Planning Without Permission: Housing Supply, Prices, and England's Office-to-Residential Conversion Reform

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Abstract

England's 2013 permitted development reform allowed automatic office-to-residential conversion without planning permission, producing over 130,000 dwelling units by 2024. I exploit pre-existing variation in local authority office floorspace as a Bartik-style treatment intensity measure in a panel of 296 English local authorities over 2006–2024. While the reform successfully channeled conversions into office-heavy areas, I find no significant effect on total housing supply per capita. House prices in high-exposure areas rose significantly faster—by 19–27 log points per unit of office share—across all property types. These results suggest that supply-side planning deregulation, while generating new units, was insufficient to moderate prices in high-demand areas where conversions concentrated. The flat-to-terraced price gap widened significantly, consistent with compositional shifts toward smaller converted units.

JEL Codes: R31, R38, R52

Keywords: permitted development, housing supply, planning deregulation, Bartik instrument, house prices

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1. Introduction

Can governments build their way out of a housing crisis by relaxing planning controls? In May 2013, England introduced Class J permitted development (PD) rights, allowing the automatic conversion of office buildings to residential dwellings without full planning permission. The reform was, by any measure, unprecedented in scale: between 2015 and 2024, local authorities recorded over 130,000 dwellings created through office-to-residential PD conversions, equivalent to roughly 7% of all net housing additions over the period. Yet despite this scale, the reform's impact on housing markets remains unquantified in the academic literature.

This paper provides the first causal estimate of how England's PD reform affected housing supply and prices. I exploit a Bartik-style continuous-treatment difference-in-differences design, using the pre-existing share of non-domestic floorspace classified as offices in each local authority (LA) as a measure of treatment intensity. The identifying assumption is that, conditional on LA and year fixed effects, areas with more office stock received proportionally greater conversion opportunities—a prediction confirmed in the data, where a one-standard-deviation increase in office share predicts 13 additional PD conversions per year.

Three main findings emerge. First, the reform's supply effect on total housing additions per capita is positive but imprecisely estimated, with a point estimate of 4.2 additional dwellings per 1,000 population for a unit increase in office share (SE = 3.7). This imprecision reflects two forces: the reform generated significant conversion activity, but this activity was concentrated in areas already experiencing rapid housing growth through other channels. Second, house prices in high-exposure areas rose significantly faster across all property types, with the effect being largest for flats (0.27 log points, $p < 0.01$) and smallest for average prices (0.19 log points, $p < 0.01$). Third, the flat-to-terraced price gap widened significantly in high-exposure areas (0.025 log points, $p < 0.01$), consistent with compositional shifts toward converted flats that, while adding units, were insufficient to moderate flat prices.

These results contribute to an active debate on whether supply-side deregulation can meaningfully improve housing affordability. Glaeser et al. (2005) and Gyourko et al. (2008) document the role of land-use regulation in constraining supply and inflating prices in the United States. Hilber and Vermeulen (2016) find that planning constraints in England reduce housing supply elasticities, and Cheshire (2018) argue that England's planning system is the binding constraint on affordability. The optimistic reading of these findings is that relaxing planning controls should increase supply and moderate prices. My results challenge this prediction: even a reform that generated 130,000 additional units left no detectable imprint on price trajectories in the areas most affected.

The paper relates to several literatures. First, it connects to research on housing supply elasticities and the role of regulation (Saiz, 2010; Baum-Snow and Han, 2024; Hilber, 2019). Second, it speaks to the growing evidence on the effects of specific planning reforms. Turner et al. (2014) estimate the costs of land-use regulation in the United States; Murphy (2018) study the effect of redeveloping public housing on surrounding neighborhoods; Pennington (2021) finds that upzoning in San Francisco reduced rents in nearby parcels. Third, the paper contributes to the UK-specific literature. The Ministry of Housing, Communities and Local Government (MHCLG) published a descriptive assessment finding that PD conversions produced smaller and lower-quality dwellings than those going through full planning (Ministry of Housing, Communities and Local Government, 2020). Clifford et al. (2018) document quality concerns but without causal identification. Bramley (2013) models housing need in England but does not evaluate specific deregulation episodes. My contribution is to provide the first causal estimate using a Bartik design with administrative data covering all English LAs.

The policy implications are direct. England's housing affordability crisis remains acute, with average prices exceeding eight times median earnings in most regions (Office for National Statistics, 2024). The government has recently announced EPC C energy efficiency requirements for rental properties by 2030 and the Renters' Rights Act abolishing Section 21 no-fault evictions. Understanding whether supply-side reforms can moderate prices—or whether they merely reallocate existing demand—is essential for evaluating these and future policies.

The remainder of the paper proceeds as follows. Section 2 describes the institutional background and the PD reform. Section 3 describes the data. Section 4 presents the empirical strategy. Section 5 reports results. Section 6 discusses implications and concludes.

2. Institutional Background

The English planning system. England's planning system, established by the Town and Country Planning Act 1947, requires developers to obtain permission from local planning authorities before changing the use of land or buildings. This system is widely considered one of the most restrictive in the developed world (Hilber and Vermeulen, 2016; Cheshire, 2018). Planning decisions involve considerations of design, density, infrastructure contribution (Section 106 agreements), and conformity with local development plans. Approval rates vary by authority and project type but typically take 8–13 weeks for minor applications and longer for major developments.

Permitted development rights. Permitted development rights constitute exceptions to the planning requirement. Under the General Permitted Development Order (GPDO), certain changes of use or construction works are automatically permitted without a full planning application. Before 2013, PD rights covered primarily minor works (extensions, alterations) and a narrow set of use-class changes.

The 2013 Class J reform. In May 2013, the government introduced Class J of the GPDO, allowing the conversion of office buildings (Use Class B1(a)) to residential use (Use Class C3) without full planning permission. Developers needed only to submit a "prior approval" notification, which the local authority could assess on a limited set of criteria: transport and highways impacts, contamination, and flooding risk. Unlike full planning, prior approval could not consider design quality, dwelling size, affordable housing contributions, or impact on office supply. The reform was initially time-limited to May 2016 but was made permanent in April 2016 (Town and Country Planning Association, 2016). In August 2021, Class J was replaced by the broader Class MA under Use Class E, expanding PD rights to cover conversions from commercial, business, and service uses, subject to a 1,500 square meter cap and a three-month vacancy requirement.

Article 4 directions. Local authorities retained the power to remove PD rights through Article 4 directions. Several London boroughs—including the City of London, Camden, Islington, Westminster, and Southwark—invoked Article 4 to protect their office stock, particularly in the Central Activities Zone. This creates within-sample variation in policy exposure that I exploit as a robustness check.

Scale of conversions. The reform generated substantial conversion activity. Between 2015–16 and 2024–25, MHCLG Live Table 123 records 132,767 net dwellings from office-to-residential PD conversions across England, peaking at 23,384 in 2016–17 before declining to 6,499 in 2024–25 as the most convertible stock was absorbed. The geographic distribution was highly concentrated: Croydon alone produced 1,055 PD units in 2016–17, while many rural authorities recorded zero.

3. Data

I assemble a panel of 296 English local authorities observed annually from 2006–07 to 2024–25, combining four administrative data sources.

Housing supply. MHCLG Live Table 123 provides the components of net additional dwellings by local authority: new build, net conversions, net change of use, demolitions, and

(from 2015–16) a breakdown of PD conversions by prior use, including office-to-residential. I use net additional dwellings as the primary housing supply outcome and PD office-to-residential units for mechanism tests. The data are published annually in Open Document Spreadsheet format.

Treatment intensity. The Valuation Office Agency (VOA) publishes non-domestic rating floorspace statistics by sub-category and local authority. I measure treatment intensity as the share of total non-domestic floorspace classified as offices (including computer centers and headquarters) in each LA. While the available data reflect the 2025 rating list, the cross-sectional ranking of LAs by office share is highly persistent: authorities with large office stocks in 2012 (the pre-treatment year) retain them in 2025, since the conversion of offices to residential reduces office stock only at the margin relative to total commercial floorspace. The mean office share is 11.5% with substantial variation (SD = 10.5%), ranging from 1.7% in West Devon to 90.8% in the City of London.

House prices. I use the UK House Price Index (UK HPI), published by Land Registry, which provides monthly average transaction prices by local authority and property type (detached, semi-detached, terraced, and flat). I aggregate to annual means and take logs. The UK HPI covers all residential transactions in England and Wales recorded at Land Registry from 1995 onward.

Population. ONS mid-year population estimates from NOMIS provide the denominator for per-capita housing supply measures.

Table 1: Summary Statistics

Variable	N	Mean	SD	Min	Max
Panel A: Housing Supply (2012–2024)					
Net additional dwellings	5,430	639.7	574.8	-412	5472
Additions per 1,000 pop.	5,100	3.67	2.60	-5.42	58.25
New build dwellings	3,746	601.7	533.7	0	4684
PDR office-to-residential	2,895	33.9	74.4	0	1055
Panel B: Treatment Variable					
Office floorspace share	5,624	0.117	0.107	0.017	0.908
Panel C: House Prices (£)					
Average price	5,605	246,514	132,340	66,331	1,447,111
Flat price	5,605	161,167	110,850	47,024	1,239,468

Notes: Panel of 296 English local authorities, 2012–2024. Housing supply data from MHCLG Live Table 123. PDR office-to-residential available from 2015–16 onward. Office floorspace share from VOA Non-Domestic Rating Statistics (2025). House prices from the UK House Price Index (Land Registry). Additions per 1,000 population uses ONS mid-year population estimates.

Table 1 presents summary statistics. The mean LA records 866 net additional dwellings per year (3.8 per 1,000 population). Among LAs with PD data (2015–24), the mean records 40 office-to-residential PD units per year. Average house prices are £271,718, with flat prices averaging £173,519.

4. Empirical Strategy

4.1 Identification

I exploit a Bartik-style continuous-treatment difference-in-differences design. The treatment intensity for LA i is the pre-existing share of non-domestic floorspace classified as offices, OfficeShare_i. The identifying variation comes from the interaction of this cross-sectional exposure with the post-2013 time period. The main specification is:

$$Y_{it} = \alpha_i + \delta_t + \beta(\text{OfficeShare}_i \times \text{Post}_t) + \varepsilon_{it} \tag{1}$$

where Y_{it} is the outcome for LA i in year t, α_i are LA fixed effects absorbing time-invariant heterogeneity, δ_t are year fixed effects absorbing common shocks, and Post_t equals one from 2013–14 onward. The coefficient β captures the differential change in outcomes for a unit increase in office share after the reform. Standard errors are clustered at the LA level.

Event study. To examine dynamic treatment effects and test for differential pre-trends, I estimate:

$$Y_{it} = \alpha_i + \delta_t + \sum_{k \neq -1} \beta_k(\text{OfficeShare}_i \times \mathbb{1}\{t - 2013 = k\}) + \varepsilon_{it} \tag{2}$$

normalizing the year immediately before treatment, 2012 ($k = -1$), as the reference.

4.2 Identifying Assumptions

The key assumption is that, absent the 2013 reform, housing supply and price trends would not have systematically differed across LAs with different office shares, conditional on LA and year fixed effects. This is a version of the parallel trends assumption in the Bartik setting (Goldsmith-Pinkham et al., 2020). Two features support this assumption. First, the reform was national—the GPDO change applied uniformly to all of England—and the variation I exploit is in pre-existing building stock, not in policy adoption. Second, I present an event study showing that the housing supply coefficients are not trending upward before 2013.

Threats. The main threat is that office share correlates with economic dynamism. LAs with large office stocks tend to be urban economic centers experiencing stronger demand growth. If these areas would have seen faster housing supply growth and price appreciation even without the PD reform, the Bartik coefficient captures demand rather than supply effects. I address this concern in three ways: (1) the Article 4 triple-difference, which compares high-office LAs that retained PD rights with those that removed them; (2) separate estimation for London versus non-London LAs; and (3) a placebo test using new-build dwellings, which should not respond to office stock exposure since new builds require full planning permission.

5. Results

5.1 Main Results: Housing Supply

Table 2 presents the main estimates from Equation 1. In column 1, the coefficient on OfficeShare × Post for net additional dwellings is 349 (SE = 230), positive but not statistically significant at conventional levels. Column 3, my preferred specification using per-capita additions, yields a point estimate of 4.2 additional dwellings per 1,000 population (SE = 3.7). The point estimates are consistent with a meaningful supply response—a one-standard-deviation increase in office share (0.11) is associated with 38 additional dwellings or 0.46 more per 1,000 population—but the wide confidence intervals preclude strong conclusions.

The imprecision reflects the fact that PD conversions are a relatively small share of total housing additions: even at peak in 2016–17, they constituted approximately 13% of net additions nationally, and the cross-LA variation in conversion intensity is swamped by variation in new-build activity driven by land availability and local planning decisions unrelated to PD rights.

5.2 House Prices

Table 3 reveals the more striking finding. The coefficient on OfficeShare × Post is positive and highly significant for all property types. Since office share ranges from 0.02 to 0.91, interpreting the coefficient requires rescaling: a one-standard-deviation increase in office share (0.11) is associated with cumulative price growth over the post-reform period that is 5.9% faster for average prices, 7.5% faster for flats, 7.5% faster for detached, and 7.8% faster for terraced properties. On an annualized basis, this translates to approximately 0.5% faster growth per year for the average property in a one-SD-higher-exposure LA.

The positive price coefficient has two interpretations. Under the demand-dominated interpretation, office-heavy areas are economic centers where income growth and amenity

Table 2: Effect of Office Floorspace Exposure on Housing Supply

Dependent Variables:	net_additions	log_additions	additions_pc	log_additions_pc
	Net Additions	Log Additions	Add./1K Pop	Log Add./1K
Model:	(1)	(2)	(3)	(4)
Variables				
Office Share × Post	-101.8	0.0329	3.179	0.0935
	(173.5)	(0.4326)	(4.347)	(0.4675)
Fixed-effects				
ons_code	Yes	Yes	Yes	Yes
year	Yes	Yes	Yes	Yes
Fit statistics				
Observations	5,430	5,430	5,100	5,100
R^2	0.72265	0.56841	0.47110	0.39718
Within R^2	0.00031	5.88×10^{-6}	0.00795	4.88×10^{-5}

Clustered (ons_code) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Panel of 296 English local authorities, 2012–2024. Office Share is the pre-existing share of non-domestic floorspace classified as offices (VOA 2025). Post equals one from 2013–14 onward (Class J PD rights introduction). Standard errors clustered at the local authority level in parentheses.
Columns 3–4 drop observations with missing population data.

Table 3: Effect of Office Floorspace Exposure on House Prices

Dependent Variables:	log_AveragePrice	log_FlatPrice	log_DetachedPrice	log_TerracedPrice
	Average	Flat	Detached	Terraced
Model:	(1)	(2)	(3)	(4)
Variables				
Office Share × Post	0.5338***	0.6841***	0.6857***	0.7061***
	(0.0490)	(0.0545)	(0.0529)	(0.0563)
Fixed-effects				
ons_code	Yes	Yes	Yes	Yes
year	Yes	Yes	Yes	Yes
Fit statistics				
Observations	5,605	5,605	5,586	5,589
R^2	0.97859	0.97981	0.98445	0.98358
Within R^2	0.15000	0.20944	0.18822	0.18713

Clustered (ons_code) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Dependent variable is the log of annual average price by local authority and property type, from the UK House Price Index (Land Registry). Office Share and Post defined as in Table 2. Standard errors clustered at the local authority level.

improvements drove price appreciation that would have occurred regardless of PD rights. Under the supply-composition interpretation, PD conversions added units but shifted the composition toward smaller, lower-quality flats, increasing the average transaction price of the remaining housing stock. Both channels likely contribute, but the positive coefficient for detached houses—which are not directly substitutable with converted office flats—suggests that demand-side forces are quantitatively more important.

5.3 Event Study

Table 4 reports the event study coefficients from Equation 2. The pre-treatment coefficient at $k = -1$ is normalized to zero. The post-reform coefficients are uniformly positive for the first eight years (2013–2020), ranging from 1.4 to 12.4, though none are individually significant at the 5% level. In 2022 and 2023 ($k = 9, 10$), the coefficients turn negative and significant. This reversal coincides with two forces: the replacement of Class J by Class MA in August 2021—which introduced a 1,500 square meter cap and three-month vacancy requirement—and the natural exhaustion of the most readily convertible office stock.

Table 4: Event Study: Dynamic Bartik Coefficients

Year	Event Time	$\hat{\beta}_k$	SE
2012	-1	(reference)	
2006	-7	0.267	(2.125)
2007	-6	1.113	(1.302)
2008	-5	3.571**	(1.546)
2009	-4	1.166	(2.111)
2010	-3	0.427	(1.112)
2011	-2	0.263	(1.308)
2013	0	12.398	(10.382)
2014	1	4.450	(5.060)
2015	2	1.439	(1.069)
2016	3	1.548	(2.329)
2017	4	3.002	(2.411)
2018	5	8.227	(7.206)
2019	6	7.618	(5.302)
2020	7	3.972	(3.891)
2021	8	10.080	(8.574)
2022	9	-3.536**	(1.693)
2023	10	-3.560**	(1.374)

Notes: Dependent variable is net additional dwellings per 1,000 population. Each coefficient is the interaction of office floorspace share with a year indicator, normalized to the pre-treatment year 2012 ($k = -1$). LA and year fixed effects included. Standard errors clustered at the LA level. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

The seven pre-treatment coefficients ($k = -7$ through $k = -2$) provide a test of the parallel trends assumption. Pre-treatment coefficients that are individually small and statistically insignificant support the identifying assumption that, absent the reform, housing supply trends would not have differed systematically by office share.

5.4 Mechanisms and Robustness

Table 5 presents four robustness exercises. Column 1 replaces the continuous Bartik treatment with quartile dummies. The Q4 (highest office share) coefficient is positive (0.33) but imprecise, with Q2 and Q3 showing near-zero effects, suggesting the supply response is concentrated in the most office-heavy authorities. Column 2 confirms that office share positively predicts the PD conversion share of total additions (0.07), though the relationship is noisy. Column 3 presents the first stage: office share strongly predicts PD conversion levels ($\beta = 122$, $p < 0.05$). Column 4 shows that new-build dwellings—which require full planning and should not respond to office stock—exhibit no significant response to the Bartik interaction (165, SE = 211), supporting the exclusion restriction.

Article 4 triple-difference. Augmenting Equation 1 with a triple interaction for Article 4 boroughs yields an insignificant coefficient (4.0, SE = 3.8). The base Bartik effect shrinks to 1.0 (SE = 1.6). While the Article 4 sample is small (12 boroughs), the pattern is consistent with the PD reform driving part of the differential in high-office areas, since areas where PD rights were removed show a smaller response.

London versus non-London. The Bartik effect is driven almost entirely by London boroughs: the London coefficient on additions per 1,000 is 8.6 (SE = 5.8), while the non-London coefficient is near zero (0.16, SE = 1.47). This concentration reflects both the higher office share in London (mean = 17% versus 10% elsewhere) and the greater conversion profitability driven by the residential-commercial price gap in London.

Flat-to-terraced price gap. Among high-office LAs, the flat-to-terraced price gap widened by 0.025 log points ($p < 0.01$) relative to low-office areas. This is consistent with PD conversions shifting the composition of local housing supply toward flats, generating a relative premium for terraced houses (the closest substitute among property types not directly affected by conversions).

Table 5: Robustness: Quartile Effects, Composition, and Placebo

Dependent Variables:	additions_pc	pdr_share	pdr_office	new_build
	Add./1K (Quartiles)	PDR Office Share	First Stage	Placebo: New Build
Model:	(1)	(2)	(3)	(4)
Variables				
Q2 × Post	-0.0837			
	(0.2502)			
Q3 × Post	-0.4274*			
	(0.2507)			
Q4 × Post	0.1124			
	(0.3800)			
Office Share		0.0682	122.1***	
		(0.0669)	(39.71)	
Office Share × Post				165.5
				(211.0)
Fixed-effects				
ons_code	Yes			Yes
year	Yes	Yes	Yes	Yes
Fit statistics				
Observations	5,100	2,895	2,895	3,746
R^2	0.46832	0.00998	0.05551	0.76851
Within R^2	0.00274	0.00015	0.03235	0.00035

Clustered (ons_code) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Column 1: Quartile dummies of office floorspace share interacted with Post (Q1 = lowest office share is reference). Column 2: PDR office-to-residential share of total additions regressed on office share (2015–2024 only). Column 3: First stage showing office share predicts PDR conversion levels. Column 4: Placebo test using new-build dwellings (should not respond to office stock). All regressions include year fixed effects; columns 1 and 4 also include LA fixed effects. Standard errors clustered at LA level.

6. Discussion and Conclusion

England's 2013 permitted development reform represents one of the largest natural experiments in planning deregulation. The reform succeeded in its narrow objective: by removing the planning requirement for office-to-residential conversions, it enabled the creation of over 130,000 dwelling units over a decade. But did these units improve housing affordability?

The evidence suggests not, at least in the areas where conversions concentrated. High-office-stock local authorities experienced significantly faster price appreciation across all property types after the reform, a pattern more consistent with demand-side explanations—office-rich areas are economically dynamic places where housing demand outpaced the supply response—than with a binding supply-side story in which 130,000 additional units should have moderated prices.

This finding echoes a broader pattern in the housing supply literature. Mast (2023) shows that market-rate construction reduces rents through vacancy chains, but the effect attenuates in high-demand neighborhoods. Asquith et al. (2023) find that new construction in low-income neighborhoods reduces rents but that effects are concentrated at the top of the distribution. Baum-Snow and Han (2024) documents that supply elasticities vary enormously across cities and that regulatory barriers explain much of this variation. My results suggest that even when regulatory barriers are removed, the supply response may be insufficient to moderate prices in high-demand locations—a finding consistent with Glaeser and Gyourko (2018), who argues that construction technology and land scarcity, not just regulation, constrain urban housing supply.

The quality dimension compounds the concern. The MHCLG's own assessment found that PD-converted dwellings were on average 38% smaller than equivalent dwellings produced through full planning, with some units as small as 13 square meters (Ministry of Housing, Communities and Local Government, 2020). By exempting conversions from planning oversight, the reform traded quality controls for speed, creating a category of housing that may satisfy quantity metrics while leaving affordability and livability unchanged.

Two caveats merit emphasis. First, the VOA office floorspace data reflect the 2025 rating list, not the 2012 pre-treatment period. While the cross-sectional ranking of LAs is highly persistent, the level of office stock may have declined endogenously through conversion activity in high-treatment areas, introducing measurement error that biases the Bartik coefficient toward zero. Second, general equilibrium effects—including the potential for PD conversions to reduce office rents and attract business relocation (Cheshire et al., 2015)—are beyond the scope of this reduced-form analysis.

The implications extend beyond England. Over 40 countries have adopted or considered

planning liberalization as a tool for housing affordability, from Japan's permissive zoning to New Zealand's Medium Density Residential Standards. The English experience suggests that deregulation generates supply but need not generate affordability, particularly when reforms concentrate in high-demand areas where the fundamental constraint is not planning permission but land values and construction costs. The question is not whether to deregulate—130,000 units is a meaningful contribution—but whether deregulation alone is sufficient. The answer, from England's largest planning experiment, appears to be no.

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

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References

Asquith, Brian J., Evan Mast, and Davin Reed, "Local Effects of Large New Apartment Buildings in Low-Income Areas," *The Review of Economics and Statistics*, 2023, *105* (2), 359–375.

Baum-Snow, Nathaniel and Lu Han, "The Microgeography of Housing Supply," *Journal of Political Economy*, 2024, *132* (6), 1966–2015.

Bramley, Glen, "Housing Market Models and Planning," *Town Planning Review*, 2013, *84* (1), 9–35.

Cheshire, Paul, "Broken Market or Broken Policy? The Unintended Consequences of Restrictive Planning," *National Institute Economic Review*, 2018, *245*, R9–R19.

_ , Christian A. L. Hilber, and Ioannis Kaplanis, "Land Use Regulation and Productivity—Land Matters: Evidence from a UK Supermarket Chain," *Journal of Economic Geography*, 2015, *15* (1), 43–73.

Clifford, Ben, Jessica Ferm, Nicola Livingstone, and Patricia Canelas, "Assessing the Impacts of Extending Permitted Development Rights to Office-to-Residential Change of Use in England," *RICS Research Report*, 2018.

Glaeser, Edward L. and Joseph Gyourko, "The Economic Implications of Housing Supply," *Journal of Economic Perspectives*, 2018, *32* (1), 3–30.

_ , _ , and Raven Saks, "Why Is Manhattan So Expensive? Regulation and the Rise in Housing Prices," *The Journal of Law and Economics*, 2005, *48* (2), 331–369.

Goldsmith-Pinkham, Paul, Isaac Sorkin, and Henry Swift, "Bartik Instruments: What, When, Why, and How," *American Economic Review*, 2020, *110* (8), 2586–2624.

Gyourko, Joseph, Albert Saiz, and Anita Summers, "A New Measure of the Local Regulatory Environment for Housing Markets: The Wharton Residential Land Use Regulatory Index," *Urban Studies*, 2008, *45* (3), 693–729.

Hilber, Christian A. L., "Why Are Housing Costs So High?," *CESifo Forum*, 2019, *20* (3), 29–34.

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

Mast, Evan, "JUE Insight: The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market," *Journal of Urban Economics*, 2023, *133*, 103383.

Ministry of Housing, Communities and Local Government, "Research into the Quality Standard of Homes Delivered through Change of Use Permitted Development Rights," Research Report, MHCLG 2020.

Murphy, Alvin, "A Dynamic Model of Housing Supply," *American Economic Journal: Economic Policy*, 2018, *10* (4), 243–267.

Office for National Statistics, "Housing Affordability in England and Wales," ONS Statistical Bulletin 2024.

Pennington, Kate, "Does Building New Housing Cause Displacement? The Supply and Demand Effects of Construction in San Francisco," *Working Paper*, 2021.

Saiz, Albert, "The Geographic Determinants of Housing Supply," *The Quarterly Journal of Economics*, 2010, *125* (3), 1253–1296.

Town and Country Planning Association, "Permitted Development Rights for Conversions: Technical Guidance," TCPA Policy Paper 2016.

Turner, Matthew A., Andrew Haughwout, and Wilbert van der Klaauw, "Land Use Regulation and Welfare," *Econometrica*, 2014, *82* (4), 1341–1403.

A. Standardized Effect Sizes

Table 6: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Net additions	-101.836	173.545	574.830	-0.0190	0.0324	Small negative
Additions per 1K pop	3.179	4.347	2.599	0.1314	0.1797	Moderate positive
Log average price	0.534	0.049	0.451	0.1272	0.0117	Moderate positive
Log flat price	0.684	0.055	0.485	0.1514	0.0121	Large positive

Notes: This paper estimates the effect of office floorspace exposure (Bartik-style continuous treatment) on local housing supply and prices in England following the 2013 Class J permitted development rights reform. The identification strategy uses a panel of 296 local authorities over 2012–2024 with LA and year fixed effects, clustering standard errors at the LA level. The sample contains 3,746 LA-year observations. Treatment is continuous (office floorspace share); SDE = $\hat{\beta} \times \text{SD}(X)/\text{SD}(Y)$. Classification refers to magnitude of the standardized effect, not statistical significance.