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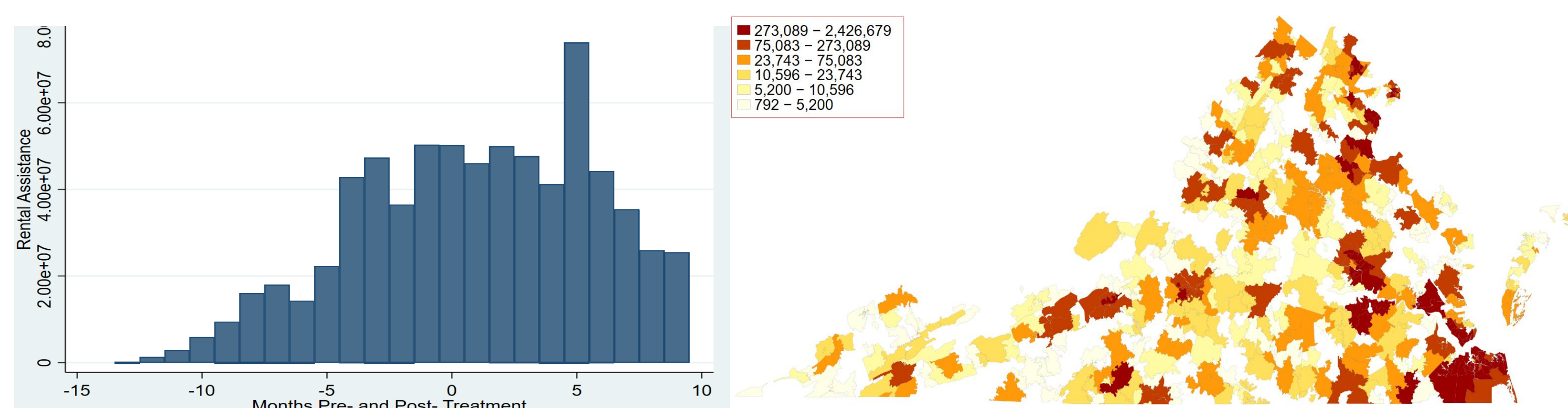
Abstract

I explore the impact of Virginia's COVID-19 eviction moratorium on rents and home values across the state. Using panel data and a differences-in-differences research design, I show that both rents and home values decreased post-moratorium compared to surrounding states. One might expect landlords to raise rent to compensate themselves for the risk of an unevictable tenant, but my results show that landlords are unable to obtain such compensation. Forced to rent to economically distressed tenants with little recourse, landlords suffer a prolonged and escalating decline in property values that exceeds the benefits of rental price declines reaped by the tenants.

Introduction

PROPERTY RIGHTS ARE foundational to residential real estate value. I show that legally curtailing those rights drastically reduces the value of the residential real estate asset creating long-term losses in value well after government intervention. My research demonstrates that while well-intended, government programs favoring tenants over landlords carry significant costs reflected in real estate asset prices, resulting in losses that cannot be recouped in the rental market. Utilizing a differences-in-differences design, with nearest neighbor propensity score matching, entropy balancing, and synthetic controls robustness tests, I show a significant negative impact on both home prices and rental prices in the State of Virginia, which extended the COVID-19 moratorium on evictions within the state after the federal ban on evictions expired.

My findings show that rental prices declined by almost 1% in Virginia. This serves as a contrast to prior theoretical expectations that landlords would be able to compensate themselves for the risk of hosting an unevictable tenant. (Abramson (2024)). Because of this deviation of rental prices from economic models, extending the eviction ban lowered residential real estate values almost 2% (and sometimes almost 5%), reducing total Virginia real estate value by more than \$20 (to \$50) billion, and resulting in an estimated capital loss of anywhere between 5% and (in rare cases 100%) compared to nearby regions for a leveraged property owner. The landlords' loss of a critical property rights had a significant negative impact on residential real estate values, well beyond the benefit gained by tenants from reduced rents. Moreover, while the decline in rents experienced by tenants post- moratorium was temporary, homeowners' prices entered a continuous, unbroken downward trend, perhaps associated with distrust for state government that could invoke similar moratoria in the event of future emergencies.



Methods and Materials

I utilize publicly available data from the Zillow Home Value Index ("ZHVI") to obtain rental prices and home value data for all states within the United States. (Zillow 2024). The index contains smoothed, seasonally adjusted valuation of everything from condominiums, one-bedroom single-family homes, to five-bedroom single-family homes. The index also provides rental prices for specific regions, typically denoted by zip code, county FIPS, or metropolitan statistical area ("MSA"). Zillow intends for this index to provide home values for homes between the 35th and the 65th percentile range. This data is naturally truncated at these levels. Data for top-tier and bottom-tier homes is also available depending on the geographic region of denomination, and I employ this data in my study wherever possible, validating the results. I obtain and combine the data for residential dwellings of all types across each state, county, zip code, and neighborhood as covered by Zillow.

Virginia's moratorium extended the landlords' waiting period for recovery of their real estate from a few months to well over a year. Given that the federal eviction moratorium had already delayed evictions for almost 18 months, the Virginia treatment had the potential to inflict additional financial damage to owners of residential real estate by extending the waiting period to 30 months since tenant default or more. To measure whether this impacted land values, I estimate the following regression:

$$Y_{it} = \alpha + \beta_1 Treatment_{it} + \beta_2 Controls_{it} + \delta_i + \eta_t + \varepsilon_{it} \quad (1)$$

where Y_{it} represents home and property values, $Treatment$ represents the differences-in-differences dummy variable equaling 0 prior to the extension of the federal eviction moratorium by Virginia law in Virginia, and 1 (in Virginia) thereafter, $Controls_{it}$ represents various control variables from the Bureau of Labor Statistics, the Census, the American Community Survey, and Post Office Data, which will be designated within the regression tables, δ_i represents urban region, county, or zip code fixed effects (depending on the level of observation), η_t represents year-month fixed effects, and ε_{it} is an error term. The inclusion of fixed effects at the zip code and year-month level renders the above regression a generalized differences-in-differences. The estimated impact of extending the eviction moratorium on the dependent variable is β_1 , making it the coefficient of interest. The $Treatment$ variable equals zero for all untreated states at all times.

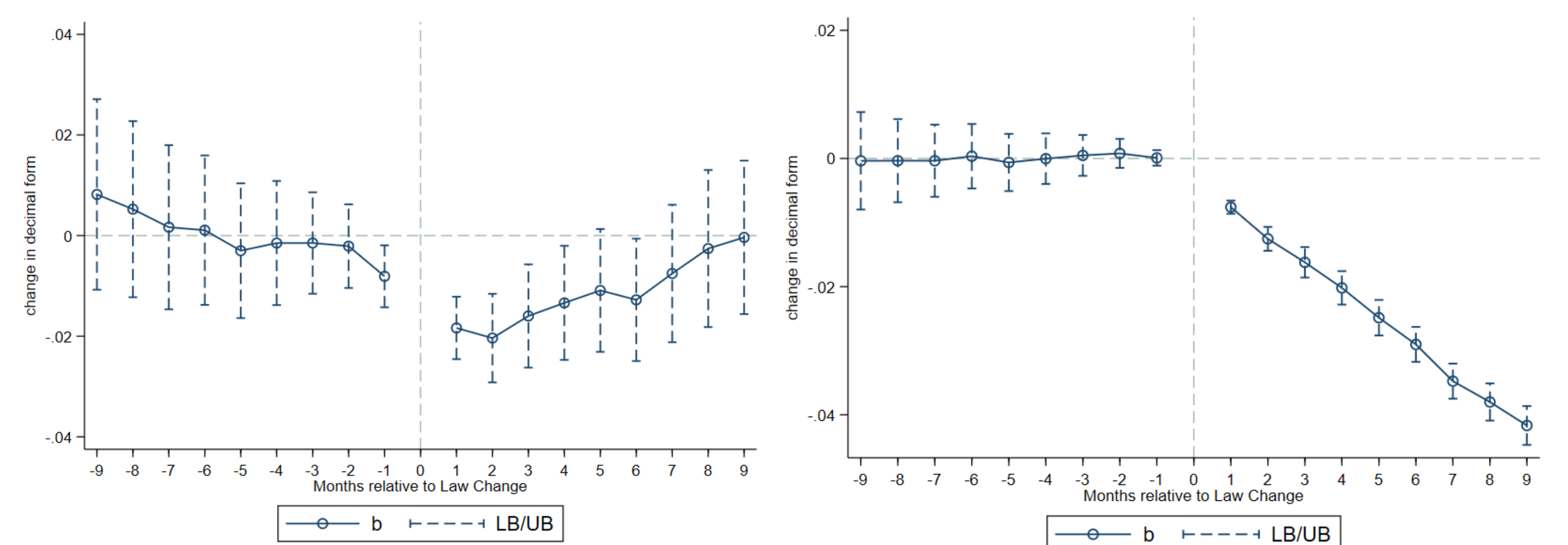
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Results

VARIABLES	(1) Rental Price	(2) Home Value	(3) Single Family Home Value	(4) Condominium Home Value	(1) One Bedroom Home Value	(2) Two Bedroom Home Value	(3) Three Bedroom Home Value	(4) Four Bedroom Home Value	(5) Five Bedroom Home Value
Treatment	-0.0113** (0.00464)	-0.0186*** (0.00195)	-0.0186*** (0.00195)	-0.0274*** (0.00445)	-0.0441*** (0.00794)	-0.0313*** (0.00266)	-0.0246*** (0.00186)	-0.0329*** (0.00260)	-0.0405*** (0.00331)
Zip Population Est.	-64.26* (36.11)	-0.409*** (0.123)	-0.428*** (0.122)	6.63** (3.914)	-8.208 (5.846)	1.425* (0.762)	-1.812** (0.754)	-0.350 (1.318)	-8.366 (7.266)
Zip Inc. per. HH	-0.0130 (0.0437)	7.00e-05 (0.00259)	8.51e-05 (0.00259)	0.0341 (0.0252)	0.000563 (0.00149)	0.000272 (0.000448)	0.000122 (0.000310)	-0.000792 (0.000991)	-0.00148 (0.000980)
Zip Num. Bus.	0.0196 (0.0627)	0.0267*** (0.00741)	0.0271*** (0.00736)	-0.0668 (0.0610)	-0.165* (0.0897)	0.0269** (0.0132)	0.0258*** (0.00794)	0.0358*** (0.0147)	0.0233 (0.0326)
Zip Num. Empl.	-0.0946* (0.0557)	0.00349 (0.00444)	0.00405 (0.00445)	-0.00583 (0.00351)	0.0263 (0.0456)	-0.00293 (0.00977)	-0.00542 (0.00559)	-0.0265*** (0.0100)	-0.0251 (0.0185)
Zip 1st Q. Payroll	0.00923 (0.0563)	-0.00906** (0.00380)	-0.00865** (0.00381)	0.00256 (0.0317)	0.0286 (0.0368)	-0.00685 (0.00806)	-0.00474 (0.00450)	0.0117 (0.0113)	0.0119 (0.0244)
Zip PO Del. Res.	64.33* (36.13)	0.521*** (0.161)	0.558*** (0.161)	-6.532*** (3.910)	8.258 (6.975)	-1.304* (0.785)	1.960*** (0.758)	0.462 (1.526)	8.487 (7.255)
Zip PO Del. Bus.	0.116** (0.0573)	0.00756 (0.00483)	0.00676 (0.00484)	0.117*** (0.0502)	0.157*** (0.0728)	-0.00410 (0.0112)	0.00731 (0.00538)	0.00347 (0.00982)	0.0199 (0.0142)
Zip PO Del. Tot.	-0.235 (0.157)	0.0859** (0.0351)	0.0854** (0.0353)	0.145 (0.115)	0.0467 (0.184)	0.143** (0.0691)	0.138*** (0.0367)	0.285*** (0.0677)	0.326** (0.127)
Zip PO Box Ct.	-0.0337* (0.0172)	-0.0110* (0.00644)	-0.0113* (0.00644)	-0.0193 (0.0192)	-0.00371 (0.0104)	-0.00634 (0.00670)	-0.0159*** (0.00594)	-0.0168*** (0.00543)	-0.0128** (0.00597)
State Unemployment	-0.103 (0.0645)	0.0138 (0.0240)	0.0124 (0.0240)	0.0723 (0.0555)	-0.123 (0.0994)	-0.114*** (0.0353)	-0.0315 (0.0261)	-0.123*** (0.0299)	-0.218*** (0.0367)
State Population	3.589*** (0.924)	7.154*** (0.200)	7.127*** (0.200)	12.48*** (6.655)	7.646*** (0.707)	7.245*** (0.267)	7.259*** (0.262)	7.181*** (0.245)	7.529*** (0.369)
State Labor Force	1.524 (1.192)	-0.202 (0.454)	-0.186 (0.453)	-1.100 (1.017)	1.855*** (1.900)	1.673 (0.502)	1.855*** (0.679)	2.169*** (0.557)	3.882*** (0.674)
State Employment	-0.969 (1.000)	-0.510 (0.421)	-0.534 (0.421)	-0.573 (0.917)	-1.185 (1.764)	-2.055*** (0.624)	-1.078** (0.456)	-2.866*** (0.536)	-4.467*** (0.654)
Observations	5,800	68,947	68,857	13,974	9,373	43,858	59,527	41,263	23,562

This table demonstrates the impact of extending the COVID-19 eviction moratorium on rental prices and home values by displaying the results of Regression (1). I use a differences-in-differences approach, designating a zip code as treated if the state in which it is located extended the COVID-19 eviction moratorium after its federal counterpart expired in July of 2021. The *Treatment* variable reads 1 in the month of treatment and in each month after treatment for the regions in the treated state (Virginia). The variable reads 0 for all untreated regions across time and all treated regions prior to treatment. The coefficient associated with the *Treatment* variable designates the differences-in-differences effect of extending the COVID-19 moratorium on rental prices and real estate values. I absorb year-month and zip code fixed effects and cluster standard errors at the zip code level.



These figures plots the relationship of extending the COVID-19 moratorium of evictions via state law (after the expiration of the federal moratorium) on rental prices and home values. I consider a 19-month window, spanning from 9 months before the change in law until 9 months after the change in law. I use a differences-in-differences approach, designating as treated all zip codes in Virginia starting in July of 2021. All Virginia zip codes prior to this date and all zip codes in other states will be left untreated. I absorb month-year and zip codes fixed effects and cluster standard errors at the region level. The dashed lines represent 95% confidence intervals, adjusted for the region-level clustering.

Discussion

These results show that landlords do not or cannot raise rental prices (at least compared to control regions) to compensate themselves for the loss of a valuable property right in the context of the landlord-tenant relationship. Perhaps due to frictions associated with lease renewals and renegotiations, landlords are unable to sufficiently compensate themselves for what most would perceive as the risk of an unevictable tenant. If my initial hypothesis that rents would rise to compensate landlords for a loss of a property right is false, then my alternative hypothesis should be true: This should make residential real estate property less valuable. Here, the empirical results robustly confirm this drop in property values: As rents decrease, residential property values decrease even more, suggesting an inability of the landlords to pass along the costs of the moratorium to and to compensate themselves for the risk of being unable to evict a defaulting tenant.

In effect, the landlords lost an important security interest in their quasi- debt contract with renters. The value of that property or contractual right exceeded the benefits gained by the tenants, through declining rental rates, which were relatively fleeting. On the other hand, the loss of the Lockean right to exclude another from one's premises after nonpayment of rent caused the decline in values of all homes, not just those owned by landlords. This break in the social contract between the government and the landlords may also explain why rental prices eventually gain parity with states surrounding Virginia but why home prices do not. It is possible that, given the plausibility of future COVID-like emergencies, investors in Virginia residential real estate view the return of eviction moratoria to the state as quite likely (if not almost certain, given the lack of successful legal challenges). Seeing the state government set precedent for using its power in this manner, even after the federal COVID-related emergency comes to an end, renders Virginia a riskier locale for residential property investment, lowering prices of residential real estate assets.

Robustness: Synthetic Control

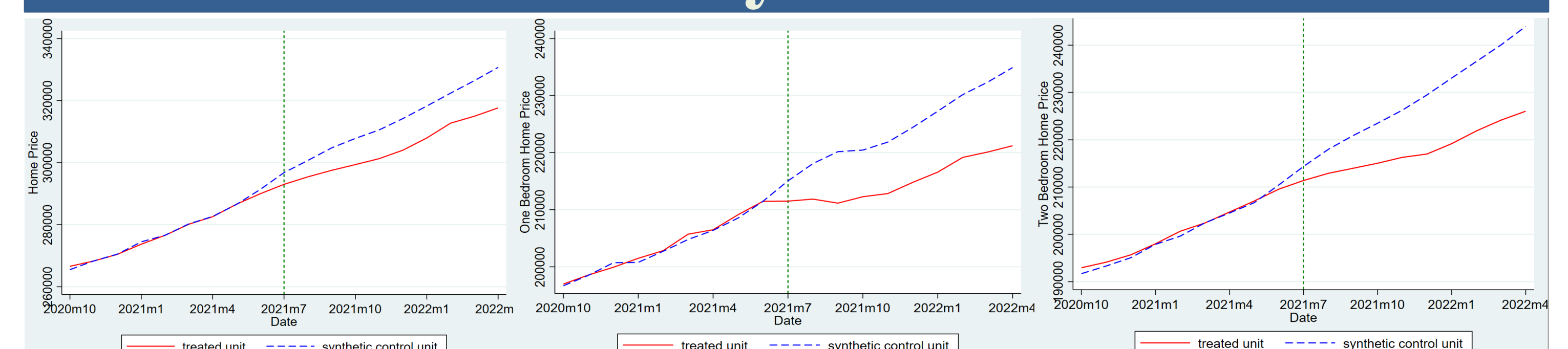


Figure 11. Overall Home Values.

Figure 12. One Bedroom Home Values.

Figure 13. Two Bedroom Home Values.

Conclusions

When homeowners face the prospect or actuality of an eviction moratorium, home prices steadily decline compared to surrounding regions. Rents decline in relative terms, but not steadily, ultimately rebounding to resemble the rental prices of the control regions. This is likely because the legal quagmire caused by eviction moratoria makes renegotiating rent prices nearly impossible for any landlord saddled with an unevictable tenant. There is no opportunity to raise prices on the unevictable tenant and no opportunity to re-rent the unit to another. As a result, homeowners economic recourse becomes extremely limited. It is true they may be able to recover some rent from the tenant and some rent from the government (since some government aid is technically part of Virginia's eviction moratorium), but it is clear from the decline in home prices that this is an insufficient amount of compensation. When landlords lose valuable property rights, even government assistance with rent, perhaps due to the bureaucratic delays inherent in the system, cannot rescue landlords from losing housing value. This is consistent with the findings of Sinai and Souleles (2005) and Campbell and Cocco (2007), albeit in a different context.

References

- Assistant Professor of Finance, Department of Finance and Business Law
- First Lieutenant, 22nd Legal Operations Detachment. The views and opinions presented herein are those of the author and do not necessarily represent the views of the Department of Defense ("DoD") or the Department of the Army. Appearance of, or reference to, any commercial products or services does not constitute DoD or Army endorsement of those products or services. The appearance of external hyperlinks does not constitute DoD or Army endorsement of the linked websites, or the information, products or services therein.
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