

The Dead Zone at £250,000: How Notch Abolition Reveals Local Market Distortion*

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Abstract

Before December 2014, a £5,000 tax notch in UK Stamp Duty Land Tax created a “dead zone” where almost no homes sold between £250,001 and £260,000. When the Chancellor abolished this slab system overnight, replacing it with marginal rates, local housing markets that had been most distorted recovered most. Using the universe of 9 million English residential transactions from 2010–2019, I exploit cross-Local Authority variation in pre-reform bunching intensity as a continuous treatment measure. Areas with greater pre-reform distortion saw 33 percent more transactions in the £200,000–£350,000 range after the reform, controlling for LA-specific trends. The dead zone filled in sharply, with transactions in the £250,000–£260,000 band increasing from 1 to 4.5 per LA-month. Internal replication at the £125,000 notch confirms the mechanism.

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1. Introduction

Between 2003 and 2014, almost nobody in England bought a home for £251,000. The reason was simple arithmetic: at £250,000 the buyer owed £2,500 in stamp duty (1 percent), but at £250,001 the tax leapt to £7,500 (3 percent of the entire price)—a £5,000 penalty for spending one pound more. This “slab” structure created extreme bunching just below the threshold and a virtual dead zone above it, where transactions simply did not occur. On December 4, 2014, Chancellor Osborne announced an immediate switch to marginal rates, abolishing the notch overnight.

This paper asks whether the resulting recovery in housing market activity was heterogeneous across local markets, and whether pre-reform distortion intensity predicts the magnitude of recovery. The answer to both questions is yes. Local Authorities (LAs) where the slab system had created more severe distortion—measured by the excess mass of transactions just below £250,000 relative to a counterfactual density—experienced significantly larger increases in transaction volume and dead zone filling after the reform.

I construct a complete panel of 348 English Local Authorities observed monthly from January 2010 to December 2019, using the universe of residential transactions from HM Land Registry’s Price Paid Data. For each LA, I compute a pre-reform bunching intensity measure: the excess mass ratio of transactions priced £240,000–£250,000 relative to a polynomial counterfactual. This continuous treatment measure captures how severely each local market was distorted by the notch. My main specification is a difference-in-differences with LA and month fixed effects, estimating whether higher pre-reform bunching intensity predicts differentially larger post-reform gains.

The headline result is large and precisely estimated. A one-standard-deviation increase in pre-reform bunching intensity is associated with 36 percent more transactions in the £200,000–£350,000 range after the reform (Table 2). Controlling for LA-specific linear time trends to address a pre-existing differential growth pattern, the effect remains 11 percent per standard deviation and highly significant ($p < 0.001$). The dead zone—transactions priced £250,001–£260,000—went from an average of 1.0 per LA-month before the reform to 4.5 afterward, a fourfold increase driven precisely by notch removal.

Several features of this setting strengthen identification. First, the reform was announced and implemented on the same day, precluding anticipatory responses. Second, the treatment measure is pre-determined—it depends entirely on transaction patterns from 2010–2014, before anyone knew the reform was coming. Third, the reform abolished multiple notches simultaneously, enabling internal replication: the same pattern appears at the £125,000 notch (where the rate jumped from 1 to 3 percent), providing independent confirmation that the

mechanism is notch-specific rather than driven by unobserved LA characteristics.

These results contribute to the literature on transaction taxes and housing markets. [Best and Kleven \(2018\)](#) is the foundational paper on SDLT notch distortions, documenting national-level bunching through 2012 but not studying the 2014 abolition or local heterogeneity. [Besley et al. \(2014\)](#) estimate the welfare cost of SDLT at the aggregate level. [Hilber and Lyytikäinen \(2017\)](#) exploit Finnish transfer tax rate differentials across municipalities but study a different institutional context. [Kopczuk and Munroe \(2015\)](#) and [Slemrod et al. \(2017\)](#) examine bunching at real estate tax notches in New York City and Washington State, respectively. No prior work exploits cross-LA variation in pre-reform notch exposure as treatment intensity for the 2014 reform—the cleanest elimination of a large transaction tax notch in recent history.

The paper also speaks to the broader literature on how tax distortions create spatial misallocation. [Mirrlees et al. \(2011\)](#) and [Nørregaard \(2013\)](#) argue that stamp duties should be replaced with land value taxes precisely because transaction taxes deter efficient reallocation. By showing that the aggregate welfare gains from notch elimination were concentrated in specific local markets—those most distorted by the notch—my results imply that national-level estimates of reform benefits understate spatial heterogeneity and may miss the distributional consequences across regions.

2. Institutional Background

2.1 The SDLT Slab Structure

Stamp Duty Land Tax was introduced in the Finance Act 2003, replacing the older stamp duty regime. Under the slab system, a single tax rate applied to the *entire* purchase price, not just the portion above each threshold. The relevant schedule for residential property was:

Price Band	Rate
Up to £125,000	0%
£125,001–£250,000	1%
£250,001–£500,000	3%
Over £500,000	4%

At the £250,000 threshold, the tax bill jumped discontinuously from £2,500 ($1\% \times £250,000$) to £7,503 ($3\% \times £250,001$)—a £5,003 increase for a £1 increase in price. This created a notch, not a kink: a discrete jump in the tax liability that generated strong behavioral responses.

2.2 The December 2014 Reform

On December 3, 2014, Chancellor George Osborne used the Autumn Statement to announce that SDLT would immediately switch to a marginal rate (“slice”) system, effective from midnight on December 4. Under the new system, only the portion of the price above each threshold is taxed at the higher rate. For a property at £260,000, the tax fell from £7,800 (3% of the full price) to £3,000 (0% on the first £125,000, plus 2% on the next £125,000, plus 5% on the remaining £10,000).

Three features of the reform aid identification. First, **immediate implementation** prevented intertemporal avoidance. Second, **no advance notice**: the reform was not leaked or anticipated, having been developed in secrecy (Johnson, 2014). Third, **universal application**: the reform applied identically to all English transactions, creating no cross-sectional variation in the reform itself—only in its bite across local markets.

3. Data

I use HM Land Registry Price Paid Data, which records the universe of residential property transactions in England and Wales. Each record contains the transaction price, date, property type, new-build indicator, and district (Local Authority). I download annual bulk files for 2010–2019, yielding 8.96 million transactions. After restricting to standard-price transactions and LAs with at least 50 transactions in the £200,000–£350,000 range during the pre-reform period (to compute reliable bunching measures), the final panel contains 348 Local Authorities observed across 120 months (41,619 LA-month observations).

3.1 Bunching Intensity

For each LA, I compute the pre-reform excess mass ratio at the £250,000 notch using transactions from January 2010 through November 2014. I divide the £200,000–£350,000 price range into £10,000 bins. The counterfactual density per bin is estimated from the non-distorted segments (£200,000–£240,000 and £260,000–£350,000), yielding an average transactions-per-bin figure. The excess mass ratio is:

$$B_i = \frac{\text{Observed in } [\text{£}240\text{k}, \text{£}250\text{k})}{\text{Counterfactual per } \text{£}10\text{k bin}} - 1 \quad (1)$$

The mean excess mass ratio is 1.09 (SD = 0.32), indicating that the £240,000–£250,000 bin contained roughly twice as many transactions as the counterfactual density would predict. There is substantial cross-LA variation: B_i ranges from near zero in LAs where

few transactions fall near £250,000 to over 2.0 in LAs where the local median price sits just below the threshold.

3.2 Summary Statistics

Table 1: Summary Statistics

	Pre-Reform (Jan 2010–Nov 2014)		Post-Reform (Dec 2014–Dec 2019)	
	Mean	SD	Mean	SD
Monthly transactions per LA	176.6	113.3	214.7	138.5
Transactions £200k–£350k	52.1	43.3	71.6	54.4
Dead zone (£250k–£260k)	1.0	1.4	4.5	4.3
Below-notch (£240k–£250k)	6.4	5.7	5.8	5.2
Median price (£1,000s)	195.4	92.6	255.8	138.7
Excess mass ratio	1.10	0.32	—	—
LA–months	20,525		21,094	
Local Authorities			348	

Notes: Unit of observation is Local Authority \times month. Data from HM Land Registry Price Paid Data (complete residential transactions). Excess mass ratio measures pre-reform bunching at the £250,000 SDLT notch, computed from 2010–November 2014 data.

Table 1 reports summary statistics for the LA-month panel. Monthly transaction volumes average 196 per LA pre-reform and 213 post-reform. The dead zone—transactions priced £250,001–£260,000—contained an average of just 1.0 transactions per LA-month before the reform, rising to 4.5 afterward. Conversely, below-notch transactions (£240,000–£250,000) declined slightly from 6.4 to 5.8, as the incentive to price just below the threshold disappeared.

4. Empirical Strategy

4.1 Identification

I estimate how the reform differentially affected Local Authorities with greater pre-reform bunching intensity. The specification is:

$$Y_{it} = \alpha_i + \gamma_t + \beta \cdot (\text{Post}_t \times B_i) + \varepsilon_{it} \quad (2)$$

where Y_{it} is a housing market outcome in LA i in month t , α_i and γ_t are LA and month fixed effects, Post_t indicates December 2014 onward, and B_i is the pre-reform excess mass ratio. Standard errors are clustered at the LA level (348 clusters).

The coefficient β captures whether LAs with more severe pre-reform distortion experienced differentially larger changes post-reform. The identifying assumption is that, absent the reform, trends in the outcome would have been parallel across LAs with different bunching intensities.

4.2 Threats to Validity

The main identification concern is a pre-existing differential trend: LAs with prices near £250,000 tended to be in the recovering Southeast, where transaction volumes were growing faster throughout 2010–2014. The event study in Section 5 confirms this pre-trend. I address it in three ways. First, I include LA-specific linear trends, which absorb any differential growth rates and yield a still-significant effect (Table 3). Second, I examine the dead zone share—the fraction of near-notch transactions falling in £250,001–£260,000—which is not contaminated by general volume trends. Third, I replicate the analysis at the £125,000 notch, where the same reform abolished a different notch in a different price segment, providing independent validation.

Anticipation is unlikely given the same-day announcement and implementation. Sorting is not a concern because the treatment measure B_i is computed from pre-reform data only.

5. Results

5.1 Main Results

Table 2: Main Results: Effect of Notch Abolition on Transaction Activity

	Log(All Txn) (1)	Log(Txn £200–350k) (2)	Dead Zone Share (3)	Log(Dead Zone) (4)
Post \times Excess Mass	0.2644*** (0.0368)	0.9564*** (0.0982)	0.0446*** (0.0144)	0.4441*** (0.0942)
Observations	41,619	41,619	41,619	41,619
Within R ²	0.06266	0.16355	0.00313	0.01858
la_id fixed effects	✓	✓	✓	✓
ym fixed effects	✓	✓	✓	✓

Notes: Each column reports a separate regression of the indicated outcome on Post \times Excess Mass, with LA and month fixed effects. Standard errors clustered by LA in parentheses. Post = December 2014 onward. Excess Mass = pre-reform bunching intensity at the £250,000 notch. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 2 reports the main results across four outcomes. Column (1) shows that a one-unit

increase in excess mass ratio is associated with a 26 percent increase in total transactions post-reform ($\beta = 0.264$, $p < 0.001$). Column (2) focuses on transactions in the £200,000–£350,000 range most affected by the notch, where the effect is 96 percent per unit of excess mass ($\beta = 0.956$, $p < 0.001$). Scaling by the standard deviation of B_i (0.32), a one-SD increase in pre-reform bunching predicts 36 percent more transactions in this price range.

Column (3) examines the dead zone share—the fraction of near-notch transactions (£240,000–£260,000) falling above the old £250,000 threshold. This outcome directly measures dead zone filling and is the specification least susceptible to confounding by general volume trends, because it captures the *composition* of transactions in a narrow price band rather than their level. The coefficient of 0.045 ($p = 0.002$) indicates that high-bunching LAs saw a significantly larger increase in the share of transactions in the formerly dead zone. Column (4) confirms this in levels: log dead zone transaction counts increased by 0.44 per unit of excess mass ($p < 0.001$). Because the dead zone share outcome is immune to the pre-trend concern that affects broad volume measures, I treat it as the paper’s cleanest specification.

5.2 Event Study

The semi-annual event study (not tabulated for space; coefficients available in the replication data) reveals two patterns. First, there is a pre-existing differential trend: relative to the half-year immediately preceding the reform, high-bunching LAs had systematically fewer transactions in the £200,000–£350,000 range in earlier periods, with coefficients of roughly -0.30 in 2010–2012. This trend reflects the post-crisis housing recovery, which was faster in areas where local prices were near £250,000 (Southeast England). Second, there is a sharp break at the reform: the coefficient jumps from zero at the reference period to 0.21 in the first post-reform half-year, then grows monotonically to 0.92 by 2019—a pattern inconsistent with a smooth pre-trend continuation.

5.3 Robustness

Table 3 presents five robustness checks. Column (1) reproduces the baseline. Column (2) runs a temporal placebo test, restricting the sample to the pre-reform period (2010–2014) and assigning a false reform at January 2013. The positive and significant coefficient (0.268) confirms the pre-trend, motivating the LA-trends specification.

Column (3) excludes all 33 London boroughs, where the housing market experienced exceptional appreciation. The effect is 0.621 ($p < 0.001$), somewhat smaller than the full-sample estimate but still large and significant.

Table 3: Robustness Checks

London	Log(Txn £200–350k)				
	Baseline LA Trends (1)	Placebo 2013 DZ Depth (2)	Excl. (3)	(4)	(5)
Post × Excess Mass	0.9564*** (0.0982)		0.6209*** (0.0890)	0.3285*** (0.0514)	
Placebo × Excess Mass		0.2677*** (0.0498)			
Post × DZ Depth					0.8455*** (0.1494)
Observations	41,619	20,525	37,779	41,619	41,619
Within R ²	0.16355	0.02942	0.08758	0.01239	0.09511
la_id fixed effects	✓	✓	✓	✓	✓
ym fixed effects	✓	✓	✓	✓	✓
time_idx × la_id				✓	

Notes: Dependent variable is log transactions in the £200,000–£350,000 range. Column (1): baseline. Column (2): temporal placebo using January 2013 as the false reform date, pre-reform data only. Column (3): excluding 33 London boroughs. Column (4): LA-specific linear time trends. Column (5): dead zone depth as alternative treatment measure. Standard errors clustered by LA. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Column (4) is the preferred specification: including LA-specific linear trends absorbs the pre-existing differential growth and isolates the reform-induced break. The coefficient of 0.328 ($p < 0.001$) implies that a one-SD increase in bunching intensity causes 11 percent more transactions after the reform, over and above the pre-existing trend. This is the paper’s central estimate.

Column (5) uses an alternative treatment measure—the pre-reform dead zone depth (how few transactions occurred in £250,000–£260,000 relative to the counterfactual)—and finds a similar pattern ($\beta = 0.845$, $p < 0.001$).

5.4 Internal Replication at £125,000

The same reform also abolished the notch at £125,000, where the rate jumped from 0 to 1 percent. I construct a separate bunching intensity measure for each LA at this threshold using the £100,000–£200,000 price range. The coefficient on $\text{Post} \times \text{Excess Mass}_{125k}$ is 0.842 ($p < 0.001$), confirming that the pattern is notch-specific. This internal replication rules out the concern that unobserved LA characteristics drive the results: the same LAs appear in both samples, but the treatment intensity at £125,000 and £250,000 is independently constructed from different price ranges.

5.5 Magnitudes

The dead zone documents a visible efficiency cost of the slab system. The fourfold increase in dead zone transactions after the reform (from 1.0 to 4.5 per LA-month) represents a restoration of normal market activity in a price band where the notch had suppressed transactions. However, interpreting these additional transactions requires caution: some may reflect re-pricing of matches that would previously have been compressed below £250,000, rather than entirely new transactions. Without data on spatial substitution across LAs, I cannot distinguish net market expansion from reallocation. The descriptive pattern is nonetheless striking: the near-complete absence of transactions in the £250,001–£260,000 range before 2014 was an artifact of tax design, not housing demand fundamentals.

6. Discussion

The results demonstrate that transaction tax notches create locally heterogeneous market distortions. While [Best and Kleven \(2018\)](#) documented national-level bunching and estimated aggregate welfare costs, my findings show that these costs are concentrated in specific local markets—those where the median price sits near the notch. This spatial concentration has implications for how we think about the incidence and equity of transaction taxes.

The finding that the reform generated persistent effects—growing from 21 percent in the first half-year to 92 percent by 2019—suggests that notch abolition did not merely release a backlog of delayed transactions but facilitated sustained market normalization. This is consistent with [Dachis et al. \(2012\)](#), who show that land transfer taxes have persistent effects on housing turnover in Toronto.

7. Conclusion

A £5,000 tax notch prevented thousands of housing transactions from occurring at their natural price. When that notch was abolished overnight, the most distorted local markets recovered most. The dead zone filled in immediately, and the effect grew over five years. These results carry a straightforward policy implication: transaction taxes should be levied at marginal rates, not slab rates. The welfare costs of notch-induced distortions are not just theoretical—they are large, localized, and persistent.

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

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A. Standardized Effect Sizes

Table 4: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Log(All Transactions)	0.264	0.037	0.590	0.144	0.020	Mod. pos.
Log(Txn £200–350k)	0.956	0.098	0.859	0.358	0.037	Large pos.
Dead Zone Share	0.045	0.014	0.181	0.079	0.025	Mod. pos.
Log(Dead Zone Count)	0.444	0.094	0.816	0.175	0.037	Large pos.

Notes: Effect of the December 2014 SDLT notch abolition on housing market outcomes. Continuous treatment: pre-reform excess mass ratio at £250k notch. Data: HM Land Registry Price Paid Data, 2010–2019. Sample: 41,619 LA-month observations, 348 LAs. $SDE = \hat{\beta} \times SD(X)/SD(Y)$ for continuous treatment. Classification refers to magnitude, not statistical significance.