State Ownership and Market Distortions: Evidence from Vietnam

Thanh Quang Ngo

Ho Chi Minh City University of Industry and Trade, Vietnam

Address: 140 Le Trong Tan, Tay Thanh Ward, Ho Chi Minh City, Vietnam

Email: thanhnq@huit.edu.vn. ORCID: 0009-0002-4805-5281

Abstract

This paper examines how state ownership affects firm dynamics and resource allocation in Vietnam. Using firm-level data from the Enterprise Census, we exploit variation in the local dominance of state-owned enterprises across provinces and over time. We find that greater SOE presence is associated with significantly lower firm growth in both employment and revenue. More importantly, SOE dominance weakens market selection. Firms are less likely to exit in provinces with higher SOE shares, and low-productivity firms are less likely to be displaced. These patterns are accompanied by greater dispersion in firm productivity and weaker alignment between productivity and employment shares. The results suggest that the primary impact of state ownership operates through distortions in the selection process rather than through changes in within-firm adjustment. While the empirical strategy does not fully establish causality, the consistent patterns across multiple outcomes point to a systematic relationship between state ownership and market inefficiency.

Keywords: *State ownership; Misallocation; Firm dynamics; Entry and exit; Productivity; Political economy; Vietnam*

JEL Codes: D24; L25; O43; P26; D22

1. Introduction

State ownership remains a central feature of many developing and transition economies, yet its impact on market functioning is still not fully understood. A large literature in macroeconomics emphasizes that distortions affecting the allocation of resources across firms can have substantial aggregate consequences (Hsieh & Klenow, 2009; Restuccia & Rogerson, 2008, 2017). In this context, the presence of state-owned enterprises (SOEs) may play a particularly important role. Unlike private firms, SOEs often operate under multiple objectives and may benefit from preferential access to credit, land, or regulatory protection, potentially weakening competitive pressures and altering market selection (Kornai, 1986; Shleifer & Vishny, 1994). However, while existing work has documented the aggregate role of distortions, there is limited micro-level evidence on how variation in state-sector dominance within a country affects firm dynamics and the allocation of resources across firms.

This paper studies how differences in SOE dominance across local markets shape firm behavior and resource allocation in Vietnam. Vietnam provides a useful setting for this analysis.

Despite decades of market-oriented reforms, the state sector continues to account for a substantial share of economic activity, with considerable variation across provinces and industries. This variation allows us to examine how exposure to state ownership affects firm growth, exit, and the efficiency of resource allocation within narrowly defined markets.

Using comprehensive firm-level data from the Vietnamese Enterprise Census over the period 2015–2023, we construct measures of SOE dominance at the province–year level and link them to firm-level outcomes. We focus on three dimensions of market performance. First, we examine firm growth in employment and revenue. Second, we study market selection by analyzing firm exit and its relationship with productivity. Third, we assess allocative efficiency using measures of productivity dispersion and the correlation between firm productivity and employment shares within markets.

Our empirical results point to three main findings. First, higher SOE dominance is associated with significantly lower firm growth in both employment and revenue. This pattern is robust across specifications with firm and time fixed effects and suggests that a larger state presence may dampen the expansion of private firms. Second, SOE dominance weakens market selection. Firms operating in more state-dominated environments are less likely to exit, and the relationship between productivity and survival becomes weaker. In particular, we find evidence that low-productivity firms are less likely to be displaced in markets with a stronger SOE presence. Third, these distortions are reflected in greater dispersion of firm-level productivity within local markets. Consistent with a weakening of competitive pressures, provinces with higher SOE shares exhibit wider gaps between high- and low-productivity firms.

By contrast, we find limited evidence that SOE dominance systematically alters the relationship between productivity and within-firm growth. Interaction terms between productivity and SOE exposure are generally small and imprecisely estimated. This suggests that the primary channel through which state ownership affects aggregate outcomes is not through distortions in the expansion of incumbent firms, but rather through changes in market selection and reallocation across firms.

This paper makes three main contributions. First, it provides new micro-level evidence on the role of state ownership in shaping resource allocation within markets. While the existing misallocation literature has documented the aggregate consequences of distortions (Hsieh & Klenow, 2009; Restuccia & Rogerson, 2017), much of the empirical work relies on cross-country comparisons or structural approaches. By contrast, we exploit within-country variation in SOE dominance to show how ownership structure affects firm dynamics and market outcomes in a unified empirical framework.

Second, the paper contributes to the political economy literature on state ownership by identifying a specific mechanism through which SOEs affect economic performance. Rather than focusing solely on differences in firm-level productivity or efficiency, we show that SOE dominance weakens market selection by reducing the likelihood that low-productivity firms exit. This channel has received limited attention in the empirical literature, which has largely emphasized preferential access to inputs or differences in firm behavior (Shleifer & Vishny, 1994; La Porta et al., 2002). Our results highlight the importance of selection and reallocation as key margins through which state ownership influences aggregate productivity.

Third, the paper contributes to the literature on firm dynamics and productivity dispersion by linking ownership structure to the distribution of productivity within markets. We document that higher SOE dominance is associated with greater dispersion in firm-level productivity, consistent with a weakening of competitive pressures. At the same time, we find limited evidence that SOE presence affects the relationship between productivity and within-firm growth. Taken together, these findings suggest that distortions operate primarily through cross-firm reallocation rather than within-firm adjustment, providing a more precise characterization of how institutional features shape aggregate outcomes.

The remainder of the paper is organized as follows. Section 2 reviews the related literature. Section 3 describes the data and variable construction. Section 4 presents the empirical strategy. Section 5 reports the main results on firm growth, exit, and productivity dispersion. Section 6 discusses the implications of the findings. Section 7 concludes.

2. Literature Review

2.1 Misallocation and Aggregate Productivity

A central insight in modern macro and development economics is that differences in aggregate productivity across countries are not driven solely by technological gaps, but also by how efficiently resources are allocated across firms. A large body of work shows that distortions in factor markets can lead to substantial productivity losses by preventing resources from flowing toward more efficient producers.

The seminal contribution of Hsieh and Klenow (2009) demonstrates that misallocation in manufacturing sectors can account for large differences in total factor productivity across countries. In their framework, wedges in capital and labor markets distort firm size and reduce aggregate output. Subsequent work extends this approach and emphasizes that policy distortions, regulatory barriers, and institutional constraints are key sources of inefficiency (Restuccia and Rogerson (2008); Restuccia and Rogerson (2017)).

While this literature has made substantial progress in measuring the magnitude of misallocation, it typically treats distortions as reduced-form wedges. As a result, less attention has been paid to the political and institutional origins of these distortions. In particular, the role of state ownership as a structural determinant of misallocation remains underexplored at the micro level.

2.2 Firm Dynamics, Selection, and Reallocation

A complementary literature focuses on firm dynamics and the role of entry, exit, and selection in shaping aggregate productivity. Efficient markets are characterized by a process of continuous reallocation, in which more productive firms expand while less productive firms contract or exit.

Empirical evidence from advanced and developing economies shows that differences in productivity are strongly linked to firm growth and survival (Bartelsman, Haltiwanger, and Scarpetta (2013)). This process of selection is a key driver of aggregate efficiency, as it reallocates resources toward higher-productivity producers.

More recent work highlights that this reallocation process may weaken over time. Cooper, Haltiwanger, and Willis (2024) document a decline in the responsiveness of firm growth to productivity differences, suggesting that distortions can operate through dynamic channels by weakening selection and adjustment.

This perspective shifts attention from static measures of dispersion toward **dynamic misallocation**, where distortions affect not only the distribution of productivity but also the mechanisms through which markets reallocate resources.

2.3 Political Economy of State Ownership

A growing literature in political economy examines the role of state ownership in shaping economic outcomes. State-owned enterprises often operate under objectives that extend beyond profit maximization, including employment stabilization, strategic sector control, and political considerations (Shleifer & Vishny, 1994; Megginson & Netter, 2001).

These objectives can lead to preferential access to resources, such as credit, land, and regulatory protection, which may distort competition with private firms. In addition, soft budget constraints may allow less efficient firms to survive longer than they would in competitive markets (Kornai, 1986; Bai et al., 2006; Brandt et al., 2012).

At the macro level, studies suggest that a large state sector may reduce efficiency by crowding out private investment and weakening competitive pressures (La Porta et al., 2002; Song et al., 2011). However, micro-level evidence on how local variation in state-sector dominance affects firm behavior and allocation remains limited.

2.4 Local Institutions and Market Outcomes

Another related strand of literature emphasizes the importance of local institutions and governance in shaping economic performance. Differences in regulatory quality, bureaucratic efficiency, and policy implementation across regions can lead to substantial variation in firm outcomes (Acemoglu & Johnson, 2005; North, 1990).

Empirical studies show that local institutional quality affects firm entry, growth, and productivity through multiple channels, including access to finance, contract enforcement, and administrative burden (Dollar et al., 2005; Hallward-Driemeier et al., 2006). In decentralized systems, local governments play a crucial role in mediating the relationship between firms and the state.

However, existing work has largely focused on broad measures of governance and institutional quality. Less attention has been paid to specific structural features of local economies, such as the composition of ownership, which may directly influence market functioning.

In this context, the presence of state-owned enterprises can be viewed as a concrete manifestation of local institutional arrangements, reflecting both historical legacies and ongoing policy choices.

2.5 Bridging Misallocation and Political Economy

Despite significant advances in both the misallocation and political economy literatures, the link between them remains incomplete. Misallocation is often modeled as an abstract distortion, while political economy studies focus on institutions without directly quantifying their impact on resource allocation.

This paper bridges these two strands by treating state-sector dominance as an observable institutional feature that shapes market allocation. Rather than inferring distortions from residual wedges, the analysis directly examines how the presence of SOEs affects firm dynamics and the allocation of resources across firms.

This approach aligns with recent calls to integrate micro-level evidence with institutional analysis, moving beyond reduced-form measures toward a more structural understanding of the sources of inefficiency.

2.6 The Case of Vietnam

Vietnam provides a particularly suitable setting for this analysis. Since the onset of economic reforms, the country has experienced rapid growth and structural transformation, while maintaining a significant state sector (World Bank, 2019; McCaig & Pavcnik, 2018).

SOEs continue to play a prominent role in many provinces, with substantial variation in their importance across regions and industries. At the same time, the private sector has expanded rapidly, creating a dual structure in which state and private firms coexist and compete (Nguyen & Van Dijk, 2012; OECD, 2021).

This institutional configuration generates a natural laboratory for studying how state-sector dominance affects market outcomes. The combination of detailed firm-level data and rich regional variation allows for a granular analysis of both static and dynamic aspects of allocation.

2.7 Contribution of This Paper

This paper contributes to the literature in three main ways. First, it provides micro-level evidence linking state ownership to misallocation, moving beyond reduced-form wedges to examine the institutional sources of distortions. Second, it highlights the importance of dynamic channels, showing how state-sector dominance affects entry, exit, and the responsiveness of firm outcomes to productivity. Third, it contributes to the political economy literature by demonstrating that local ownership structures are not merely passive features of the economy, but active determinants of market performance. By integrating insights from misallocation, firm dynamics, and political economy, the paper offers a unified framework for understanding how institutional structures shape economic efficiency.

3. Data and Variable Construction

3.1 Data Sources and Sample Construction

This paper uses firm-level panel data from the Vietnam Enterprise Census covering the period 2015–2023. The dataset provides comprehensive information on registered firms, including ownership structure, employment, revenue, capital, and industry classification. The panel structure

allows tracking firms over time and examining both within-firm dynamics and market-level reallocation.

The analysis focuses on non-missing firm-year observations with valid identifiers and economic variables. Firms with implausible values, such as negative employment or revenue, are excluded. The final sample constitutes an unbalanced panel, reflecting the natural processes of firm entry and exit.

The use of an unbalanced panel is intentional and central to the research design. Market distortions are not only reflected in the behavior of incumbent firms but also in the selection process governing which firms enter, survive, and exit. Restricting the sample to a balanced panel would mechanically remove these margins and bias the analysis toward more stable and typically larger firms. For outcomes requiring intertemporal comparisons, such as growth rates, the analysis is conducted on firms observed in consecutive years.

3.2 Ownership and SOE Dominance

Firm ownership is classified based on administrative categories in the census. A firm is defined as a state-owned enterprise if it is classified under state ownership. Using this definition, an indicator variable is constructed to identify SOEs at the firm level.

The central explanatory variable is the degree of local state-sector dominance. This is measured as the share of employment accounted for by SOEs within a given geographic or market unit.

At the province-year level, SOE dominance is defined as:

$$SOEshare_{p,t} = \frac{\sum_{i \in p,t} Employment_i \, . SOE_i}{\sum_{i \in p,t} Employment_i}$$

This measure captures the extent to which the local economy is dominated by state-owned firms.

To account for market-specific variation, an alternative measure is constructed at the province-industry-year level:

$$SOEshare_{p,s,t} = \frac{\sum_{i \in p,s,t} Employment_i \, . SOE_i}{\sum_{i \in p,s,t} Employment_i}$$

This finer measure allows controlling for sectoral composition and provides a more precise proxy for local competitive conditions.

3.3 Entry and Exit

Firm entry is defined as the first appearance of a firm in the panel. For each firm, the initial year of observation is identified, and an entry indicator is set equal to one in that year.

At the aggregate level, entry rates are constructed as the ratio of newly entering firms to the total number of active firms within a given province-year or province-industry-year cell.

Firm exit is defined as the disappearance of a firm from the dataset. Specifically, a firm is considered to exit in year t if it is observed in year t but not in year t+1. Observations in the final year of the panel are excluded from exit calculations to avoid right-censoring bias.

Exit rates are computed analogously to entry rates as the proportion of exiting firms relative to the total number of active firms in a given market.

These measures capture the extensive margin of firm dynamics and are central to understanding how institutional environments shape market selection.

3.4 Productivity and Growth

Firm-level productivity is measured using total factor productivity estimates derived from production function methods. The baseline specification relies on Levinsohn–Petrin (LP) estimates, which account for unobserved productivity shocks using intermediate inputs as proxies.

To analyze firm dynamics, growth rates are constructed as log differences in key variables. Employment growth is defined as the change in the logarithm of employment between consecutive years. Revenue growth is constructed analogously.

Lagged productivity is used to examine the responsiveness of firm outcomes to underlying efficiency differences, which is a key dimension of allocative efficiency.

3.5 Productivity Dispersion

To capture the degree of misallocation within markets, the analysis constructs measures of productivity dispersion at the province-industry-year level. These measures reflect the extent to which firms with different productivity levels coexist within the same market.

Three complementary indicators are used. First, the standard deviation of log productivity measures overall dispersion. Second, the interquartile range, defined as the difference between the 75th and 25th percentiles, captures dispersion in the central part of the distribution. Third, the difference between the 90th and 10th percentiles captures dispersion in the tails.

Higher dispersion is typically interpreted as evidence of greater misallocation, as resources are less concentrated in high-productivity firms (Hsieh & Klenow, 2009; Restuccia & Rogerson, 2017).

3.6 Misallocation Proxies

In addition to dispersion measures, the paper constructs several indicators that capture different dimensions of allocative efficiency.

Allocation of resources across firms

A key measure is the relationship between firm productivity and resource allocation. In an efficient allocation, more productive firms should command larger shares of employment or output.

To quantify this, the analysis computes the correlation between firm-level productivity and employment shares within each province-industry-year cell. A lower correlation indicates weaker alignment between productivity and resource allocation, consistent with greater distortion.

Employment concentration in low-productivity firms

Another indicator focuses on the distribution of labor across firms with different productivity levels. Firms are classified as low-productivity if their productivity falls below the median within the same market.

The share of total employment accounted for by these firms is then computed. A higher share indicates that a larger fraction of labor is allocated to less efficient firms, suggesting misallocation.

A stricter version of this measure considers firms in the bottom quartile of the productivity distribution.

Responsiveness of firm outcomes

Misallocation may also manifest through weaker responsiveness of firm outcomes to productivity differences. In efficient markets, more productive firms should grow faster and less productive firms should exit more frequently.

To capture this mechanism, the analysis examines how the relationship between productivity and firm growth or exit varies with the degree of SOE dominance. A weaker relationship in high-SOE environments indicates that institutional factors dampen the reallocation process.

Quality of entrants

Finally, the analysis considers the productivity of entering firms. In well-functioning markets, entry should be selective, with more productive firms entering and expanding.

The average productivity of entrants within each market is used as an indicator of entry quality. Lower entrant productivity in high-SOE environments suggests barriers to efficient market selection.

3.7 Empirical Interpretation

The combination of these measures provides a comprehensive picture of market distortions. Rather than relying on a single indicator, the analysis examines multiple dimensions of allocation, including dispersion, selection, and responsiveness.

This approach is consistent with the broader literature on misallocation, which emphasizes that distortions operate through both static and dynamic channels (Hsieh & Klenow, 2009; Bartelsman et al., 2013; Restuccia & Rogerson, 2017). By linking these outcomes to variation in local SOE dominance, the paper provides direct evidence on the political economy origins of misallocation.

4. Empirical Strategy and Identification

4.1 Empirical Framework

The empirical strategy is designed to identify robust reduced-form relationships between local state-sector dominance and firm dynamics, rather than to establish fully causal effects.

To examine the impact of state ownership on firm dynamics, we estimate the following baseline specification:

$$Y_{fpit} = \beta \ SOE_{p,t-1} + \gamma \ X_{f,t-1} + \alpha_f + \lambda_t + \mathcal{E}_{fpit}$$

where Y_{fpit} denotes firm-level outcomes, including employment growth, revenue growth, and exit for firm f in province p, industry i, and year t. The key explanatory variable, $SOE_{p,t-1}$, measures the lagged share of employment in state-owned enterprises at the province–year level. The vector $X_{f,t-1}$ includes lagged firm-level controls, such as total factor productivity and capital intensity.

The specification includes firm fixed effects (α_f), which absorb time-invariant firm characteristics, and year fixed effects (λ_t), which capture aggregate shocks common to all firms. Standard errors are clustered at the province level to account for spatial correlation in shocks and policies.

4.2 Identification and interpretation

Identification relies on within-firm variation in exposure to SOE dominance, arising from differential changes in provincial SOE shares over time. Conditional on firm fixed effects and common time shocks, the coefficient β\betaβ captures how changes in local exposure to state ownership affect firm outcomes within the same firm over time.

A key concern is that SOE dominance may be endogenous to local economic conditions. For example, provinces experiencing weaker private sector growth may maintain a larger state sector, leading to reverse causality. To mitigate this concern, we adopt three strategies.

First, all explanatory variables are lagged by one period. This reduces the likelihood that contemporaneous firm outcomes affect measured SOE dominance.

Second, we exploit within-firm variation by including firm fixed effects, which control for persistent differences in productivity, management quality, and sectoral specialization.

Third, in more demanding specifications, we include industry-by-year fixed effects, which absorb shocks common to firms operating in the same industry at the national level. This ensures that identification is driven by differential exposure to SOE dominance across provinces within the same industry and year.

Under these assumptions, our estimates can be interpreted as reduced-form effects of local state-sector dominance on firm dynamics.

4.3 Market-level outcomes

To study allocative efficiency and market structure, we aggregate firm-level data to the province–industry–year level and estimate:

$$Z_{pit} = \beta \ SOE_{p,t-1} + \delta \ \ln(N_{pit}) + \mu_p + \theta_i + \lambda_t + \mathcal{E}_{pit}$$

where Z_{pit} denotes market-level outcomes, including productivity dispersion and measures of allocative efficiency. The variable N_{pit} captures the number of firms in each market, included to control for differences in market size.

These specifications include province, industry, and year fixed effects. Standard errors are clustered at the province level.

4.4 Selection and interaction effects

To examine whether SOE dominance affects market selection, we estimate models of firm exit that allow for heterogeneous effects by productivity:

$$Exit_{ft} = \beta_a LowTFP_{f,t-1} + \beta_2 \mathrm{SOE}_{p,i-1} + \beta_3 (LowTFP_{f,t-1} \, x \, SOR_{p,t-1}) + \gamma \ X_{f,t-1} + FE + \mathcal{E}_{ft}$$

where LowTFP is an indicator for firms in the lower part of the productivity distribution. The interaction term captures whether the likelihood that low-productivity firms exit varies with SOE dominance.

A negative coefficient on the interaction term would indicate that SOE presence weakens market selection by allowing less productive firms to survive.

4.5 Discussion of identification limitations

Despite the rich set of controls and fixed effects, the empirical strategy remains subject to limitations. In particular, time-varying unobserved factors at the province level may still be correlated with both SOE dominance and firm outcomes. While lagging the key explanatory variable and including fixed effects helps mitigate these concerns, the results should be interpreted as evidence of strong associations rather than fully causal estimates.

Nevertheless, the consistency of results across specifications and outcome variables, together with the alignment of findings with theoretical predictions on market selection and misallocation, provides support for the proposed mechanisms.

4.6 Robustness and Alternative Specifications (lean version)

To assess the robustness of the main findings, we estimate a range of alternative specifications. First, we vary the set of fixed effects by replacing firm and year fixed effects with industry-by-year fixed effects. The results remain qualitatively similar, suggesting that the findings are not driven by industry-specific shocks at the national level.

Second, we examine the sensitivity of the results to alternative samples. In particular, we exclude the final year of the panel to address potential measurement issues in the definition of firm exit. The estimated effects of SOE dominance on firm growth and exit remain stable.

Third, we consider alternative measures of market structure and dispersion. In addition to the standard deviation of productivity, we use the interquartile range and the 90–10 percentile gap. The results consistently indicate higher dispersion in markets with greater SOE presence.

While these exercises provide support for the baseline findings, we acknowledge that the empirical strategy does not fully eliminate all sources of endogeneity. In particular, time-varying province-level factors may still be correlated with both SOE dominance and firm outcomes. Therefore, the results should be interpreted as evidence of systematic relationships consistent with the proposed mechanisms, rather than definitive causal estimates.

The empirical framework implies a set of sharp, testable predictions regarding how local state-sector dominance shapes firm dynamics and market allocation.. If SOE presence primarily operates through distortions in market selection, rather than within-firm adjustment, we should observe three patterns. First, firm growth may be dampened on average, but without a systematic change in the responsiveness of growth to productivity. Second, exit behavior should be directly affected, with weaker productivity-based selection in more state-dominated environments. Third, these distortions should manifest at the market level in the form of greater productivity dispersion and weaker alignment between productivity and resource allocation.

The results presented in the next section are organized around these predictions. We begin with firm-level growth outcomes, then turn to exit and selection mechanisms, and finally examine market-level indicators of allocative efficiency. This structure allows us to trace a consistent empirical narrative from firm behavior to aggregate market outcomes.

5. Estimation results

5.1 Descriptive patterns

Table 1 reports descriptive statistics for the main variables used in the analysis. The firm-level sample is large and highly heterogeneous, which is consistent with the broad coverage of the Vietnam Enterprise Census. The distribution of firm outcomes shows substantial variation in employment growth, revenue growth, and firm exit, suggesting that the enterprise sector is characterized by considerable dynamism as well as wide differences in performance across firms and markets. At the same time, the distribution of provincial SOE employment share indicates meaningful cross-provincial variation in state-sector dominance. This variation is important for identification because it provides the institutional heterogeneity that underlies the empirical analysis.

The market-level variables also reveal substantial dispersion in productivity and allocation outcomes across province-industry-year cells. The standard deviation of TFP, the interquartile range, and the p90–p10 spread all suggest that productivity differences within local markets remain large. Similarly, the correlation between productivity and employment shares, as well as the share of employment accounted for by low-productivity firms, varies substantially across local markets. These descriptive patterns are consistent with the idea that resource allocation may differ systematically across local institutional environments.

Table 1. Descriptive statistics
Panel A. Firm-level variables

	Mean	SD	Min	Max	N
Employment growth	-0.072	0.990	-7.146	7.146	474106
Revenue growth	0.804	3.292	-19.227	27.803	474106
Firm exit	0.242	0.428	0.000	1.000	625132
Lagged TFP	0.329	1.746	-3.235	16.015	253989
Lagged SOE employment share	0.044	0.038	0.000	0.426	669733
Lagged IHS capital	7.896	7.399	0.000	26.976	439556
Observations	729849				

Panel B. Market-level variables

	Mean	SD	Min	Max	N
Entry rate	0.236	0.326	0.000	1.000	10822
Exit rate	0.247	0.285	0.000	1.000	9583
TFP standard deviation	0.570	0.364	0.000	4.716	6897
TFP interquartile range	0.580	0.546	0.000	6.669	8097
TFP p90-p10 spread	1.090	0.906	0.000	12.573	8097
TFP-employment correlation	0.027	0.490	-2.407	1.731	6877
Employment share of low-productivity firms	0.215	0.261	0.000	0.996	10822
Mean TFP of entrants	0.982	1.874	-1.938	13.898	4090
Lagged SOE employment share	0.052	0.064	0.000	0.426	9626
Number of firms	67.441	233.850	1.000	4210.000	10822
Observations	10822				

This table reports summary statistics for the main variables used in the analysis. The sample includes firms from the Vietnamese Enterprise Census over the period 2015–2023. Employment and revenue growth are defined as log differences. Total factor productivity (TFP) is estimated using the Levinsohn–Petrin method. SOE share is measured as the share of employment in state-owned enterprises at the province–year level. All monetary variables are expressed in real terms.

5.2 SOE dominance and firm employment growth

Table 2 examines whether SOE dominance is associated with firm-level employment growth. Across all specifications, the coefficient on lagged provincial SOE employment share is negative and statistically significant. In the baseline specification, a higher SOE share is associated with lower subsequent employment growth. This result remains stable when lagged productivity and lagged capital are added, suggesting that the negative relationship is not merely driven by differences in firm productivity or capital intensity.

Lagged productivity is negative and statistically significant, indicating that firms with higher productivity in the previous period do not, on average, expand employment more rapidly. This pattern is consistent with labor-saving adjustment rather than labor-absorbing expansion. Lagged capital also

enters negatively and significantly, which reinforces the interpretation that capital deepening is associated with weaker subsequent labor growth.

By contrast, the interaction between lagged productivity and SOE dominance is not statistically significant. This implies that although SOE dominance is associated with weaker average employment growth, it does not significantly alter the relationship between productivity and employment expansion. In other words, the evidence does not support the view that state-sector dominance distorts allocation primarily through within-firm employment growth responses. The growth channel matters at the level of average firm performance, but not as the main mechanism through which productivity-based selection is weakened.

Table 2. SOE dominance and firm employment growth

	(1) Employment growth	(2) Employment growth	(3) Employment growth	(4) Employment growth
Lagged SOE employment share	-1.513***	-2.437***	-2.434***	-2.434***
	(0.483)	(0.908)	(0.901)	(0.901)
Lagged TFP		-0.065***	-0.063***	-0.063***
		(0.008)	(0.012)	(0.012)
Lagged IHS capital		-0.140***	-0.140***	-0.140***
		(0.008)	(0.008)	(0.008)
Lagged TFP x Lagged SOE employment share			-0.038	-0.038
			(0.151)	(0.151)
Constant	-0.007	1.241***	1.242***	1.242***
	(0.023)	(0.107)	(0.108)	(0.108)
Observations	438,697	229,881	229,881	229,881
R-squared	0.257	0.373	0.373	0.373

Notes: The dependent variable is firm-level employment growth. The key explanatory variable is the lagged SOE employment share at the province–year level. Control variables include lagged firm productivity and capital. All specifications include firm and year fixed effects. Standard errors are clustered at the province level and reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

5.3 SOE dominance and firm revenue growth

Table 3 turns to firm revenue growth. The results closely mirror those for employment growth. Lagged SOE dominance is negative and statistically significant across specifications, indicating that firms located in more state-dominated local environments experience slower revenue growth. This finding suggests that the adverse influence of SOE dominance is not confined to labor adjustment, but extends more broadly to firm performance.

Lagged productivity again enters negatively and significantly, and lagged capital also has a negative coefficient. The interaction between lagged productivity and SOE dominance remains statistically insignificant. This pattern is important because it reinforces the conclusion from the employment-growth regressions. SOE dominance appears to depress firm growth on average, but it does not significantly reshape the mapping from productivity to firm expansion. The absence of a significant interaction suggests that distortions do not primarily operate through the growth performance of incumbent firms.

Taken together, Tables 2 and 3 indicate that SOE dominance is associated with weaker firm growth in both employment and revenue terms, but they do not provide strong evidence that the state sector distorts resource allocation through within-firm growth differentials across productivity levels.

Table 3. SOE dominance and firm revenue growth

	(1) Revenue growth	(2) Revenue growth	(3) Revenue growth	(4) Revenue growth
Lagged SOE employment share	-3.212***	-3.904**	-3.890**	-3.890**
	(1.062)	(1.695)	(1.680)	(1.680)
Lagged TFP		-0.204***	-0.197***	-0.197***
		(0.019)	(0.030)	(0.030)
Lagged IHS capital		-0.212***	-0.213***	-0.213***
		(0.019)	(0.019)	(0.019)
Lagged TFP x Lagged SOE employment share			-0.164	-0.164
			(0.328)	(0.328)
Constant	0.980***	3.417***	3.419***	3.419***
	(0.055)	(0.225)	(0.224)	(0.224)
Observations	438,697	229,881	229,881	229,881
R-squared	0.504	0.614	0.614	0.614

Notes: The dependent variable is firm-level revenue growth. The key explanatory variable is the lagged SOE employment share at the province–year level. Control variables include lagged firm productivity and capital. All specifications include firm and year fixed effects. Standard errors are clustered at the province level and reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

5.4 SOE dominance and firm exit

Table 4 provides the strongest evidence in the paper. The coefficient on lagged SOE dominance is negative and statistically significant across all exit specifications, indicating that firms in more state-dominated environments are less likely to exit. This result suggests that local state-sector dominance weakens the market selection process by reducing firm turnover.

Once lagged productivity and lagged capital are included, the negative association between SOE dominance and firm exit remains robust. More importantly, the interaction between lagged productivity and SOE dominance is negative and marginally statistically significant. This result indicates that productivity-based selection is weaker in provinces with a stronger state-sector presence. Put differently, the survival advantage associated with higher productivity is reduced in more state-dominated local environments.

This is a central result for the paper. It implies that the state sector does not merely depress firm outcomes on average. Rather, it weakens the extent to which market selection rewards productivity differences. This finding is consistent with a political economy interpretation in which SOE dominance softens competitive pressure and allows firms to survive under conditions that would be less sustainable in more market-oriented local environments.

The negative coefficient on lagged capital further indicates that firms with larger capital stocks are less likely to exit, which is intuitive in a setting where capital depth may proxy for firm scale, market power, or better access to finance. However, the key mechanism remains the same. SOE dominance is associated with weaker exit discipline, and this is where the distortion story becomes most compelling.

Table 4. SOE dominance and firm exit

	(1) exit_firm	(2) exit_firm	(3) exit_firm
Lagged SOE employment share	-0.285**	-0.425***	-0.424***
	(0.117)	(0.138)	(0.138)
Lagged TFP		0.002	0.004**
		(0.002)	(0.002)
Lagged IHS capital		-0.014***	-0.014***
		(0.005)	(0.005)
Lagged TFP x Lagged SOE employment share			-0.041*
			(0.024)
Constant	0.263***	0.346***	0.346***
	(0.011)	(0.036)	(0.036)
Observations	565,016	231,854	231,854
R-squared	0.147	0.073	0.073

Notes: The dependent variable is an indicator equal to one if a firm exits in year t. Exit is defined as disappearance from the dataset in year t+1. The key explanatory variable is the lagged SOE employment share at the province–year level. All specifications include firm and year fixed effects. The sample excludes the final year to avoid mechanical exit. Standard errors are clustered at the province level and reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

5.5 SOE dominance and productivity dispersion

Table 5 examines whether weaker selection in high-SOE environments is reflected in broader dispersion of productivity across firms. The answer is yes. Lagged SOE dominance is positively and significantly associated with the standard deviation of TFP and with the p90–p10 productivity spread. Although the coefficient on the interquartile range is positive but statistically insignificant, the overall pattern is clear: local markets with stronger state-sector dominance exhibit greater productivity dispersion.

This result is important because it links the firm-level selection evidence to a broader market-level outcome. If more state-dominated local environments weaken exit discipline and allow firms with weaker performance to remain active, one would expect the productivity distribution within markets to become more dispersed. The positive coefficients on dispersion measures are fully consistent with that mechanism.

In substantive terms, these findings suggest that SOE dominance is associated with a less efficient allocation of resources across firms. The state sector appears to soften selection pressures, and the aggregate consequence is a wider spread of productivity levels within local markets.

Table 5. SOE dominance and productivity dispersion

	(1) (mean) sd_tfp_piy	(2) (mean) iqr_tfp_piy	(3) (mean) p90p10_tfp_piy
Lagged SOE employment share	0.407***	0.196	0.727***
	(0.123)	(0.176)	(0.257)
Constant	0.548***	0.582***	1.072***
	(0.006)	(0.009)	(0.013)
Observations	5,845	6,724	6,724
R-squared	0.169	0.122	0.229

Notes: The dependent variables are measures of productivity dispersion at the province–industry–year level, including the standard deviation, interquartile range, and the 90–10 percentile gap of TFP. The key explanatory variable is the lagged SOE employment share at the province–year level. Regressions are estimated at the aggregated market level and include province, industry, and year fixed effects. Standard errors are clustered at the province level and reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

5.6 SOE dominance and resource allocation

Table 6 considers more direct indicators of allocative efficiency. The first measure is the correlation between firm productivity and employment shares within province-industry-year cells. The second is the employment share accounted for by low-productivity firms. The results point in the expected direction, though they are less precisely estimated than the exit and dispersion results.

The coefficient on SOE dominance is negative in the productivity-employment correlation regression, suggesting that stronger state-sector presence weakens the alignment between productivity and labor allocation. The coefficient on SOE dominance is positive in the low-productivity employment share regression, suggesting that more labor remains concentrated in weaker firms in high-SOE environments. However, only the market-size control is precisely estimated in the second regression, while the SOE coefficient itself is not statistically significant.

These results should therefore be interpreted cautiously. They are suggestive rather than definitive. Still, they are consistent with the broader pattern that emerges from the paper. The stronger evidence comes from the exit and productivity-dispersion results, while the direct allocation indicators move in the expected direction but are estimated less precisely.

Table 6. SOE dominance and resource allocation

	(1) TFP-Employment Correlation	(2) Low-productivity Employment Share
Lagged SOE employment share	-0.214	0.005
	(0.150)	(0.054)
Log number of firms	-0.053*	0.043***
	(0.029)	(0.007)
Constant	0.240**	0.083***
	(0.094)	(0.020)
Observations	4,889	8,335
R-squared	0.708	0.634

Notes: The dependent variables capture allocative efficiency at the province–industry–year level, including the correlation between firm productivity and employment shares, and the employment share of low-productivity firms. The key explanatory variable is the lagged SOE employment share at the province–year level. All specifications control for market size using the log number of firms and include province, industry, and year fixed effects. Standard errors are clustered at the province level and reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

5.7 Robustness: exit of low-productivity firms

Appendix Table A1 replaces continuous productivity with a discrete indicator for low-productivity firms. The coefficient on lagged low productivity is negative, and the interaction between low productivity and SOE dominance is also negative, but the interaction is not statistically significant. This suggests that the main selection mechanism is better captured when productivity is modeled continuously rather than through a coarse low-productivity dummy.

This robustness result does not overturn the main findings. Instead, it clarifies them. The evidence supports the view that SOE dominance weakens productivity-based selection in general, but it does not show that this effect is sharply concentrated only among firms below a particular productivity threshold. The appendix results therefore complement, rather than replace, the main exit specification.

The results reveal a coherent pattern. SOE dominance is associated with weaker firm growth on average, but does not significantly alter the relationship between productivity and within-firm expansion. By contrast, it is strongly associated with lower firm exit and with weaker productivity-based selection. At the market level, these distortions are reflected in greater productivity dispersion and weaker, though less precisely estimated, indicators of allocative efficiency. Taken together, the

evidence suggests that the main effect of local state-sector dominance operates through weakened market selection rather than through differential growth responses among incumbent firms.

6. Discussion and Policy Implication

The results point to a consistent and economically meaningful pattern. Across specifications, SOE dominance is associated with weaker firm growth on average, but more importantly, with a systematic weakening of market selection. The most robust evidence comes from the exit regressions, where higher provincial SOE employment shares reduce firm exit rates and attenuate the relationship between productivity and survival. This finding aligns closely with theoretical and empirical work emphasizing the central role of selection in aggregate productivity dynamics (Hsieh & Klenow, 2009; Foster et al., 2001; Melitz, 2003).

From a political economy perspective, these results suggest that SOE presence does not simply operate through direct resource allocation within firms, but through broader institutional channels that shape competitive pressures. In more state-dominated local environments, firms appear less exposed to hard budget constraints and competitive discipline. This interpretation is consistent with earlier evidence showing that state ownership and political connections can soften financial constraints and reduce exit pressures, particularly in transition economies (Kornai, 1986; Bai et al., 2006; Brandt et al., 2012).

An important implication of the findings is that distortions in Vietnam's enterprise sector are not primarily driven by differential growth responses among incumbent firms. The absence of a statistically significant interaction between productivity and SOE dominance in the growth regressions suggests that more productive firms are not systematically prevented from expanding. Instead, the distortions arise because less productive firms are not forced to contract or exit at the same rate as they would in a more competitive environment. This distinction is critical, as it shifts the focus from within-firm dynamics to between-firm reallocation.

The evidence on productivity dispersion reinforces this interpretation. Higher SOE dominance is associated with greater dispersion in firm-level productivity within local markets. This pattern is consistent with weakened selection allowing a wider range of firms, including low-productivity ones, to survive. Such outcomes mirror findings from other contexts where distortions lead to persistent misallocation and wider productivity gaps (Restuccia & Rogerson, 2008; Hsieh & Klenow, 2009). While the direct measures of allocative efficiency are less precisely estimated, they move in the expected direction, further supporting the selection-based mechanism.

At a broader level, the results contribute to the literature on state capitalism and mixed ownership systems. Rather than viewing SOEs solely as inefficient producers, the findings highlight their role in shaping market structure and competitive dynamics. In Vietnam, where the state sector remains prominent in key industries and regions, this influence appears to operate through local institutional environments that affect all firms, not only those directly owned by the state.

The findings carry several policy implications for the ongoing reform of Vietnam's enterprise sector and the broader transition toward a more market-oriented economy. First, the results suggest that improving allocative efficiency requires strengthening market selection mechanisms rather than

focusing exclusively on firm-level productivity enhancement. Policies that aim to raise productivity within firms, such as technology adoption or managerial improvements, are important but may yield limited aggregate gains if low-productivity firms continue to survive due to weak competitive pressures. Enhancing exit mechanisms, including bankruptcy procedures and enforcement of financial discipline, is therefore essential.

Second, the role of SOEs should be considered not only in terms of their direct economic performance, but also in terms of their indirect effects on market competition. Reducing preferential access to credit, land, and regulatory advantages for SOEs would help level the playing field and restore competitive pressures. This aligns with broader reform agendas aimed at hardening budget constraints and improving corporate governance in the state sector.

Third, the substantial variation in SOE dominance across provinces suggests that local institutional reforms could play a significant role. Strengthening local governance, reducing discretionary interventions, and improving transparency may help mitigate the distortive effects of state presence. Policies targeting subnational variation are particularly relevant in Vietnam, where provincial governments have considerable influence over economic outcomes.

Finally, the findings indicate that policies promoting entry alone may not be sufficient. While encouraging new firm formation is important, its impact on aggregate productivity depends on the extent to which inefficient firms exit. A balanced policy approach that facilitates both entry and exit is therefore necessary to improve resource allocation and sustain productivity growth.

7. Conclusion

This paper studies how state ownership affects firm dynamics and resource allocation in Vietnam. Using firm-level data from the Enterprise Census, we exploit variation in the local dominance of state-owned enterprises to examine their impact on firm growth, exit, and market efficiency.

The results point to a clear pattern. Greater SOE presence is associated with slower firm growth, weaker market selection, and higher dispersion in productivity. In particular, low-productivity firms are less likely to exit in state-dominated environments, and the allocation of employment becomes less aligned with productivity. These findings suggest that the main effect of state ownership operates through distortions in the process of market selection.

While the empirical strategy does not fully establish causal effects, the results provide consistent evidence across multiple outcomes that is difficult to reconcile with frictionless market functioning. Rather than offering a definitive causal estimate, the paper documents a coherent set of empirical regularities linking state ownership to market distortions.

These findings have important implications. They suggest that the costs of state ownership may arise less from inefficiencies within firms and more from distortions in the process through which markets select and allocate resources across firms. Policies that strengthen competitive neutrality and reduce preferential treatment may therefore improve not only firm performance but also the overall efficiency of the economy.

References

Acemoglu, D., & Johnson, S. (2005). Unbundling institutions. *Journal of Political Economy*, 113(5), 949–995. https://doi.org/10.1086/432166

Bai, C. E., Lu, J., & Tao, Z. (2006). Property rights protection and access to bank loans: Evidence from China. *Economics of Transition*, 14(4), 611–628. https://doi.org/10.1111/j.1468-0351.2006.00261.x

Bartelsman, E. J., Haltiwanger, J., & Scarpetta, S. (2013). Cross-country differences in productivity: The role of allocation and selection. *American Economic Review*, 103(1), 305–334. https://doi.org/10.1257/aer.103.1.305

Brandt, L., Van Biesebroeck, J., & Zhang, Y. (2012). Creative accounting or creative destruction? Firm-level productivity growth in Chinese manufacturing. *Journal of Development Economics*, 97(2), 339–351. https://doi.org/10.1016/j.jdeveco.2011.02.002

Cooper, R., Haltiwanger, J., & Willis, J. (2024). Declining responsiveness at the establishment level: Sources and productivity implications. *NBER Working Paper No. 32130*. https://doi.org/10.3386/w32130

Dollar, D., Hallward-Driemeier, M., & Mengistae, T. (2005). Investment climate and firm performance. *Economic Development and Cultural Change*, 54(1), 1–31. https://doi.org/10.1086/431262

Hallward-Driemeier, M., Wallsten, S., & Xu, L. C. (2006). Ownership, investment climate, and firm performance: Evidence from Chinese firms. *Economics of Transition*, 14(4), 629–647.

Hsieh, C. T., & Klenow, P. J. (2009). Misallocation and manufacturing TFP in China and India. *Quarterly Journal of Economics*, 124(4), 1403–1448. https://doi.org/10.1162/qjec.2009.124.4.1403

Kornai, J. (1986). The soft budget constraint. *Kyklos*, 39(1), 3–30. https://doi.org/10.1111/j.1467-6435.1986.tb01252.x

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). Government ownership of banks. *Journal of Finance*, 57(1), 265–301. https://doi.org/10.1111/1540-6261.00422

McCaig, B., & Pavcnik, N. (2018). Export markets and labor allocation in a low-income country. *Journal of Development Economics*, 131, 58–74. https://doi.org/10.1016/j.jdeveco.2017.10.001

Megginson, W. L., & Netter, J. M. (2001). From state to market: A survey of empirical studies on privatization. *Journal of Economic Literature*, 39(2), 321–389. https://doi.org/10.1257/jel.39.2.321

Nguyen, A. N., & Van Dijk, M. A. (2012). Corruption, growth, and governance in Vietnam. *Journal of Asian Economics*, 23(4), 373–394. https://doi.org/10.1016/j.asieco.2012.03.002

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.

OECD. (2021). *OECD Economic Surveys: Vietnam*. OECD Publishing. https://doi.org/10.1787/4b6b6a0b-en

Restuccia, D., & Rogerson, R. (2008). Policy distortions and aggregate productivity with heterogeneous establishments. *Review of Economic Dynamics*, 11(4), 707–720. https://doi.org/10.1016/j.red.2008.05.002

Restuccia, D., & Rogerson, R. (2017). The causes and costs of misallocation. *Journal of Economic Perspectives*, 31(3), 151–174. https://doi.org/10.1257/jep.31.3.151

Shleifer, A., & Vishny, R. W. (1994). Politicians and firms. *Quarterly Journal of Economics*, 109(4), 995–1025. https://doi.org/10.2307/2118354

Song, Z., Storesletten, K., & Zilibotti, F. (2011). Growing like China. *American Economic Review*, 101(1), 196–233. https://doi.org/10.1257/aer.101.1.196

World Bank. (2019). *Vietnam's future jobs: Leveraging megatrends for greater prosperity*. World Bank.

Appendix

Appendix Table A1. SOE dominance and exit of low-productivity firms

	(1) Exit: Low productivity × SOE
Lagged TFP	-0.007
	(0.004)
Lagged SOE employment share	-0.405***
	(0.126)
Lagged TFP x Lagged SOE employment share	-0.068
	(0.082)
Lagged IHS capital	-0.014**
	(0.005)
Constant	0.346***
	(0.036)
Observations	231,854
R-squared	0.073

Notes: The dependent variable is firm exit. The key explanatory variables include lagged productivity, lagged SOE employment share, and their interaction. The interaction term captures whether SOE dominance affects the likelihood that

low-productivity firms exit. All specifications include firm and year fixed effects. Standard errors are clustered at the province level and reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.