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State Monopolies, Redistribution, and Productivity: Rethinking Ecuador's Growth Constraints *

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Abstract

Ecuador's economic performance has lagged behind its potential and the broader Latin American region since 2010. Despite rising public debt and financial support from international institutions, Ecuador's economic growth remains stagnant. This paper seeks to characterize the key structural factors impeding Ecuador's economic growth and identify policies that could enhance it. We develop an analytical model framed within the Melitz (2003) framework to examine the implications of a state-controlled monopoly over extractive export-driven industries and the redistributive mechanisms that sustain low-productivity firms. Our findings indicate that redistribution policies can sustain inefficient firms, hinder productivity growth. This study contributes to the broader literature on state-owned monopolies and economic growth by illustrating the specific challenges faced by Ecuador and offering insights into policy reforms necessary to break the cycle of stagnation.

1 Introduction

Since 2010, Ecuador's economic growth has lagged behind both its potential and the regional average, despite increased fiscal interventions. Unlike other Latin American economies that have experienced periods of sustained expansion, Ecuador's growth trajectory has been constrained by structural inefficiencies and a development model heavily reliant on state control over key industries. The implications of these constraints are far-reaching: stagnation exacerbates welfare losses, and without meaningful economic growth, fiscal sustainability remains elusive. Given Ecuador's increased dependence on debt and financial assistance from international financial institutions, the urgency of addressing these issues has never been greater.

In this paper, we investigate what structural factors constrain Ecuador's economic growth, and how do state monopolization of key industries and redistribution policies contribute to economic stagnation. Specifically, we develop an analytical model within the Melitz (2003) model framework to examine the effects of state monopolization of extractive export-driven industries and wealth redistribution policies. Our model provides insights into how these mechanisms shape firm dynamics, sectoral productivity, and overall economic performance. By focusing on the interplay between monopoly control and redistribution, we uncover a set of results that systematically deter productive firms while sustaining low-productivity enterprises.

Our findings highlight two key mechanisms through which Ecuador's current economic structure hampers growth. First, redistribution policies inadvertently encourage low-productivity firms to persist in the market, diluting overall efficiency and constraining resource reallocation towards more dynamic sectors. Second, the entrenchment of these policies creates a political economy equilibrium in which incentives to reform remain weak, as entrenched interests benefit from the existing redistribution framework. These factors collectively impose a high cost on societal welfare by maintaining economic stagnation and limiting long-term growth prospects.

In line with our analysis, the literature on state ownership and economic stagnation provides ample empirical and theoretical evidence supporting the mechanisms described in this paper. Megginson and Netter (2001) find that privatization generally improves firm efficiency and economic growth, reinforcing our argument that Ecuador's state-controlled extractive industries create inefficiencies and hinder productivity gains. Similarly, Berkowitz and DeJong (2003) document how excessive state control and

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redistribution distort market incentives, a phenomenon mirrored in Ecuador's reliance on oil rents to sustain inefficient firms.

The resource curse literature, including Sachs and Warner (2001) and Torvik (2002), further substantiates our claim that Ecuador's heavy dependence on oil revenues exacerbates rent-seeking behaviors and misallocation of resources, ultimately constraining economic diversification. Acemoglu and Robinson (2012) emphasize how political institutions that prioritize redistribution over productivity-enhancing reforms, as observed in Ecuador, can lead to long-term stagnation. Additionally, Banerjee and Duflo (2005) argue that inefficient redistribution policies sustain low-productivity firms, preventing necessary structural transformations. Latin American-specific studies, such as Lora (2012) and Rodrik (2014), demonstrate that government control over key industries, coupled with a lack of structural reforms, has historically impeded economic dynamism in the region. These findings collectively support our model's predictions regarding the adverse effects of state monopolization and redistributive mechanisms on Ecuador's long-run growth prospects.

This paper contributes to the literature by providing a theoretical explanation of how state-owned monopolies interact with redistributive policies to constrain economic growth in Ecuador. While prior studies have examined the inefficiencies of state monopolies, our work explicitly links these inefficiencies to political economy dynamics and long-run productivity growth. Furthermore, by applying our theoretical framework to the case of Ecuador, we illustrate how these mechanisms manifest in a specific economic context, offering insights that are relevant to other resource-dependent economies facing similar structural challenges.

2 Background: The Structural Constraints of Ecuador's Economic Model

Ecuador's economic development has been shaped by a state-dominated model that prioritizes wealth redistribution over productivity-enhancing reforms. This model originates from the legal framework that reserves state ownership over strategic industries, particularly in the oil sector. The government's control over these assets allows it to capture substantial revenues from extractive industries and distribute them across various economic and social programs. This redistribution takes multiple forms, including public employment expansion, broad subsidies for fossil fuels, electricity, and services, as well as direct transfers to firms and households. While these policies have historically played a role in reducing poverty and stabilizing consumption, they have also introduced significant distortions that constrain long-term growth.

The state's ability to redistribute wealth is highly dependent on oil revenues, which have historically followed a boom-and-bust cycle. During periods of high oil prices, the government expands redistribution efforts, creating an artificial boost in demand that enables inefficient firms to operate profitably despite low productivity. These firms, insulated from market competition through state transfers and preferential policies, survive under conditions that would otherwise force them to exit in a more competitive environment. As a result, the economy exhibits a misallocation of resources, where factors of production remain tied to unproductive sectors instead of flowing to more dynamic industries.

The fragility of this model was exposed in 2015 when global oil prices collapsed. The sharp decline in revenues made it unsustainable for the government to maintain redistribution at previous levels. In response, rather than allowing market mechanisms to correct inefficiencies, policymakers resorted to closing the economy, imposing protectionist measures, and Central Bank balance sheet expansion (a Quantitative Easing mechanism) to finance public spending. This strategy, however, exacerbated macroeconomic imbalances, leading to liquidity shortages and a deterioration of Ecuador's fiscal position. As public investment declined, the constraints of the redistribution-driven economy became evident, and private sector growth stagnated due to a lack of incentives and competitive pressures.

The fiscal response to the crisis included an increase in public debt and financial agreements with international financial institutions (IFIs), including the International Monetary Fund (IMF). These efforts aimed at stabilizing Ecuador's macroeconomic position and addressing liquidity constraints. However, despite structural adjustment programs, little has changed in the fundamental model of redistribution and state control over key industries. The persistence of these distortions continues to inhibit private sector-led growth and limit productivity improvements across industries.

In the following section, we explain the mechanisms through which Ecuador's economic structure constrains growth by developing a theoretical model that integrates state monopolization of extractive industries and wealth redistribution. By illustrating how these mechanisms sustain inefficient firms

and generate adverse incentives, we contribute to a broader understanding of how state-led models interact with economic growth dynamics. Our findings suggest that without structural reforms to improve factor allocation and reduce reliance on redistributive policies, Ecuador will struggle to achieve sustained economic expansion.

3 Stylized Facts About the Ecuadorian Economy

Ecuador's economic performance over the past two decades underscores its deep dependence on the oil sector as a driver of GDP growth. While oil production has remained relatively stable, fluctuations in WTI oil prices have played a decisive role in shaping economic outcomes. Periods of high oil prices, such as 2008, 2011, and 2013, corresponded with notable GDP growth, driven by increased export revenues and heightened economic activity. Conversely, during downturns in oil prices—such as the 2015–2016 oversupply crisis and the 2020 COVID-19 pandemic—GDP contracted sharply, revealing the country's acute vulnerability to global market shocks. The graph below illustrates this entrenched relationship, showing how GDP dynamics closely track fluctuations in oil prices, even when production remains steady.

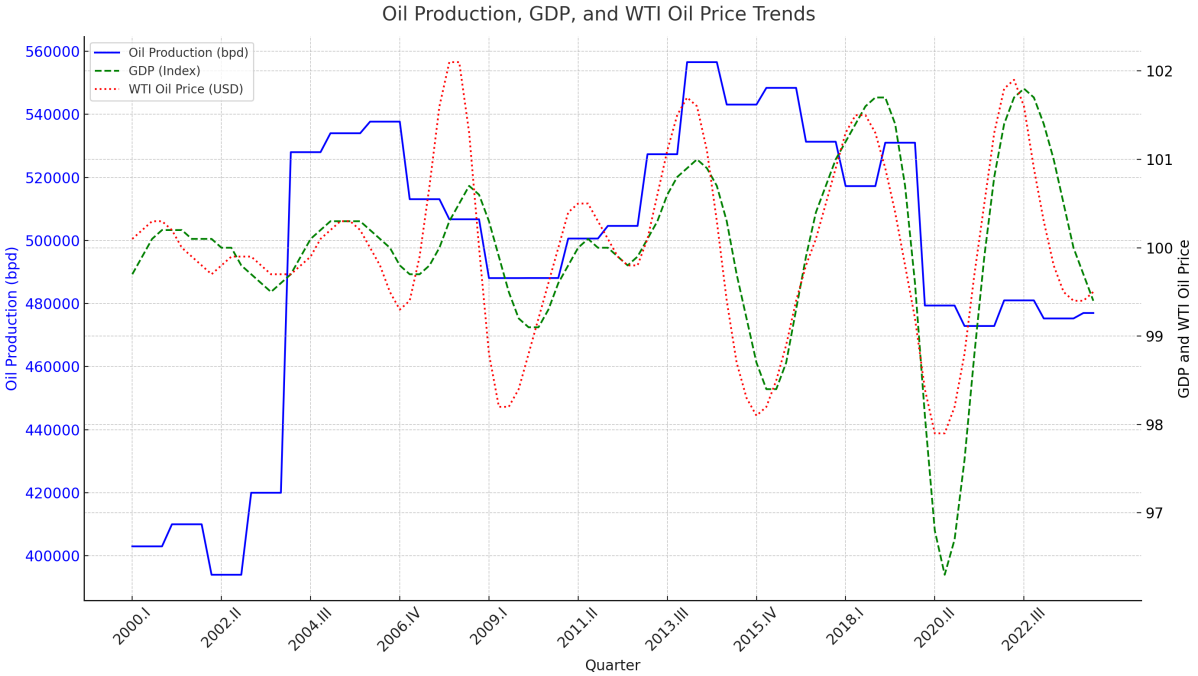

Figure 1: Trends in Oil Production, WTI Oil Prices, and GDP in Ecuador (2000–2024)

Ecuador's reliance on the oil sector highlights a deeper structural challenge: the country's limited capacity to diversify into other industries. While Ecuador's comparative advantage lies in oil, institutional constraints on domestic factor mobility and foreign direct investment have hindered diversification. These restrictions limit private capital investments, leaving the state as the primary driver of sectoral development. Addressing price volatility in the oil market remains an important goal, but it does not conflict with the opportunity to optimize Ecuador's economic potential by opening the oil sector to private investment. Allowing domestic and foreign capital to flow into the oil industry would improve the allocation of resources in sectors where Ecuador adds the most value, even if it does not solve price volatility. Paired with institutional reforms that facilitate broader investment across industries and mechanisms to buffer the impact of price shocks, this approach could unlock economic growth while reducing the country's dependence on oil performance and its vulnerability to global price fluctuations. These general ideas are supported by the conclusions and simulations derived from the following model.

Ecuador's economic model has historically centered around state control over extractive industries, particularly oil and mining. As of 2024, the oil sector accounted for approximately 8% of Gross Value Added (GVA), underscoring its continued importance to the economy. PetroEcuador, the state-owned oil company, controlled 65% of total oil production, limiting private sector participation and competition. Government oil revenues constituted 26% of total exports, highlighting fiscal dependence on commodity

markets. Despite the strategic importance of the oil sector, Ecuador has faced declining total factor productivity (TFP), reflecting inefficiencies arising from government monopolization. Between 2013 and 2023, TFP fell by 17%, indicating that resources were not being allocated efficiently.

Redistribution remains a cornerstone of Ecuador's economic policy, sustaining employment and consumption at the cost of long-term efficiency. Public employment reached 650,000 workers in 2024, with public wages consuming 84% of oil revenues. Broad subsidies for fossil fuels and electricity distorted price signals, discouraging private investment in energy efficiency. Total government transfers, including subsidies and direct income support, amounted to $13.3 billion in 2024, equivalent to 35% of total fiscal revenue. These redistributive mechanisms have allowed low-productivity firms to remain in operation, reducing incentives for technological adoption and business innovation.

Ecuador has exhibited persistently low economic growth relative to the Latin American region. Between 2013 and 2023, average annual GDP growth was 0.6%, compared to the regional average of 2.1%. Ecuador's labor productivity remained significantly below that of its peers, with a 154% gap relative to the United States and 97% relative to Chile. Gross fixed capital formation declined, reflecting weak investment in productive assets. Institutional weaknesses, policy uncertainty, and overregulation further exacerbated these constraints, deterring foreign direct investment (FDI) and limiting private sector-led growth.

The fiscal framework remains fragile, with public spending outpacing revenues. As of 2024, the fiscal deficit stood at 3.6% of GDP, requiring $7.8 billion in external financing. Ecuador's debt-to-GDP ratio continued to rise, increasing reliance on international financial institutions for stability. Public investment declined to $13.5 billion, reflecting fiscal constraints on infrastructure and development projects. The interplay between state control, redistribution, and fiscal imbalances suggests that without structural reforms, Ecuador will remain trapped in a low-growth equilibrium. The following sections explore the theoretical mechanisms through which these dynamics manifest and their implications for economic policy.

4 A General Model for Ecuador

Understanding the impact of trade opening on firm dynamics and factor reallocation is central to international trade theory. This model builds upon the framework of Melitz (2003), where firms are heterogeneous in productivity and compete in a monopolistically competitive market. Firms must cover fixed costs to remain active, and only the most productive firms survive when trade is liberalized.

In this baseline model, firms produce differentiated goods and face a downward-sloping demand curve. Each firm sets its price as a markup over marginal cost, and revenue is directly proportional to productivity:

$$r(\varphi) \propto \varphi^{\sigma-1}, \tag{1}$$

where σ is the elasticity of substitution. Firms with productivity below a critical threshold φ^* exit the market because they cannot generate sufficient revenue to cover their fixed costs:

$$\pi(\varphi^*) = 0 \quad \Rightarrow \quad r(\varphi^*) = \sigma f. \tag{2}$$

Trade opening increases competition, raising the productivity cutoff φ^* and reallocating labor and capital to more productive firms. Aggregate productivity, defined as the weighted average of firm productivity, is given by:

$$\tilde{\varphi} = \left(\int_{\varphi^*}^{\infty} \varphi^{\sigma-1} g(\varphi) d\varphi \right)^{\frac{1}{\sigma-1}}. \tag{3}$$

Now, consider the introduction of a government monopoly in the most productive industry. Given its high productivity, this monopolist will export most of its products. The revised aggregate productivity function for these sectors is:

$$\tilde{\varphi}_{nm} = \left(\int_{\varphi_m}^{\infty} \varphi^{\sigma-1} g(\varphi) d\varphi \right)^{\frac{1}{\sigma-1}}, \tag{4}$$

where $\varphi_m > \varphi*$ represents the productivity of the monopolized sector.

To further extend the model, we introduce a redistribution mechanism where the government transfers a fraction θ of its profits from the monopolized sector to less competitive firms in the domestic market.

Unlike a proportional allocation, redistribution is designed to favor firms with lower productivity. The transferred profit per firm is inversely proportional to productivity:

$$\pi_r(\varphi) = \frac{\lambda}{\varphi}. \tag{5}$$

This redistribution changes firm dynamics, as some low-productivity firms that would otherwise exit now remain operational. The new survival threshold, φ_r^*, satisfies:

$$\pi_r(\varphi_r^*) + \frac{r(\varphi_r^*)}{\sigma} = f. \tag{6}$$

The consequence of this intervention is a decline in aggregate productivity, as inefficient firms persist in the market. The revised productivity measure accounts for the prolonged survival of these firms:

$$\tilde{\varphi}_r = \left(\int_{\varphi_r^*}^{\varphi^*} \varphi^{\sigma-1} g(\varphi) d\varphi + \int_{\varphi^*}^{\varphi_m} \varphi^{\sigma-1} g(\varphi) d\varphi \right)^{\frac{1}{\sigma-1}}. \tag{7}$$

5 Model Calibration and Parameters

The model incorporates key parameters that characterize firm survival, government redistribution, and productivity in the Ecuadorian economy. These parameters, grounded in empirical data and theoretical foundations, influence firm dynamics and aggregate outcomes. The elasticity of substitution (σ) is set at 4, reflecting moderate differentiation across firms. Fixed operational costs (f) are normalized to 1, ensuring a minimum threshold for firm survival. The productivity of the monopolized sector (ϕ_m) is calibrated at 3, assuming moderate efficiency under state control.

The productivity distribution follows a Pareto distribution with shape parameter $\alpha = 2$, indicating a long tail of high-productivity firms. The lower ($\phi_{\min} = 0.1$) and upper ($\phi_{\max} = 5$) productivity bounds capture firm heterogeneity. Government redistribution is modeled as a function of oil revenue, with an initial transfer budget (λ_{initial}) set at 13.3, reflecting Ecuador's fiscal structure where transfers influence firm survival. The monopolized sector accounts for 50% of GDP.

To refine the calibration, key parameters were adjusted based on Ecuador-specific economic indicators. Table 1 presents the final model parameters.

Parameter	**Current Value**	**Ecuador Calibration**
λ_{initial} (Gov. Transfer Budget)	13.3	Adjusted based on oil revenue (35% of fiscal revenue)
Oil Revenue Formula	Fixed	Incorporated oil production and gov. share (65%)
ϕ_m (Productivity of Monopolized Sector)	3	Derived from SOE productivity estimates
$\phi_{\min}, \phi_{\max}$ (Min/Max Productivity)	0.1, 5	Based on firm-level productivity data
α (Pareto Shape Parameter)	2	Estimated from Ecuadorian firm data
Monopoly Share	0.5	Derived from monopolized sector's GDP contribution
Shock Response	Instant	Introduced lag in government spending adjustments

Table 1: Model parameter calibration based on Ecuador's economic structure.

6 Baseline Model and Simulations

The baseline model represents an economy where 35% of government fiscal revenue originates from oil exports. Given Ecuador's total fiscal revenue of $38 billion, oil-related revenue is estimated at $13.3 billion. The government redistributes a portion of this revenue to firms, determining their survival threshold (ϕ_r). Firms with productivity below ϕ_r exit the market, affecting aggregate productivity ($\tilde{\phi}$) and total output.

To analyze the dynamics of the economy, we simulate two key scenarios: an oil price drop and the de-monopolization of the economy. A 30% decline in oil prices (from $100 to $70 per barrel) reduces government revenue and restricts redistribution, leading to a rise in the survival threshold (ϕ_r), forcing the exit of low-productivity firms, and causing a contraction in total output as fewer firms remain and the monopolized sector's value declines. Conversely, the opening of the monopolized sector to private investment facilitates the entry of more productive firms, improving overall efficiency, boosting total

output through resource reallocation, and increasing the survival threshold (ϕ_r) as inefficient firms exit the market. The final simulation results are summarized in Table 2.

	Baseline	**Oil Price Drop**	**De-Monopolization**
Survival Threshold ϕ_r	2.54	4.18	2.80
Total Output	1.5006	1.0500	1.7519

Table 2: Simulation results under different scenarios.

The simulation results highlight the impact of both an oil price drop and de-monopolization on firm survival and total output. In the **baseline scenario**, the survival threshold (ϕ_r) is 2.54, and total output is 1.5006. When the **oil price drops by 30%**, government revenue contracts, reducing redistribution and forcing less productive firms out of the market. Consequently, the survival threshold rises to **4.18**, leading to a decrease in total output to **1.0500** due to firm exits and reduced monopolized sector productivity. In contrast, when the **monopolized sector is opened to private investment**, more productive firms enter, increasing efficiency and reallocating resources. This results in an increase in the survival threshold to **2.80**, while total output rises to **1.7519**, reflecting improved productivity and sectoral realignment. These findings underscore the importance of government revenue stability and market competition in shaping economic outcomes.

7 Conclusion

This study has presented an analytical narrative consistent with a simple yet powerful economic model that explains Ecuador's structural growth constraints. At the core of our argument is the institutional framework that grants the state a monopoly over the industries where Ecuador holds a comparative advantage—primarily extractive and export-driven sectors—while using the wealth generated from these industries to subsidize the rest of the economy. This redistributive mechanism, rather than fostering broader economic development, creates systemic inefficiencies by shaping incentives in ways that distort market dynamics and hinder productive investment. Under this institutional arrangement, economic agents across various sectors become, directly or indirectly, subsidiaries of the state, prioritizing rent-seeking behavior over efficiency and innovation.

The inefficiencies generated by this institutional framework manifest in two fundamental ways. First, resource misallocation arises because redistribution directs capital and labor not to their most productive uses but to sectors and firms that are politically favored or dependent on state transfers. Instead of allowing markets to determine the most efficient allocation of factors of production, the redistribution rule sustains inefficient firms, preventing necessary structural adjustments and productivity-enhancing shifts. Second, there is a severe misallocation of resources. Investments do not flow to sectors where they would yield the highest returns; instead, subsidized firms deter the entrance of productive firms, limiting the gains from trade liberalization.

Overcoming these institutional constraints is essential for unlocking Ecuador's sustainable economic growth potential. Without reforms that open up strategic industries to competitive investment and reduce the role of discretionary redistribution, the economy will remain trapped in a low-productivity equilibrium. A shift toward market-driven capital allocation and a more flexible labor market could allow resources to flow toward their most productive uses, fostering innovation, integration into international markets, and long-term growth. Reforming the institutional framework that sustains inefficiencies—by reducing state monopolization and reorienting redistribution toward productivity-enhancing policies—can create the conditions necessary for Ecuador to transition from a stagnant, subsidy-dependent economy to a dynamic, competitive, and sustainable one.

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