Gaming the Threshold: Domestic Profit Shifting, Corporate Groups and Size-Dependent Tax Policy[*]

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February 9, 2025

Abstract

Tax-motivated profit shifting by multi-firm groups has been widely studied, with most research focusing on international tax avoidance by multinational enterprises (MNEs). However, far less attention has been given to domestic profit shifting within corporate groups. This paper examines how corporate groups in Thailand respond to a size-dependent tax policy through intra-group profit shifting. Using comprehensive administrative data covering all registered firms in Thailand, we construct a unique panel dataset by integrating corporate shareholding information to identify corporate group structures. Our empirical strategy leverages a difference-in-differences approach, exploiting Thailand's 2011 introduction of a revenue-based eligibility threshold for SME tax incentives. We find strong evidence of tax-motivated profit shifting, with profitability among eligible SMEs in corporate groups increasing by 75.8% of their pre-policy level relative to ineligible SMEs. Our findings further suggest that corporate groups primarily engage in transfer pricing rather than strategic debt allocation as a means of relocating profits. Additionally, profit shifting is more prevalent among smaller corporate groups, those with weaker governance, and those with lower industry diversification. These findings demonstrate that profit shifting is not exclusive to MNEs and highlight the need for policymakers to account for how multi-firm establishments leverage internal networks to respond to tax regulations in a domestic setting.

Keywords: Profit shifting, Corporate groups, Size-dependent tax policy, Tax avoidance, Domestic transfer pricing

JEL Classifications: H25, H26, K34

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1. Introduction

Tax-motivated profit shifting by multinational enterprises (MNEs) has long been a central issue in economics and tax policy. A significant body of research has explored both the mechanisms and scale of tax avoidance by MNEs, particularly how they shift profits from high-tax to low-tax jurisdictions, including tax havens, to minimize their overall tax burden (e.g. Hines and Rice, 1994; Huizinga and Laeven, 2008; Dharmapala and Riedel, 2013; Dharmapala, 2014; Cristea and Nguyen, 2016; Dyreng and Markle, 2016; Davies et al., 2018; Menkhoff and Miethe, 2019; Tørsløv et al., 2023; Bilicka and Scur, 2024). However, the ability to exploit within-group networks to reallocate profits and minimize tax liabilities is not exclusive to MNEs. Domestic corporate groups—multi-firm establishments operating within a single economy—may engage in similar behaviors by strategically shifting income across affiliated entities.

While extensive research has explored cross-border profit shifting, much less attention has been given to domestic profit shifting within corporate groups. Unlike standalone firms, corporate groups—through networks of affiliated entities—enjoy greater flexibility in managing taxable income across subsidiaries within the same tax jurisdiction. The economic significance of corporate groups in domestic economies further underscores the relevance of this issue. In Thailand, corporate networks accounted for 60% of total corporate revenue and nearly 50% of total corporate profit in 2017 (Apaitan et al., 2020). Given their dominant role in the economy, understanding how corporate groups strategically respond to tax regulations is critical for designing more effective tax policies.

This study seeks to fill this gap by investigating how domestic corporate groups in Thailand respond to a size-dependent tax regulation through intra-group profit shifting. By analyzing firm-level data and ownership structures, we provide empirical evidence on the extent, mechanisms, and heterogeneity of tax-motivated profit shifting within corporate networks.

Using comprehensive firm-level data covering the universe of Thai firms and their ownership networks, we examine how corporate groups exploit within-group networks to take advantage of the size-dependent tax incentive. Many tax systems worldwide implement size-based tax regulations, offering lower corporate tax rates or exemptions to smaller firms (Bergner et al., 2017). While these policies aim to support small businesses, they may distort firms' growth decisions for standalones and create opportunities for tax

avoidance within corporate groups. By redistributing profits across multiple affiliated entities, firms can exploit SME tax thresholds, effectively engaging in domestic transfer pricing to minimize their tax burden.

To empirically examine this behavior, we construct a unique panel dataset using administrative records from 2004 to 2017, incorporating annual financial statements for all registered firms in Thailand. Crucially, we integrate corporate shareholding data to identify corporate groups, defined as collections of firms under common ownership. This dataset enables us to study the impact of size-dependent tax regulation on multi-firm establishments.

Our identification strategy utilizes Thailand's 2011 introduction of a revenue-based eligibility threshold for small and medium-sized enterprises (SMEs) tax incentives. The policy introduced a 30-million-baht annual revenue cap, requiring that firms remain below this threshold in both the current and previous years to qualify for reduced tax rates.[1] This policy change not only creates a tax notch in the corporate tax system but also segments SMEs into two groups, each facing different tax rates. This setting allows us to implements a difference-in-differences (DiD) approach to analyze corporate group behavior before and after the policy change. To capture these effects, we classify firms into treatment and control groups based on their eligibility for the SME tax incentive in the year prior to the reform. Our analysis focuses on corporate groups containing both eligible and ineligible SMEs, enabling us to examine tax-motivated profit shifting within multi-firm establishments.

Our findings can be summarized as follows.

First, we provide strong empirical evidence of tax-motivated profit shifting among corporate-group firms. Our DiD analysis shows that, following the 2011 introduction of the revenue threshold, the profitability of eligible SMEs within corporate groups increased significantly relative to ineligible SMEs, with the increase accounting for 75.8% of the treatment group's pre-policy profitability. This suggests that corporate groups actively shift profits from ineligible firms to those qualifying for the SME tax incentive.

Second, we explore the mechanisms of profit shifting and find that corporate groups primarily rely on transfer pricing rather than strategic debt allocation to reallocate

[1] The threshold is around 0.9 million USD using the average exchange rate during 2004-2017 (1 USD = 34.3 THB). Note that the exchange rate for THB ranged between 26.8 and 41.6 baht per USD during that time.

profits. Following the 2011 policy change, the operating turnover ratio of eligible SMEs increased by 0.47 relative to ineligible SMEs, representing 123.9% of the treatment group's pre-policy ratio. In contrast, the effect on the debt-to-asset ratio is minimal and statistically insignificant. This indicates that transfer pricing, rather than strategic debt placement, serves as the primary mechanism for profit shifting within corporate groups. These results highlight the importance of domestic transfer pricing, a tax avoidance strategy that has been relatively overlooked in the literature, despite its significant implications in countries offering preferential tax schemes for certain types of firms.

Third, we find that tax-motivated profit shifting varies across corporate groups. The practice is particularly pronounced among smaller corporate groups, those with weaker governance structures, and those with lower industry diversification. These findings suggest that firm size, governance quality, and sectoral exposure influence the ability of firms to exploit tax incentives. In particular, weaker governance environments may facilitate tax-motivated income shifting, as firms in such settings face fewer internal or regulatory constraints on aggressive tax planning.

This study contributes to two key strands of literature.

First, it adds to the growing body of research on profit shifting and base erosion. While most prior studies have focused on cross-border profit shifting by MNEs (e.g. Hines and Rice, 1994; Fuest et al., 2011; Crivelli et al., 2016; Johannesen et al., 2019; Muthitacharoen and Sampantharak, 2020), far less is known about domestic profit shifting within corporate groups. Our study provides evidence that tax avoidance through profit shifting is not exclusive to multinational firms—domestic corporate groups also engage in similar behaviors by exploiting within-country tax rate differentials to reduce their tax liabilities.

Second, our work contributes to the literature on size-dependent tax regulations, tax enforcement, and firm behavior. Prior research has shown that firms respond to tax thresholds by bunching just below regulatory cutoffs to avoid VAT registration requirements (Harju et al., 2016; Liu et al., 2019; Muthitacharoen et al., 2021), take advantage of SME tax privileges (Tsuruta, 2020; Hosono et al., 2023; Muthitacharoen et al., 2024), or evade size-based labor and government regulations (Garicano et al., 2016; Almunia and Lopez-Rodriguez, 2018). However, these studies primarily focus on standalone firms adjusting their reported size to remain below policy thresholds. We extend this literature by providing evidence that corporate groups actively leverage size-

dependent tax incentives through intra-group profit reallocation, a strategy resembling MNEs' cross-border profit shifting. Furthermore, we show that this practice is most prevalent among smaller corporate groups, those with weaker governance structures, and those with lower industry diversification, highlighting key factors that drive domestic tax-motivated profit shifting.

The remainder of the paper is organized as follows. Section 2 provides the policy background. Section 3 describes the dataset, while Section 4 discusses the empirical strategy. Section 5 presents the main findings, and Section 6 explores policy implications and concludes.

2. Background on Tax Incentives for SMEs in Thailand

In Thailand, all registered companies are subject to corporate income tax, generally imposed at a flat rate on net profits. Starting from 2008, the Thai government introduced a preferential tax scheme aimed at supporting SMEs. To qualify, a firm's registered capital was required to be no more than 5 million baht. This initiative sought to alleviate financial burdens and enhance the competitiveness of SMEs by offering reduced tax rates on taxable income. The scheme featured a progressive tax structure, with rates starting at 0% and increasing incrementally based on net profit levels.

In 2011, significant revisions were made to the SME tax scheme's eligibility criteria (Table 1). The government announced an annual revenue cap of 30 million baht ($876,000) and mandated that a firm's revenue must not have exceeded this threshold in any previous year.[2] This policy change introduces a tax notch within the corporate tax system, creating a sharp discontinuity in tax treatment. By imposing a strict revenue cap based on a firm's entire financial history, it effectively divided SMEs into two distinct categories: those that consistently remained below the threshold and eligible for preferential tax rates, and those that exceeded it even once, rendering them permanently ineligible for the incentive. The policy was announced in 2011 and implemented in 2012, potentially prompting firms to adjust their behaviors immediately following the announcement.

[2] The threshold is approximately 0.9 million USD, based on the average exchange rate of 34.3 THB per USD from 2004 to 2017. During this period, the THB-USD exchange rate fluctuated between 26.8 and 41.6 THB per USD.

Table 1: Thailand's tax incentive scheme for SMEs

Year	Registered capital requirement (5 mil. baht)	Revenue requirement (30 mil. baht)	Illustrative tax liability for a hypothetical firm with sample-mean profit (Baht)
2004	-	-	977,357
2005	-	-	977,357
2006	-	-	977,357
2007	-	-	977,357
2008	Yes	**No**	704,857
2009	Yes	**No**	704,857
2010	Yes	**No**	704,857
2011	Yes	**No (Announced)**	704,857
2012	Yes	**Yes**	646,807
2013	Yes	**Yes**	556,571
2014	Yes	**Yes**	556,571
2015	Yes	**Yes**	295,786
2016	Yes	**Yes**	295,786
2017	Yes	**Yes**	456,571

Note: This table outlines the SME tax incentive scheme. Between 2008 and 2011, firms qualified for reduced tax rates if their registered capital did not exceed 5 million baht. However, beginning in 2012, an additional eligibility criterion was introduced: in addition to maintaining registered capital below 5 million baht, firms also had to keep annual revenue below 30 million baht. This 30-million-baht revenue threshold was officially announced in 2011 and came into effect in 2012. For reference, the average firm profit in the baseline sample is approximately 3.3 million baht.

To illustrate the impact of this tax incentive, consider a hypothetical firm with an average profit of 3.3 million baht.[3] Between 2008 and 2010, prior to the policy change, this firm faced an annual tax liability of 704,857 baht. Following the 2011 policy revision, its tax burden dropped to an average of 468,015 baht per year during the 2012–2017 period, representing an approximately 34% reduction compared to the 2008–2010 average.

From the government's perspective, the revised policy—by incorporating both current and historical revenue thresholds—was designed to more effectively target tax benefits toward firms that genuinely need support. However, for corporate groups, this change effectively divides the corporate income tax system into two tiers, creating an

[3] This amount represents the average gross profit in our baseline analysis sample, approximately 96,000 USD, based on the average exchange rate of 34.3 THB per USD from 2004 to 2017.

incentive to strategically allocate profits across affiliated firms to maximize tax advantages. By shifting income among firms, corporate groups may exploit the SME tax threshold, ensuring that more of their profits are taxed at the preferential SME rate rather than the standard corporate tax rate. This potential for tax-motivated profit shifting raises important questions about the unintended effects of the policy. In this study, we seek to empirically examine whether and how corporate groups engage in such strategic tax behavior.

3. Data

We construct a panel dataset of Thai firms from 2004 to 2017 by integrating two key sources: (1) corporate profiles and financial statements and (2) ownership data.

The first dataset comes from the Corporate Profiles and Financial Statements (CPFS) database maintained by the Department of Business Development (DBD) at the Ministry of Commerce. All registered firms in Thailand are legally required to submit annual financial statements to the DBD, making this database a comprehensive source of firm-level financial and demographic information. It includes details such as registration year, business type, firm status, and primary industry classification. We exclude holding companies from our analysis, as they do not engage in direct production activities and primarily serve as investment entities.[4]

The second dataset, also obtained from the DBD, provides a snapshot of corporate ownership as of 2017. [5] This dataset contains detailed ownership information, including the names, types, and nationalities of owners, as well as the number of shares held. For this study, we focus on corporate shareholding and use this data to construct ownership networks. Additionally, we utilize firm registration dates to track the evolution of corporate group composition over time.

Following Apaitan et al. (2020), we define corporate groups based on shareholding relationships: if Firm A owns shares in Firm B, both firms are considered part of the same ownership network or corporate group. These ownership structures can take the form of pyramidal ownership, where a parent firm holds shares in a subsidiary, or cross-shareholding, where two or more firms own shares in each other. Figure 1

[4] For more details, see Banternghansa et al. (2019).
[5] We exclude firms established after 2015 due to the high exit rate of firms during their first two years of operation.

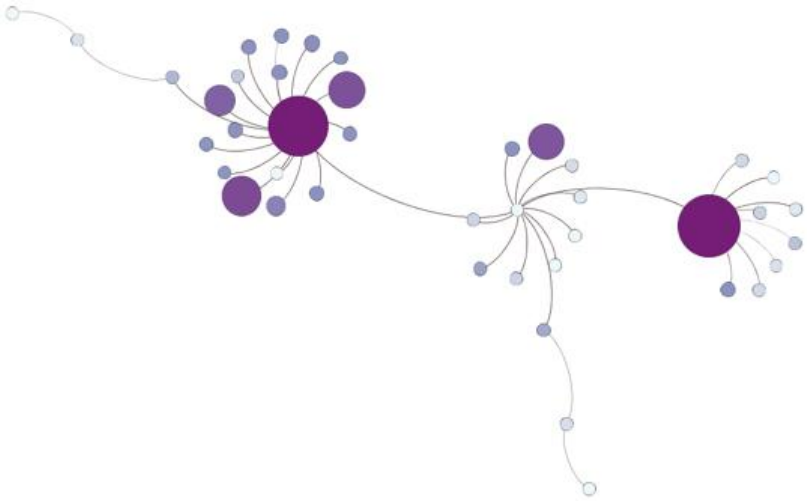
illustrates examples of these ownership networks among Thai firms, highlighting the diversity in size and structural complexity.

Figure 1. Examples of ownership networks of Thai firms

A) Small corporate group



B) Large corporate group



Note: Node size represents total assets in the corporate group. Firm A owning Firm B represents by a clockwise edge from A to B.

Source: Banternghansa and Samphantharak (2021).

Approximately 5.4% of registered firms in Thailand belong to corporate groups.[6] In terms of industry diversification, Thai corporate groups tend to be highly concentrated within a single sector. More than half of corporate groups operate exclusively within the same industry, suggesting that intra-group relationships are primarily structured around sector-specific business activities.

Table 2 shows summary statistics for our DiD analyses.

[6] For more information about Thai corporate groups, see Apaitan et al. (2020) and Banternghansa and Samphantharak (2021).

Table 2: Descriptive statistics

Variables	N	Mean	Median	S.D.
ROA	24,629	0.085	0.000	0.456
Operating turnover to assets	24,629	0.450	0.000	1.049
Debt to assets	24,629	1.108	0.001	5.223
Treat	24,629	0.631	1.000	0.483
Post	24,629	0.478	0.000	0.500
Age	24,629	14.625	13.000	10.243

Note: ROA, operating turnover to assets and debt to assets are winsorized at 1%.

Source: Authors' estimate.

4. Methods

To evaluate the impact of the size-dependent SME tax incentive on profit-shifting behavior within corporate groups, we employ a difference-in-differences (DiD) framework. The tax incentive was first introduced in 2008, with the revenue qualification threshold announced in 2011. Based on this timeline, we define 2008–2010 as the pre-policy period and 2011–2017 as the post-policy period.

Our identification strategy categorizes firms into treatment and control groups based on their eligibility for the SME tax incentive in 2010, the year before the policy change was announced. The treatment group consists of firms that consistently had annual revenues below 30 million baht from 2004 to 2010, making them eligible for the incentive, while the control group includes firms that exceeded this threshold in at least one year from 2004 to 2009, rendering them ineligible. To ensure comparability, we restrict the sample to firms with revenues of 30 million baht or less in 2010, ensuring that eligibility status was determined exogenously. Our analysis focuses on corporate groups containing both eligible and ineligible SMEs, allowing us to examine tax-motivated profit shifting within multi-firm establishments.

We estimate the following regression model:

$$y_{it} = \alpha_0 + \alpha_1 post_t + \alpha_2 post_t \cdot treat_i + \alpha_3 Age_{it} + FirmFE + YearFE + YearxSectorFE + \varepsilon_{it}, \quad (1)$$

where y_{it} denotes pre-tax return on assets (ROA), $post_t$ denotes an indicator variable that equals 1 for the post-policy period and zero otherwise, $treat_i$ denotes an indicator variable that equals 1 for treatment firms and zero otherwise, and Age_{it} denotes firm age. The model includes firm-, year- and year-x-sector-fixed effects. We use robust standard errors clustered at the firm level.

Assuming that unobserved factors influencing profitability (ε_{it}) remain unchanged between the treatment and control groups before and after the policy implementation, the coefficient α_2 captures the causal impact of the SME size-based policy on firms' reported profits. A positive α_2 would indicate that eligible SMEs increase their reported profits relative to ineligible SMEs after the policy change, consistent with tax-motivated profit shifting.

To further investigate how corporate groups engage in profit shifting, we modify the dependent variable in equation (1) to examine two key financial ratios: Operating turnover-to-asset ratio and debt-to-asset ratio.[7] A relative increase in the operating turnover-to-asset ratio among treated firms relative to control firms after the policy change may indicate transfer pricing, as sales are shifted from ineligible to eligible SMEs to take advantage of preferential tax rates. On the other hand, a relative decrease in the ratio of debt-to-asset ratio may signal strategic debt placement, where corporate groups adjust debt structures across affiliates to optimize tax benefits.

Finally, we examine whether the extent of tax-motivated profit shifting varies based on group size (larger vs. smaller corporate groups), corporate governance quality (high vs. low governance groups), industry diversification (more vs. less diversified industry composition). These analyses help identify which types of corporate groups are more likely to exploit the size-dependent SME tax incentives for profit shifting, providing critical insights for tax policy design and enforcement.

5. Findings

We begin by visually examining how firms distribute around the SME tax threshold of 30 million baht (Figure 2). Given our focus on corporate ownership structures, we categorize firms into corporate-group firms and standalone firms. Corporate-group firms are defined as discussed in Section 3, whereas standalone firms refer to those that do not belong to any corporate group.

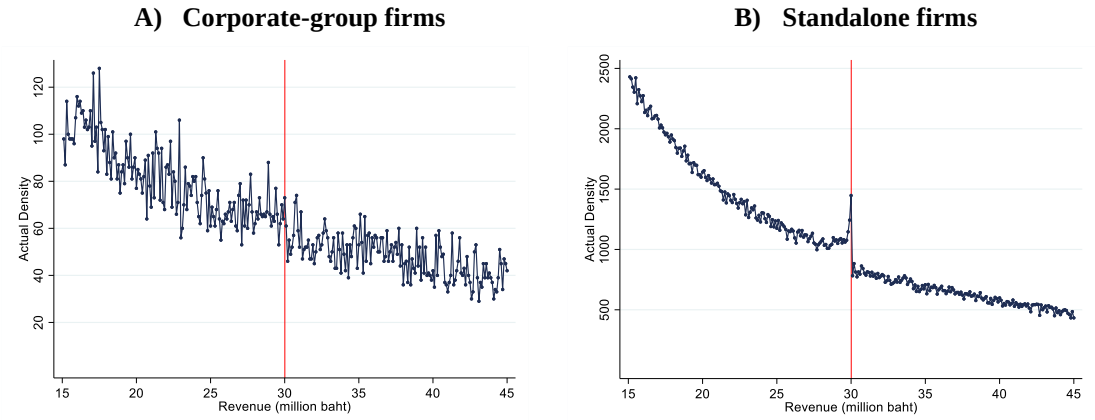
We find that the bunching behavior, where firms cluster just below the tax threshold, is predominantly observed among standalone firms, while corporate group firms exhibit little to no bunching in comparison. This suggests that constraining revenue to remain below the SME tax threshold is not the primary strategy used by corporate

[7] Note that we construct debt by subtracting current liabilities from total liabilities because this approach isolates long-term debt, which is more indicative of strategic debt allocation within corporate groups.

groups to benefit from the tax incentive. Instead, they may rely on alternative mechanisms, such as intra-group profit shifting, to optimize their tax position. This contrast highlights that standalone firms and corporate groups respond differently to the size-dependent SME tax policy.

A possible explanation is that standalone firms have fewer opportunities to shift profit across entities, leaving them more reliant on restricting reported revenue to qualify for tax benefits. In contrast, corporate groups likely have greater flexibility to reallocate profit within their network to take advantage of the SME tax scheme. To explore this further, we next examine whether corporate-group firms engage in tax-motivated profit shifting as a response to the policy change.

Figure 2: Histogram of revenue around the SME threshold by ownership structure (2011-17)



Note: This figure shows the histogram of firms' revenue by pooling data each year from 2011 to 2017. The bin width is 100,000 baht. The red line denotes the threshold of 30 million baht.
Source: Authors' estimate.

Columns 1–4 of Table 3 present the DiD estimation results for equation (1), progressively incorporating firm fixed effects, year fixed effects, and sector-year fixed effects. Across all specifications, the coefficient on the interaction term ($Post_t \cdot Treat_i$) remains positive and statistically significant at the 1% level. Under the baseline specification (Column 4), we find that following the 2011 threshold introduction, the ROA of eligible SMEs increases by 0.11 relative to ineligible SMEs, with the effect being highly significant at the 1% level. This increase accounts for 75.8% of the treatment group's pre-policy profitability, providing strong evidence that corporate-group firms with the position to shift profits prior to the policy announcement engaged in tax-motivated profit shifting in response to the SME tax incentive.

Table 3: Effects of the introduction of the revenue-based SME threshold on profitability (Dep var = ROA)

	(1)	(2)	(3)	(4) Baseline
Post	-0.289***	-0.056***	0.241	0.091
	(0.014)	(0.015)	(0.239)	(0.508)
Treat x Post	0.137***	0.141***	0.110***	0.110***
	(0.017)	(0.017)	(0.016)	(0.016)
Age				0.012
				(0.035)
Observations	24,629	24,629	24,629	24,629
R-squared	0.070	0.157	0.282	0.282
Firm FE	YES	YES	YES	YES
Year FE	NO	YES	YES	YES
Sector x Year FE	NO	NO	YES	YES
Control	NO	NO	NO	YES
Number of firms	3,149	3,149	3,149	3,149

Note: This table presents the estimated impacts of the introduction of the revenue-based SME threshold on profitability. $Post_t$ is a dummy variable that equals one for 2011–2017, and zero for 2008–2010. Treat is a dummy variable that equals one for eligible SMEs and zero for ineligible SMEs. $Post_t \cdot Treat_i$ is the interaction variable between $Post_t$ and $Treat_i$. Standard errors are heteroscedasticity-robust and clustered at firm level. Numbers in parentheses indicate standard error. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.
Source: Authors' estimate.

Our findings suggest that transfer pricing plays a more significant role than strategic debt placement in facilitating profit shifting within corporate groups. To explore the underlying mechanisms, Table 4 presents the DiD analysis from equation (1) using operating turnover-to-asset ratio and debt-to-asset ratio as dependent variables.

The results show that following the 2011 policy introduction, the operating turnover ratio of eligible SMEs increases by 0.47 relative to ineligible SMEs. This increase is significant at the 1% level and represents 123.9% of the treatment group's pre-policy ratio. Such increase indicates a substantial shift in sales. In contrast, the effect on the debt-to-asset ratio is very small (2.5% of the pre-policy ratio) and statistically insignificant.

These findings suggest that corporate groups primarily rely on transfer pricing rather than altering their debt structure to shift profits in response to the SME tax incentive. This result is particularly important as it highlights the significance of domestic

transfer pricing—a tax avoidance strategy that has received limited attention in the literature despite its relevance for countries that implement preferential tax schemes for certain types of firms.

Table 4: Effects of the introduction of the revenue-based SME threshold on operating turnover and debt

	Dep var: Operating turnover to assets				Dep Var: Debt to assets			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post	-0.741***	-0.484***	0.509	-0.174	0.897***	1.103***	2.959	-127.730
	(0.035)	(0.039)	(0.450)	(1.018)	(0.170)	(0.186)	(3.131)	(106.808)
Treat x Post	0.569***	0.579***	0.474***	0.474***	-0.168	-0.167	0.006	-0.023
	(0.040)	(0.040)	(0.036)	(0.036)	(0.210)	(0.210)	(0.212)	(0.146)
Age				0.053				10.068
				(0.070)				(8.212)
Observations	24,629	24,629	24,629	24,629	24,629	24,629	24,629	38,784
R-squared	0.087	0.127	0.235	0.235	0.015	0.016	0.064	0.055
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	YES	YES	NO	YES	YES	YES
Sector x Year FE	NO	NO	YES	YES	NO	NO	YES	YES
Control	NO	NO	NO	YES	NO	NO	NO	YES
Number of firms	3,149	3,149	3,149	3,149	3,149	3,149	3,149	3,158

Note: This table presents the estimated impacts of the introduction of the revenue-based SME threshold on operating turnover and debt. $Post_t$ is a dummy variable that equals one for 2011–2017, and zero for 2008–2010. Treat is a dummy variable that equals one for eligible SMEs and zero for ineligible SMEs. $Post_t \cdot Treat_i$ is the interaction variable between $Post_t$ and $Treat_i$. Standard errors are heteroscedasticity-robust and clustered at firm level. Numbers in parentheses indicate standard error. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.
Source: Authors' estimate.

Next, we examine the heterogeneity in tax-motivated profit shifting based on corporate group size, considering two dimensions: the number of firms within a group and total revenue (Columns 1-4 of Table 5). Our findings indicate that profit shifting is more pronounced among smaller corporate groups in both dimensions.

In terms of the number of firms, we compare corporate groups with 2–3 firms to those with more than 3 firms. Among smaller groups, following the 2011 policy introduction, the ROA of eligible SMEs increased by 0.142 relative to ineligible SMEs. The increase is significant at the 1% level. In contrast, for corporate groups with more than three firms, we also observe a significant increase in ROA among eligible SMEs, but the effect is much smaller at 0.094.

For group size by revenue, we classify corporate groups based on the median value of total revenue in the year prior to the policy announcement. Among smaller corporate groups, the ROA of eligible SMEs increased by 0.162 relative to ineligible SMEs, with the effect being highly significant at the 1% level. In contrast, for larger corporate groups, we again observe a significant increase in ROA among eligible SMEs, but the effect is comparatively smaller at 0.083.

These results suggest that smaller corporate groups, both in terms of firm count and revenue, are more aggressive in engaging in tax-motivated profit shifting in response to the introduction of the size-dependent tax incentive. One possible explanation is that larger corporate groups may have access to alternative tax minimization strategies, reducing their dependence on profit shifting through the SME tax scheme.

Table 5: Heterogeneity in tax-motivated profit shifting (Dep var = ROA)

	Group size (number of firms)		Group size (Revenue)		Governance		Industry diversity	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(5)
	n=2-3	n>3	Small	Large	Low	High	Low	High
Post	-2.360	0.723	-2.390	0.782*	-2.374***	2.192	-17.392***	-0.609
	(1.745)	(0.492)	(2.076)	(0.463)	(0.846)	(1.494)	(5.908)	(0.377)
Treat x Post	0.142***	0.094***	0.162***	0.083***	0.124***	0.035	0.150***	0.055*
	(0.031)	(0.019)	(0.027)	(0.020)	(0.017)	(0.036)	(0.020)	(0.030)
Age	0.169	-0.033	0.174	-0.033	0.177***	-0.139	1.371***	-0.000
	(0.130)	(0.030)	(0.154)	(0.031)	(0.065)	(0.113)	(0.468)	(0.000)
Observations	5,708	18,921	7,907	16,722	20,672	3,957	14,444	9,401
R-squared	0.399	0.290	0.344	0.305	0.294	0.394	0.308	0.350
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Sector x Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Control	YES	YES	YES	YES	YES	YES	YES	YES
Number of firms	710	2,439	1,011	2,138	2,623	526	2,222	1,439

Note: This table presents the estimated impacts of the introduction of the revenue-based SME threshold on profitability across corporate groups with varying characteristics. $Post_t$ is a dummy variable that equals one for 2011–2017, and zero for 2008–2010. Treat is a dummy variable that equals one for eligible SMEs and zero for ineligible SMEs. $Post_t \cdot Treat_i$ is the interaction variable between $Post_t$ and $Treat_i$. Standard errors are heteroscedasticity-robust and clustered at firm level. Numbers in parentheses indicate standard error. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.
Source: Authors' estimate.

Furthermore, we investigate heterogeneity in tax-motivated profit shifting with respect to corporate governance (Columns 5-6 of Table 5). To proxy for corporate governance, we use the presence of firms listed on the Stock Exchange of Thailand (SET) within a corporate group. Groups with SET-listed firms are likely to have higher governance standards, as publicly traded firms are subject to stricter financial reporting requirements, regulatory oversight, and shareholder scrutiny.

Our results indicate that corporate groups with lower governance exhibit a stronger profit-shifting response. Following the 2011 policy introduction, the ROA of eligible SMEs in lower-governance groups increases by 0.124 relative to ineligible SMEs, with the effect being highly significant at the 1% level. In contrast, for groups with higher governance standards, the effect on ROA is not statistically significant, suggesting that stronger governance mechanisms may constrain firms' ability to engage in profit shifting.

Finally, we examine heterogeneity with respect to industry diversity (Columns 7-8 of Table 5). To measure industry diversity, we compute the Herfindahl-Hirschman Index (HHI) of revenue concentration at two levels of industry classification: the 2-digit ISIC level and the 4-digit ISIC level. We then take the ratio of these two measures ($HHI_{2-digit}/HHI_{4-digit}$), where a lower ratio indicates lower industry diversity—meaning that a corporate group's revenue is more concentrated within a single major industry.

Similarly, corporate groups with lower industry diversity display a more pronounced response to the SME tax incentive. Among these groups, the ROA of eligible SMEs increases by 0.150 relative to ineligible SMEs, with the effect again being highly significant at the 1% level. In contrast, for groups with greater industry diversity, the increase in ROA is much smaller at 0.055 and is only significant at the 10% level. These findings suggest that corporate groups operating primarily within the same major industry may find it easier to shift profits across affiliated firms.

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6. Conclusion

This study examines how domestic corporate groups respond to size-dependent tax policies through intra-group profit shifting, a topic that has received far less attention than cross-border tax avoidance by MNEs. Utilizing a comprehensive panel dataset of all registered Thai firms and their ownership structures, we investigate how corporate groups exploit within-group ownership networks to shift profits in response to a 2011 reform introducing a revenue-based SME tax threshold.

Our findings provide strong empirical evidence that corporate groups engage in tax-motivated profit shifting when a size-dependent tax incentive is in place. Following the 2011 introduction of a revenue cap for SME tax eligibility, we observe a significant increase in the profitability of eligible SMEs within corporate groups, Further analysis reveals that corporate groups primarily rely on transfer pricing rather than strategic debt allocation to reallocate taxable income. This finding is particularly important because it highlights domestic transfer pricing as a key tax avoidance mechanism, despite its relative neglect in the literature compared to cross-border profit shifting. Additionally, we find that profit shifting is more pronounced among smaller corporate groups, those with weaker governance structures, and those with lower industry diversification, suggesting that group-level characteristics play a crucial role in shaping tax avoidance behavior.

Given that size-dependent tax incentives are widely implemented across many countries (Bergner et al., 2017), our findings have broad policy relevance beyond the Thai context. While such policies aim to promote small business growth or support specific types of firms, they may unintentionally incentivize corporate groups to fragment reported income across affiliates to maximize tax benefits. This underscores the need for policymakers to address both international and domestic tax-motivated profit shifting in their policy design.

Despite its contributions, this study has some limitations. While our dataset allows us to observe firm-level financial data and ownership structures, we do not have access to detailed transaction-level data on intra-group transfers. Utilizing such data would provide further insights into specific profit-shifting mechanisms.

Declaration of competing interest

The authors declare no conflict of interest.

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