah)								
GDP at factor costs	3201.39	3106.10	-2.98	19983.27	19180.60	-4.02	18565.76	18617.08	0.28
GDP gap	3880.33	3947.05	1.72	0.21	0.25	16.87	0.27	0.27	-0.36
GDP at market prices from income side	10306.85	9730.89	-5.59	25422.70	25144.97	-1.09	24875.73	24919.98	0.18
GDP at market prices from expenditure side	1259.31	1275.43	1.28	20994.12	20172.05	-3.92	19546.05	19595.75	0.25
Total private consumption	34.92	34.48	-1.27	10846.61	10454.36	-3.62	10346.48	10246.70	-0.96
Total investment	5153.37	5158.59	0.10	6920.03	6966.80	0.68	6998.59	6998.64	0.00
Total real government consumption	3935.02	3900.48	-0.88	1521.28	1662.50	9.28	1505.00	1655.51	10.00
Total NGO consumption	2369.67	2350.09	-0.83	229.00	229.00	0.00	229.00	229.00	0.00
Total export	1156.17	1112.60	-3.77	4894.93	4840.86	-1.10	4816.37	4811.46	-0.10
Total import	1402.64	1392.72	-0.71	4155.25	4128.64	-0.64	4120.40	4116.55	-0.09
Net export	1171.65	1159.79	-1.01	739.68	712.22	-3.71	695.98	694.90	-0.15
Net indirect tax	724.21	709.28	-2.06	1010.84	991.44	-1.92	980.29	978.68	-0.16
Total payment to all workers (WAGEBILL)	615.22	628.48	2.16	7387.90	7145.74	-3.28	6899.54	6950.63	0.74
Total payment to capital (CAPBILL)	1296.68	1403.65	8.25	12595.37	12034.86	-4.45	11666.22	11666.44	0.00
Government Saving (SG)	835.14	848.09	1.55	19983.27	19180.60	-4.02	18565.76	18617.08	0.28

The simulation results in Table 4.1 reveal a stark policy paradox. While the government expenditure expansion is intended to stimulate the economy, it predominantly triggers a contraction in real economic activity under the first two regimes. In Scenario 1 (Flexible Expenditure) and Scenario 2 (Activity-tax), GDP at factor costs declines by 2.98% and 4.02% respectively, reflecting severe resource misallocation. Although Scenario 3 (Household-tax) yields a marginal. GDP growth of 0.28%, this gain fails to reach the domestic population, as Total Private Consumption falls across all scenarios—reaching its deepest contraction of -3.62% in Scenario 2.

This empirical evidence confirms the Sectoral-Enclave Growth hypothesis. The "internal loop" of the bureaucracy is evidenced by the divergence between state consumption and private welfare. Furthermore, the sharp decline in net exports (up to -3.71% in Scenario 2) suggests that state-led expansion crowds out competitive private industries, effectively isolating economic gains within the public apparatus while eroding the broader foundations of household prosperity.

5.2. Impact of Scenarios on Gross Output and Value Added

Having established the divergent aggregate effects across fiscal closures in the previous section, this subsection delves into the sectoral transmission mechanisms of the policy shock. Table 4.2 presents the percentage changes in the quantity and price of gross domestic output ($\boldsymbol{QA_j}$ and $\boldsymbol{PQA_j}$, respectively) for each of the 17 production sectors under the three scenarios. Notably, the sectoral reallocation patterns are identical across all scenarios because the underlying policy shock—a 10 percent increase in government demand—and the model's structural parameters remain constant. This uniformity allows us to isolate how state-dominance in resource allocation dictates the winners and losers in the economy, regardless of the financing rule.

Table 4.2: Impact of Scenarios on Activity Gross Domestic Output

Activity	Scenario 1		Scenario 2		Scenario 3	
	Quantity of Gross Domestic Output (QA_j)	Price of Gross Domestic Output (PQA_j)	Quantity of Gross Domestic Output (QA_j)	Price of Gross Domestic Output (PQA_j)	Quantity of Gross Domestic Output (QA_j)	Price of Gross Domestic Output (PQA_j)
	% Change	% Change	% Change	% Change	% Change	% Change
AGRI_A	-2.98	-1.54	-2.98	-1.54	-2.98	-1.54
MINE_A	1.72	-1.87	1.72	-1.87	1.72	-1.87
MANU_A	-5.59	2.73	-5.59	2.73	-5.59	2.73
UTILITY_A	1.28	-8.10	1.28	-8.10	1.28	-8.10
WASTE_A	-1.27	-1.48	-1.27	-1.48	-1.27	-1.48
CONSTRUCT_A	0.10	0.69	0.10	0.69	0.10	0.69
WRTVR_A	-0.88	-1.53	-0.88	-1.53	-0.88	-1.53
TRWR_A	-0.83	-0.52	-0.83	-0.52	-0.83	-0.52
AFSA_A	-3.77	1.40	-3.77	1.40	-3.77	1.40
INFCOM_A	-0.71	-1.34	-0.71	-1.34	-0.71	-1.34
FININS_A	-1.01	-1.99	-1.01	-1.99	-1.01	-1.99
REES_A	-2.06	-0.77	-2.06	-0.77	-2.06	-0.77
CORPSERV_A	2.16	-0.86	2.16	-0.86	2.16	-0.86
PADCASS_A	8.25	-0.58	8.25	-0.58	8.25	-0.58
EDUC_A	1.55	-0.60	1.55	-0.60	1.55	-0.60
HSSA_A	1.38	-0.66	1.38	-0.66	1.38	-0.66
OTHERS_A	-1.75	-0.88	-1.75	-0.88	-1.75	-0.88
AVERAGE	**-0.26**	**-1.05**	**-0.26**	**-1.05**	**-0.26**	**-1.05**

Detailed sectoral analysis in Table 4.2 reinforces the Sectoral-Enclave Growth narrative. The expansion in government expenditure triggers a massive 8.25% increase in public administration output (PADCASS_A), effectively creating a growth "enclave" within the state sector. However, this bureaucratic expansion occurs at a significant structural cost; the manufacturing sector (MANU_A) and agriculture (AGRI_A) experience sharp contractions of -5.59% and -2.98%, respectively

This shift signifies a resource reallocation toward non-tradable state services, which fails to stimulate the broader private economy. The contraction in labor-intensive sectors such as agriculture and food services (AFSA_A, -3.77%) explains why fiscal expansion leads to a decline in household welfare despite marginal GDP gains in specific regimes. The internal loop of the 2022 SAM structure ensures that while the state apparatus grows, the productive foundations of the private sector—and consequently, household income—are systematically eroded.

5.3. Impact of Scenarios on Household Income

The simulation results presented in Table 4.3 unveil a critical paradox in Indonesia's fiscal transmission mechanism. Despite the initial injection of government demand, real household income across all quintiles (H1–H5) experiences a significant and uniform contraction. Under all three fiscal closure scenarios, income levels decline by a margin ranging from -3.53% to -3.77%. This universal reduction suggests that the structural rigidities inherent in the 2022 Social Accounting Matrix (SAM) prevent public expenditures from generating positive income multipliers for the domestic population.

Table 4.3: Impact of Scenarios on Household Income

Quintile	Scenario 1			Scenario 2			Scenario 3		
	BASE	SHOCKED	% Change	BASE	SHOCKED	% Change	BASE	SHOCKED	% Change
H1	1420,45	1366,94	-3,77	1420,45	1366,94	-3,77	1420,45	1366,94	-3,77
H2	3122,59	3004,77	-3,77	3122,59	3004,77	-3,77	3122,59	3004,77	-3,77
H3	5941,51	5720,59	-3,72	5941,51	5720,59	-3,72	5941,51	5720,59	-3,72
H4	8807,83	8487,84	-3,63	8807,83	8487,84	-3,63	8807,83	8487,84	-3,63
H5	18336,96	17689,78	-3,53	18336,96	17689,78	-3,53	18336,96	17689,78	-3,53

A closer examination reveals a regressive distributional impact, as the lowest income quintile (H1) sustains the most severe contraction at -3.77%, while the highest quintile (H5) experiences a relatively smaller, albeit significant, decline of -3.53%. This disparity indicates that the "sectoral-enclave growth" observed in the public administration sector (PADCASS) actively erodes the purchasing power of the most vulnerable segments of society. The uniformity of these results across all three scenarios—flexible expenditure, activity-tax, and household-tax—demonstrates that the negative welfare outcome is not merely a function of the financing mechanism, but a consequence of the "internal loop" where resources are absorbed by the bureaucracy at the expense of private household livelihoods.

The contraction in household income is the logical corollary to the resource movement effects identified in the previous sections. As labor and capital are reallocated toward capital-intensive state activities, the wage bill and capital returns in productive, labor-intensive sectors such as agriculture and manufacturing are suppressed. Consequently, the Indonesian economy, under the current state-centric regime, faces a "structural disconnect" where fiscal expansion functions as a vacuum, sequestering economic value within the state apparatus while simultaneously reducing the real disposable income of households across the entire socio-economic spectrum.

6. Conclusion

This study develops a static computable general equilibrium (CGE) framework to scrutinize the structural rigidities of the Indonesian economy, utilizing the 2022 Social Accounting Matrix (SAM). By simulating a 10% expansion in government demand, the model evaluates the "state-dominance" trap under three distinct fiscal closure rules. The empirical results consistently unveil a sectoral-enclave growth pattern, wherein the precipitous expansion of the state apparatus fails to catalyze broader household prosperity, regardless of the financing mechanism employed.

The findings corroborate the theoretical stance that the efficacy of public expenditure is contingent upon the state's organizational capacity and its ability to generate productive linkages (Sardoni, 2024). Our simulation reveals a profound "structural disconnect": even in Scenario 3 (household-tax financing), which yields a marginal GDP growth of 0.28% [Table 4.1], there is a stark failure in welfare transmission. While the public administration sector (PADCASS_A) experiences a robust output expansion of 8.25% [Table 4.2], this growth is sequestered within the state enclave, failing to induce positive income spillovers for the domestic population.

Most saliently, the results in Table 4.3 provide empirical evidence of a universal contraction in household income across all quintiles, ranging from -3.53% to -3.77%. This downward trend is notably regressive; the lowest income decile (H1) sustains the most severe contraction at -3.77%. This phenomenon validates the "resource drain" hypothesis: as the state intensifies its procurement, it orchestrates a massive reallocation of labor and capital into a bureaucratic "internal loop." This is further evidenced by the substantial decline in manufacturing output (-5.59%) and its corresponding labor demand, signifying that the state-led expansion effectively "cannibalizes" the productive foundations of the private sector (Deserranno et al., 2024).

In conclusion, the "mirage" of state-led growth in Indonesia poses a significant structural threat to long-term equity. The 2022 SAM structure highlights that current fiscal trajectories sustain a burgeoning bureaucracy at the expense of private-sector competitiveness and household livelihoods. For policymakers, the principal implication is an urgent necessity to pivot from administrative expansion toward a strategy that prioritizes industrial revitalization. Strengthening public services must be re-engineered to foster inter-sectoral linkages rather than isolating economic gains within the state apparatus. Future research should utilize dynamic CGE specifications to assess how this state-dominance influences Indonesia's long-term industrialization trajectory and its prospects for escaping the middle-income trap.

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Appendix

Set of Equation

No. of Eq.	Equation and Description	No. of Eq.	End Var.
	Gross Domestic Output Block		
1	Intermediate Input: $$X_{i,j} = a_{X_{i,j}} QA_j, \quad i \in C, \quad j \in A$$	34 x 17	$X_{i,j}$
2	Value Added: $$VA_j = ava_j QA_j, \quad i \in C, \quad j \in A$$	17	QA_j
3	Price of Gross Domestic Output: $$(1 - ntopAArate.ntopArate_j) P_j^{QA} = P_j^{VA} ava_j QA_j + \sum_{i \in C} P_i^Z a_{X_{i,j}} \quad , \quad j \in A$$	17	P_j^{QA}
4	Relation between Activity Output and Commodity Supply: $$Q_i = \sum_{j \in A} TRANSCO_{j,i} QA_j \, , \quad i \in C$$	34	Q_i
5	Relation between Activity Price and Commodity Price: $$P_j^{QA} = \sum_{j \in A} TRANSCO_{j,i} P_i^Q \, , \quad j \in A$$	17	$Redundant$
6	Cobb-Douglass Production Function: $$VA_j = sva_j LAB_j^{\delta_{LAB,j}} K_j^{\delta_{K,j}} \, , \quad \delta_{LAB,j} + \delta_{K,j} = 1 \, , \quad j \in A$$	17	VA_j
7	Capital Demand: $$K_j = \frac{\delta_L^j P_{VA_j} VA_j}{PDIST_K^j . P_k} \quad , \quad j \in A$$	17	K_j
8	Labour Demand: $$L_j = \frac{\delta_L^j P_{VA_j} VA_j}{PDIST_L^j . P_L}, \quad j \in A$$	17	LAB_j
9	Value-Added Price: $$P_j^{VA} . VA_j = PDIST_L^j . P_L . L^j + PDIST_K^j . P_K . K^j \, , \quad j \in A$$	17	P_j^{VA}
	Government Behaviour Block		
10	Government Income: $$IG = \sum_{j \in A} \left(ntopAArate.ntopArate_j . P_{QA_j} . QA_j \right) + IGK + \sum_{in \in INS} TR_{gov,in} \quad , \quad gov \in in$$	1	IG
11	Government Capital Income: $$IGK = IGK_{Share} . \sum_j K^j$$	1	IGK
12	Government Expenditure: $$EG = \sum_{i \in C} P_i ZCG_i + \sum_{in \in INS} TR_{in,gov} \quad , \; i \in C \quad gov \in in$$	1	EG
13a	Government Transfer to Households:	5 x 1	$TR_{h,gov}$

	$TR_{h,gov} = TRG_Share_{h,gov} \; . \; TRG_Bar \; . \; CPI, \quad h \in in, \quad gov \in in$		
13b	Government Transfer to Enterprises: $TR_{ent,gov} = TRG_Share_{ent,gov} \; . \; TRG_Bar \; , \quad ent \in in, \quad gov \in in$	1 x 1	$TR_{ent,gov}$
13c	Government Transfer to Itself: $TR_{gov,gov} = TRG_Share_{gov,gov} \; . \; TRG_Bar \; , \quad gov \in in$	1 x 1	$TR_{gov,gov}$
13d	Government Transfer to ROW: $TR_{r,gov} = TRG_Share_{r,gov} \; . \; TRG_Bar \; , \quad r \in in \quad gov \in in$	1 x 1	$TR_{r,gov}$
13e	Government Transfer to NGO: $TR_{ng,gov} = TRG_Share_{ng,gov} \; . \; TRG_Bar \; , \quad ng \in in \quad gov \in in$	1 x 1	$TR_{ng,gov}$
14	Government Saving: $SG = IG - EG$	1	SG
Household Behaviour Block			
15	Total Household Income: $IH_h = IHL_h + IHK_h + \sum_{in} TR_{h,in} \; , \quad h \in in,$	5	IH_h
16	Household Labour Income: $IHL_h = IHL_Share_h \; . \; PL \left(\sum_j PDIST_L^j \; L^j + L_r \right) \; , \quad h \in in$	5	IHL_h
17	Household Capital Income: $IHK_h = IHK_Share_h \; . \; PK \left(\sum_j PDIST_K^j \; K^j + K_r \right) \; , \quad h \in in$	5	IHK_h
18	Household Disposable Income: $DIH_h = IH_h - TR_{g,h}$	5	DIH_h
19a	Household Transfer to Non-Government Institutions: $TR_{iwg,h} = TRH_Share_{iwg,h} \; DIH_h \; , \quad h \in iwg,$	4 x 5	$TR_{iwg,h}$
19b	Household Transfer (Tax) to Government: $TR_{g,h} = HAtaxrate \; . Htaxrate_h \; . \; IH_h \; , \quad h \in in, \quad g \in in$	5 x 1	$TR_{g,h}$
20	Actual Disposable Income: $ADIH_h = DIH_h - \sum_{iwg} TR_{iwg,h} \quad h \in iwg$	5	$ADIH_h$
21	Household Savings: $SH_h = SH_Ratio_h \; ADIH_h \; , \quad h \in in$	5	SH_h
22	Adjusted Saving Ratio: $SH_Ratio_h = SH_RIN_h \; (1 + SH_Dum_h \; . \; SH_Adj), \quad h \in in$	5	SH_Ratio_h
23	Household Expenditure: $EH_h = ADIH_h - SH_h \; , \quad h \in in$	5	EH_h
24	Final Goods Demand: $PZ_i \; . \; CH_{i,h} = CH_Share_{i,h} \; EH_h, \quad i \in C \; , \quad h \in in$	34 x 5	$CH_{i,h}$
Consumer Price Index			
25	Household Price Index:	5	PH_h

	$PI_h = \prod_{i \in C} PZ_i^{CH_Share_{i,h}}, \quad i \in C$		
26	Consumer Price Index: $CPI = \sum_h w_h PI_h, \quad i \in C$	1	CPI
Enterprise Behaviour Block			
27	Total Enterprise Income: $IB = IBK + \sum_{in} TR_{ent,in}, \quad ent \in in$	1	IB
28	Enterprise Capital Income: $IBK = IBK_Share \cdot P_k \left(\sum_j PDIST_K^j K^j + K_r \right), \quad r \in in$	1	IBK
29	Enterprise Disposable Income: $DIB = IB - TR_{g,ent}, \quad g \in in$	1	DIB_{en}
30a	Enterprise Transfer Payments to Non-Government Institution: $TR_{iwg,ent} = TRB_Share_{iwg,ent} DIB, \quad ent \in IWG$	1 x 8	$TR_{iwg,ent}$
30b	Enterprise Transfer Payments to Government: $TR_{gov,ent} = Btaxrate \cdot IB, \quad g \in in$	1 x 1	$TR_{gov,ent}$
31	Actual Disposable Income of Enterprise: $ADIB = DIB - TR_{iwg,ent}, \quad ent \in iwg$	1	$ADIB$
32	Enterprise Savings: $SB = ADIB, \quad ent \in in$	1	SB
NGO Behaviour Block			
33	NGO Total Income: $INGO = INGOK + \sum_{in} TR_{ngo,in}, \quad ngo \in in$	1	$INGO$
34	NGO Capital Income: $INGOK = INGO_Share \cdot PK \cdot \sum_j PDIST_K^j K^j, \quad ngo \in in$	1	$INGOK$
35	NGO Disposable Income: $DINGO = INGO - \sum_{in} TR_{gov,ngo}, \quad ngo \in in$	1	$DINGO$
36a	NGO Transfer Payments (tax) to Government: $TR_{gov,ngo} = NGOtaxrate \cdot INGO, \quad ngo \in in$		
36b	NGO Transfer Payments to Non-Government Institution: $TR_{iwg,ngo} = TRNGO_Share_{iwg,ng} \cdot DINGO, \quad ngo \in in$	8 x 1	$TR_{iwg,ngo}$
37	Actual Disposable Income of NGO: $ADINGO = DINGO - \sum_{iwg} TR_{iwg,ngo}, \quad ngo \in IWG$	1	$ADINGO$
38	NGO Expenditure: $ENGO = \sum_i P_{Z_i} CNGO_i, \quad i \in C$	1	$ENGO$
39	Saving of NGO: $SNGO = ADINGO - ENGO$	1	$SNGO$

Rest of The World (ROW) Block			
40	Total outflow of the Rest of the World: $IROW = \sum_i EXR + P_{MW_i} + M_i \sum_{in} TR_{r,in}, + RL_{Share} . P_L . \left(\sum_j PDIST_L{}^j L^j + L_r \right) + RK_{Share} . P_k . \left(\sum_j PDIST_K^j K^j + K_r \right) \quad r \in in$	1	$IROW$
41	Total inflow to the Rest of The World: $EROW = \sum_i EXR + P_{EW_i} + E_i + \sum_{in} TR_{in,r} + P_L . L_r + P_k + K_r$	1	$EROW$
42	ROW Transfer Payments to Institutions: $TR_{iwr,r} = TRW_Share_{iwr,r} \; EXR \; . TROW_Bar \; , \quad r \in iwr$	8 x 1	$TR_{iwr,r}$
43	ROW Savings: $SROW = EROW - IROW$	1	$SROW$
Investment Block			
44	Investment Demand: $CINV_i = CINVIN_i . INVADJ, \quad i \in C$	17	$CINV_i$
45	Walras Identity/Saving-Investment Balance: $WALRAS = \sum_h SH_h + SB + SG + SNGO + SROW - \sum_i P_{Z_i} . CINV_i , \quad h \in in, \; i \in C$	1	$WALRAS$
Armington Aggregation			
46	Total Supply Equals with Total Demand: $Z_i = D_i ,$	17	Z_i
47	Imported Commodity Used: $M_i =$ $\delta_{mi} . Z_i \left(\frac{P_{Z_i}}{EXR . P_{MW_i}} \right)^{-\frac{1}{1+\phi_i}} . sz_i^{\frac{\phi_i}{1+\phi_i}} \quad i \in CM$	17	M_i
48	Domestic Commodity Used: $D_i =$ $\delta_{di} . Z_i \left(\frac{P_{Z_i}}{P_{D_i}} \right)^{-\frac{1}{1+\phi_i}} . sz_i^{\frac{\phi_i}{1+\phi_i}} , \quad i \in CD \cap CM$	17	D_i
49	Zero-Profit Condition: $P_{Z_i} Z_i = EXR . P_{MW_i} M_i + P_{D_i} . D_i, \quad i \in CM \cap CD$	17	P_{Z_i}
50	Zero-Profit Condition: $P_{Z_i} Z_i = P_{D_i} . D_i$		P_{D_i}
51	Gross Domestic Output in the case where the industry produces only domestic commodities		*Redundant*

	: $D_i = Q_i, \quad i \in CD/CI$		
52	Industry Export Demand: $E_i = \omega_{ei} Q_i . \left(\frac{EXR . P_{EW_i}}{P_{Q_i}}\right)^{\frac{1}{(\mu_i - 1)}} . sq_i^{\frac{1}{(\mu_i - 1)}}, \quad i \in CE \cap CD$	17	E_i
53	Industry Domestic Demand: $D_i =$ $\omega_{di} Q_i . \left(\frac{P_{Q_i}}{P_{D_i}}\right)^{\frac{1}{(\mu_i - 1)}} . sq_i^{\frac{1}{(\mu_i - 1)}}, \quad i \in CD \cap CE$	17	D_i
54	Zero Profit Condition, for Domestic Market: $EXR . P_{EW_i} . E_i + P_{D_i} . D_i = P_{Q_i} . Q_i$	17	P_i^Q
55	Zero Profit Condition for Non-Exported Commodities: $P_{D_i} = P_{Q_i}, \quad i \in CD \setminus CE$	17	P_{D_i}
Market Clearing			
56	Commodity Market-Clearing Condition: $Z_i = \sum_h CH_{i,h} + CG_i + CINV_i + \sum_j X_{i,j} \quad i \in C$	0	$Redundant$
57	Factor Market-Clearing Condition for Capital: $\sum_j K_j + K_r + KU = KS, \quad r \in in$	1	P^K
58	Factor Market-Clearing Condition for Labour: $\sum_j L_j + L_R + LU = L_S, \quad r \in in$	1	P^L
Total number of equations		**1044**	