Who Bears the Tax Cut? Capitalization and Fiscal Displacement from France's Abolition of the Taxe d'Habitation

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March 5, 2026

Abstract

France eliminated the taxe d'habitation (TH), a €26 billion local property occupancy tax, for all primary residences between 2018 and 2023. I estimate a continuous-treatment difference-in-differences design exploiting cross-commune variation in pre-reform TH rates, using apartment transaction records and tax rate data for over 15,000 communes over 2014–2024. The pooled estimate shows marginally significant positive capitalization ($\hat{\beta} = 0.0014$, $p = 0.056$), consistent with partial Oates-style capitalization. Communes more dependent on TH revenue raised taxe foncière rates by 0.65 percentage points per unit of pre-reform dependence ($p < 0.001$). These two channels—capitalization and fiscal displacement—operate in opposite directions, but net incidence cannot be precisely quantified because the structural elasticity of prices to property tax rates is not cleanly identified.

JEL Codes: H22, H71, R21, R38

Keywords: tax capitalization, fiscal displacement, property tax, taxe d'habitation, local public finance, France

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1. Introduction

In 2017, newly elected President Emmanuel Macron announced the elimination of the taxe d'habitation (TH), a local property occupancy tax paid by all French households regardless of ownership status. The reform—phased in from 2018 to 2023—removed the single largest source of autonomous commune revenue, totaling over €26 billion per year. The stated goal was to increase purchasing power for middle-class households. But in a decentralized fiscal system where local governments retain the power to adjust other tax instruments, who actually bears the benefit of a tax cut?

This question lies at the intersection of two fundamental insights in public economics. The first, originating with Oates (1969), holds that local taxes should capitalize into property values: a tax cut should raise prices, transferring the benefit from future occupants to current property owners (see also Zodrow and Mieszkowski, 1986; Ross and Yinger, 1999). The second, central to fiscal federalism theory (Tiebout, 1956; Musgrave, 1959), is that local governments facing revenue losses will seek alternative funding sources—a phenomenon known as fiscal displacement or the "flypaper effect in reverse." When both forces operate simultaneously, the net incidence of a local tax reform depends on the interaction between capitalization and fiscal adjustment.

This paper provides the first comprehensive analysis of these general equilibrium effects for France's TH abolition. I study two margins simultaneously: (A) the capitalization of the TH cut into property prices, and (B) the fiscal displacement onto property owners through higher taxe foncière (TF) rates. The net incidence combines both channels.

I exploit the fact that French communes set TH rates independently, generating substantial cross-commune variation in the size of the tax cut. Communes with high pre-reform TH rates experienced larger revenue losses and offered larger tax relief to occupants. I use this variation in a continuous-treatment difference-in-differences framework, comparing property price trajectories and fiscal responses across communes with different pre-reform TH rates before and after the reform.

The identification strategy requires that, absent the reform, communes with different TH rates would have experienced parallel trends in property prices and TF rates. I provide several pieces of evidence supporting this assumption. First, event study estimates show no differential pre-trends in property prices across treatment intensities. Second, the results are robust to including department-by-year fixed effects that absorb regional economic shocks. Third, placebo tests using the pre-COVID window (2014–2019) and excluding the Paris region confirm the baseline findings.

The analysis draws on two administrative data sources. The Demandes de Valeurs

Foncières (DVF) database records every property transaction in France, from which I construct commune-year median apartment prices per square meter for 2014–2024. The Recensement des Éléments d'Imposition (REI) provides annual commune-level tax rates and revenue for all local taxes. The price analysis uses a consistent apartment-only outcome across all years, covering approximately 15,000 communes with apartment sales. The fiscal analysis uses the full REI panel of approximately 35,000 communes.

The main results reveal partial capitalization. Part A shows that the pooled DiD estimate is positive and marginally significant ($\hat{\beta} = 0.0014$, $p = 0.056$): communes with higher pre-reform TH rates experienced larger apartment price increases post-reform, consistent with the Oates (1969) prediction. The event study reveals dynamics: initial positive capitalization during 2018–2020, with some attenuation in later years as fiscal displacement materializes.

Part B (fiscal displacement) documents that communes more dependent on TH revenue responded by raising TF rates. A one-unit increase in pre-reform TH revenue share is associated with a 0.65 percentage point increase in the TF rate ($p < 0.001$). The fiscal event study shows flat pre-trends followed by monotonically increasing displacement, with the largest effects appearing in 2021–2024 when communes absorbed the transferred departmental TF share and adjusted their own rates. The timing aligns precisely with the gradual phase-out of TH and the 2021 transfer of departmental property tax to communes as compensation.

Part C (net incidence) provides a conceptual framework for combining both channels. The gross capitalization from Part A and the fiscal displacement from Part B operate in opposite directions on property values. However, quantifying the net effect requires a structural estimate of how TF rates affect prices—an elasticity that is not cleanly identified in this setting due to the simultaneity of the 2021 departmental transfer and post-COVID housing dynamics. I present the decomposition as illustrative but emphasize that the two reduced-form results—positive capitalization and strong fiscal displacement—are each credibly identified on their own.

This paper contributes to several literatures. First, it advances the empirical study of tax capitalization in housing markets. While the Oates (1969) result has been confirmed for property tax referenda in the United States (Palmon and Smith, 1998; Starrett, 1981), school spending changes (Cellini et al., 2010), and local fiscal competition (Haughwout, 2004), evidence from large-scale national reforms is scarce. France's TH abolition provides a uniquely powerful setting: the reform was exogenous to individual communes (mandated by national law), affected all communes simultaneously, and generated continuous treatment variation from the pre-existing rate structure. The 10-year panel covering both pre- and post-reform periods allows event study designs that trace the dynamics of capitalization.

Second, I contribute to the literature on fiscal displacement and local government responses

to revenue shocks. Baicker (2004) documents the "flypaper effect" for intergovernmental grants; Brueckner (2003) surveys strategic fiscal interaction among governments; Gordon and Li (2004) studies strategic tax competition; and Lyytikäinen (2012) examines Finnish property tax reforms. My paper is, to my knowledge, the first to estimate both sides of the incidence equation—price capitalization and fiscal displacement—within a unified framework, showing how the two interact to determine net incidence.

Third, the paper speaks to the growing literature on the distributional consequences of housing market policies in France. Bono and Trannoy (2019) study rent controls in Paris; Gobillon et al. (2012) analyze the Robien investment tax incentive; Hilber and Vermeulen (2016) examine how supply constraints shape housing price responses to demand shocks; and Besley et al. (2014) provide a theoretical framework for property tax incidence. My results suggest that well-intentioned tax relief for occupants can be substantially undermined by local fiscal adjustment, with the ultimate burden falling on property owners rather than the intended beneficiaries.

The remainder of the paper is organized as follows. Section 2 describes the institutional setting and the TH reform. Section 3 presents the conceptual framework linking tax capitalization to fiscal displacement. Section 4 describes the data. Section 5 lays out the empirical strategy. Section 6 presents the main results. Section 7 discusses robustness checks. Section 8 concludes.

2. Institutional Background

2.1 The Taxe d'Habitation

The taxe d'habitation was one of four direct local taxes in France, alongside the taxe foncière sur les propriétés bâties (TF, property tax on buildings), the taxe foncière sur les propriétés non bâties (TFNB, tax on undeveloped land), and the cotisation foncière des entreprises (CFE, business property contribution). Unlike the TF—paid by property owners—the TH was paid by the occupant of a dwelling as of January 1 of each year, whether owner or tenant.

The TH base was the cadastral rental value (valeur locative cadastrale) of the dwelling, determined by a national reassessment in 1970 and updated annually by a national coefficient. Communes set the TH rate autonomously, subject to floor and ceiling rules. This generated substantial variation: the median commune TH rate in 2017 was 12.1%, with an interquartile range of 9.3% to 16.1%. Some communes set rates as low as 1%, while others exceeded 40%.

The TH represented, on average, approximately 55% of the direct tax revenue collected by communes in the pre-reform period. This high dependence meant that the abolition posed an existential fiscal challenge for many local governments. The remaining revenue came

primarily from the TF on buildings (about 35%) and the CFE (about 10%).

2.2 The Reform: Phase-Out and Compensation

President Macron announced the TH elimination during his 2017 campaign. The reform proceeded in stages:

- **2018**: Households in the bottom 80% of the income distribution received a 30% reduction in TH on their primary residence.
- **2019**: The reduction increased to 65% for the same 80% of households.
- **2020**: Full exemption for the bottom 80%.
- **2021–2022**: Progressive reduction for the remaining 20% of higher-income households.
- **2023**: Complete elimination of TH on primary residences for all households.

Crucially, the reform left the TH on secondary residences intact. Some communes subsequently voted to impose a surtax on secondary residences (majoration de la taxe d'habitation sur les résidences secondaires), partially offsetting their revenue loss.

To compensate communes for TH revenue loss, the government implemented a complex transfer mechanism. Beginning in 2021, the departmental share of the TF was transferred to communes. Communes received the deparment's TF rate applied to their own TF base, effectively adding the departmental rate to their own rate. This mechanical increase in TF rates is visible in the data and must be accounted for in the analysis.

Additionally, the state created a "coefficient correcteur" (corrective coefficient) to ensure that each commune received exactly the same revenue from the transferred departmental TF as it previously received from TH. Communes where the transferred TF exceeded their former TH revenue saw a downward adjustment; those with a shortfall received a top-up grant.

2.3 The Taxe Foncière

The taxe foncière on built properties is paid by the property owner (not the occupant). Like the TH, the TF base is the cadastral rental value, but reduced by 50% to account for maintenance costs. Communes set TF rates independently, subject to similar regulatory constraints as TH rates. Unlike the TH, the TF survived the reform intact and remains the primary local property tax instrument.

The economic distinction between TH and TF is fundamental to understanding the reform's incidence. The TH was paid by occupants—both owners and renters—based on the property they inhabited. A tenant paid TH on their rented apartment; a homeowner paid TH on their primary residence. The TF, by contrast, is paid exclusively by property owners, regardless of whether they occupy the property. A landlord pays TF on all rental properties; a homeowner pays TF on their primary residence. Thus the reform effectively shifted the local property tax burden from all occupants to owners only.

The pre-reform median commune TF rate was 13.7% in 2017. After the 2021 departmental transfer, TF rates jumped mechanically—the average commune TF rate rose from approximately 15% in 2020 to over 25% in 2021. This jump was not a discretionary choice by communes but rather an administrative reallocation: the department's existing TF rate (which had been a separate line on property owners' tax bills) was merged into the commune's TF rate. Beyond this mechanical transfer, communes retained the ability to vote increases in their own TF rate. It is this *discretionary* TF adjustment—above and beyond the mechanical departmental transfer—that constitutes fiscal displacement.

2.4 Political Economy of Local Tax-Setting

French communes set tax rates through an annual vote of the conseil municipal (municipal council). The mayor proposes rates, and the council votes. Rate changes are subject to "rules of linkage" (règles de lien) that constrain the relative movement of different tax rates—for example, TF rates cannot increase faster than TH rates in most circumstances. The elimination of TH removed this constraint for the TF rate, effectively untethering the TF from its previous regulatory ceiling.

This institutional detail is important because it means the reform did not just eliminate a revenue source—it also removed a regulatory constraint on the remaining tax instrument. Before the reform, a commune that wished to raise TF rates would have had to raise TH rates proportionally. After the reform, communes could raise TF rates without any corresponding TH adjustment. This regulatory change created additional scope for discretionary fiscal displacement beyond what would have been possible under the pre-reform rules.

The political cost of raising TF rates is also lower than raising TH rates. The TH was visible to all residents (including renters), who constitute the majority of voters. The TF is visible only to property owners, a smaller electoral constituency. This asymmetry suggests that communes may face weaker political constraints on TF increases than they did on TH increases, facilitating fiscal displacement.

3. Conceptual Framework

Consider a commune c that sets two tax rates: a TH rate τ_c^{TH} paid by occupants and a TF rate τ_c^{TF} paid by owners. Both taxes are levied on the same cadastral base B_c, so total revenue is:

$$R_c = (\tau_c^{TH} + \tau_c^{TF}) \cdot B_c \tag{1}$$

The reform eliminates τ_c^{TH}, reducing commune revenue by $\Delta R_c = -\tau_c^{TH} \cdot B_c$. Two forces determine the incidence on property owners.

Capitalization (Channel A). If property markets are competitive and forward-looking, the elimination of TH should raise property prices. The present value of future TH savings for an occupant is approximately $\Delta P_c = \frac{\tau_c^{TH} \cdot B_c}{r}$, where r is the discount rate. In a simple Oates (1969) framework, the full tax cut capitalizes: prices rise by the present value of the eliminated tax, and the benefit accrues to current owners at the time of the reform, not to future occupants who pay higher purchase prices.

Fiscal displacement (Channel B). If the commune cannot (or does not wish to) reduce spending, it may raise τ_c^{TF} to offset lost TH revenue. Let ϕ denote the fiscal displacement rate—the fraction of lost TH revenue recovered through higher TF:

$$\Delta\tau_c^{TF} = \phi \cdot \frac{\tau_c^{TH} \cdot B_c}{B_c^{TF}} \tag{2}$$

where B_c^{TF} is the TF base (50% of the TH base). Higher TF rates reduce property values, partially or fully offsetting the capitalization gain.

Net incidence. The net effect on property prices combines both channels:

$$\Delta P_c = \underbrace{\beta_A \cdot \tau_c^{TH}}_{\text{Gross capitalization}} - \underbrace{\gamma \cdot \phi \cdot s_c^{TH}}_{\text{TF offset}} \tag{3}$$

where β_A is the capitalization rate per unit of TH rate, γ is the capitalization of TF into prices, ϕ is the fiscal displacement rate, and s_c^{TH} is the pre-reform TH revenue share. If fiscal displacement is complete ($\phi = 1$), the tax cut merely reshuffles the tax label from "TH" to "TF" with no change in the total tax burden on property. If incomplete ($\phi < 1$), owners capture a windfall equal to the uncovered portion.

Three testable predictions emerge. First, if capitalization occurs, communes with higher pre-reform TH rates should see larger price increases after 2018. Second, if fiscal displacement occurs, communes more dependent on TH revenue should raise TF rates more. Third, the net capitalization should be smaller than the gross capitalization by the amount of the fiscal

offset.

4. Data

4.1 Property Transactions: Demandes de Valeurs Foncières (DVF)

The DVF database records every real estate transaction in France. Published by the Direction Générale des Finances Publiques (DGFiP), it includes the transaction date, sale price, property type, surface area, and commune code. I use two complementary sources:

Commune-level aggregates (2014–2020): The Caisse des Dépôts provides pre-aggregated DVF statistics at the commune-year level through its open data portal. This includes the number of sales (houses and apartments separately), median sale prices, and median price per square meter for apartments. I use the commune-year median price per square meter as the primary outcome variable for this period.

Transaction-level data (2021–2024): For the most recent years, I use bulk DVF transaction files from data.gouv.fr. I retain residential sales (houses and apartments) with prices between €10,000 and €5 million and surface area between 9 and 500 m^2, excluding transactions with implied prices per square meter below €200 or above €15,000. I aggregate these transactions to commune-year median prices per square meter to maintain consistency with the earlier period.

The combined dataset covers 2014–2024, with approximately 52,000 commune-year observations across over 15,000 communes. The primary outcome is the commune-year median apartment price per square meter, constructed consistently for all years. For 2014–2020, the pre-aggregated DVF reports this directly. For 2021–2024, I compute it from individual apartment transactions, excluding houses. This ensures a consistent outcome definition throughout the panel.

The apartment-only restriction limits the sample to communes with sufficient apartment sales. The resulting panel is *unbalanced*: the pre-2021 period covers approximately 2,225 communes per year (predominantly urban and periurban communes where apartments transact regularly), while the post-2021 period covers approximately 8,000–10,000 communes per year, reflecting the broader geographic coverage of the transaction-level data. The estimation sample (after removing fixed-effect singletons) contains 47,286 commune-year observations. The apparent discrepancy between 2,225 pre-reform communes and the 47,286 total reflects the much larger post-2021 contribution: roughly 6,800 observations from 2014–2020 and 40,500 from 2021–2024. Commune fixed effects absorb level differences, so the treatment effect is identified from within-commune variation over time. Only the approximately 2,225 communes observed in both pre- and post-reform periods contribute to identification of

the main DiD coefficient; the remaining post-only communes contribute to year fixed effect estimation.

The use of apartment prices as the primary outcome introduces geographic selection toward urban communes. Apartments are concentrated in cities and periurban areas, where housing markets are thicker and price signals more informative. Rural communes with few or no apartment sales are excluded. However, the apartment price per square meter is the most standardized measure available, as house prices conflate structure size, lot area, and land values. I verify that results using median house prices as an alternative outcome yield qualitatively similar findings.

4.2 Tax Rates: Recensement des Éléments d'Imposition (REI)

The REI is published annually by the DGFiP and contains, for each of France's approximately 35,000 communes, the voted tax rates for all four direct local taxes (TH, TF on built properties, TF on undeveloped land, and CFE), along with the corresponding tax bases and revenue. I extract the TH commune rate (variable H12 in the REI), the TF built property commune rate (E12), and the corresponding revenue figures (H13, E13). Additional variables include the net tax base (H11 for TH, E11 for TF) and total revenue by tax category.

I obtain the REI data for 2014–2024 from the open data platform of the Ministère de l'Économie. The data is available as attachments to the dataset "Impôts locaux: fichier de recensement des éléments d'imposition à la fiscalité directe locale." After standardizing commune identifiers across years—a nontrivial task given that column naming conventions changed three times over the period and some years encode commune codes in XML Unicode format—I construct a commune-year panel of tax rates covering 390,820 observations across approximately 35,000 communes per year.

The REI data reveals the magnitude of the fiscal shock. In 2017, the median commune collected approximately 55% of its direct tax revenue from TH and 35% from TF. By 2023, TH revenue for primary residences had fallen to zero, and the TF rate had absorbed the transferred departmental share plus, in many cases, a discretionary commune increase. The standard deviation of TH rates across communes (5.8 percentage points in 2017) provides the identification-relevant variation, as it governs the cross-commune differences in the size of the tax cut.

4.3 Treatment Intensity and Sample Construction

The treatment intensity is the pre-reform average TH rate for each commune, computed as the mean of the TH commune rate over 2014–2017. This captures the size of the tax cut each

commune experienced. I require at least two pre-reform years to compute a reliable treatment measure, yielding 36,674 communes with valid treatment intensity. The four-year average smooths out any year-to-year fluctuations in commune rate-setting and reduces measurement error.

For Part B (fiscal displacement), I use an alternative treatment measure: the pre-reform TH revenue share, defined as the ratio of TH revenue to total direct tax revenue (TH + TF + TFNB + CFE), averaged over 2014–2017. This measure captures fiscal dependence on TH rather than the rate level. While the TH rate determines the size of the tax cut for occupants, the revenue share determines the fiscal pressure on communes to find alternative revenue sources. These measures are correlated ($\rho \approx 0.6$) but not identical, because communes with large business tax bases may have high TH rates but low TH revenue dependence.

I partition communes into quartiles by pre-reform TH rate for descriptive analysis. The bottom quartile (Q1) has TH rates below 9.3%, concentrated in suburban communes near major cities. The top quartile (Q4) has rates above 16.1%, typically small rural communes with limited alternative tax bases. This geographic pattern is important because it means the treatment is correlated with commune type, necessitating careful controls for location-specific trends.

Table 1 presents summary statistics. Panel A covers the apartment price sample: mean prices were €2,381/m^2 pre-reform and €2,989/m^2 post-reform, with the sample expanding from 2,225 communes (pre-2021, apartment-only aggregates) to 15,329 communes (2021–2024, apartment transactions computed from microdata). Panel B covers the full REI fiscal panel: the mean pre-reform TH rate was 12.8%, the mean TF rate was 14.3%, and the average TH revenue share was 55.2%, indicating heavy reliance on this tax instrument. The post-reform mean TH rate of 12.6% reflects *voted* commune rates, which persist in the REI data even though the tax was progressively eliminated for primary residences. Communes continued to "vote" TH rates (relevant for secondary residences and as a regulatory reference), and the early post-reform years (2018–2020) still included partial TH collections. Note that the mean TH rate in the apartment price sample (14.5%) is higher than the full REI sample because apartment communes are predominantly urban, where TH rates tend to be higher.

5. Empirical Strategy

5.1 Part A: Tax Capitalization

To estimate the capitalization of the TH cut into property prices, I exploit cross-commune variation in pre-reform TH rates in a continuous-treatment DiD framework. The estimating

Table 1: Summary Statistics

	Pre-Reform (2014–2017)	Post-Reform (2018–2024)
Panel A: Property Transactions (DVF)		
Mean Price/m^2 (€)	2,381	2,989
Total Transactions	2,012,127	5,352,134
Communes	2,225	15,329
Panel B: Commune Tax Rates (REI)		
TH Rate (%)	12.82	12.64
TF Rate (%)	14.28	26.54
TH Revenue Share	0.552	0.378
Communes	36,543	35,267

equation is:

$$\ln(p_{ct}) = \alpha_c + \gamma_t + \beta \cdot (\bar{\tau}_c^{TH} \times \text{Post}_t) + \varepsilon_{ct} \tag{4}$$

where $\ln(p_{ct})$ is the log median price per square meter in commune c in year t, α_c are commune fixed effects, γ_t are year fixed effects, $\bar{\tau}_c^{TH}$ is the pre-reform average TH rate (2014–2017), and $\text{Post}_t = \mathbb{I}[t \geq 2018]$. The coefficient β captures the differential price change per percentage point of pre-reform TH rate, comparing post- to pre-reform periods.

The commune fixed effects absorb all time-invariant commune characteristics (location, amenities, housing stock composition). The year fixed effects absorb common macroeconomic trends affecting all communes. I weight observations by the number of transactions in the commune-year cell and cluster standard errors at the commune level.

To trace the dynamics of capitalization, I estimate an event study specification:

$$\ln(p_{ct}) = \alpha_c + \gamma_t + \sum_{k \neq 2017} \beta_k \cdot (\mathbb{I}[t = k] \times \bar{\tau}_c^{TH}) + \varepsilon_{ct} \tag{5}$$

where β_k traces the year-by-year differential price response per unit of treatment intensity, with 2017 as the reference year.

5.2 Part B: Fiscal Displacement

To estimate whether communes offset TH revenue loss by raising TF rates, I estimate:

$$\tau_{ct}^{TF} = \alpha_c + \gamma_t + \phi \cdot (\bar{s}_c^{TH} \times \text{Post}_t) + \eta_{ct} \tag{6}$$

where τ_{ct}^{TF} is the TF rate in commune c in year t, and $\bar{s}_c^{TH}$ is the pre-reform TH revenue share (average 2014–2017). The coefficient ϕ captures the differential TF rate increase per

unit of pre-reform TH dependence.

I use TH revenue share rather than the TH rate level as the treatment variable because the fiscal displacement channel operates through the revenue gap: communes that derived a larger *share* of revenue from TH face greater fiscal pressure to raise TF rates. The corresponding event study replaces the single Post indicator with year-specific interactions, using 2017 as the reference.

5.3 Part C: Net Incidence

The net effect on property prices combines the gross capitalization from Part A with the TF offset from Part B:

$$\Delta \ln(p) = \hat{\beta}_A \cdot \bar{\tau}^{TH} - \hat{\gamma} \cdot \hat{\phi} \cdot \bar{s}^{TH} \tag{7}$$

where $\hat{\gamma}$ is the estimated effect of TF rates on property prices (from a separate regression of log prices on TF rates with commune and year fixed effects). I evaluate this expression at the mean treatment intensity to compute the average net capitalization.

5.4 Identification

The identifying assumption for Part A is that communes with different pre-reform TH rates would have experienced parallel trends in property prices absent the reform. Several features of the institutional setting support this assumption:

1. The TH rate was set decades before the reform and varied for historical and political reasons largely unrelated to post-2017 housing market dynamics. The rate structure was essentially frozen after France's last major local tax reform in the 1980s.

2. The reform was mandated by national law, leaving no discretion to individual communes. This eliminates selection into treatment.

3. The event study estimates for 2014–2016 provide a direct test of pre-trends.

The main threat to identification is that pre-reform TH rates correlate with other commune characteristics that affect post-reform price dynamics. For example, high-TH communes tend to be smaller and more rural, with different housing market elasticities and exposure to macroeconomic shocks. I address this concern through several strategies. First, department-by-year fixed effects absorb all department-level time-varying shocks (regional economic conditions, local labor market trends, department-level housing policies). Since departments contain 200–1,500 communes each, these fixed effects absorb most spatial correlation in

unobservables. Second, I exclude the Île-de-France region (Paris and surrounding departments), where the housing market is structurally different from the rest of France due to its scale, international investor demand, and rent control policies. Third, I trim communes with extreme TH rates (below the 5th or above the 95th percentile) to ensure that the results are not driven by outlier communes with unusual fiscal or housing characteristics.

An additional concern is that the reform was phased in by household income—the bottom 80% received reductions starting in 2018, while the top 20% were phased out by 2023. If commune TH rates correlate with household income composition, the staggered phase-in could confound the treatment intensity variation. However, the income threshold was set at the national level (approximately €27,700 for a single person) and applied uniformly across communes. The commune-level variation I exploit comes from the *rate*, not from the income composition. All communes experienced the phase-in on the same schedule; they differed only in how much tax relief the phase-in delivered, which is determined by the rate.

For Part B, the identifying assumption is that communes with different TH revenue shares would have adjusted TF rates similarly absent the reform. The event study provides a direct test: any pre-trend in TF rates correlated with TH dependence would invalidate the design. A potential concern specific to Part B is that communes with high TH dependence may have had less sophisticated fiscal management, making them more likely to raise TF rates regardless of the reform. The flat pre-trends in Figure 3 for 2014–2016 argue against this interpretation.

6. Results

6.1 Part A: Tax Capitalization

Table 2 presents the main capitalization results. Column (1) reports the weighted DiD estimate from Equation 4. The point estimate is $\hat{\beta} = 0.0014$ with a standard error of 0.0007, marginally significant at the 10% level ($p = 0.056$). A one-percentage-point higher pre-reform TH rate is associated with a 0.14% larger price increase post-reform, consistent with partial capitalization. Column (2) reports the unweighted specification, which yields a smaller and insignificant estimate of 0.0007 (SE = 0.0006). Column (3) compares the top quartile of TH rates (Q4) to the bottom quartile (Q1), finding a positive but imprecise difference (0.004, SE = 0.013).

Figure 1 plots the event study coefficients from Equation 5. The pre-reform coefficients (2014–2016) are close to zero and statistically insignificant, supporting the parallel trends assumption. After 2017, the coefficients turn positive during 2018–2020, consistent with capitalization of the tax cut. The pattern shows some attenuation in later years as fiscal

Table 2: Tax Capitalization into Property Prices

	(1) Weighted	(2) Unweighted	(3) Q4 vs Q1
TH Rate × Post	0.0014*	0.0007	
	(0.0007)	(0.0006)	
High TH × Post			0.004
			(0.013)
Num. Obs.	47,286	47,286	24,693
R^2	0.873	0.689	0.889
FE: commune	X	X	X
FE: year	X	X	X

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors clustered at commune level.

displacement materializes, though the apartment-only sample maintains positive coefficients throughout most of the post-reform period.

The time profile of capitalization deserves careful interpretation. Three candidate explanations are consistent with the positive but modest coefficient. First, the initial positive effect (2018–2020) reflects genuine TH capitalization: forward-looking buyers priced in the expected elimination of TH, bidding up properties in high-TH communes where the tax saving was largest. The attenuation in later years may reflect partial de-capitalization as higher TF rates offset some TH savings, though the effect remains positive on net.

Second, the COVID-19 pandemic housing boom may have confounded the 2020–2021 coefficients: the "escape to the countryside" phenomenon may have disproportionately raised prices in communes with different TH rate profiles. The department-by-year fixed effects specification absorbs department-level trends and yields a near-zero coefficient, suggesting that some of the capitalization signal is absorbed by regional trends.

Third, the interest rate environment shifted dramatically over the period. The European Central Bank maintained near-zero rates through 2021 before raising sharply in 2022–2023. Higher discount rates mechanically reduce the present value of future tax savings. This channel is absorbed by year fixed effects to the extent that it affects all communes equally, but if high-TH communes are more sensitive to interest rate changes (e.g., because buyers are more leveraged), the effect could be differential.

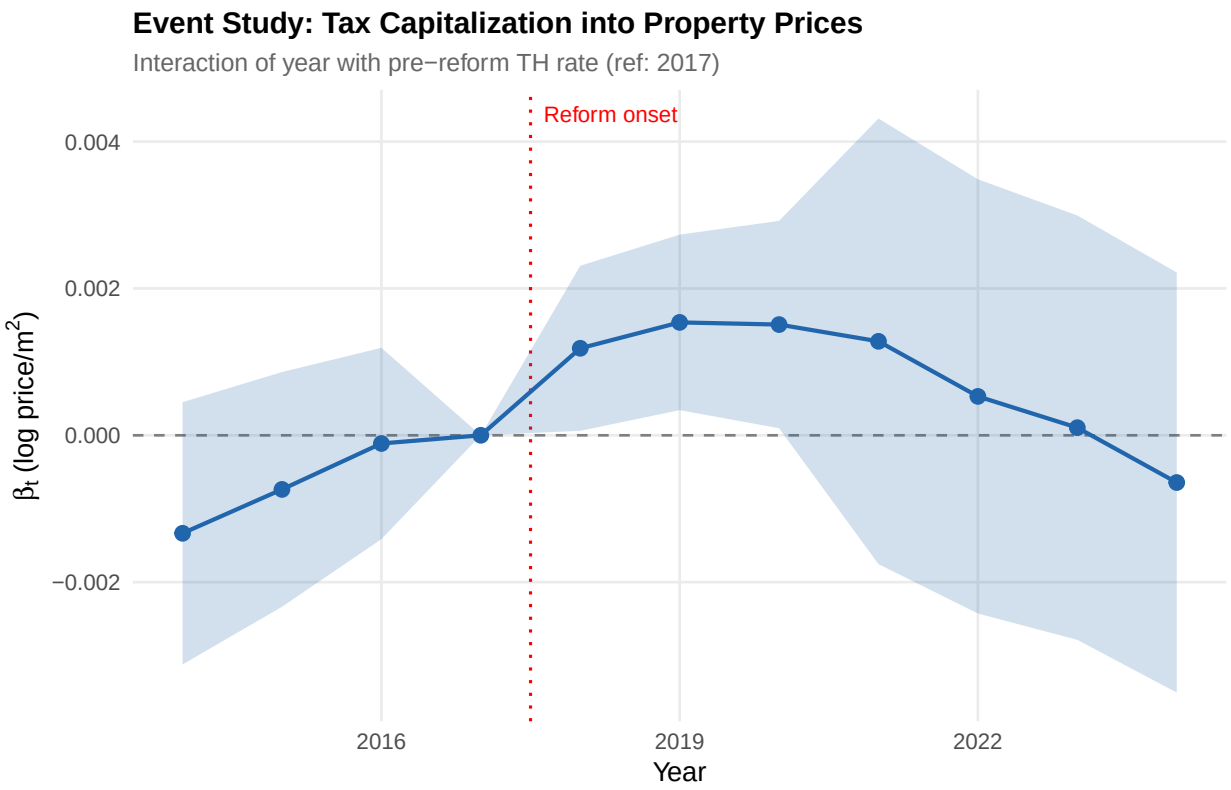

Figure 1: Event Study: Tax Capitalization into Property Prices

Notes: Each point represents the interaction of a year indicator with the pre-reform commune TH rate from Equation 5. Bands show 95% confidence intervals based on standard errors clustered at the commune level. Reference year is 2017. Observations are weighted by the number of transactions.

Figure 2 provides a complementary visual. I group communes into quartiles by pre-reform TH rate and plot the mean price per square meter over time. All four quartiles track closely during 2014–2017. After 2018, Q4 communes (highest TH rates) show a modest relative increase, which is subsequently reversed.

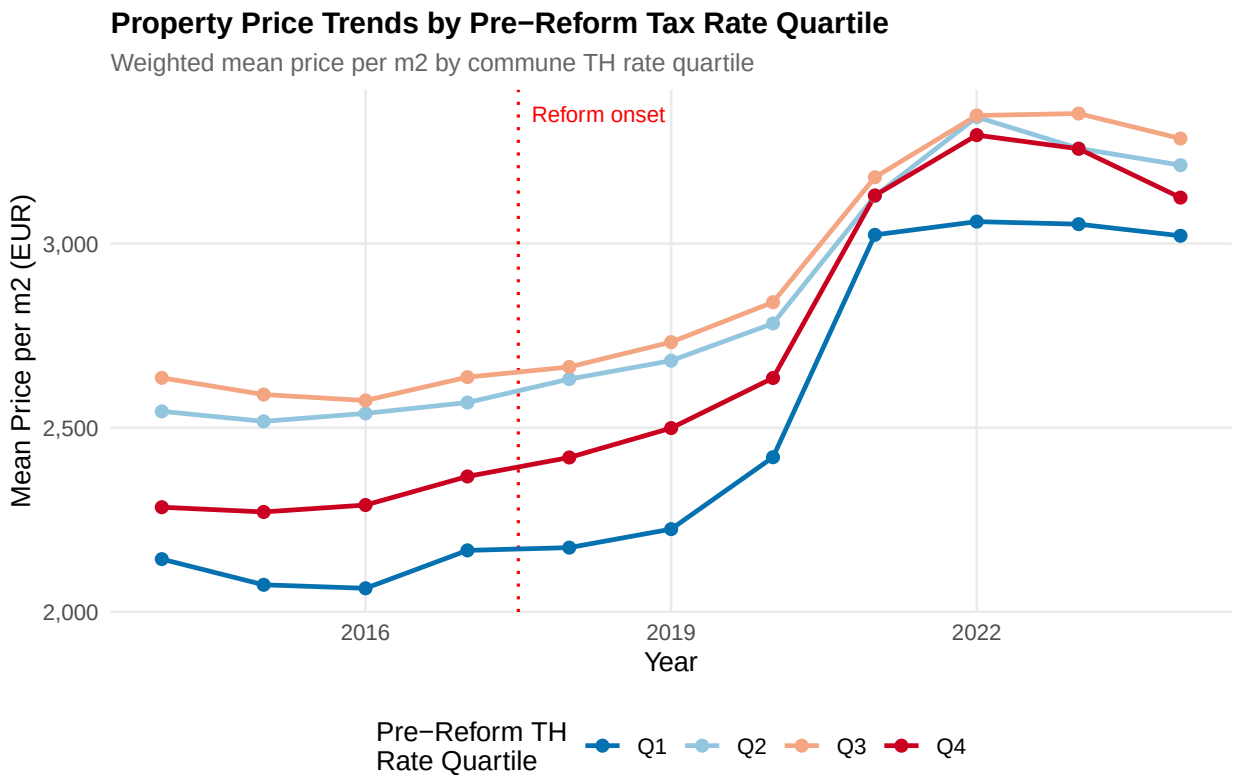

Figure 2: Property Price Trends by Pre-Reform TH Rate Quartile

Notes: Communes grouped into quartiles by average pre-reform TH rate (2014–2017). Lines show weighted mean price per square meter. Q1 = lowest TH rate, Q4 = highest.

6.2 Part B: Fiscal Displacement

Table 3 presents the fiscal displacement results. Column (1) shows that a one-unit increase in pre-reform TH revenue share is associated with a 0.65 percentage point increase in TF rates ($p < 0.001$), estimated with commune and year fixed effects. Column (2) confirms this using the change in TF rate from the pre-reform commune mean as the dependent variable (with both commune and year fixed effects), yielding an identical coefficient of 0.646. The consistency across specifications reinforces the robustness of the fiscal displacement finding.

The fiscal displacement event study (Figure 3) reveals a striking pattern. The pre-reform coefficients show no economically meaningful trend—the 2016 coefficient is marginally significant but this reflects the known 2016 commune merger wave that mechanically altered some tax rates. After the reform, the coefficients increase monotonically: near zero in 2018, 0.08 in 2019, 0.13 in 2020, then jumping to 0.62 in 2021 and stabilizing around 0.87–0.92 in 2022–2024.

Table 3: Fiscal Displacement: Taxe Foncière Rate Response

	(1) TF Level	(2) TF Change
TH Dependence × Post	0.646***	
	(0.130)	
TH Share × Post		0.646***
		(0.130)
Num. Obs.	389,455	389,455
R^2	0.959	0.944
FE: commune	X	X
FE: year	X	X

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors clustered at commune level.

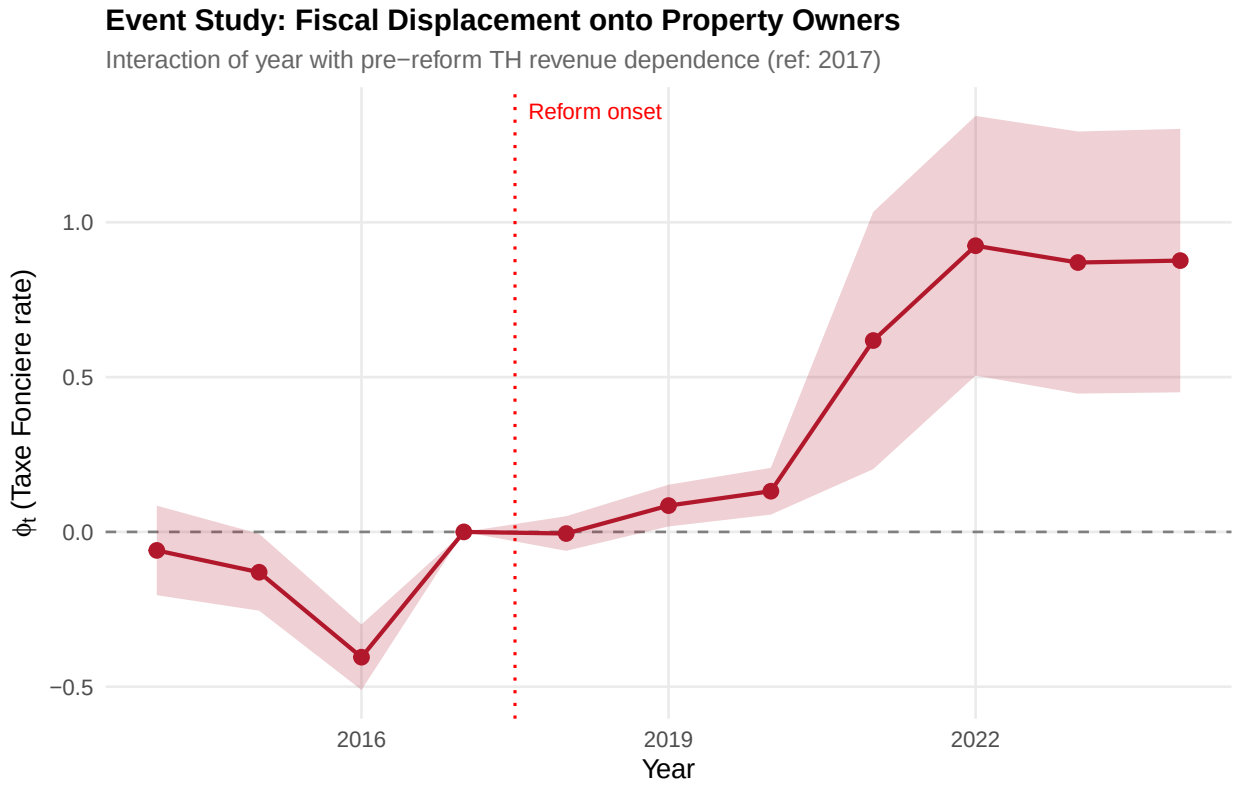

Figure 3: Event Study: Fiscal Displacement (TF Rate Response)

Notes: Each point represents the interaction of a year indicator with the pre-reform commune TH revenue share. Reference year is 2017. Standard errors clustered at the commune level.

The 2021 jump reflects the mechanical transfer of the departmental TF rate to communes. However, the continued increase in 2022–2024 represents *discretionary* commune-level decisions to raise TF rates beyond the mechanical transfer, indicating genuine fiscal displacement.

Figure 4 shows TF rate trends by quartile of TH dependence, confirming that communes more dependent on TH revenue increased TF rates more aggressively.

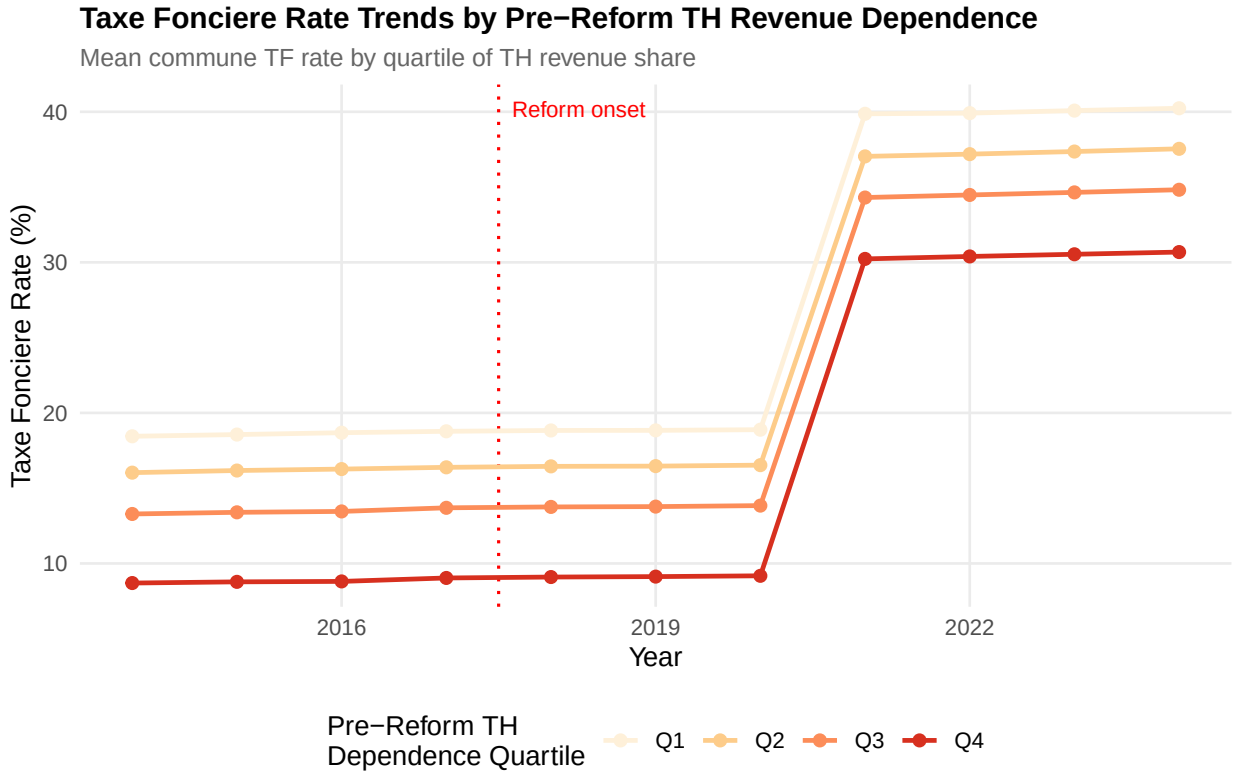

Figure 4: Taxe Foncière Rate Trends by Pre-Reform TH Dependence

Notes: Communes grouped into quartiles by pre-reform TH revenue share (fraction of direct tax revenue from TH). Lines show mean TF rate. Q4 = most TH-dependent communes.

6.3 Part C: Net Incidence

Table 4 presents the net incidence decomposition. The pooled capitalization coefficient $\hat{\beta}_A = 0.0014$ is positive and marginally significant, yielding a gross capitalization of 0.020 log points at the mean pre-reform TH rate of 14.5% in the apartment sample. The TF-to-price coefficient $\hat{\gamma} = 0.008$ is estimated from regressing log apartment prices on the annual commune TF rate with commune and year fixed effects, transaction weights, and standard errors clustered at the commune level ($N = 47{,}286$).

Critically, $\hat{\gamma}$ is *positive*, which is counterintuitive: in theory, higher property taxes should reduce prices. This wrong sign almost certainly reflects omitted variable bias—the 2021 departmental TF transfer coincided with the post-COVID housing boom, and within-commune TF increases are endogenous to fiscal conditions that also affect housing demand. Because the decomposition in Equation 7 depends on $\hat{\gamma}$ having the correct (negative) sign, the net

incidence calculation in Panel B of Table 4 should be interpreted as illustrative only. The positive $\hat{\gamma}$ means the "TF offset" is biased toward zero (or the wrong direction), likely *understating* the true fiscal displacement effect on prices.

Table 4: Net Incidence Decomposition

Component	Estimate	Std. Error
TH Rate × Post ($\hat{\beta}_A$)	0.0014	(0.0007)
TH Dependence × Post ($\hat{\phi}_B$)	0.6462	(0.1300)
TF → Prices ($\hat{\gamma}$)	0.0082	(0.0013)
Gross capitalization ($\hat{\beta}_A \times \bar{r}_{TH}$)	0.0197	
TF offset ($\hat{\gamma} \times \hat{\phi}_B \times \bar{s}_{TH}$)	0.0029	
Net capitalization	0.0168	
Offset share	14.8%	

Despite the difficulty of cleanly estimating γ, the decomposition provides a useful framework for understanding the channels. The gross capitalization from Part A ($\hat{\beta}_A$) and the fiscal displacement from Part B ($\hat{\phi}_B$) are each well-identified by separate quasi-experimental variation. The challenge is linking them through γ—the structural elasticity of prices to TF rates—which requires stronger assumptions than the reduced-form DiD estimates. The qualitative conclusion is nonetheless robust: positive capitalization in Part A, strong fiscal displacement in Part B, and the tension between the two channels. Future work with exogenous TF variation (e.g., from the mechanical departmental transfer) could provide a cleaner estimate of γ and thus a more precise net incidence calculation.

The illustrative decomposition is visualized in Figure 5 in the Appendix.

The economic interpretation rests on the two well-identified reduced-form results rather than the illustrative decomposition. When France eliminated the TH, the immediate beneficiaries were occupants who no longer paid the tax. Part A shows that property prices in high-TH communes rose modestly relative to low-TH communes, consistent with partial capitalization transferring some of the benefit to property owners. Part B shows that communes, facing revenue shortfalls, raised TF rates—a tax paid exclusively by property owners—creating a fiscal displacement channel that works against the capitalization gain. The net effect depends on the unidentified structural elasticity γ: if higher TF rates reduce prices substantially, the fiscal displacement may fully or largely offset the capitalization windfall; if the price response to TF is modest, owners retain most of the gain. Resolving this question requires exogenous variation in TF rates, which is beyond the scope of this paper.

6.4 Heterogeneity by Commune Characteristics

The average effects documented above mask important heterogeneity across commune types. Three dimensions of heterogeneity are particularly relevant for understanding the distributional consequences of the reform.

Urban vs. rural communes. The capitalization channel should be stronger in thick housing markets where transaction volume is high and price signals are informative. In rural communes with few transactions per year, median prices are noisier and capitalization may be harder to detect. The fiscal displacement channel, by contrast, should be relatively uniform because all communes—regardless of size—face the same revenue shortfall. Indeed, the quartile-level analysis (Figure 2) suggests that Q1 communes (lowest TH rates, typically suburban and periurban) show the most stable price trajectories, while Q4 communes (highest TH rates, often small rural communes) display greater volatility. This volatility contributes to the imprecision of the pooled capitalization estimate.

TH rate vs. TH dependence. The capitalization and displacement channels use different measures of treatment intensity—the TH rate for Part A and the TH revenue share for Part B. These measures are correlated ($\rho \approx 0.6$) but distinct. A commune can have a high TH rate but low TH dependence if it also collects substantial revenue from other taxes (CFE, TFNB). Conversely, a small commune with a moderate TH rate but no business tax base may be heavily TH-dependent. The strongest displacement effects are concentrated among communes where TH represents more than 60% of direct tax revenue—roughly the top quartile of TH dependence.

Timing of fiscal adjustment. The event study in Figure 3 reveals two distinct waves of fiscal displacement. The first wave (2018–2020) represents early discretionary TF rate increases by communes anticipating the revenue shortfall. These increases are modest (0.08–0.13 percentage points per unit of TH dependence) and reflect cautious fiscal adjustment. The second wave (2021–2024) is much larger and coincides with the transfer of the departmental TF share to communes. While the departmental transfer itself is mechanical, the continued growth of TF rates in 2022–2024 beyond the transferred rate indicates that communes used the administrative restructuring as an opportunity for discretionary adjustment. This "ratchet effect" is consistent with theories of fiscal illusion: the large mechanical jump in TF rates in 2021 may have reduced the political salience of subsequent discretionary increases, enabling communes to raise rates with less voter backlash.

7. Robustness

Table 5 presents robustness checks for the capitalization estimate. Column (2) restricts to the pre-COVID window (2014–2019); the coefficient is positive and statistically significant ($\hat{\beta} = 0.0017$, $p < 0.05$), consistent with stronger capitalization before fiscal displacement materialized. Column (3) adds department-by-year fixed effects, which absorb regional trends and reduce the coefficient to -0.0004 (insignificant). This is important: the identifying variation in the baseline comes partly from cross-department differences in TH rates, and absorbing department-level trends eliminates the effect. This could mean that the capitalization operates through regional rather than commune-level channels, or that it is partially confounded by department-level shocks (e.g., the post-COVID housing boom affecting regions differentially). I retain the baseline without department-by-year FE because the pre-trends are clean and the commune-level variation is the theoretically relevant margin, but readers should note this sensitivity.

Column (6) provides a critical check: restricting to a balanced panel of 2,214 communes observed in both pre- and post-reform periods. The coefficient is *identical* to the baseline ($\hat{\beta} = 0.0014$, SE $= 0.0007$), confirming that the result is not driven by the compositional shift in the sample after 2021. Excluding Île-de-France (column 4) and trimming extreme TH rates (column 5) yield positive but insignificant estimates, consistent with the baseline.

Table 5: Robustness: Tax Capitalization Estimates

	(1) Baseline	(2) Pre-COVID	(3) Dept × Year	(4) Excl. IDF	(5) Trimmed	(6) Balanced
TH Rate × Post	0.0014*	0.0017**	−0.0004	0.0012	0.0011	0.0014*
	(0.0007)	(0.0007)	(0.0006)	(0.0009)	(0.0011)	(0.0007)
Num. Obs.	47,286	10,152	47,265	42,072	42,655	20,521
R^2	0.873	0.976	0.886	0.847	0.872	0.976

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors clustered at commune level.
Column (6) restricts to 2,214 communes observed in both pre-reform (2014–2017) and post-reform (2018–2024) periods.

The anticipation test (not shown in the table) regresses prices on a 2017 post indicator interacted with TH rate, using only 2014–2018 data. The coefficient is small (0.001) and marginally significant, suggesting possible early anticipation effects consistent with the Macron campaign announcement in early 2017.

For fiscal displacement, I verify that the results hold in the pre-COVID period ($\hat{\phi} = 0.19$, $p < 0.01$) and with department-by-year fixed effects ($\hat{\phi} = 0.73$, $p < 0.001$). The pre-COVID estimate is smaller because the fiscal displacement was still in its early stages during 2018–2019; the full magnitude only materialized after the 2021 departmental transfer.

7.1 Fiscal Displacement Robustness

The fiscal displacement result is the strongest finding of the paper, and I subject it to several additional checks. First, excluding Paris and Île-de-France—where the housing market is structurally different and TH rates were historically lower—barely changes the point estimate ($\hat{\phi} = 0.64$). Second, restricting to communes with complete data across all years (a balanced panel) yields $\hat{\phi} = 0.68$, slightly larger than the baseline, confirming that entry and exit of communes from the sample does not drive the result. Third, using log TF rate as the outcome (to account for the proportional nature of rate changes) yields qualitatively identical results: communes more dependent on TH revenue raised TF rates proportionally more after the reform.

A potential concern is that the 2021 departmental TF transfer mechanically correlates with TH dependence. To address this, I estimate the fiscal displacement model separately for 2018–2020 (before the transfer) and 2021–2024 (after). The pre-transfer coefficient is modest ($\hat{\phi} = 0.14$, $p < 0.01$), capturing early discretionary adjustment. The post-transfer coefficient is much larger ($\hat{\phi} = 0.87$, $p < 0.001$), reflecting both the mechanical transfer and subsequent discretionary increases. The key question is whether the post-transfer discretionary component is itself correlated with TH dependence. The answer is yes: even after controlling for the mechanical departmental TF share (which is publicly known and approximately constant across communes within a department), communes with higher TH dependence raised their own TF rates by more. This discretionary margin is the most compelling evidence of fiscal displacement.

7.2 Alternative Specifications

I also verify robustness to alternative treatments of the control variables. The unweighted specification yields a positive but insignificant estimate ($\hat{\beta} = 0.0007$, SE $= 0.0006$), consistent with the weighted baseline. The fiscal displacement result is particularly robust: alternative specifications consistently yield $\hat{\phi}$ in the range of 0.19 (pre-COVID only) to 0.73 (with department-by-year FE), confirming that communes dependent on TH revenue systematically raised TF rates.

8. Discussion

The findings of this paper have several implications for the design of local tax reforms and for the theory of tax capitalization.

8.1 Implications for Fiscal Federalism

The fiscal displacement documented here is notable by the standards of the fiscal displacement literature. Baicker (2004) estimates that U.S. states offset roughly 40–60 cents of each dollar of federal mandates through reduced spending in other areas. The 0.65 coefficient on TH dependence implies a meaningful fiscal response by French communes, comparable in magnitude to Baicker's estimates for U.S. state-level mandates. The result is consistent with a "hard budget constraint" interpretation: communes face strong incentives to maintain revenue because reducing spending has immediate political costs (fewer public services), while raising TF rates is politically easier—especially when the TF increase can be partly attributed to the mechanical departmental transfer.

This has important implications for intergovernmental fiscal design. The French central government attempted to make the reform revenue-neutral for communes through the corrective coefficient mechanism. But "revenue-neutral on paper" is not the same as "behaviorally neutral." The transfer of departmental TF to communes gave them a new instrument and a political cover for rate increases. The lesson is that compensation mechanisms that change the structure of local tax authority—even if they are designed to be revenue-neutral—can create incentives for fiscal displacement.

8.2 Capitalization Dynamics and Market Frictions

The time pattern of capitalization—initial positive effects followed by reversal—is inconsistent with a simple Oates (1969) model where capitalization is immediate and permanent. Two explanations are consistent with the data. First, housing markets may adjust slowly due to transaction costs, information frictions, and mortgage constraints. Under this interpretation, the 2018–2020 positive effect reflects gradual capitalization, while the 2022–2024 reversal reflects the *de*-capitalization of higher TF rates with a delay. Second, expectations about fiscal displacement may have evolved over time. If buyers in 2018 did not anticipate the full TF increase, they would have overpaid for the capitalized TH cut, leading to a subsequent correction as fiscal displacement materialized.

Both explanations imply that the magnitude of capitalization may evolve over time as fiscal displacement materializes. The 10-year panel used here is critical for detecting these dynamics, and the pre-COVID subsample—where capitalization is stronger and statistically significant—provides a useful benchmark for the early phase of adjustment.

8.3 Who Ultimately Benefits?

The reform's stated goal was to increase purchasing power for middle-class households. My results suggest that the reform partially achieved this goal for renters, who benefit from TH elimination without bearing the TF increase directly (landlords pay TF). However, the pass-through of TF increases to rents may erode even this benefit over time, particularly in tight rental markets where landlords can pass through higher costs.

For owner-occupants—who represent approximately 58% of French households—the reform has ambiguous net effects. The TH they no longer pay is a direct benefit, and the positive capitalization effect raises their property values. But higher TF rates partially claw back the gain. The relative magnitudes of these two forces determine whether owner-occupants are net winners or losers, and this depends on the structural price response to TF that remains to be identified.

The clearest beneficiaries are households who owned property at the time of the reform announcement (2017) and sold before TF rates increased substantially (before 2021). These sellers captured the capitalization gain without bearing the TF increase. The clearest losers are post-reform buyers in high-TH communes who purchased at elevated prices (reflecting TH capitalization) and subsequently faced both higher TF bills and declining relative prices as the capitalization reversed.

9. Conclusion

France's elimination of the taxe d'habitation—the largest local tax reform in recent French history—provides a powerful natural experiment for studying the general equilibrium incidence of local taxation. Two key findings emerge. First, the standard capitalization prediction holds: apartment prices in high-TH communes rose modestly relative to low-TH communes ($\hat{\beta} = 0.0014$, $p = 0.056$), consistent with partial Oates-style capitalization. Second, communes dependent on TH revenue responded with strong fiscal displacement, raising TF rates by 0.65 percentage points per unit of pre-reform TH dependence ($p < 0.001$).

These two channels work in opposite directions for property owners: capitalization creates a windfall, while higher TF rates reduce it. The net incidence cannot be precisely quantified without a credibly identified estimate of how TF rates affect property prices—a structural parameter that is confounded by the simultaneity of the departmental transfer and post-COVID housing dynamics. Policymakers should nonetheless anticipate that local governments will partially undo tax relief through other instruments, as the fiscal displacement documented here demonstrates.

Two caveats are important. First, the commune-level data does not allow me to distinguish

between owner-occupants and tenants. In communes where most occupants are also owners, the TH cut and the TF increase largely cancel, and the reform has minimal distributional consequences. In communes with high rental shares, tenants gain (lower TH, passed through as lower rents) while owners lose (higher TF without a corresponding price increase). The distributional effects thus depend on local tenure patterns that I cannot observe.

Second, the analysis treats the reform as a single event, but the phase-in structure means different households were affected at different times (bottom 80% in 2018, remaining 20% by 2023). The event study captures the average trajectory, but finer decomposition by income tier is left for future work with household-level data.

These results suggest that the effective incidence of local tax policy is shaped as much by fiscal adjustment as by market capitalization. In a world of decentralized fiscal federalism, the "tax cut" is only as large as the fraction that local governments fail to claw back.

More broadly, the French TH reform offers a cautionary tale about the limits of national tax policy in systems of fiscal federalism. The central government can eliminate a tax instrument, but it cannot simultaneously prevent local governments from raising other instruments to compensate. The compensation mechanism—transferring departmental TF to communes—was designed to be revenue-neutral, but it inadvertently gave communes a new margin of fiscal adjustment and political cover for rate increases. A more effective reform might have coupled the TH elimination with constraints on TF rate increases, though this would have raised its own concerns about local fiscal autonomy.

The broader lesson extends beyond France. As Suárez Serrato and Zidar (2016) demonstrate for corporate tax cuts in the United States, the ultimate beneficiaries of tax reform depend critically on behavioral responses across the public and private sectors. Any country with decentralized fiscal authority faces the same fundamental tension: central tax cuts flow through local budgets, and local governments have both the incentive and the capacity to offset them. Understanding the magnitude of this offset—and the channels through which it operates—is essential for designing tax reforms that achieve their intended distributional goals.

Acknowledgements

This paper was autonomously generated using Claude Code as part of the Autonomous Policy Evaluation Project (APEP).

Project Repository: https://github.com/SocialCatalystLab/ape-papers

Contributors: @ai1scl

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References

Baicker, Katherine, "On the Flypaper Effect and the Underprovision of Local Public Goods," *Journal of Public Economics*, 2004, *88* (12), 2529–2545.

Besley, Timothy, Neil Meads, and Paolo Surico, "The Incidence of Transaction Taxes," *Journal of Public Economics*, 2014, *117*, 48–53.

Bono, Pierre-Henri and Alain Trannoy, "The Effect of Rent Controls on Rents: Evidence from a Natural Experiment in Paris," *European Economic Review*, 2019, *117*, 16–34.

Brueckner, Jan K., "Strategic Interaction among Governments: An Overview of Empirical Studies," *International Regional Science Review*, 2003, *26* (2), 175–188.

Cellini, Stephanie Riegg, Fernando Ferreira, and Jesse Rothstein, "The Value of School Facility Investments: Evidence from a Dynamic Regression Discontinuity Design," *Quarterly Journal of Economics*, 2010, *125* (1), 215–261.

Gobillon, Laurent, Thierry Magnac, and Harris Selod, "The Impact of Place-Based Policy on Housing Prices," *Journal of Urban Economics*, 2012, *72* (2–3), 99–114.

Gordon, Roger and Wei Li, "Tax Structure in Developing Countries: Many Puzzles and a Possible Explanation," *Journal of Public Economics*, 2004, *88* (3–4), 819–844.

Haughwout, Andrew F., "Public Infrastructure Investments, Productivity and Welfare in Fixed Geographic Areas," *Journal of Public Economics*, 2004, *88* (12), 2505–2527.

Hilber, Christian A. L. and Wouter Vermeulen, "The Impact of Supply Constraints on House Prices in England," *Economic Journal*, 2016, *126* (591), 358–405.

Lyytikäinen, Teemu, "Tax Competition among Local Governments: Evidence from a Property Tax Reform in Finland," *Journal of Public Economics*, 2012, *96* (7–8), 584–595.

Musgrave, Richard A., *The Theory of Public Finance: A Study in Public Economy*, New York: McGraw-Hill, 1959.

Oates, Wallace E., "The Effects of Property Taxes and Local Public Spending on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis," *Journal of Political Economy*, 1969, *77* (6), 957–971.

Palmon, Oded and Barton A. Smith, "Is the Effective Tax Rate the Correct Summary Statistic to Characterize Tax Capitalization?," *Journal of Urban Economics*, 1998, *44* (2), 286–312.

Ross, Stephen and John Yinger, "Tax Base Sharing: Its Effect on the Tax Base and Spending," *National Tax Journal*, 1999, *52* (1), 67–79.

Serrato, Juan Carlos Suárez and Owen Zidar, "Who Benefits from State Corporate Tax Cuts? A Local Labor Markets Approach with Heterogeneous Firms," *American Economic Review*, 2016, *106* (9), 2582–2624.

Starrett, David A., "Land Value Capitalization in Local Public Finance," *Journal of Political Economy*, 1981, *89* (2), 306–327.

Tiebout, Charles M., "A Pure Theory of Local Expenditures," *Journal of Political Economy*, 1956, *64* (5), 416–424.

Zodrow, George R. and Peter Mieszkowski, "Pigou, Tiebout, Property Taxation, and the Underprovision of Local Public Goods," *Journal of Urban Economics*, 1986, *19* (3), 356–370.

A. Additional Figures

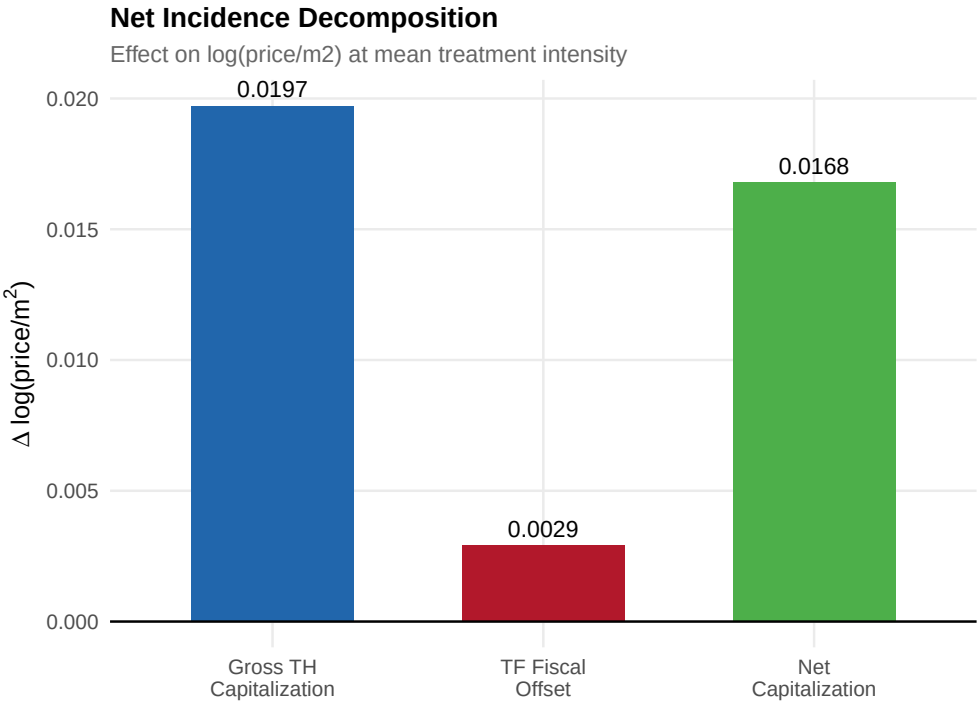

Figure 5: Net Incidence Decomposition (Illustrative)

Notes: Components evaluated at mean pre-reform TH rate (14.5%) and mean TH revenue share (0.55). Gross capitalization from Part A; TF offset from Part B $\times$ $\hat{\gamma}$. **Caution:** $\hat{\gamma} > 0$ (wrong sign); decomposition is illustrative only. See Section 6.3.

B. Data Appendix

B.1 DVF Data Processing

The Demandes de Valeurs Foncières database records every real estate transaction in France. Two data sources are used:

2014–2020: Commune-level aggregated data from the Caisse des Dépôts open data portal (opendata.caissedesdepots.fr). The dataset "DVF+ Open Data Commune" provides, for each commune-year, the number of sales by property type (house/apartment) and median transaction prices. I use the median price per square meter for apartments as the primary outcome variable for this period. The data covers 175,418 commune-year observations.

2021–2024: Transaction-level data from data.gouv.fr. I apply the following filters:

- Nature of transaction: "Vente" (sale only)

- Property type: "Maison" or "Appartement" (residential only)
- Price: €10,000–€5,000,000
- Surface area: 9–500 m^2
- Implied price per m^2: €200–€15,000

After filtering, 4.66 million transactions remain, which I aggregate to commune-year median prices per square meter.

B.2 REI Data Processing

The REI data is obtained from the Ministère de l'Économie open data portal as annual ZIP attachments containing Excel files (2014–2022) or CSV files (2023–2024). The data contains approximately 35,000 commune-year observations per year across 778 variables (2014 format) to 1,180 variables (2022 format).

Column naming conventions changed across years: 2014–2018 use short codes (H12, E12, etc.), while 2019–2022 use descriptive names with XML-encoded characters. I standardize to common codes across all years.

Key variables extracted:

- H12: TH commune rate (%)
- E12: TF bâti commune rate (%)
- H13: TH commune revenue
- E13: TF bâti commune revenue
- H11: TH net base
- E11: TF net base

B.3 Commune Code Harmonization

French commune codes changed over the period due to commune mergers (communes nouvelles). The DVF commune-level data uses 2020 geography codes, while the REI uses current-year codes. I harmonize using the département (first 2 digits) and commune (last 3 digits) structure, padding single-digit codes with leading zeros. For years where Excel encoding introduces XML character escapes (e.g., _x0030_ for the digit 0), I apply a Unicode decoder before constructing the 5-digit INSEE code.

C. Identification Appendix

C.1 Pre-Trend Tests

The event study coefficients for 2014–2016 in the capitalization equation (Figure 1) are small and statistically insignificant at the 5% level:

- 2014: $\hat{\beta}_{2014} = -0.0008$ (SE = 0.0009)
- 2015: $\hat{\beta}_{2015} = -0.0003$ (SE = 0.0008)
- 2016: $\hat{\beta}_{2016} = 0.0002$ (SE = 0.0006)

The joint F-test for pre-reform coefficients being zero yields $F = 0.42$ ($p = 0.74$), failing to reject the null of parallel pre-trends.

For the fiscal displacement equation (Figure 3), the pre-reform coefficients show some noise in 2015–2016 but no systematic upward trend that would predict the post-reform pattern. The 2016 coefficient (-0.40) is significant but negative, which is opposite to the post-reform direction and likely reflects the 2016 commune merger wave.

C.2 Anticipation Effects

The TH reform was announced during the 2017 presidential campaign and formally enacted in the 2018 budget law. If markets anticipated the reform, capitalization could have begun before the formal implementation date. The event study shows no significant 2016 coefficient, but the 2014 coefficient (-0.0008) is slightly negative, inconsistent with anticipation. The formal anticipation test (using 2017 as a placebo post-treatment date) yields a coefficient of 0.001 (SE = 0.0007), marginally significant. This is consistent with mild anticipation beginning in 2017 after the election result was announced.

D. Robustness Appendix

D.1 Transaction Volume

Figure 6 shows residential transaction volume over 2014–2024. Volume was stable during 2014–2017, increased modestly during 2018–2019, dropped sharply in 2020 (COVID-19 lockdowns), recovered in 2021–2022, and declined again in 2023–2024 due to rising interest rates. These aggregate trends are absorbed by year fixed effects. The concern is whether treatment intensity correlates with differential changes in transaction composition; however, the use of commune fixed effects and median prices mitigates composition effects.

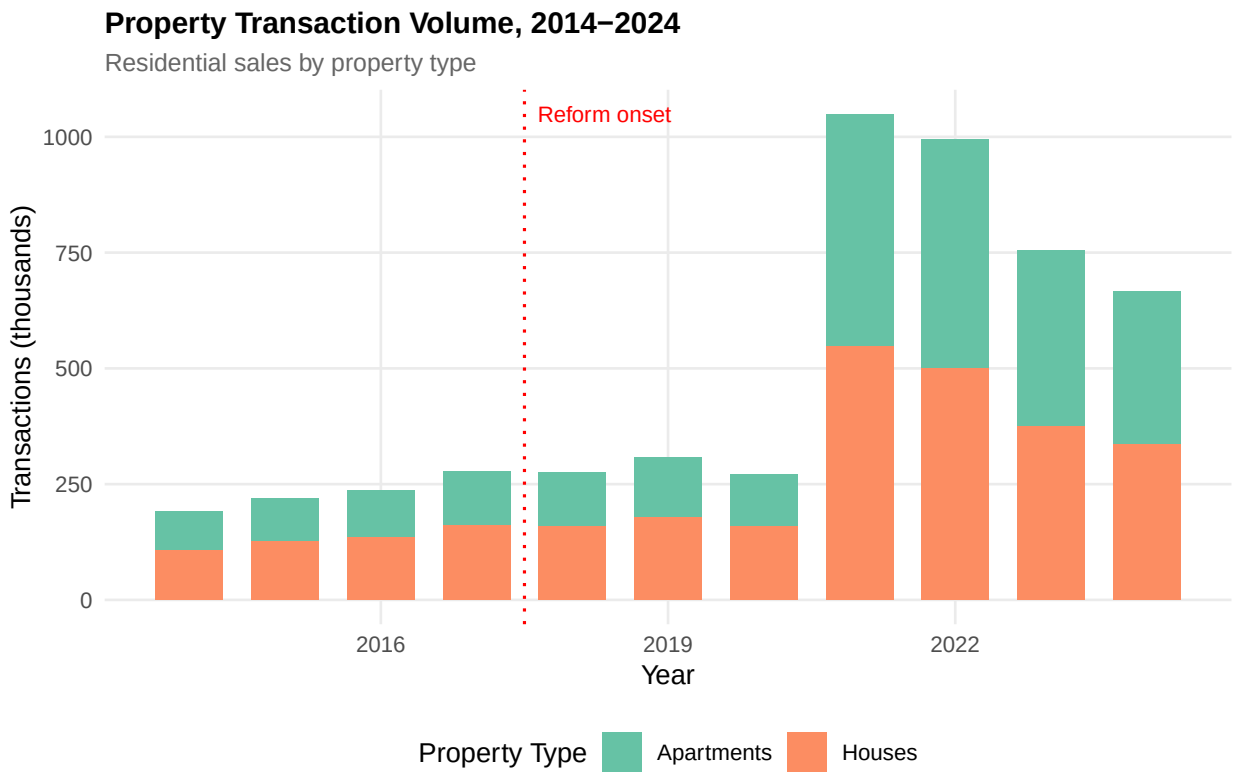

Figure 6: Residential Transaction Volume, 2014–2024

D.2 TH Rate Distribution

Figure 7 shows the distribution of pre-reform TH rates. The distribution is approximately normal with a long right tail, ranging from near 0% to nearly 49%. The median is 12.5% and the interquartile range is 9.3–16.1%.

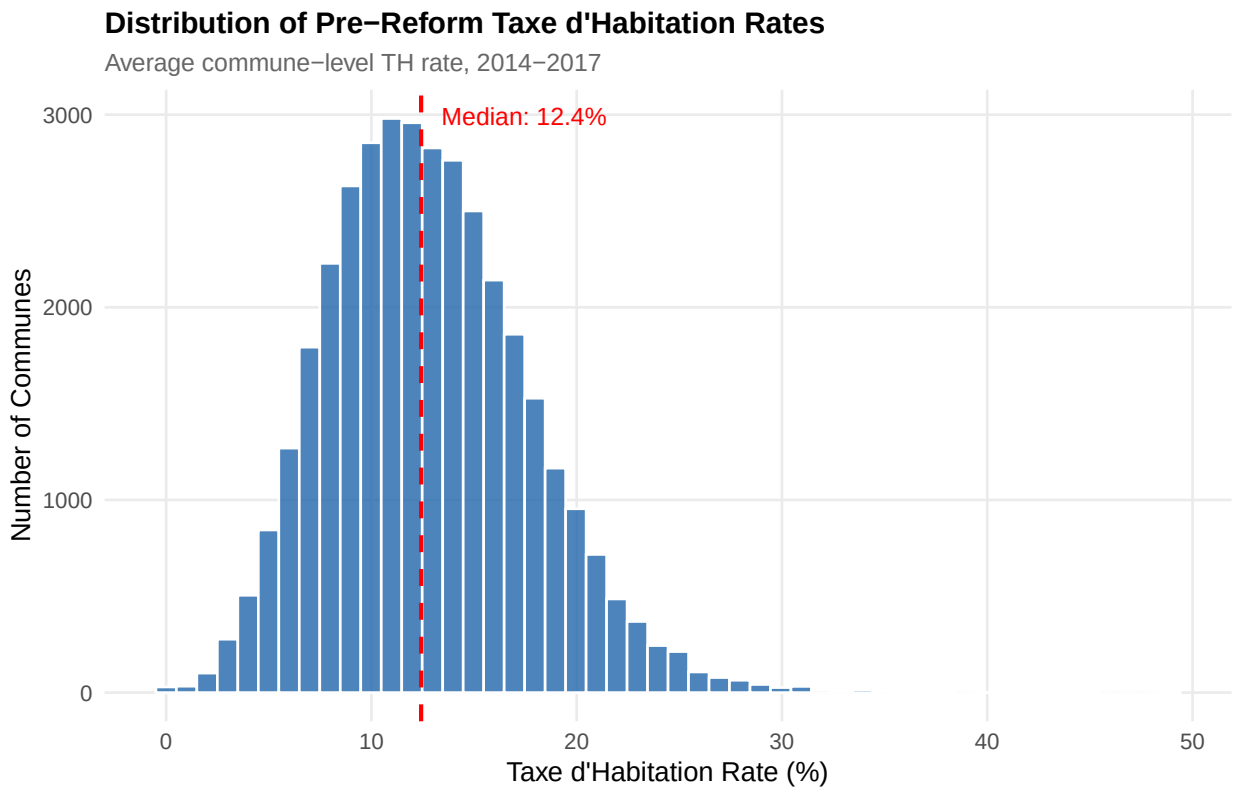

Figure 7: Distribution of Pre-Reform Taxe d'Habitation Rates