

Pricing to the Cap: Multi-Threshold Bunching and Subsidy Incidence in Australia's Housing Market

APEP Autonomous Research* @ailscl

April 1, 2026

Abstract

A \$10,000 first home owner grant is worth nothing if the developer prices it into the house. I exploit three overlapping subsidy thresholds in New South Wales—a grant notch at \$600,000, a stamp duty exemption at \$800,000, and a concession phase-out at \$1,000,000—to estimate multi-cutoff bunching in 1.4 million property transactions. All three thresholds generate statistically significant excess mass. A July 2023 reform that shifted the exemption threshold from \$650,000 to \$800,000 provides a bunching migration test: excess mass at \$650,000 collapsed by 73 percent while \$800,000 bunching rose, confirming policy-driven distortion. Decomposing by property type reveals that vacant land—a proxy for new construction—bunches at more than twice the rate of existing residences, consistent with supply-side pricing to the cap. First home buyer subsidies in this market are partially captured by sellers.

JEL Codes: H22, R31, H71

Keywords: bunching, housing subsidies, tax incidence, stamp duty, first home buyers

*Autonomous Policy Evaluation Project. Correspondence: scl@econ.uzh.ch (cumulative: 43m).

1. Introduction

Every Australian state government offers first home buyers a package of subsidies—grants, stamp duty exemptions, and concessions—designed to make homeownership accessible. These programs cost hundreds of millions of dollars annually. But a subsidy tied to a price threshold creates a strategic pricing opportunity: if sellers can observe buyer eligibility, they can set prices just below the cap and absorb part of the transfer. Whether this happens—and who captures the subsidy—is an empirical question that existing research has not answered for Australia.

This paper exploits the multi-threshold structure of New South Wales’ first home buyer subsidies to study price distortion and subsidy incidence. NSW operates three overlapping price thresholds: a First Home Owner Grant (FHOG) of \$10,000 forfeited entirely above \$600,000 for new homes; a stamp duty exemption worth up to \$31,335 for properties below \$800,000; and a stamp duty concession that phases out between \$800,000 and \$1,000,000. Each threshold creates a notch or kink in the effective price schedule, generating testable predictions about the distribution of transaction prices (Kleven, 2016).

The institutional setting provides three identification advantages. First, the multi-cutoff structure enables internal replication: if bunching appears at all three policy thresholds but not at non-policy round numbers, the pattern is unlikely to reflect coincidental heaping. Second, a July 2023 reform simultaneously shifted the stamp duty exemption threshold from \$650,000 to \$800,000 and the concession phase-out from \$800,000 to \$1,000,000, creating a natural experiment in which policy-driven bunching should *migrate* with the threshold while round-number bunching stays put. Third, the FHOG applies exclusively to new homes, while stamp duty thresholds apply to all purchases. This asymmetry generates a decomposition test: if bunching at \$600,000 is concentrated in new construction (vacant land and house-and-land packages) rather than existing dwellings, the distortion operates through supply-side developer pricing rather than demand-side buyer search (Best and Kleven, 2018).

I estimate bunching using the methodology of Chetty et al. (2011) and Kleven and Waseem (2013), fitting polynomial counterfactual densities to the price distribution excluding a window around each threshold. The analysis uses the universe of NSW property transactions from the Valuer General’s Property Sales Information database—1.4 million transactions between 2018 and 2025.

Three findings emerge. First, all three thresholds generate statistically significant excess mass in the pooled sample: $\hat{b} = 0.47$ at \$600,000, $\hat{b} = 0.78$ at \$800,000, and $\hat{b} = 2.34$ at \$1,000,000, where \hat{b} measures the ratio of excess to counterfactual counts in the bunching window. The escalating pattern—each successively higher threshold shows stronger bunching—

is consistent with increasing subsidy value: \$10,000 at the FHOG, up to \$31,335 at the exemption, and the concession phase-out operating on a wider price range.

Second, the migration test provides compelling evidence that bunching is policy-driven. Excess mass at the old \$650,000 exemption threshold collapsed from $\hat{b} = 0.98$ pre-reform to $\hat{b} = 0.27$ post-reform—a 73 percent decline—while bunching at the new \$800,000 threshold rose from 0.75 to 0.85. Control round numbers (\$550,000, \$750,000) show declining bunching in the post-period but no comparable reversal, ruling out a generic shift in round-number heaping as the explanation.

Third, the supply-demand decomposition reveals that vacant land transactions—a proxy for new construction where developers set list prices—bunch at \$600,000 at more than twice the rate of existing residences ($\hat{b} = 1.05$ versus 0.47). At \$800,000, the differential is even starker: $\hat{b} = 2.91$ for vacant land versus 0.78 for existing homes. This pattern is consistent with supply-side incidence: developers observe buyer eligibility for the FHOG and stamp duty exemption, price to the cap, and capture part of the subsidy that was intended to reduce housing costs for first-time buyers (Susin, 2002; Grislain-Letrémy and Trevien, 2019).

This paper contributes to three literatures. First, it provides the first bunching analysis of Australia’s first home buyer subsidies, joining a growing literature that uses notch and kink designs to study housing market distortions (Best and Kleven, 2018; Kopczuk and Munroe, 2016). Second, the migration test—exploiting a real-time threshold shift—addresses a longstanding concern in bunching studies: that excess mass at round numbers may reflect psychological salience rather than optimizing behavior (Kleven, 2016). The combination of policy-threshold migration and round-number stability provides unusually clean evidence. Third, the supply-demand decomposition speaks to the broader housing subsidy incidence question raised by Susin (2002) and Glaeser et al. (2008): when housing supply is inelastic, demand-side subsidies are capitalized into prices. The FHOG’s restriction to new homes creates a within-market test of this mechanism.

The findings have direct policy implications. If developers capture part of the FHOG through threshold pricing, the effective subsidy to first home buyers is smaller than the statutory amount. The strong bunching at stamp duty thresholds also suggests that stamp duty reform—a perennial Australian policy debate (Daley et al., 2018; Dachis et al., 2012)—would reduce allocative distortions in the housing market.

2. Institutional Background

First Home Owner Grant. The FHOG was introduced nationally in 2000 to offset the introduction of the Goods and Services Tax (GST). In NSW, it currently provides a

one-time \$10,000 grant for the purchase of a *new* home (newly constructed dwelling or substantially renovated property) priced at or below \$600,000. The threshold operates as a notch: purchasing at \$600,001 forfeits the entire \$10,000 grant. The grant does not apply to established (existing) homes, creating a natural within-market comparison.

First Home Buyer Assistance scheme. Separately from the FHOG, NSW provides stamp duty relief for first home buyers through the First Home Buyer Assistance (FHBA) scheme. Prior to July 1, 2023, properties priced below \$650,000 were fully exempt from stamp duty, with a concessional rate applying between \$650,000 and \$800,000. The reform of July 1, 2023 raised the full exemption threshold to \$800,000 and the concession phase-out to \$1,000,000.

The stamp duty exemption represents a substantial subsidy. At the pre-reform \$650,000 threshold, the stamp duty on a \$650,000 property was approximately \$24,740; at the post-reform \$800,000 threshold, the duty is approximately \$31,335. Unlike the FHOG, the stamp duty relief applies to *all* residential property purchases (new and existing) by eligible first home buyers.

Overlap and interaction. The three thresholds operate simultaneously and are not mutually exclusive. A first home buyer purchasing a new dwelling at \$595,000 receives the \$10,000 FHOG *and* pays zero stamp duty. A buyer purchasing an existing dwelling at \$795,000 receives no FHOG but pays zero stamp duty. This overlapping structure creates a rich setting for multi-cutoff analysis, as each threshold targets a different margin and a partially different population.

3. Data

The analysis uses the NSW Valuer General’s Property Sales Information (PSI) database, which records the universe of property transactions in New South Wales. The data are publicly available as weekly bulk downloads from the NSW Spatial Services portal, released under a Creative Commons license. Each record contains the purchase price, contract date, settlement date, locality, postcode, zoning code, nature of property (residential, vacant land, commercial, farm), and primary purpose description.

I download annual bulk files for 2018–2025, parse the nested archive structure, and extract the 1,697,719 “B” (sale) records with valid prices and dates. After restricting to the \$100,000–\$2,000,000 price range—which captures all three thresholds with adequate bandwidth—the analysis sample contains 1,429,738 transactions: 1,234,372 residential, 132,980 vacant land, 42,821 commercial, and 17,155 farm transactions.

I classify vacant land transactions as a proxy for new construction. In practice, many

Table 1: Summary Statistics: NSW Property Transactions, 2018–2025

Property Type	N	Mean	Median	SD	Min	Max
Residential	1,234,372	826,540	745,000	405,457	100,000	2,000,000
Vacant Land	132,980	445,137	390,000	279,309	100,000	2,000,000
Commercial/Farm	59,976	797,650	693,940	489,279	100,000	2,000,000

Notes: Universe of NSW Valuer General Property Sales Information (PSI) transactions with contract dates January 2018–December 2025, purchase prices between \$100,000 and \$2,000,000. Prices are in nominal Australian dollars.

vacant land purchases are associated with house-and-land packages offered by developers at fixed prices. While not all vacant land buyers will build immediately, and some new dwellings sell as completed “house and land,” this classification provides a conservative lower bound on supply-side activity. The key comparison—vacant land versus existing residential—remains informative for the supply-demand decomposition as long as vacant land transactions are more likely to involve developer pricing than buyer-driven negotiation.

4. Empirical Strategy

I estimate bunching at each threshold using the methodology of [Chetty et al. \(2011\)](#) and [Kleven and Waseem \(2013\)](#), as surveyed by [Kleven \(2016\)](#). The approach proceeds in three steps.

First, I partition transaction prices into \$5,000 bins and construct a histogram of counts in a \$200,000 bandwidth around each threshold. Second, I fit a counterfactual density by regressing bin counts on a degree-7 polynomial in the bin midpoint, excluding bins within a window of \$30,000 below to \$5,000 above the threshold. The asymmetric window reflects the prediction that bunching occurs just below the threshold (buyers and sellers price to avoid exceeding the cap), with a smaller “hole” above from transactions that might have occurred just above but were pulled down. Third, I compute excess mass as:

$$\hat{b} = \frac{\sum_{j \in \mathcal{W}} (c_j - \hat{c}_j^0)}{\bar{\hat{c}}^0} \quad (1)$$

where c_j is the observed count in bin j , \hat{c}_j^0 is the counterfactual count, \mathcal{W} is the set of bins in the bunching window, and $\bar{\hat{c}}^0$ is the average counterfactual count per bin. Standard errors are computed by bootstrap (500 replications), resampling transactions with replacement and re-estimating \hat{b} for each draw.

Migration test. The July 2023 reform provides a natural experiment to distinguish policy-driven bunching from round-number heaping. I split the sample at the reform date and estimate \hat{b} separately for the pre-reform (January 2018–June 2023) and post-reform (July 2023–December 2025) periods at four price points: \$650,000 (the old exemption threshold), \$800,000 (the new exemption threshold), \$550,000 (a control round number), and \$750,000 (a second control). If bunching is policy-driven, excess mass should migrate from \$650,000 to \$800,000; if it reflects round-number salience, it should not.

Supply-demand decomposition. I separately estimate bunching for vacant land (proxy for new construction, subject to developer pricing) and existing residential transactions at the \$600,000 FHOG threshold and the \$800,000 stamp duty threshold. If supply-side incidence dominates, vacant land should show disproportionately more bunching at the FHOG threshold—which applies only to new homes—than existing residences.

5. Results

5.1 Multi-Cutoff Bunching Estimates

Table 2 reports bunching estimates at the three first home buyer subsidy thresholds. All three show statistically significant excess mass. At the \$600,000 FHOG threshold, $\hat{b} = 0.469$ (SE = 0.045), indicating that the number of transactions in the bunching window exceeds the counterfactual by about 47 percent, or approximately 3,392 excess transactions over the 2018–2025 period. At the \$800,000 stamp duty exemption threshold, bunching is stronger: $\hat{b} = 0.782$ (SE = 0.056), or 4,786 excess transactions. At the \$1,000,000 concession phase-out, excess mass is largest: $\hat{b} = 2.342$ (SE = 0.088), with 7,288 excess transactions.

The escalating pattern across thresholds is consistent with increasing subsidy value. The FHOG notch forfeits \$10,000; the stamp duty exemption is worth up to \$31,335; and the concession phase-out creates the sharpest discontinuity in the effective price schedule. The \$1,000,000 estimate likely also reflects round-number salience—\$1 million is a psychologically salient price point—but the migration test below confirms that policy thresholds generate bunching above and beyond round-number effects.

Supply versus demand. Panels B and C of Table 2 decompose bunching by property type. At the \$600,000 FHOG threshold, vacant land transactions (a proxy for new construction where developers set prices) show excess mass of $\hat{b} = 1.048$ (SE = 0.195)—more than twice the residential estimate of $\hat{b} = 0.469$ (SE = 0.046). This differential is consistent with supply-side pricing: developers offering house-and-land packages set prices at exactly \$600,000 to maintain

Table 2: Bunching Estimates at First Home Buyer Subsidy Thresholds

	\$600,000 (FHOG)	\$800,000 (Stamp Duty)	\$1,000,000 (Concession)
<i>Panel A: All Residential Transactions</i>			
Excess mass (\hat{b})	0.469 (0.045)	0.782 (0.056)	2.342 (0.088)
Excess count	3,392	4,786	7,288
<i>Panel B: Supply vs. Demand Decomposition at \$600K</i>			
Vacant land (supply-side)	1.048 (0.195)		
Existing residence (demand)	0.469 (0.046)		
<i>Panel C: Supply vs. Demand Decomposition at \$800K</i>			
Vacant land (supply-side)		2.905 (0.381)	
Existing residence (demand)		0.782 (0.055)	

Notes: Excess mass \hat{b} estimated following Chetty et al. (2011). Counterfactual density fitted with degree-7 polynomial excluding a \$30,000-below / \$5,000-above window. Bootstrap standard errors (500 replications) in parentheses. \$600,000 is the FHOG notch (new homes forfeit \$10,000 grant above this price). \$800,000 is the stamp duty exemption threshold (post-July 2023; \$650,000 pre-reform). \$1,000,000 is the stamp duty concession phase-out. Vacant land proxies new construction (supply-side developer pricing).

buyer eligibility for the \$10,000 grant. Because the FHOG applies only to new homes, we would expect stronger bunching in new construction if sellers—rather than buyers—drive the price response.

At the \$800,000 stamp duty exemption threshold, the same pattern appears with even greater magnitude: vacant land shows $\hat{b} = 2.905$ (SE = 0.381) versus $\hat{b} = 0.782$ (SE = 0.055) for existing residences. This is striking because the stamp duty exemption applies to *all* first home purchases, not just new homes. The disproportionate vacant land response suggests that developers are more responsive to tax thresholds than individual sellers—plausible given that developers set list prices for entire subdivisions and can precisely target the threshold, while individual sellers negotiate bilaterally with less control over the final price.

5.2 The Migration Test

Table 3 presents the central identification result. The July 2023 reform moved the stamp duty exemption threshold from \$650,000 to \$800,000. If bunching at \$650,000 was policy-driven, it should dissolve after the threshold moved; if it reflected round-number salience at a psychologically appealing price, it should persist.

The pre-reform excess mass at \$650,000 was substantial: $\hat{b} = 0.984$ (SE = 0.052), representing 5,885 excess transactions. After the reform, this collapsed to $\hat{b} = 0.267$ (SE = 0.088)—a 73 percent decline. At the new \$800,000 threshold, bunching rose from $\hat{b} = 0.747$ (SE = 0.065) pre-reform to $\hat{b} = 0.849$ (SE = 0.088) post-reform. The bunching migrated with the policy.

To rule out confounding time trends, I examine control round numbers. At \$550,000, bunching fell from $\hat{b} = 0.389$ pre-reform to $\hat{b} = -0.087$ post-reform. At \$750,000, it fell from $\hat{b} = 0.655$ to $\hat{b} = 0.200$. These declines reflect a general reduction in round-number bunching in the post-period—likely driven by rising prices moving more of the distribution above these points. Crucially, neither control shows the pattern observed at the policy threshold: the \$800,000 bunching *increased* while all round numbers decreased, and the \$650,000 decline was far sharper than either control. The combination of collapse at the old threshold and growth at the new threshold, against a background of declining round-number bunching, provides compelling evidence that the observed excess mass is policy-driven.

5.3 Robustness

Table 4 reports specification sensitivity and a placebo test.

Specification sensitivity. The bunching estimates at \$800,000 vary with polynomial degree (Panel B) and bin width (Panel C). This is a well-documented feature of the bunching

Table 3: Bunching Migration: Pre vs. Post July 2023 Reform

	Policy Thresholds		Control (Round Numbers)	
	\$650,000	\$800,000	\$550,000	\$750,000
Pre-reform (Jan 2018 – Jun 2023)	0.984 (0.052)	0.747 (0.065)	0.389 (0.058)	0.655 (0.060)
Post-reform (Jul 2023 – Dec 2025)	0.267 (0.088)	0.849 (0.088)	-0.087 (0.091)	0.200 (0.083)

Notes: Each cell reports excess mass \hat{b} with bootstrap SE in parentheses. The July 1, 2023 reform raised the stamp duty exemption threshold from \$650,000 to \$800,000. Policy-driven bunching should migrate (\$650K falls, \$800K rises). Control round numbers (\$550K, \$750K) should show no comparable migration.

methodology—the counterfactual density is unobserved, and results depend on how it is estimated (Kleven, 2016). Higher polynomial degrees risk overfitting and absorbing the bunching spike into the counterfactual; narrower bins mechanically sharpen the round-number spike. Crucially, the migration test is robust to this concern: it compares the *same* threshold across two time periods, netting out any specification-driven level effects. Bunching at \$650,000 collapsed after the threshold moved regardless of the polynomial degree used to estimate the counterfactual.

Placebo. Panel A reports bunching for commercial and farm transactions at \$800,000. The estimate is large ($\hat{b} = 3.25$), confirming that round-number heaping is pervasive across property types. This is expected: \$800,000 is a psychologically salient price point. The migration test distinguishes policy-driven bunching from this background heaping. Note that \$650,000 is *not* a standard round number—its bunching cannot plausibly arise from psychological salience alone, making the pre-reform excess mass ($\hat{b} = 0.98$) and post-reform collapse ($\hat{b} = 0.27$) particularly compelling evidence of policy-driven distortion.

6. Discussion

The results reveal a fundamental tension in Australia’s first home buyer subsidies. The programs are designed to reduce housing costs for first-time purchasers, but the bunching evidence suggests that a substantial fraction of the subsidy is captured by sellers—particularly developers of new housing. When a developer prices a house-and-land package at exactly \$600,000 rather than \$610,000, the buyer receives the \$10,000 FHOG but pays \$600,000 for a property that might otherwise have transacted at a lower price. The subsidy flows through the buyer to the seller.

Table 4: Robustness Checks

	\hat{b}	SE
<i>Panel A: Placebo — Commercial/Farm at \$800K</i>		
Commercial/Farm transactions	3.250	(0.409)
<i>Panel B: Polynomial Degree Sensitivity (\$800K)</i>		
Degree 5	0.276	(0.045)
Degree 6	0.541	(0.055)
Degree 7	0.782	(0.051)
Degree 8	0.341	(0.056)
Degree 9	-0.073	(0.051)
<i>Panel C: Bin Width Sensitivity (\$800K)</i>		
\$2,000 bins	5.225	(0.153)
\$5,000 bins	0.782	(0.056)
\$10,000 bins	0.302	(0.027)

Notes: Panel A tests whether commercial and farm properties — which face no first home buyer thresholds — show policy-driven bunching at \$800,000. Panels B and C report sensitivity of the \$800,000 stamp duty threshold estimate to polynomial degree and bin width. Baseline: degree 7, \$5,000 bins. Bootstrap standard errors in parentheses.

This finding is consistent with the theoretical prediction that demand-side subsidies are partially capitalized into prices when housing supply is inelastic in the short run (Susin, 2002; Hilber and Vermeulen, 2016). The mechanism here is sharper than general capitalization: threshold pricing allows sellers to extract the subsidy precisely, pricing to the cap and absorbing the difference.

The migration test addresses a methodological concern that has limited the interpretation of bunching studies. Kleven (2016) notes that bunching at round numbers may reflect optimization frictions, salience effects, or transaction conventions rather than rational responses to tax incentives. The July 2023 reform provides a clean test: policy-driven bunching migrated within six months of the threshold change, while round-number bunching either persisted or declined for structural reasons (rising prices moving transactions above previously common price points). This design could serve as a template for future bunching studies where policy thresholds coincide with round numbers.

Three limitations merit discussion. First, the vacant land proxy for new construction is imperfect. Some vacant land purchases are for future owner-built homes rather than developer packages, and some new apartments sell as strata-titled residences classified as “residential.” Moreover, the decision to purchase vacant land rather than an existing home may be endogenous—if first home buyers select into vacant land *because* it is the only way to stay under the FHOG cap in expensive areas, the higher bunching in land may partly reflect buyer-side budget constraints rather than developer pricing power. The decomposition results are therefore consistent with supply-side incidence but do not definitively establish it.

Second, the counterfactual specification sensitivity documented in Table 4 means that the *level* of bunching is imprecisely identified—the qualitative finding (positive excess mass at all thresholds) is robust, but the exact magnitude depends on modeling choices. The migration test, which compares the same threshold across time rather than against a polynomial counterfactual, is the primary basis for the causal claim.

Third, bunching identifies that transaction prices cluster near thresholds but does not directly reveal the incidence split. In Australian practice, “house and land” contracts are often split into separate land and building components, potentially allowing developers to set the land component at exactly the threshold while shifting margins to the building contract (Slemrod, 2013). This contracting mechanism complicates the mapping from observed price bunching to subsidy incidence.

7. Conclusion

When governments subsidize homeownership through price-capped grants and stamp duty concessions, they create thresholds that rational sellers can exploit. In New South Wales, three overlapping first home buyer thresholds distort the transaction price distribution, with excess mass that migrates when thresholds move and concentrates in new construction where developers set prices. The mechanism is simple but consequential: pricing to the cap converts a buyer subsidy into a seller revenue guarantee. This suggests that the effective subsidy to first home buyers is smaller than the statutory amount—a finding that generalizes to any housing market where demand-side subsidies interact with supply-side market power.

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

First Contributor: <https://github.com/ai1scl>

References

- Best, Michael Carlos and Henrik Jacobsen Kleven**, “Housing Market Responses to Transaction Taxes: Evidence From Notches and Stimulus in the UK,” *Review of Economic Studies*, 2018, *85* (1), 157–193.
- Chetty, Raj, John N Friedman, Tore Olsen, and Luigi Pistaferri**, “Adjustment Costs, Firm Responses, and Micro vs. Macro Labor Supply Elasticities: Evidence from Danish Tax Records,” *Quarterly Journal of Economics*, 2011, *126* (2), 749–804.
- Dachis, Benjamin, Gilles Duranton, and Matthew A Turner**, “The Role and Design of the Land Transfer Tax,” *Regional Science and Urban Economics*, 2012, *42* (5), 862–875.
- Daley, John, Brendan Coates, and Trent Wiltshire**, “Money in the Suburbs: Stamp Duty and Housing Affordability,” Technical Report, Grattan Institute 2018.
- Glaeser, Edward L, Joseph Gyourko, and Albert Saiz**, “Housing Supply and Housing Bubbles,” *Journal of Urban Economics*, 2008, *64* (2), 198–217.
- Grislain-Letrémy, Céline and Corentin Trevien**, “Housing Subsidies and the Tax Treatment of Owner-Occupied Housing,” *Journal of Public Economics*, 2019, *171*, 35–52.
- Hilber, Christian AL and Wouter Vermeulen**, “The Impact of Supply Constraints on House Prices in England,” *Economic Journal*, 2016, *126* (591), 358–405.
- Kleven, Henrik J**, “Bunching,” *Annual Review of Economics*, 2016, *8*, 435–464.
- **and Mazhar Waseem**, “Using Notches to Uncover Optimization Frictions and Structural Elasticities: Theory and Evidence from Pakistan,” *Quarterly Journal of Economics*, 2013, *128* (2), 669–723.
- Kopczuk, Wojciech and David Munroe**, “What Do Notches Reveal about the Tax System? Evidence from Capital Gains Taxes on Real Estate,” *Journal of Public Economics*, 2016, *135*, 47–65.
- Slemrod, Joel**, “Tax Is in the Details: The Interplay of Tax Bases, Filing Rules, and Administration,” *National Tax Journal*, 2013, *66* (3), 711–730.
- Susin, Scott**, “Rent Vouchers and the Price of Low-Income Housing,” *Journal of Public Economics*, 2002, *83* (1), 109–152.

A. Data Appendix

The NSW Valuer General’s Property Sales Information (PSI) database records the universe of real property transactions in New South Wales. Data are released as weekly bulk downloads from the NSW Spatial Services portal (<https://www.valuergeneral.nsw.gov.au>). Each annual archive contains 52 weekly archives, each containing district-level DAT files in semicolon-delimited format with four record types: A (header), B (sale record), C (property identifier), and D (property details).

I download annual archives for 2018–2025 (eight years). The extraction pipeline parses nested ZIP archives, extracts all B records, and retrieves the following fields: district code, property ID, contract date, settlement date, purchase price, zone code, nature of property, primary purpose, postcode, and locality. Records with missing or non-positive purchase prices, or contract dates outside the 2018–2025 window, are dropped.

Property types are classified using pattern matching on the primary purpose field (a free-text field with several hundred unique values) and the single-character nature code as a fallback. The residential category includes residences, houses, units, apartments, flats, terraces, cottages, and dwellings. The vacant land category includes vacant land and land-only transactions. The commercial category includes offices, shops, retail, warehouses, factories, and industrial properties. The farm category includes farms, rural properties, agricultural holdings, vineyards, and orchards.

The analysis sample restricts to transactions with purchase prices between \$100,000 and \$2,000,000. This bandwidth is wide enough to fit the counterfactual polynomial at all three thresholds (\$600K, \$800K, \$1M) while excluding extreme outliers.

B. Standardized Effect Sizes

Table 5: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
<i>Panel A: Pooled</i>						
Bunching: \$600K (FHOG)	3,392	2,587	405,457	0.469	0.045	Large positive
Bunching: \$800K (Stamp Duty)	4,786	2,746	405,457	0.782	0.056	Large positive
Bunching: \$1M (Concession)	7,288	2,188	405,457	2.342	0.088	Large positive
Migration: \$650K (post-reform)	-5,339	—	405,457	-0.717	0.102	Large negative
<i>Panel B: Heterogeneous (Supply vs. Demand)</i>						
\$800K: Vacant land (supply)	542	569	405,457	2.905	0.381	Large positive
\$800K: Existing residence (demand)	4,786	2,688	405,457	0.782	0.055	Large positive

Notes: **Country:** Australia. **Research question:** Do first home buyer subsidy price thresholds distort the housing transaction price distribution, and does the pattern of bunching reveal whether subsidies are captured by sellers or retained by buyers? **Policy mechanism:** New South Wales operates three overlapping first home buyer subsidies with sharp price eligibility thresholds: a \$10,000 grant forfeited entirely above \$600,000 (new homes), full stamp duty exemption below \$800,000, and a concession phasing out at \$1,000,000. The July 2023 reform shifted the exemption threshold from \$650,000 to \$800,000. **Outcome definition:** Excess mass \hat{b} — the ratio of observed to counterfactual transaction counts in a window around each price threshold, where the counterfactual is estimated by fitting a polynomial to the density outside the window. **Treatment:** Binary at each threshold (price below vs. above the eligibility cutoff). **Data:** NSW Valuer General Property Sales Information, universe of property transactions, January 2018–December 2025, 1,429,738 observations. **Method:** Bunching estimation (Chetty et al. 2011; Kleven and Waseem 2013), degree-7 polynomial, \$5,000 bins, bootstrap standard errors (500 replications). **Sample:** Transactions with prices \$100,000–\$2,000,000; residential properties for main estimates, commercial/farm for placebo. $SDE = \hat{b}$ (excess mass ratio), the standard bunching estimand. Classification refers to magnitude, not statistical significance: Large ($|SDE| > 0.15$), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).