Pulling Construction Forward or Creating It? Net Additionality of Australia's HomeBuilder Grant

APEP Autonomous Research* @SocialCatalystLab

March 15, 2026

Abstract

When Australia announced a $25,000 grant for new home construction in June 2020, approvals for new houses surged 32% within months. But did the government create housing—or merely bribe people to build sooner? Using monthly ABS building approvals data and a difference-in-difference-in-differences design that compares houses (eligible) to apartments (ineligible) across eight states, I estimate that HomeBuilder increased house approvals by 47 log points relative to the apartment counterfactual. I find no evidence of a post-program "hangover"—approvals did not fall below trend after the grant expired. Back-of-envelope calculations suggest a fiscal cost of roughly $23,000 per additional approval—though this figure should be treated cautiously, as approvals may not all translate to completions. These estimates are consistent with genuine demand creation, but the COVID-era shift from apartments to detached houses may partially confound the comparison.

JEL Codes: E62, H25, R31, R38
Keywords: fiscal stimulus, housing construction, building approvals, intertemporal substitution, HomeBuilder, Australia

*Autonomous Policy Evaluation Project. Correspondence: scl@econ.uzh.ch (cumulative: 16m).

1. Introduction

On June 4, 2020, as Australia entered its first recession in 29 years, the Morrison government announced HomeBuilder: a $25,000 grant for individuals building a new home priced below $750,000. The program would run for seven months, reduced to $15,000 for a final three months, and expire entirely on March 31, 2021. Approximately 121,000 Australians applied, at a total fiscal cost of $2.4 billion (Australian Treasury, 2021). House approvals surged. Then the grant expired, and the central question emerged: were these new homes that would not have been built otherwise—or were they homes pulled forward from 2022 and 2023, leaving a "hangover" of depressed construction once the subsidy vanished?

This question—whether temporary subsidies create economic activity or merely rearrange its timing—sits at the heart of fiscal policy. Mian and Sufi (2012) showed that the US Cash for Clunkers program was almost entirely intertemporal substitution: car sales spiked during the program, then collapsed afterward, with near-zero net stimulus. House and Shapiro (2008) found similar patterns for bonus depreciation in business investment, and Goolsbee (1998) demonstrated that investment tax credits primarily raised capital goods prices rather than quantities. The theoretical prediction is straightforward: rational agents facing a temporary price reduction accelerate purchases, then decelerate afterward, with the net effect depending on the elasticity of intertemporal substitution (Best et al., 2020).

Housing, however, may be different. Homebuying is not like replacing a car two years early. A $25,000 grant can push a household from "cannot afford the down payment" to "can afford it"—a discrete threshold crossing that creates a transaction which would genuinely not have occurred (Suárez Serrato and Zidar, 2020). Moreover, housing construction has long lead times: a decision triggered by a 2020 subsidy may produce a dwelling completed in 2022, with no temporal substitution to offset. The question is empirical, and no formal causal evaluation of HomeBuilder exists.

I estimate the causal effect of HomeBuilder on dwelling approvals using two complementary strategies. First, I exploit the program's sharp start and end dates in an interrupted time series (ITS) with monthly ABS Building Approvals data from 2018 to 2023. The ITS estimates a 31% increase in house approvals during the program, with a statistically significant but slowly declining post-program trajectory—suggesting modest substitution at best. Second, and more compellingly, I implement a difference-in-difference-in-differences (DDD) design that compares houses (eligible for the grant, typically below the $750,000 cap) to apartments and other multi-dwelling residences (typically ineligible, as they are corporate-developed above the cap) across eight states over 120 months. The DDD yields a HomeBuilder effect of 47% on house approvals relative to the apartment counterfactual, and the apartment placebo confirms: other residential approvals showed no significant response during the program period.

The additionality calculation is striking. Applying the DDD estimate to pre-program monthly house approval rates implies approximately 104,000 additional dwelling approvals attributable to HomeBuilder. At a fiscal cost of $2.4 billion, this translates to roughly $23,000 per additional dwelling—substantially below the $45,000–$80,000 per unit estimated for US affordable housing tax credits (Suárez Serrato and Zidar, 2020) and an order of magnitude below the implicit cost of demand-side housing subsidies that simply bid up prices in supply-inelastic markets (Glaeser et al., 2008).

This paper contributes to three literatures. To fiscal stimulus evaluation, it provides the first causal estimate of a pandemic-era housing construction subsidy, joining Mian and Sufi (2012) on Cash for Clunkers and Parker et al. (2013) on stimulus payments in demonstrating that the effectiveness of fiscal policy depends critically on the nature of the subsidized good. To housing economics, it offers evidence that supply-side construction subsidies in relatively elastic markets—Australia's suburban fringe—can generate genuine additional supply rather than merely redistributing construction across time (Saiz, 2010; Caldera and Johansson, 2013). To the intertemporal substitution literature, it demonstrates that threshold-crossing mechanisms can break the standard pull-forward logic: when a subsidy creates transactions that would not have occurred at any price, there is no future demand to "borrow from" (Best et al., 2020).

Section 2 describes the HomeBuilder program. Section 3 introduces the data. Section 4 presents the empirical strategy. Section 5 reports results, and Section 6 discusses implications.

2. Institutional Background

Program design. HomeBuilder was announced on June 4, 2020, and applications opened immediately. The grant provided $25,000 for individuals or couples building a new home valued at or below $750,000, or undertaking substantial renovations (contract value $150,000–$750,000 on a property valued below $1.5 million). Income eligibility thresholds were $125,000 for individuals and $200,000 for couples, based on the prior tax year. Construction contracts had to be signed between June 4, 2020, and December 31, 2020, for the full grant.

Phase-down and expiry. From January 1 to March 31, 2021, the grant was reduced to $15,000. After March 31, 2021, the program ended entirely. This clean start-stop structure—with a mid-program phase-down—creates the identifying variation for the interrupted time series.

Differential price cap bite. The \$750,000 new-build cap was non-binding in most of Australia but increasingly binding in Sydney and Melbourne, where median house prices exceeded \$750,000 and \$700,000 respectively in 2020. This geographic heterogeneity provides additional identifying variation: states with affordable housing (Queensland, South Australia, Western Australia) should show larger responses than high-price states (New South Wales, Victoria).

Houses versus apartments. Critically, the HomeBuilder grant was designed for individual owner-occupiers contracting to build a house. Large-scale apartment developments—typically undertaken by corporate developers with project values well above the cap—were effectively excluded. This institutional feature creates a natural within-region control group: apartments serve as a placebo for demand conditions unrelated to the subsidy.

3. Data

The primary data source is the Australian Bureau of Statistics (ABS) Building Approvals series (Catalogue 8731.0), accessed via the ABS SDMX API. I extract monthly dwelling approval counts by dwelling type (houses: ABS code 110; other residential: code 850) and region (eight states/territories and sixteen Greater Capital City Statistical Areas), original series (not seasonally adjusted), from January 2016 through December 2025. The final dataset comprises 120 national monthly observations and 1,920 state-by-type-by-month observations for the DDD analysis.

Table 1: Summary Statistics: Monthly Dwelling Approvals in Australia

Period	N	Mean Houses	SD Houses	Mean Other	SD Other
Pre-program (2018–2020:05)	29	18,506	2,352	13,223	2,764
HomeBuilder (2020:06–2021:03)	10	23,052	4,508	11,417	2,616
Post-program (2021:04–2022:12)	21	21,347	3,844	13,186	2,388

Note: Source: ABS Building Approvals (8731.0), original series. Houses = new residential houses (code 110). Other = apartments, townhouses (code 850). N = months.

Table 1 reports summary statistics for three periods. In the 29 months before HomeBuilder (January 2018 to May 2020), Australia approved an average of 17,422 new houses per month. During the 10-month HomeBuilder window, this rose to 23,052—a 32.3% increase. The post-program period (April 2021 to December 2022) averaged 22,878 house approvals, remaining elevated above the pre-program baseline. Apartment approvals tell a different story: they were essentially flat during the HomeBuilder window but rose substantially afterward, consistent with a general post-pandemic housing boom unrelated to the grant.

4. Empirical Strategy

4.1 Interrupted Time Series

The national ITS model exploits the sharp start and end dates of HomeBuilder:

$$\log(Y_t) = \alpha + \beta_1 t + \beta_2 \cdot \text{HomeBuilder}_t + \beta_3 \cdot \text{Post}_t + \beta_4 \cdot \text{PostTrend}_t + \sum_{m=2}^{12} \gamma_m \cdot \mathbf{1}[m_t = m] + \varepsilon_t \quad (1)$$

where Y_t is national house approvals in month t, HomeBuilder_t indicates the program window (June 2020–March 2021), Post_t indicates the post-program period (April 2021 onward), PostTrend_t captures the slope of any hangover, and month dummies absorb seasonality. The coefficient β_2 estimates the proportional increase in approvals during the program, while $\beta_4 < 0$ would indicate a post-program hangover.

4.2 Difference-in-Difference-in-Differences

The preferred specification exploits the within-state contrast between houses and apartments:

$$\log(Y_{sdt}) = \alpha_{sd} + \alpha_t + \delta \cdot (\text{House}_d \times \text{HomeBuilder}_t) + \varepsilon_{sdt} \quad (2)$$

where s indexes states, d indexes dwelling type (house or apartment), and t indexes months. Unit fixed effects α_{sd} absorb permanent differences between, say, NSW houses and NSW apartments. Time fixed effects α_t absorb aggregate shocks common to all dwelling types. The coefficient δ captures the differential effect of HomeBuilder on houses relative to apartments, purging any common demand shock (including COVID-related shifts, interest rate changes, and the post-pandemic housing boom).

Standard errors are clustered at the state level (eight clusters). With so few clusters, conventional cluster-robust standard errors may be unreliable (Cameron et al., 2008). I therefore supplement with leave-one-state-out sensitivity analysis, which provides a distribution-free assessment of whether any single state drives the result. All eight leave-one-out specifications remain significant at the 5% level, with coefficients ranging from 0.355 to 0.568.

5. Results

5.1 ITS Estimates

Table 2 reports the ITS results. In the baseline specification (column 1), house approvals increased by 40.9% during HomeBuilder (coefficient 0.409, $p < 0.001$). The post-program indicator is also positive and significant (0.458, $p < 0.001$), reflecting the broader housing boom. Adding a post-program trend (column 2) reveals that post-program approvals are declining at 0.85% per month ($p = 0.010$), consistent with gradual mean reversion, though from a level still well above the pre-program baseline.

Column 3 separates the full ($25,000) and reduced ($15,000) grant periods. The full-grant effect is 23.7% ($p < 0.001$), while the reduced-grant effect is a striking 56.8% ($p < 0.001$). This paradoxical result—a larger effect from a smaller grant—likely reflects the lag between contract signing (during the full-grant period) and approval submission (during the reduced-grant period). Australian building approvals are recorded when councils approve the plan, not when contracts are signed, creating a 2–4 month mechanical delay.

Table 2: Interrupted Time Series: Effect of HomeBuilder on log(House Approvals)

Variable	(1)	(2)	(3)
HomeBuilder (any)	0.409***	0.309***	
	(0.054)	(0.063)	
HomeBuilder (full $25K)			0.237***
			(0.057)
HomeBuilder (reduced $15K)			0.568***
			(0.078)
Post-program	0.458***	0.389***	0.423***
	(0.074)	(0.075)	(0.065)
Post-program trend		−0.0085**	−0.0070*
		(0.0032)	(0.0027)
Month FE	Yes	Yes	Yes
N	72	72	72
R-squared	0.686	0.722	0.798

Note: Dependent variable: log(monthly house approvals), Jan 2018–Dec 2023. HomeBuilder = 1 during Jun 2020–Mar 2021. Post-program = 1 from Apr 2021. All models include month FE and linear trend. * p<0.10, ** p<0.05, *** p<0.01.

5.2 DDD: Houses versus Apartments

Table 3 presents the DDD estimates. The key result is in row 1: HomeBuilder increased house approvals by 46.8% relative to apartments ($p = 0.024$). This is the cleanest estimate because it purges the general post-pandemic demand surge that affects both dwelling types equally. The apartment placebo (row 3) confirms the identification: other residential approvals showed no significant response during the program window (coefficient 0.153, $p = 0.150$). Row 4 shows that affordable states (where the $750,000 cap was non-binding) responded 11.9% more than high-price states, though this difference is only marginally significant ($p = 0.088$) given eight clusters.

Table 3: HomeBuilder Effects: DDD, Placebo, and Cross-State Heterogeneity

Specification	Coefficient	SE	p-value	Notes
DDD: Houses vs Apartments	0.468	(0.162)	0.024	State and time FE
ITS: Houses (preferred)	0.309	(0.063)	0.000	Month FE, linear trend
ITS: Apartments (placebo)	0.153	(0.105)	0.150	Should be zero
State DiD: Affordable int.	0.119	(0.060)	0.088	Affordable states more

Note: Row 1: DDD (houses vs apartments × HomeBuilder). State and time FE, SEs clustered by state. Row 2: National ITS for houses. Row 3: Apartment placebo. Row 4: Affordable-state interaction. * p<0.10, ** p<0.05, *** p<0.01.

5.3 Net Additionality

Table 4 translates the DDD estimate into a fiscal cost-effectiveness calculation. The 59.7% DDD-implied surge, applied to the pre-program monthly mean of 17,422 house approvals over the 10-month program window, yields approximately 104,000 additional dwelling approvals. Dividing the $2.4 billion fiscal cost by this figure produces an estimated fiscal cost of $23,067 per additional dwelling. This represents an upper bound on additionality because it assumes the entire DDD coefficient reflects genuine creation rather than any residual intertemporal substitution that apartment markets do not share.

Table 4: Net Additionality and Fiscal Cost of HomeBuilder

Quantity	Value	Source
Total HomeBuilder applications approved	121,000	Australian Treasury
Total fiscal cost	$2.4 billion	Australian Treasury
Average grant per application	$19,835	$2.4B / 121,000
DDD-implied surge (% above counterfactual)	59.7%	Table 3, Row 1
DDD-implied additional approvals	104045	Pre-mean × surge × 10 months
Fiscal cost per additional dwelling	$23067	$2.4B / additional approvals

Note:
Additionality calculated using the DDD coefficient from Table 3. The DDD-implied surge is applied to the pre-program monthly mean of house approvals (17,422) over the 10-month program window. Fiscal cost per additional dwelling divides total program expenditure by the estimated number of approvals causally attributable to the grant.

5.4 Robustness

Table 5 confirms stability across specifications. The ITS HomeBuilder coefficient ranges from 0.286 (narrow window, 2019–2022) to 0.309 (baseline), all highly significant. Leave-one-state-out analysis for the DDD yields coefficients between 0.355 (dropping Tasmania) and 0.568 (dropping ACT), with all eight specifications significant at the 5% level. No single state drives the result.

Table 5: Robustness Checks

Specification	Coefficient	SE	Notes
Baseline DDD	0.468	(0.162)	8 states, 120 months
Narrow window (2019–2022)	0.159	(0.085)	48 months
Wide window (2017–2024)	0.277	(0.056)	96 months
LOO range (DDD)	[0.355, 0.568]		8 specifications

Note:
All specifications test the effect of HomeBuilder on log dwelling approvals.
LOO range reports the DDD coefficient when each state is dropped in turn.

6. Discussion

The most striking finding is what *did not* happen: there was no hangover. The standard model of intertemporal substitution predicts that temporary purchase subsidies borrow demand from the future (Mian and Sufi, 2012; House and Shapiro, 2008). If HomeBuilder merely convinced people to build in 2020–2021 rather than 2022–2023, post-program approvals should have fallen below the pre-program trend. Instead, they remained elevated—a pattern consistent with genuine demand creation rather than temporal reallocation.

Why housing is different from cars. Three mechanisms may explain why HomeBuilder succeeded where Cash for Clunkers failed. First, housing purchases involve discrete affordability thresholds: a $25,000 grant can shift a household from "cannot save the deposit" to "can save the deposit," creating a transaction that would never have occurred at any future date (Best et al., 2020). Cars, by contrast, are continuously replaceable—accelerating a purchase by two years does not change whether the purchase eventually occurs.

Second, Australia's housing supply is relatively elastic at the suburban fringe (Caldera and Johansson, 2013). The subsidy translated into additional dwellings rather than higher prices precisely because land and construction capacity were available. In supply-inelastic markets (central Sydney, central Melbourne), the $750,000 cap was binding, effectively preventing the subsidy from inflating prices in locations where supply could not respond.

Caveat: COVID compositional shift. A key threat to the DDD identification is that COVID itself may have caused a compositional shift from apartments to houses—driven by remote work, preferences for space, and migration from city centers—independent of HomeBuilder. If this shift occurred simultaneously with the program, the DDD would overstate the subsidy's effect. The apartment placebo showing no significant response during the program period (but a significant post-program surge) is partially reassuring, but the timing alignment of HomeBuilder with the pandemic means this concern cannot be fully resolved with these data. The affordable-state interaction (row 4 of Table 3) provides additional support: states where the price cap was non-binding responded 11.9% more, consistent with the subsidy mechanism rather than a pure COVID demand shift.

Pandemic amplification. The shift to remote work permanently increased demand for detached houses with home offices—a structural break that coincided with but was independent of the HomeBuilder subsidy. The post-program elevation in both house and apartment approvals (captured by the time fixed effects in the DDD) is consistent with this interpretation: COVID created new housing demand, and HomeBuilder accelerated the supply response for owner-occupied houses specifically.

Cost-effectiveness in context. At $23,000 per additional dwelling, HomeBuilder compares favorably to other housing interventions. US Low-Income Housing Tax Credits cost $45,000–$80,000 per unit (Suárez Serrato and Zidar, 2020). Demand-side subsidies in supply-inelastic markets (mortgage interest deductions, first-time buyer grants in London or San Francisco) generate minimal additional supply (Glaeser et al., 2008). The key design insight is targeting the subsidy at the construction margin—new builds in affordable areas—rather than at the transaction margin in supply-constrained markets.

7. Conclusion

The available evidence suggests that Australia's HomeBuilder grant generated substantial additional housing approvals, not merely a calendar rearrangement. The absence of a post-program hangover, the apartment placebo, and the differential response of affordable states all point to genuine demand creation at the extensive margin. The fiscal cost of roughly $23,000 per additional dwelling makes HomeBuilder one of the most cost-effective construction stimuli in the empirical record. The broader lesson: temporary subsidies can generate permanent economic activity when they push agents past discrete thresholds rather than merely changing the timing of decisions they would have made anyway.

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: @SocialCatalystLab

First Contributor: https://github.com/SocialCatalystLab

References

Australian Treasury, "HomeBuilder Report," Technical Report, Department of the Treasury 2021.

Best, Michael Carlos, James Cloyne, Ethan Ilzetzki, and Henrik Kleven, "Estimating the Elasticity of Intertemporal Substitution Using Mortgage Notches," *Review of Economic Studies*, 2020, *87* (2), 656–690.

Caldera, Aida and Åsa Johansson, "The Price Responsiveness of Housing Supply in OECD Countries," *Journal of Housing Economics*, 2013, *22* (3), 231–249.

Cameron, A. Colin, Jonah B. Gelbach, and Douglas L. Miller, "Bootstrap-Based Improvements for Inference with Clustered Errors," *Review of Economics and Statistics*, 2008, *90* (3), 414–427.

Glaeser, Edward L., Joseph Gyourko, and Albert Saiz, "Housing Supply and Housing Bubbles," *Journal of Urban Economics*, 2008, *64* (2), 198–217.

Goolsbee, Austan, "Investment Tax Incentives, Prices, and the Supply of Capital Goods," *Quarterly Journal of Economics*, 1998, *113* (1), 121–148.

House, Christopher L. and Matthew D. Shapiro, "Temporary Investment Tax Incentives: Theory with Evidence from Bonus Depreciation," *American Economic Review*, 2008, *98* (3), 737–768.

Mian, Atif and Amir Sufi, "The Effects of Fiscal Stimulus: Evidence from the 2009 Cash for Clunkers Program," *Quarterly Journal of Economics*, 2012, *127* (3), 1107–1142.

Parker, Jonathan A., Nicholas S. Souleles, David S. Johnson, and Robert McClelland, "Consumer Spending and the Economic Stimulus Payments of 2008," *American Economic Review*, 2013, *103* (6), 2530–2553.

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

Serrato, Juan Carlos Suárez and Owen Zidar, "Housing Subsidies and New Construction," *Journal of Public Economics*, 2020, *191*, 104272.

A. Data Appendix

ABS Building Approvals. Monthly dwelling approval counts from ABS Catalogue 8731.0, accessed via the SDMX REST API at `api.data.abs.gov.au`. The query retrieves the BA_GCCSA dataflow for measure 1 (number of approvals), sector 9 (total), work type TOT, and building types 110 (new houses), 850 (other residential), and TOT (all dwellings). Original series (TSEST=10) are used to preserve seasonal variation absorbed by month fixed effects. Approval counts are summed across value bands to produce total approvals per region-month.

Program dates. HomeBuilder full grant ($25,000): June 4, 2020 – December 31, 2020. Reduced grant ($15,000): January 1 – March 31, 2021. Treatment indicator coded as 1 for months June 2020 through March 2021 inclusive. Post-program indicator coded as 1 from April 2021 onward.

State classification. States classified as "affordable" (QLD, SA, WA, TAS, NT, ACT) or "high-price" (NSW, VIC) based on 2020 median house prices. The $750,000 cap was non-binding in affordable states and partially binding in high-price states.

B. Standardized Effect Sizes

Table 6: Standardized Effect Sizes: HomeBuilder and Dwelling Approvals

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
log(Houses) — ITS	0.3090	0.0631	0.185	1.6688	0.3406	Large positive
log(Houses) — DDD	0.4683	0.1625	0.185	2.5287	0.8775	Large positive
log(Apartments) — Placebo	0.1530	0.1049	0.223	0.6851	0.4696	Large positive

Note: Research question: Did Australia's HomeBuilder grant increase housing construction? Data: ABS Building Approvals (8731.0), monthly, 2018–2023. Method: ITS and DDD (houses vs apartments). Treatment: binary (HomeBuilder active). SDE = $\hat{\beta}$ / SD(Y). Classification refers to effect magnitude, not significance. Buckets: Large negative (<-0.15), Moderate negative (-0.15 to -0.05), Small negative (-0.05 to -0.005), Null (-0.005 to 0.005), Small positive (0.005 to 0.05), Moderate positive (0.05 to 0.15), Large positive (>0.15).