



Appraising the District's rentals

By Yesim Sayin Taylor

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The role of rental housing in creating affordability and economic inclusion in the District of Columbia

This report provides a comprehensive picture of the District's rental housing to evaluate its capacity to create economically inclusive neighborhoods in the District of Columbia. It combines multiple data sources to estimate the number and type of rental units and the buildings that hold them, and the rents that prevail at different types of rentals across the city.

The report finds that the District has too few rental apartments to serve all renter households in the city. The city has nearly 40,000 households who should not be paying more than \$750 per month to keep their rent affordable (defined as less than 30 percent of household income) and over 41,000 renter households who could pay upwards of \$2,700 per month without being burdened. Both groups put pressure on the middle (another 43,000 renter households) in competition for the city's 124,600 rental apartments. The shadow rental market—defined as the less regulated rentals in single-family homes, condominiums, and such—fills the gap by offering units at a wide variety of sizes and prices.

The city's estimated 73,000 rent-controlled units have lower rents compared to uncontrolled units, but do not always serve lower-income renters. This report proposes a new policy tool, *Inclusionary Conversions*, that takes advantage of the relatively lower rents and the ubiquity of the city's rent-controlled buildings to create subsidized affordable housing, especially in highly resourced parts of the city where it has been difficult to create subsidized units in the past. By utilizing a share of the units in each rent-controlled building, this analysis shows, the city can create a significant number of affordable units at the fraction of the current costs of producing or preserving affordable housing.



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Established in 2016, the D.C. Policy Center is a non-partisan, independent think tank focused on advancing policies for a vibrant and growing economy in the District of Columbia. The D.C. Policy Center provides objective, targeted, and high-quality data analyses to support a productive policy debate in the District of Columbia.

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EXECUTIVE SUMMARY

In the District of Columbia, where housing is prohibitively expensive and neighborhoods are economically segregated, rental housing—with its lower costs, variety of units, and a more egalitarian distribution across the city's eight wards and many neighborhoods—offers one avenue for reducing housing burdens and mixing incomes to create affordable and inclusive neighborhoods.

Rental housing's potential capacity to create affordability and economic inclusion—and how the city can leverage this capacity—are the topics of this study. This report's primary goal is to understand how different segments of the rental market—including the rent-controlled stock and shadow rental units—contribute to the affordability of housing and economic inclusion across neighborhoods in the District. Its secondary goal is to examine ways in which the District can leverage its rental housing to create affordability and economic inclusion, especially in parts of the city where existing public programs have not been able to create affordable housing.

Rental housing in the District of Columbia extends well beyond rental apartment buildings.

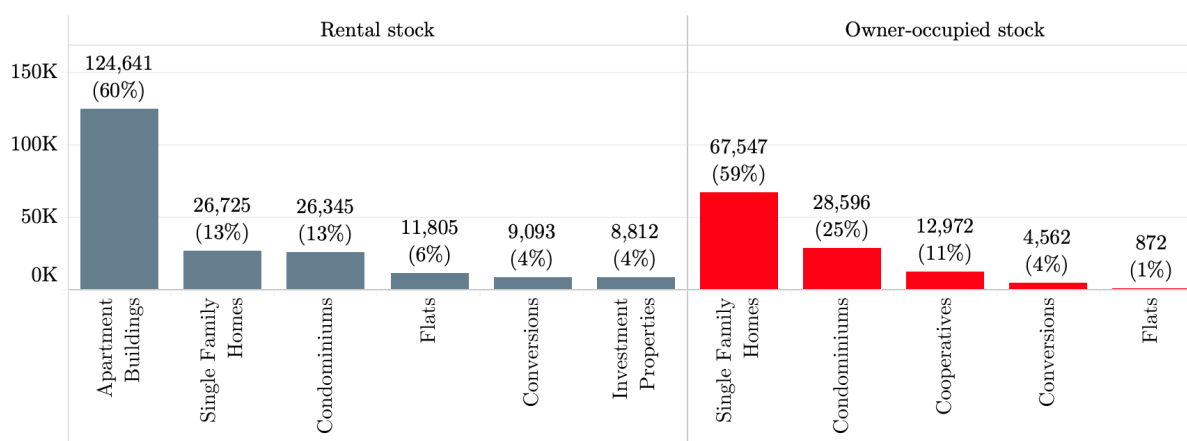
An estimated 64 percent of the District's 322,000 housing units are rentals; of these only 124,600 are in rental apartment buildings, as classified by the city's tax administrators. Single-family homes, condominiums, flats, and units in conversions, make up one third of the District's rental housing. The report refers to this section of rental housing the “shadow rental market” because it is a less regulated—and sometimes unregulated—source of housing.

Housing in the District of Columbia by occupancy status and type, 2019

All housing units

Rental stock	207,421
Owner-occupied stock	114,550
Total	321,971

...and by type of unit



Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.

Note: The number of units for multi-family rental buildings and co-ops are not always noted in the CAMA files. When this is the case, the number of units is estimated by the number of different addresses for the building. Owner occupied count includes co-operatives, that are almost always owner occupied, but not noted in that way in the tax extract. This is because the taxable entity is the cooperative that owns the building, and not individual shareholders (who own the units).



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Rental housing is fluid.

Homeowners frequently move their units in and out of the rental market. One fifth of the 87,000 owner-occupied condominiums and single-family homes in 2006 had become rentals in 2019. Conversely, of the 39,500 condominiums and single-family homes that were rentals in 2006, nearly 15,000 (38 percent) were, as of September 2019, owner-occupied.

While rental apartment buildings are the most stable portion of the city's rental housing, they are not entirely resistant to change, either. Some may be demolished to make room for new development, and others leave the rental stock because they are converted into condominiums or into a cooperative building.

It is difficult to track conversions through administrative data when rental apartments are converted to condominiums, but one study estimates that between 2000 and 2007, 1,147 rental apartment buildings with 26,645 units were converted into condominiums.¹ Some of these

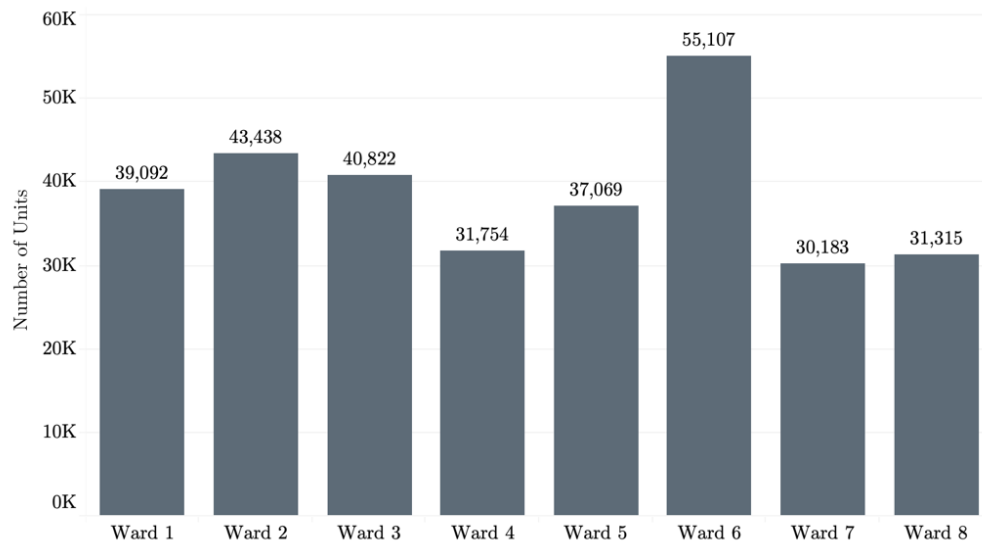
¹ Carolyn Gallaher, *The Politics of Staying Put* (Temple University Press, 2016), 19.

buildings were purchased by their existing tenants through the District's Tenant Opportunity to Purchase Act (TOPA) program. But in others, where tenants did not exercise their TOPA rights, or have signed away those rights, the units have been redeveloped into expensive units with prices the former tenants would not have been able to afford.

Rental housing is everywhere.

In every ward of the District of Columbia, at least 45 percent of housing units are rentals. Ward 6 has the greatest number of rentals (69 percent of all housing in this ward)—most in entirely new or redeveloped residential neighborhoods such as NoMa, Navy Yard, and most recently, the Wharf at the Southwest Waterfront. Ward 4 has the fewest rental units, as it both has a smaller stock of housing to begin with and high home ownership rates (55 percent of the homes are owner-occupied, compared to the citywide average of 36 percent). Ward 8 also stands out, as 81 percent of its housing units are rentals (only 6,000 housing units in Ward 8 are occupied by their owners).

Rental housing by ward in the District of Columbia, 2019



Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



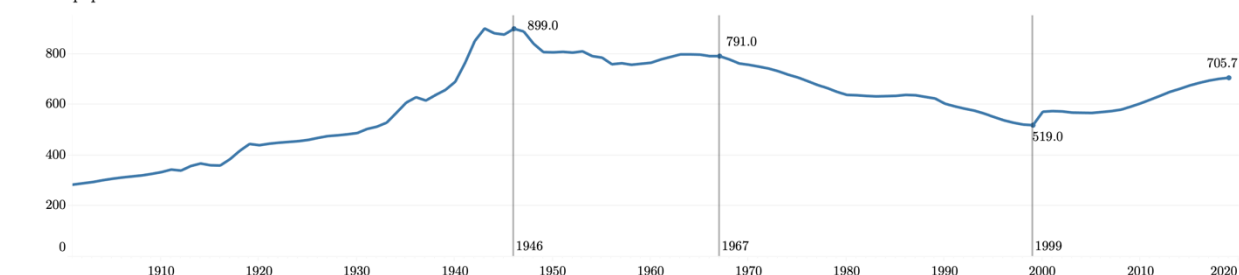
Rental housing has been shaped by the city's history.

The District's 124,641 apartments, spread across 3,121 buildings, show dramatic variety in size, location, and the configuration of unit sizes, reflecting the market conditions and zoning regulations of where and when they were built. It is useful to think of the city's housing history alongside its changes in population, as population is a strong predictor of housing demand. In this context, the four distinct periods in the District's population history produce four distinct periods of its rental housing production history.

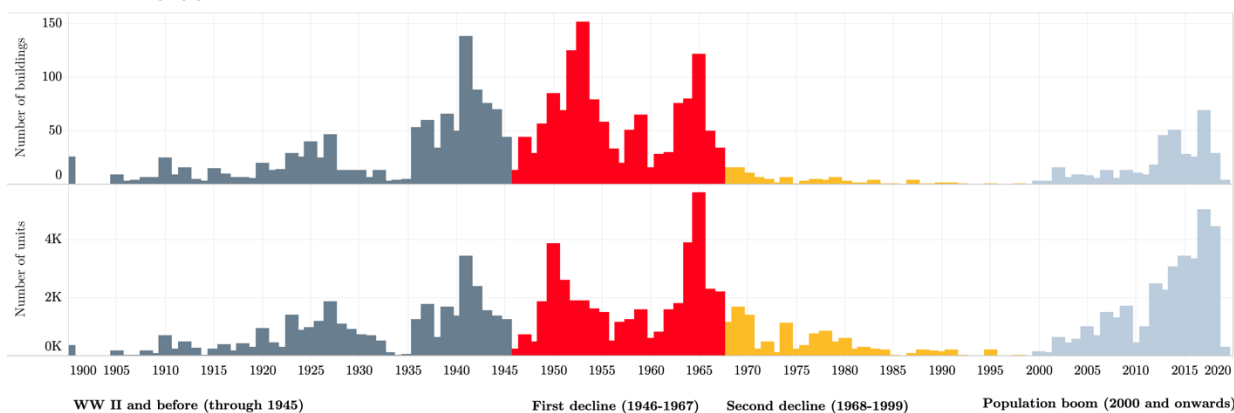
One third of the rental apartments and 40 percent the rental apartment buildings that serve D.C. residents today were constructed before 1946, during a period of continuous population increase that began before the turn of the 20th century and lasted through the end of World War II. These older, smaller buildings are the source of half of the current rent-controlled units in apartment buildings.

D.C.'s population and rental apartment construction since 1900

District population: 1900 to 2019



Construction activity by year



Source: U.S. Census Bureau, Resident Population in the District of Columbia, retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/DCPOP>, February 29, 2020. Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



Construction activity was still strong between 1946 and 1965, as the city's population stabilized after its 1946 peak. However, it came to a virtual stand-still following the period of population loss that began in 1967 and continued through 1999; only about 6,000 rental apartment units that serve the residents today were built during that period.

The District's population began rebounding in 2000, and since then D.C. has experienced one of its strongest periods of rental apartment production, despite even the effects of the Great Recession. During the past 20 years, the city has added 375 new apartment buildings (12 percent of all rental buildings in the District) with 34,000 units (almost one quarter of all units).

This combination of new and old construction in the District gives the city's rental apartment buildings a diverse profile. More than two thirds of all apartment buildings are low-rise buildings of two or three levels without elevators, and have, on average, 20 units. Today, these buildings—typically built before 1965—dominate the landscape in neighborhoods east of the Anacostia River. In contrast, nine out of ten of the city's apartment buildings with elevators are in neighborhoods west of the Anacostia River. These buildings are relatively new and have an average 104 units each—roughly five times the number of units that are in the city's low-rise buildings.

An estimated 72,900 rental apartments are in buildings under rent control.

Rent-controlled units account for 57 percent of all units in rental apartment buildings (excluding those owned by the D.C. government or managed by nonprofits, and including those not subject to rent control), 35 percent of all units that are currently being rented (including in the shadow rental market), and 23 percent of the total housing stock.

Taxable apartment buildings by regulatory period

		Number of Buildings	Number of Units
Under rent control or potentially under rent control	Built before 1976	2,052	68,299
	Built in 1976 or 1977	6	769
	Unknown	99	3,810
	Total	2,157	72,878
Not subject to rent control	Unregulated (1978 to 2007)	52	5,967
	Subject to Inclusionary Zoning requirements (2007 onwards)	146	25,006
	Total	198	30,973
Grand total		2,355	103,851

Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



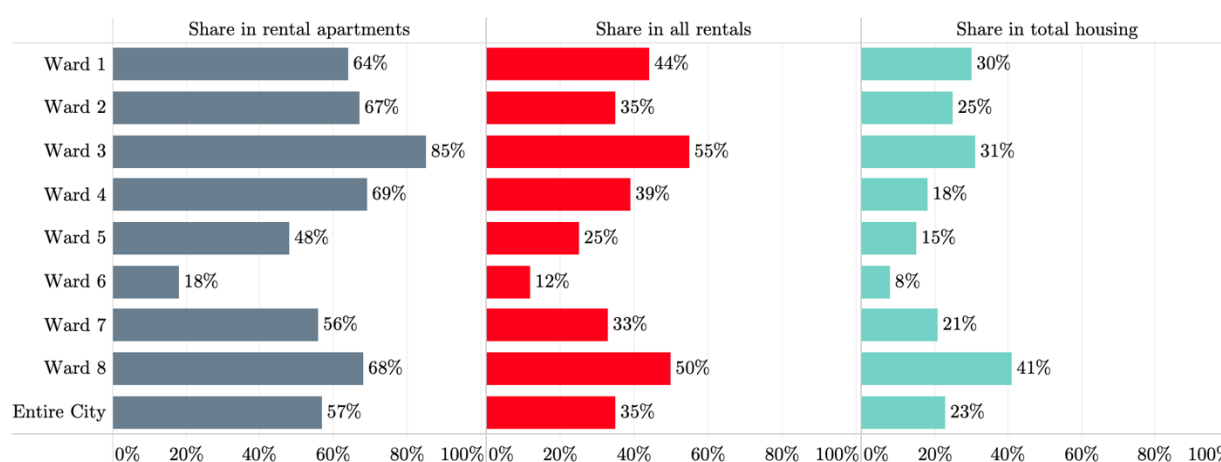
The District's rent-controlled housing is resilient. The city has experienced some loss of rent-controlled units since the enactment of the Rental Housing Act of 1985. While it is hard to provide a precise estimate, different approaches suggest that this drainage out of the rent-controlled stock could be somewhere between 15 and 30 percent—a relatively small share compared to other jurisdictions with rent control ordinances. For example, only 10 years after San Francisco extended its rent control laws to buildings with fewer than five units, the number of rental units in such buildings had declined by 15 percent, and the number of tenants in these buildings had declined by 25 percent—a much swifter decline than what D.C. has seen. Similar magnitudes of unit loss have been documented for New York and New Jersey municipalities with rent control ordinances.

In every ward except for Ward 6, the rent-controlled stock constitutes at least half of rental apartment units.

Ward 6 not only holds the greatest number of rental apartment units in the city, but it holds the fewest number of rent-controlled units. This is because the development of multi-family buildings in Ward 6 happened almost entirely after 2000. The estimated 4,606 rent-controlled units in Ward 6 make up 18 percent of all rental apartments, 12 percent of all rental stock, and 8 percent of the total housing stock in the ward.

Rent-controlled units comprise the largest share of rental units in Ward 3 (85 percent of all rental apartments, and 55 percent of all rental housing), but the highest share of all housing in Ward 8 (41 percent of all housing in Ward 8 are rent-controlled apartments).

Rent controlled units as a share of rental housing an total housing, by ward



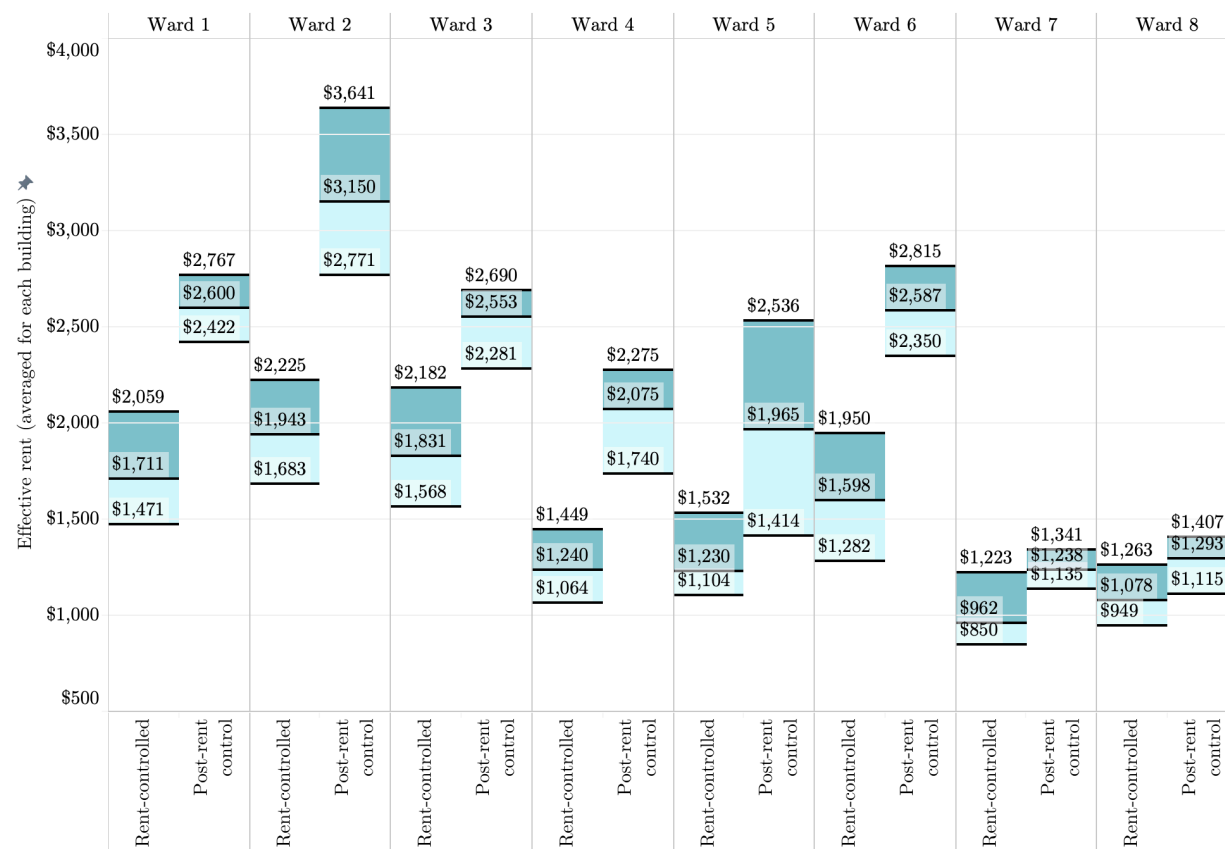
Source: Housing database compiled by the D.C. Policy Center.

Rents vary greatly across the city and across rent-controlled and uncontrolled apartment units.

Rents increase moving from east to west in the city. Rent-controlled units typically have much lower rents than similarly sized uncontrolled rentals, especially in parts of the city where housing values have increased rapidly.

Rent quartiles in the rent-controlled and uncontrolled apartment buildings

25th, 50th, and 75th percentile rent



How prominent are rent-controlled units in the ward?

	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
% rent-controlled units in all rental apartments	77%	75%	85%	80%	58%	21%	91%	96%

Source: Housing database compiled by the D.C. Policy Center; rents from Costar.

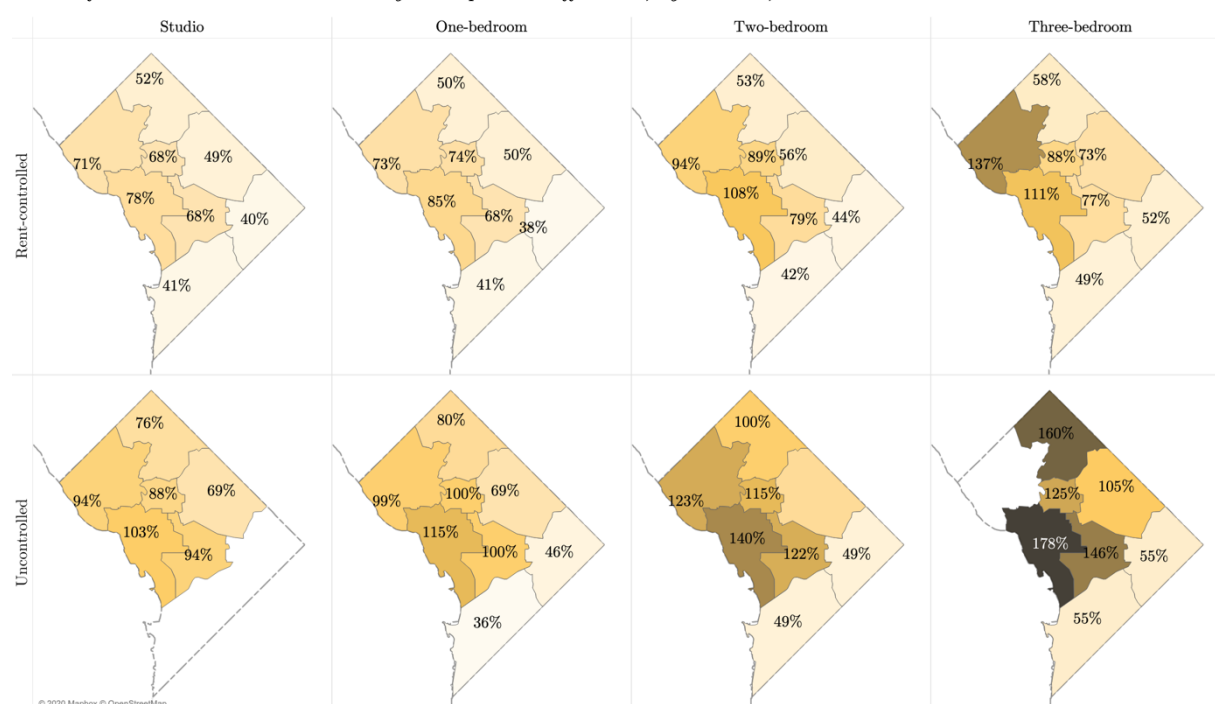
Note: Excludes buildings under construction. The data presented are average effective rents per building (rents after concessions).



The rent differentials across rent-controlled and uncontrolled units translate into stark income differentials when examined through the lens of affordability and rent burdens. Across all wards in the District, the median rent for a rent-controlled studio apartment would not burden the renter (meaning rent expenditure is at 30 percent of household income), and therefore be

affordable, at about 80 percent of Area Median Income. That is, an annual income of \$67,950 for single-person household. The same person must earn \$87,500—or nearly \$20,000 more—to be able to afford a studio apartment from the uncontrolled stock in Ward. A two-person household with an income of \$71,800 can afford a one-bedroom rent-controlled unit in Ward 1, but their income needs to rise by \$25,000 to afford an uncontrolled unit in the same ward. The similar income differential that would render an uncontrolled one-bedroom equally affordable as a rent-controlled one is \$31,000 in Ward 6, but only \$7,700 in Ward 7.

Share of Area Median Income necessary to keep a unit affordable, by unit size, rent-controlled and uncontrolled stock



Source: Housing database compiled by the D.C. Policy Center and CoStar (September 2019)

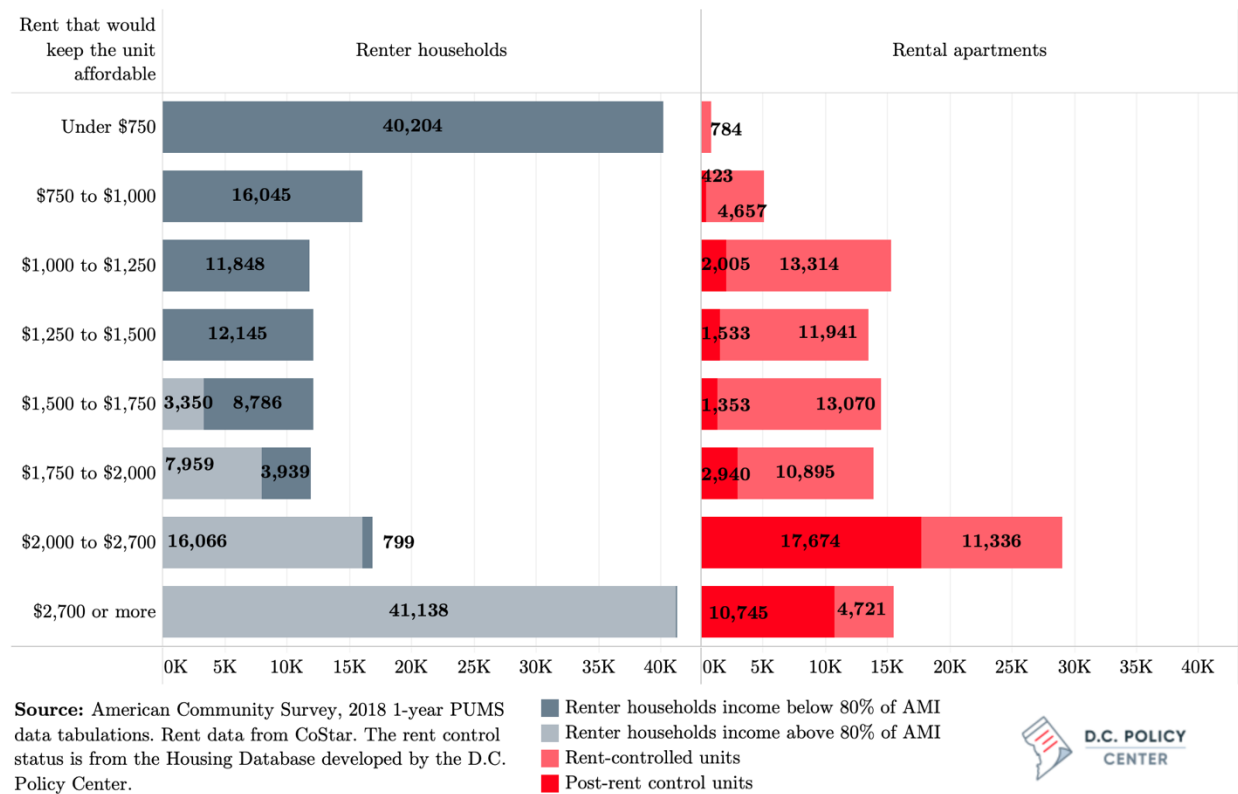


Rental apartments face pressure from both the bottom and the top of the income distribution.

Of the District of Columbia's 93,000 households that earn less than 80 percent of Area Median Income, approximately 40,000 can keep rent burdens under 30 percent of their incomes only if they spend less than \$750 per month on rent. In comparison, we counted fewer than 800 rental apartment units with a rent below \$750. As a result, these renters must seek housing in more expensive units (and likely seek subsidies). This pressure from the bottom is intensified by the 17,000 households that earn between \$30,000 and \$40,000 per year, and therefore should be paying a rent of \$750 to \$1,000 per month to keep their rents affordable, when the city's rental apartment buildings can provide only 5,000 rental units that charge this rent—most of which are one-bedroom apartments.

Competing with the 40,200 renter households who must keep their monthly rents under \$750 are the 41,100 households that conceivably can spend over \$2,700 per month on rent and still not be rent-burdened. For this group, the District's rental apartment buildings offer fewer than 15,500 units with rents over \$2,700 per month (including 4,700 units under rent control). With their higher incomes, these households could drive rents up for units that are not under rent control. And for the rent-controlled units where rents cannot be bid up, the higher-income renter households simply compete on the same terms as lower-income households.

Renters and rentals, by income and rent band



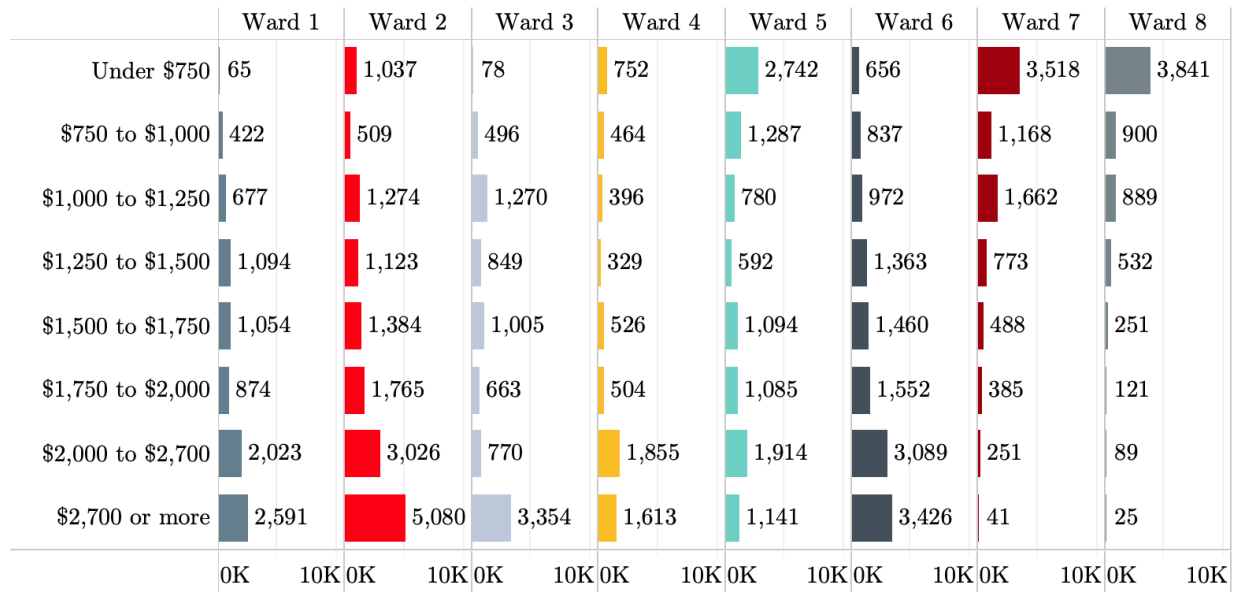
The shadow rental market provides a larger variety of units at larger variety of rents.

By offering a mix of both low-priced and high-priced units to renters, the shadow rental market relieves the pressures on the rental apartment buildings from both the bottom and from the top.

Grouping shadow rental market units by their estimated rents, this report finds an estimated 12,700 units that could potentially serve the lowest end of the rental market, with rents at or below \$750 per month. Most of these units are in Wards 5, 7, and 8. There are likewise many high-priced units: an estimated 17,000 units, or approximately 22 percent of the units in the shadow rental market, likely command monthly rents above \$2,700 per month, outside the

affordability threshold for any household that earns less than 80 percent of Area Median Income, regardless of household size. Most of these higher-priced units are in Wards 2, 3, and 6.

Shadow rental market units by rent bands



Source: Housing database compiled by the D.C. Policy Center.



Across rent-controlled apartments, where rents are higher, renters' estimated rent burdens are lower.

This suggests that rent-controlled housing is also economically segregated, and lower rents in rent-controlled buildings have not been able bring lower-income residents into otherwise higher-income neighborhoods. But the presence of rent-controlled units in a neighborhood does appear to mitigate displacement. A larger share of tenants stays in place in census tracts where rent-controlled-units are a larger share of the housing stock, and the loss of residents of color has been slower in census tracts where a larger share of housing is rent-controlled apartments.

The District can leverage the ubiquity and the lower rents of its rent-controlled stock to increase affordability and economic inclusion.

The District's rent-controlled units have lower rents, and they are everywhere, especially in parts of the city where building affordable units has been difficult. This report considers a policy tool—called Inclusionary Conversions—that takes advantage of these characteristics to create subsidized affordable units with multi-year covenants.

Under the Inclusionary Conversion approach, the District would convert a small portion of existing rent-controlled units into designated affordable units. Once the conversion takes place, the converted unit would operate in the same way as an Inclusionary Zoning unit: the rent would be set below a certain income level that reflects the city's affordability targets, and only households in the eligible income band would be offered the unit. In return, the landlord receives public support that is the equivalent of the difference between the rent-controlled rent and the rent considered "affordable" as not more than 30 percent of the renter's income.

This report presents a model that can be simulated with different policy targets to estimate the number and location of units. It also estimates the costs of the program to the District under two different financing approaches: one that creates the inclusionary conversion units by providing a one-time subsidy during a capital event, such as refinancing of a rent-controlled building, much like a Housing Production Trust Fund soft loan; and one that offers annual subsidies through the life of the covenants, much like project-based local rent supplements.

Regardless of the financing approach, the Inclusionary Conversion approach follows two simple principles:

1. Convert rent-controlled units into subsidized affordable housing, because rent-controlled units are everywhere, and they have relatively lower rents.
2. Rather than committing an entire building for affordable use, convert a small share in each building to further establish economic inclusion without dramatically changing the overall income profile of a building.

Potential number of Inclusionary Conversion units created

Share of units converted: 10%

Affordability regime	Minimum building size	
Rents capped at 50% of AMI	20 Units	5,277
	40 Units	4,976
	100 units	3,905
Rents capped at 80% of AMI	20 Units	2,924
	40 Units	2,865
	100 units	2,446

Source: Simulations run by the D.C. Policy Center.



The Inclusionary Conversion approach can therefore enable the creation of new subsidized affordable rental units, especially in parts of the city that so far have not had a large amount of

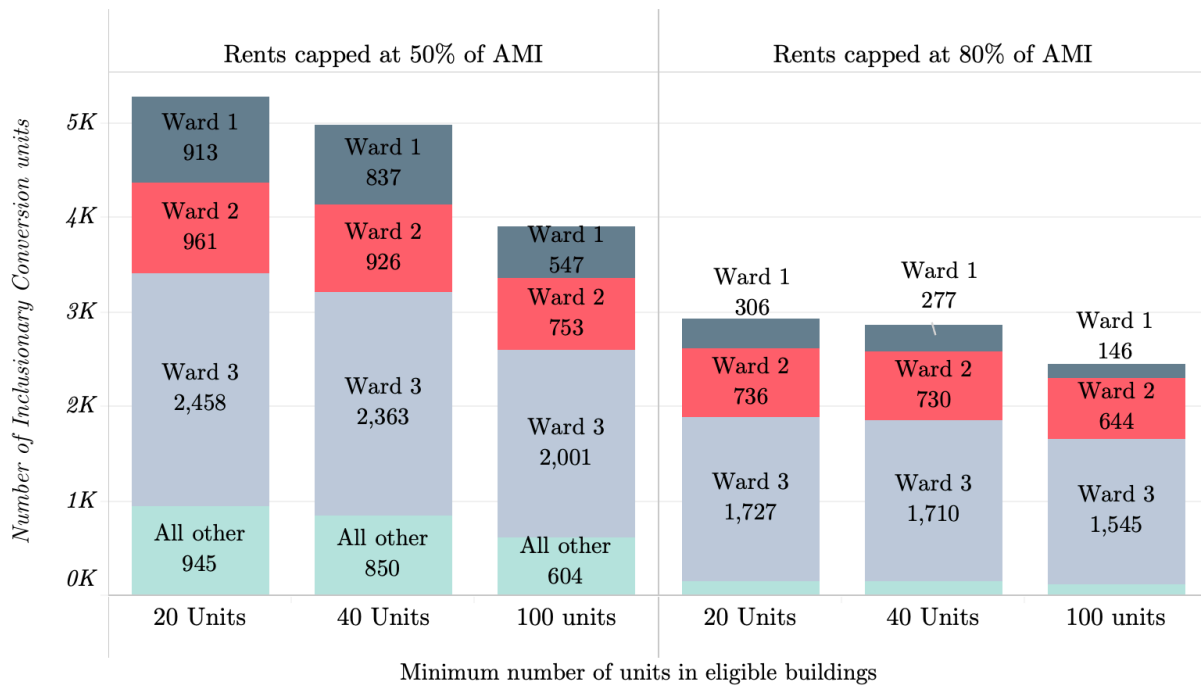
subsidized affordable housing. For example, if the District were to set aside 10 percent of units in rent-controlled buildings for affordable use under this program, it could generate up to 5,300 affordable units, depending on the type of affordability goal it pursued.

The Inclusionary Conversion tool would create the greatest number of affordable units in Wards 1, 2, and 3.

This outcome is partially driven by the distribution of rent-controlled apartment buildings across the city, as many of these older buildings are in Wards 1, 2, and 3. It is also partially dependent on the affordability target the city chooses to pursue. An affordability target of 80 percent of AMI, for example, would exclude many rent-controlled units in Wards 7 and 8, since rents in these two wards are already affordable at or below this income level. But were the city set the affordability target to 50 percent of AMI, more units overall would be eligible for the public subsidy (because of lower target rents) in every ward in the city.

Distribution of Inclusionary Conversion units

Share of units converted: 10%



Source: Simulations run by the D.C. Policy Center.



The unit costs of creating a subsidized unit under the Inclusionary Conversion approach would be much lower than what current Housing Production Trust Fund projects cost.

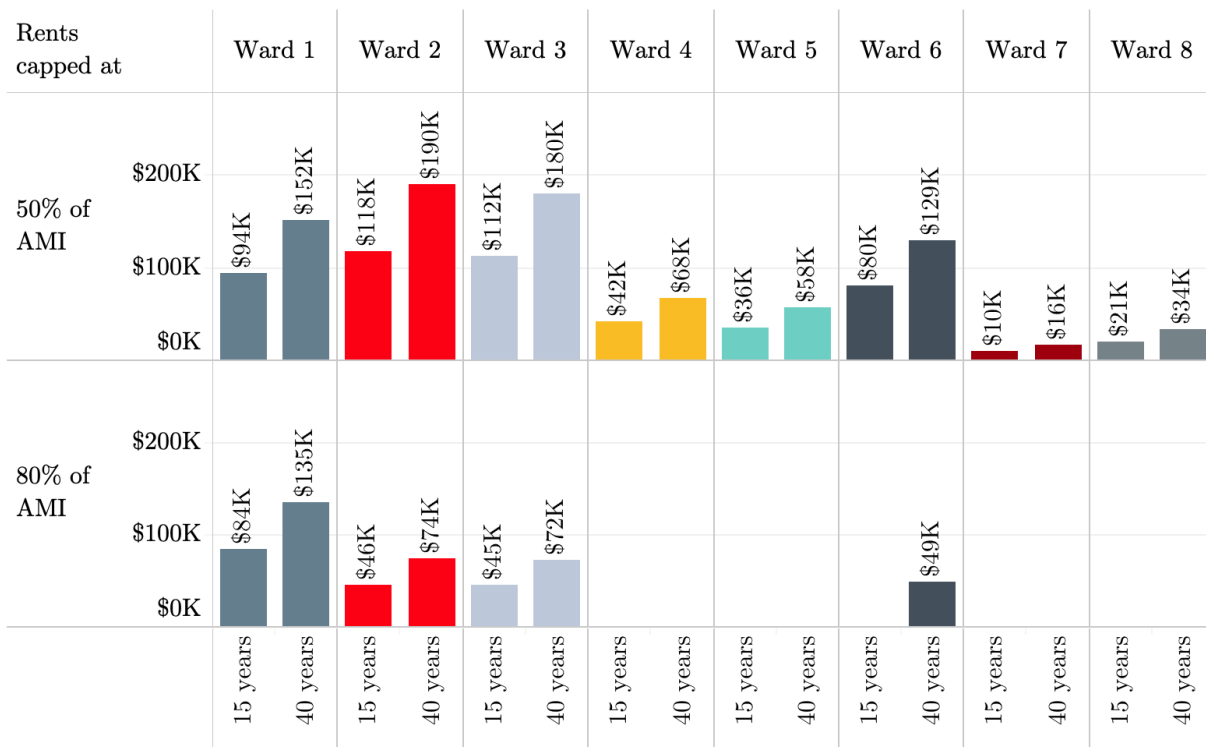
To facilitate the comparison with the Housing Production Trust Fund (HPTF), we modeled the financing of the Inclusionary Conversion program in a manner similar to an HPTF soft loan, wherein the landlord receives the present value of the subsidies for the affordable units with covenants at the time of a capital event, such as refinancing. Under this approach, the estimated unit cost of converting an apartment into an affordable unit at 50 percent of Area Median Income with a 40-year covenant (most like HPTF projects) is \$190,000 for Ward 2 and \$180,000 for Ward 3. While not small, these are not unusual numbers as far as subsidies go for deeply affordable units in current HPTF projects. And they are well below the amount necessary to build such units in Wards 2 and 3 as new construction, even if it is assumed that there is room under current zoning to build them. While the HPTF has produced almost no units in these parts of the city because of the prohibitive costs, the Inclusionary Conversion program can do so, and produce a greater number of units.

Estimated unit cost of conversion, by ward

Model assumptions

Minimum building size: 100 units

Share of units converted: 10 percent



Source: Simulations run by the D.C. Policy Center.

The District could also fund Inclusionary Conversion units through annual operating subsidies, and even pay for them through a tax abatement.

There are salient differences between these two financing approaches. An annual subsidy would commit the District to annual payments over the term of the covenant, significantly expanding the operating budget for housing subsidies over long periods of time. On the other hand, the cost of a one-time financing subsidy, much like the cost of a Housing Production Trust Fund loan, is clear, concrete, and one-time, without creating any risks to the District's financial plan. However, it also shifts the fiscal risk to the landlords: when they accept a one-time subsidy, they accept a lower resale value for their building.

The *Inclusionary Conversion* approach can be extended to ensure a certain number of units are delivered each year, or the number of affordable units are maximized for a given level of funding (by, for example, asking landlords to bid, as they do for HPTF loans). It can further be extended to look more like a major rehabilitation loan with the landlord committing a larger share of the building's units for affordable use in return for a bigger cash infusion that should be used towards rehabilitation. The District can also weigh other priorities when deciding who would be funded through a potential Inclusionary Conversion program: it can incentivize, for example, buildings with larger units, buildings in different parts of the city, or buildings that prioritize other policy goals (such as green investments or closer to transportation corridors).

While this report is focused on developing the concept of *Inclusionary Conversions*, there are sure to be some implementation hurdles, many like those that afflict existing affordability programs. While they are not thoroughly explored herein, these include deciding who would be responsible for verifying incomes (landlords or a government agency), how eligibility existing tenants will be monitored year to year, how the Inclusionary Conversion program could interact with existing tenants' rights laws, and how units with tenants already under the affordability limits would be treated, among others.

The Inclusionary Conversion approach could be a more efficient means of using the city's public housing subsidies, but it will not create new units.

The Inclusionary Conversion approach presented in this report is intended as a lower cost alternative to the District's current public subsidy programs—one that can potentially create more economically inclusive neighborhoods. It is not intended to be a wholesale solution for the housing crises in the District. While creating more targeted affordability, the Inclusionary Conversions approach will not create more units to relieve the existing pressures on the District's rental housing. More fundamental changes in the housing landscape can only be achieved with less restrictive land use practices and a better functioning regulatory system.

The District of Columbia needs a broader view of rental housing and how it fits into its overall housing strategy.

A substantive part of the District's rental housing is dependent upon the willingness on the part of smaller landlords to keep their units in the rental market. Further, some of the policies the city is pursuing to increase housing supply (such as Accessory Dwelling Units or infill development) relies on convincing current homeowners to become landlords. The District's rental housing policies, however, are generally focused on large rental apartments, and do not consider the constraints for and the capacity of smaller landlords in obtaining financing, meeting regulatory requirements, and working within the requirements of tenants' rights laws. A broader rental housing policy that recognizes the importance of these smaller landlords in expanding the city's housing supply would be a step in the right direction for the District of Columbia.

TABLE OF CONTENTS

Executive summary.....	i
ONE The role of District's rental housing in creating affordability and economic inclusion	1
1. Affordability and economic inclusion in the context of D.C.'s rental housing	1
2. The importance of studying rental housing now	4
3. What are the main takeaways from this study?	5
TWO The landscape of rental housing in the District OF COLUMBIA	8
1. Where is the rental housing in the District of Columbia?.....	11
2. Characteristics of rental apartments	13
Apartment buildings subject to rent control.....	16
The shadow rental market	18
3. Can the District's rental housing serve households of all sizes?	19
THREE How affordable is the District of Columbia's rental housing?.....	23
1. How much lower are rents in rent-controlled buildings?.....	23
Rents in all rental apartment buildings	24
Rents in rent-controlled units	27
2. Can rental apartments meet affordability needs in the District?	30
3. Is the shadow rental market closing the affordability gap?.....	33
FOUR How much does the District of Columbia's rental housing advance economic diversity and inclusion?	38
1. Is rental housing in the District a source of economic diversity?	39
2. Can rent-controlled housing help reduce the risk of displacement?	43
FIVE How can the District use Its Existing rental Housing to Create inclusive neighborhoods?.....	47
1. Inclusionary Conversion program design.....	47
Policy Variables	48
How does the financing work?.....	52
Advantages of the program:.....	52
3. Potential number of units and the unit pipeline	53
4. Estimated costs	56
Costs under one-time cash infusion approach	57
Costs under operating subsidies	60
Using tax abatements to pay for affordability	62
Comparing the two financing models of one-time cash infusion and annual operating subsidies.....	64
Extensions to the model.....	66
Implementation concerns	67
SIX Conclusions	69
On use of public subsidies	69
On increasing the housing supply	70
On the need for a broader perspective for rental housing	70
Appendix I – The history of rent control laws in the District of Columbia.....	72
Appendix II – Review of literature on the impact of rent control on housing quality and quantity, displacement, and inclusion.....	75
Do rent control policies reduce the housing stock?	75
Do rent control laws reduce the quality of the housing stock?	76
Do rent control laws reduce housing values?	76
Do rent control laws reduce displacement?	77
Appendix III – Methodology	80
1. Classification of units by use type.....	81
2. Determination of rental and owner-occupied stocks.....	81
3. Estimating the number of units in multi-family buildings	82

4.	Estimation of units by size in multi-family buildings.....	83
5.	Estimation of rents by unit size in multi-family buildings	85
6.	Estimation of the number of rent-controlled units	86
7.	Assessment of the rents in shadow rental market properties	87
8.	Displacement models.....	90
	Rent-controlled units.....	90
	All Rentals	91
	Owner-occupied housing.....	91
9.	Modeling Inclusionary Conversions	91
10.	Full list of data sources used to develop the Rental Housing Database.....	93
Appendix IV – Additional tables and charts		94
References		103

FIGURES AND TABLES

Figure 1 – Share of publicly subsidized housing units in the total housing stock, by census tract	3
Figure 2 – Housing units by type of unit and by occupancy characteristics, 2019	8
Figure 3 – Rental housing by ward, 2019	12
Figure 4 – Location of rental housing units, by building type, 2019.....	13
Figure 5 – Apartment buildings by construction period	14
Figure 6 – The share of rent-controlled apartments, by ward	18
Figure 7 – The shadow rental market's share in rental units and total housing, by ward.....	19
Figure 8 – Rental housing by unit size	20
Figure 9 – Density of different rental apartment units across the city	21
Figure 10 – Share of units by source of stock across differently-sized units in each ward	22
Figure 11 – Rent quartiles across rental apartment buildings, by ward	25
Figure 12 – Rent quartiles by ward and unit size	26
Figure 13 – Share of area median income a household must earn to afford a rental apartment, by ward and unit size.....	27
Figure 14 – Rent quartiles in the rent-controlled and post-rent control apartment buildings	28
Figure 15 – Share of Area Median Income necessary to be able to afford the median unit, by rent control status and ward	29
Figure 16 – Rental apartments by size and rent control status, compared to the number of households that can afford to live in them.....	31
Figure 17 – Affordable rents for renters earning under 80 percent of Area Median Income and the number of apartment units at that rent band.....	32
Figure 18 – All renters and rental units in apartment buildings, by income status and rent control status	33
Figure 19 – Rent quartiles in the shadow rental market compared to rental apartments, by ward	34
Figure 20 – Rents in the shadow rental market, by rent band and by ward	35
Figure 21 – Units in the shadow rental market, by affordability criteria and by size.....	36
Figure 22 – Affordability of the median home, shadow rental market and the rent-controlled stock.....	37
Figure 23 – Incomes and rents that prevail in rental apartments across the District of Columbia, 2019 ...	39
Figure 24 – Renter's estimated rent burdens for the rent-controlled stock, by census tract.....	40
Figure 25 – Renter's estimated rent burdens for the shadow rental stock, by census tract.....	41
Figure 26 – Distribution of census tracts across wards, by rent burden band	42
Figure 27 – Share of census tracts by estimated rent burdens within each ward	43
Figure 28 – The share of renters who moved in during each period, by the prevalence of rent-controlled housing and total rental housing in the same census tract (quartiles).....	44

Figure 29 – Change in the share of minority population and the composition of the housing stock, by census tract	45
Figure 30 – Inclusionary Conversion design.....	49
Figure 31 – Potential number of Inclusionary Conversion units	53
Figure 32 – Distribution of Inclusionary Conversion units	54
Figure 33 – Potential pipeline under a one-time Housing Production Trust Fund-like financing.....	55
Figure 34 – Potential pipeline with local rent supplement-like subsidies	56
Figure 35 – Estimated costs for the Inclusionary Conversion program under a one-time cash infusion scenario	58
Figure 36 – Estimated unit cost of Inclusionary Conversions, by ward	59
Figure 37 – Estimated annual funding required by the Inclusionary Conversion program, if administered as an operating subsidy.....	61
Figure 38 – Per unit operating subsidy of the Inclusionary Conversions by ward (first year only).....	62
Figure 39 – Estimated median property tax rate if D.C. paid for the Inclusionary Conversion program with a tax abatement	63
Figure 40 – Comparison of Inclusionary Conversion costs under different financing arrangements	64
Table 1 – Type of units in D.C.'s rental stock.....	9
Table 2 – Taxable rental apartment buildings and units by regulatory period	16
Table 3 – Model capabilities: what is presented and what can be simulated.....	51
Appendix Exhibit 1 – Use Codes and groupings.....	81
Appendix Exhibit 2 – Rental apartment buildings and number of units, by building size	82
Appendix Exhibit 3 – Rental apartments by construction period	83
Appendix Exhibit 4 – Rental apartment unit sizes by the period of construction: 10 th percentile, median, and 90 th percentile.....	84
Appendix Exhibit 5 – Rental apartment buildings and number of units, by building size	85
Appendix Exhibit 6 – Median rents by ward and size	86
Appendix Exhibit 7 – Types of units included in the shadow rental market analysis	88
Appendix Exhibit 8 – Units excluded from the shadow market analysis because of lack of information....	89
Appendix Exhibit 9 – Units by ward and affordability.....	90
Appendix Exhibit 10 – Publicly subsidized affordable units, by program and ward	94
Appendix Exhibit 11 – Distribution of Inclusionary Zoning units and zoning.....	94
Appendix Exhibit 12 – Movement of shadow rental market units in and out of the rental stock	95
Appendix Exhibit 13 – Drainage of units out of rental apartment status since 2006	95
Appendix Exhibit 14 – The composition of the housing stock, by ward.....	96
Appendix Exhibit 15 – Rental apartment buildings, by size of the building	96
Appendix Exhibit 16 – Rental apartments: walk-ups and buildings with elevators.....	97
Appendix Exhibit 17 – Rent-controlled buildings and units, by ward.....	98
Appendix Exhibit 18 – Shadow rental market, by ward and type of dwelling	98
Appendix Exhibit 19 – Shadow rental market, by ward and type of dwelling, table.....	99
Appendix Exhibit 20 – Voluntary agreement petitions and their outcomes, 2006 to 2019	99
Appendix Exhibit 21 – Unit sizes by construction period and by ward.....	100
Appendix Exhibit 22 – Distribution of shadow rental market units, by size and ward	100
Appendix Exhibit 23 – Availability of differently sized rental units in each ward, by source of stock.....	101
Appendix Exhibit 24 – Rents, and income necessary to afford them, by ward and unit size	101
Appendix Exhibit 25 – Income and race characteristics across the District's neighborhoods	102
Appendix Exhibit 26 – Inclusionary Conversion units, by unit size	102

ONE | THE ROLE OF DISTRICT'S RENTAL HOUSING IN CREATING AFFORDABILITY AND ECONOMIC INCLUSION

The high cost of housing in the District of Columbia is a significant challenge. The city's zoning laws and poorly run regulatory regime, sometimes combined with resistance to growth, restrict the amount, type, and location of housing that can be built. The result has been steep increases in housing prices,² and the consequent affordability crisis has made it difficult for households with low and moderate incomes to remain in the city. This has further increased economic and racial segregation in the city, especially for owner-occupied housing.³ In this context, the city's rental housing stock—with its lower costs, greater variety of units, and a more equal distribution across the city—offers one avenue for reducing housing burdens and mixing incomes to create affordable and inclusive neighborhoods.

Rental housing's potential ability to create affordability and economic inclusion is the topic of this study. This report first examines the different price and location options the District's rental housing is providing in order to gauge its capacity to create affordability. Second, it examines how this capacity matches renters' income profiles to evaluate the extent to which rental housing is meeting the city's affordability needs. Third, it examines whether rental housing has created more economically inclusive neighborhoods than owner-occupied housing. Fourth, it presents a new policy tool that can leverage the strengths of the city's rent-controlled housing stock in order to increase the number of subsidized affordable units in parts of the city where it has been difficult to do so.

1. Affordability and economic inclusion in the context of D.C.'s rental housing

The District has invested a great amount of public resources in rental housing to ease housing burdens for its lower-income residents. Through interventions in the rental market, the District's programs—along with federal subsidies—have delivered approximately 52,000 affordable units.⁴ These units are “affordable” by policy design: the out-of-pocket rent tenants pay is restricted to 30 percent of their

² Nominal housing prices (purchase only) have increased by over five times since 1991 in the District of Columbia. The growth in the metropolitan Washington area has also been fast, but not as fast as the District. In the metropolitan area, housing prices increased three times since 1991. This information is from the Federal Housing Finance Agency, Quarterly Data on Purchase-Only Indexes for the District of Columbia and Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.

³ For details, please refer to the analyses in Yesim Sayin Taylor, “[Taking Stock of District's Housing Stock](#)” (Washington DC, 2018).

⁴ The recent Housing Equity report published by the Office of Planning and the Department of Housing and Community Development identifies 51,900 housing units, including about 6,000 units that are under construction or in the pipeline. This number does not include tenant-based vouchers. See District of Columbia Office of Planning and Department of Housing and Community Development, “[Housing Equity Report: Creating Goals for Areas of Our City](#)” (Washington DC, 2019).

income. This rent depends on the affordability target and household size, but the units only serve households that earn at most 80 percent of the Area Median Income (also called the Median Family Income). Some affordable units are in public housing (about 7,500 units),⁵ some are owned by nonprofits that receive public subsidies or preferential tax treatment (or both) from the city, and some are owned by for-profit entities that commit to lowering rents for all or some of their units in return for public financing or additional density.⁶ In addition, some tenants receive rent subsidies from the federal government (11,180 vouchers)⁷ or the District (approximately 3,200 vouchers), or both, to keep their rents affordable—that is, under 30 percent of their incomes.⁸

Subsidized housing units are an important source of affordability, but at current funding levels, they can serve approximately half of D.C. households that would qualify for public assistance. Of the approximately 287,000 households in the District, an estimated 125,000 households (44 percent) earn less than 80 percent of Area Median Income, and approximately 59,000 households (20 percent) earn less than 30 percent of Area Median Income. Of those that earn less than 80 percent of Area Median Income (the highest income that qualifies for public support), 93,700 households are renters.⁹

Additionally, publicly subsidized housing tends to be concentrated within certain parts of the city, reducing opportunities for economically inclusive neighborhoods. Half of the city's subsidized rental units are in Wards 7 and 8—where, as this report will show, both incomes and market rents are already low—and only 1 percent are Ward 3, where incomes and rents are high. As a result, subsidized housing constitutes almost the entire housing stock in some neighborhoods, and is virtually absent in others (Figure 1).¹⁰ Even the city's Inclusionary Zoning program—which requires new development to set aside a certain share of units as affordable—is limited in its inclusionary capacity by current zoning: more than half of the units produced by the Inclusionary Zoning program are in Wards 5 or 6, where zoning

⁵ Based on information published in the District's Open Data Portal on May 17, 2018. Available under the name [Public Housing Areas](#).

⁶ Through the Housing Production Trust Fund and Inclusionary Zoning (and in combination with supports from the Housing Finance Agency and sometimes with federal programs like the Low-Income Housing Tax Credits), the District has added 9,907 new units with affordability covenants since 2015; another 3,993 are under construction, and over 6,000 are in the pipeline. This information is gleaned from the Affordable Housing Dataset dated October 21, 2019, available at [Opendata.dc.gov](#).

⁷ Based on information [published](#) by the U.S. Department of Housing and Urban Development (HUD) for 2019.

⁸ Based on information submitted by the D.C. Housing Authority to the D.C. Council's Committee on Housing and Community Development in response to 2019 agency performance review questions and [published](#) by the D.C. Council.

⁹ Most of these households (an estimated 81,000) are small with one or two persons. An estimated 11,750 households with four or more persons (about 41 percent of 34,100 such households) are potentially eligible for subsidized housing. While this is only 11 percent of low-income households, it is by no means trivial. We do not know if all subsidized housing programs prioritize families over smaller households, but we know that larger households are more likely to live under unfavorable conditions: 57 percent of renter households with four or more persons are cost burdened or live in over-crowded homes without adequate facilities, while the similar share for households with one or two persons is 49 percent. This information is based on the tabulation of 2017 American Community Survey data by the Economic and Market Analysis Division at HUD.

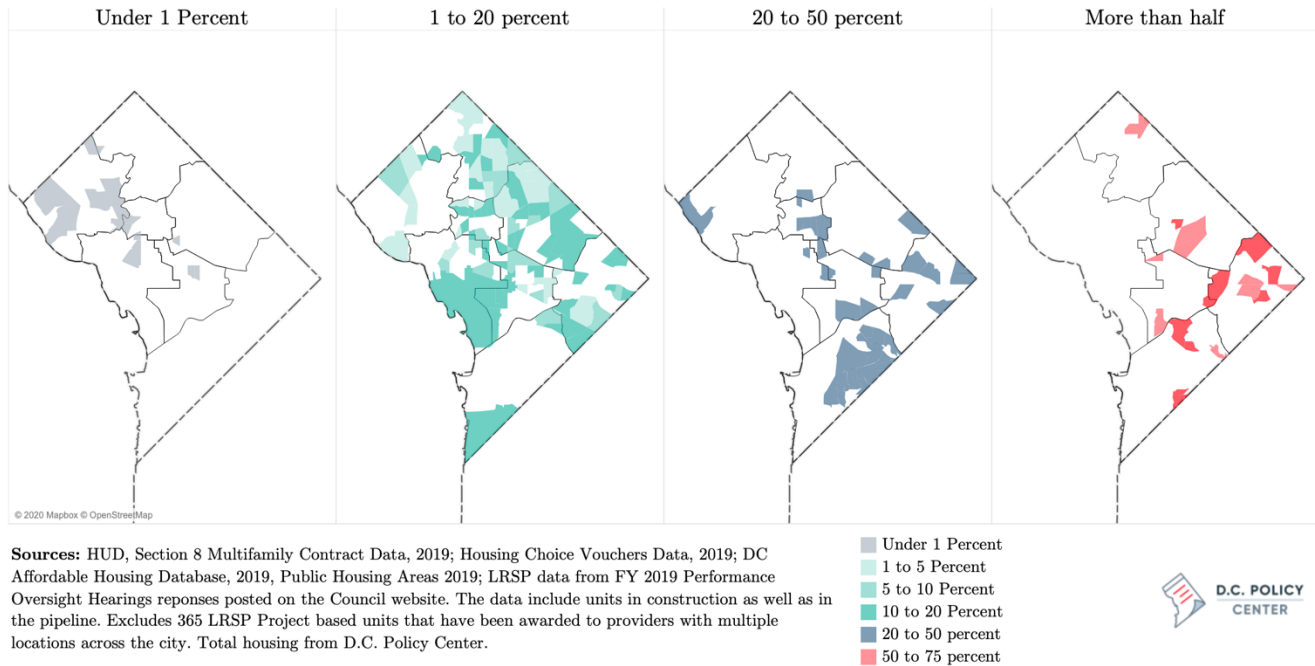
¹⁰ Additionally, there are 22 tracts where there is no publicly subsidized housing, but some of these tracts have very few housing units.

is more permissive; only 11 percent are in Wards 3 and 4 combined, where most land is set aside for only single-family housing (Appendix Exhibit 11 on page 94).

Figure 1 – Share of publicly subsidized housing units in the total housing stock, by census tract

Includes: Public Housing, Section 8 Multifamily, Housing Choice Vouchers, Inclusionary Zoning, Housing Production Trust Fund, Housing Finance Agency.

Excludes: Tenant-based local rent supplements



Economic segregation is not just a feature of the District's public housing. As shown in the D.C. Policy Center's 2018 report, *Taking Stock of the District's Housing Stock*, economic segregation characterizes all types of housing, especially housing for families. District policymakers are increasingly focused on reversing this trend of economic segregation in housing. In October 2019, the Bowser administration announced a citywide goal of 36,000 new housing units to be built or preserved by 2026, including 12,000 affordable units with specific neighborhood targets that are heavily weighted toward parts of the city where publicly supported affordable housing units are rare. These would mean increasing the current pace of development as well as increased subsidies for affordability.¹¹ Importantly, the District's restrictive land use practices can significantly impair where these units can be built.¹² The administration's preliminary plans suggest that they will try to meet these targets by primarily incentivizing more development through less restrictive land use, by expanding inclusionary zoning requirements, and by increasing public investments in the production and preservation of affordable housing, and potentially increasing local rent supplements.

¹¹ According to CoStar, the city has added, on average, 4,700 units per year in the last five years.

¹² Yesim Sayin Taylor, "[Land Value Tax: Can It Work in the District?](#)" (D.C. Policy Center, 2019).

There is also interest in amending rent control laws to help keep rents lower in rent-controlled units, as the District's rent control laws are expiring at the end of 2020. This discussion in D.C. follows the “universal rent control” laws enacted in Oregon¹³ and New York State, and being debated in Colorado, Illinois, and Washington State: the proposal discussed in the District would strictly cap rent growth to the growth in the Consumer Price Index (at present the District allows for an additional 2 percent growth, CPI+2%), eliminate the provisions that allow for higher increases (vacancy increases and voluntary agreements), and expand rent control laws to newer and smaller buildings^{14,15} The expectation could be that stricter rent control laws—an in turn, lower growth in rents—would increase affordability over time.¹⁶

2. The importance of studying rental housing now

Increased interest in local and national policy discussions using the rental stock to increase affordability is motivating this report. The primary goal of this report is to understand how different segments of the rental market—including the rent-controlled stock and shadow rental units—contribute to the affordability of housing and economic inclusion across neighborhoods in the District of Columbia. To this end, this report provides a detailed analysis of all rental units, including building and unit types, unit sizes, and rents. It examines the affordability of and economic inclusion in the rent-controlled stock separately from the rest of the rental apartment market. It also examines the role of shadow rentals, which has been largely neglected in policy discussions,¹⁷ but fill an important gap in the District. The report also examines the sources of growth in the rental market as well as types of drain—that is, ways in which units are taken out of the rental stock, including the rent-controlled stock.

The secondary goal for this report is to explore policy options that could repurpose existing rental apartment units, specifically within the rent-controlled stock, to increase affordability and economic inclusion in the District. This is also timely. The Bowser administration's neighborhood-specific goals signal a forceful commitment to economic inclusion, but to realize them, D.C. needs new policy tools.

¹³ Oregon's universal rent control legislation caps the rents at CPI + 7%. For 2019, this number was 10.3 percent.

¹⁴ Ally Schweitzer, “[Here's What Rent Control Could Mean For D.C.'s Housing Crisis](#),” WAMU, 2019, Natasha Lennard, “[Progressives Push for Universal Rent Control in New York](#),” The Intercept, 2019.; Steven Wishnia, “[Your Guide To Which Universal Rent Control Measures Will Survive Albany](#),” Gothamist, April 24, 2019.

¹⁵ The proposal advocated by the “Reclaim Rent Control” platform would: (i) cap annual rent increases at the rate of inflation, instead of the current rate of inflation + 2%; (ii) expand rent control laws to smaller buildings and landlords who own just four housing units; (iii) lower the minimum rate of return on rent-controlled buildings from 12% to 5%; (iv) expand rent control to buildings built before 2005, and subject all units subject to rent control once they are 15 years old; (v) eliminate vacancy increases; (vi) eliminate voluntary agreements; and (vii) ensure that rent increases for capital improvements are temporary. As of the drafting of this paper, the proposal had not yet been turned into a bill.

¹⁶ Research across the country (reviewed in [Appendix II](#) of this report) shows that restrictive rent control policies can also lead to a decay in both the quality and the quantity of units, and significantly dampen housing values, and consequently, tax revenue.

¹⁷ Konstantin A Kholodilin et al., “[Social Policy or Crowding-out? Tenant Protection in Comparative Long-Run Perspective](#),” (National Research University Higher School of Economics, Basic Research Program Working Papers, 2019).

For instance, in neighborhoods west of Rock Creek Park, the administration's plan calls for 1,260 new housing units, and 1,910 new affordable homes. This means the affordable housing goals can only be met by converting existing non-subsidized stock into affordable units.¹⁸

This report provides a new policy option, "Inclusionary Conversions," that has the potential to create long-term subsidized affordable units in the District's rent-controlled apartment buildings in return for either annual subsidies similar to local rent supplements, or one-time capital infusions similar to the refinancing or rehabilitation loans from the Housing Production Trust Fund (HPTF). This could be achieved at a fraction of the cost of producing new housing units, expanding the capacity of public subsidies in creating affordability, while also committing the landlords of rent-controlled units to keep their apartment buildings in service, and in good repair.

This study uses a broad definition of rental housing. This definition includes both multi-family rental apartments and what is commonly referred to as the "shadow rental market," which includes rental units outside of multi-family rental apartment buildings, such as single-family homes, condominiums, and flats let by their owners. This is often called the shadow rental market not because it is illegal, but because the transactions are often less regulated, and sometimes, less formal. The report analyzes these two sources separately, but also shows how they complement each other in meeting the demand from the city's renter households.

3. What are the main takeaways from this study?

The report provides extensive details on rental housing, rents, affordability, and inclusion. Below are what we consider to be the most important takeaways:

On rental housing characteristics:

- Rental housing in the District of Columbia extends well beyond rental apartment buildings. 64 percent of the District's 322,000 housing units are potentially available for rent; of these only 124,600 are in rental apartment buildings, as classified by the city's tax administrators. Single-family homes, condominiums, flats, and units in various types of conversions make up about a third of the District's rental housing.
- Because the shadow rental market is such a large share of the stock, rental housing is fluid. Owners of single-family homes or condominiums frequently put in and pull out their units from the rental market.

¹⁸ The Housing Equity Report identifies "conversion" as a means of repurposing the existing stock but does not provide any further detail.

- An estimated 72,900 rental apartments are in buildings under rent control. This represents at least a 15 percent—and potentially up to 30 percent—loss in the number of rent-controlled apartments since the city enacted the Rental Housing Act of 1985.

On rents and affordability:

- Rent-controlled units offer deep savings, especially in parts of the city where housing values have increased rapidly.
- For those seeking a rental apartment, there is a lot of pressure from the bottom and a lot of pressure from the top. There are 40,000 households who cannot pay more than \$750 per month in rents to keep housing expenditures below 30 percent of their incomes, but there are fewer than 800 units in this price range. There are also over 41,000 renter households who could pay north of \$2,700 per month without being burdened, but only 14,000 units of that level of rent. These households, both poor and rich, compete for rental units.
- The shadow rental market helps relieve these pressures on rental apartments by offering a great variety of housing at a great variety of price points. Shadow rental studios and one-bedrooms have lower rents than rental apartments, and even the rent-controlled units, and thereby easing the pressure from the bottom. Larger units in the shadow rental market do not always have lower rents, but there is a lot of them meeting the demand from larger or wealthier households, and thereby easing the pressure from the top.

On inclusion and displacement:

- Renters in rental apartment buildings are also economically segregated, with the highest income renters living in parts of the city with higher rents, and lowest income renters living in parts of the city with lower rents. The estimated rent burdens are more evenly spread across the city and within wards for the shadow rental market.
- The presence of rent-controlled units in a neighborhood appears to mitigate displacement. A larger share of residents stays in place in census tracts where rent-controlled-units are a larger share of the housing stock, but no such relationship exists when measured for all rentals or for owner-occupied housing. Similarly, a strong presence of rent-controlled stock is correlated with a smaller loss in minority populations.

On the potential to increase affordability and economic inclusion:

- An important characteristic of the rent-controlled housing is that rent-controlled units are everywhere, especially in parts of the city where building affordable units has been difficult. Another important characteristic is that their rents are lower, as rent control laws have, over time, created a sizeable difference in rents of rent-controlled and uncontrolled units.
- We propose an Inclusionary Conversion tool that takes advantage of the relatively low rents and ubiquity of the rent-controlled stock. Under this approach, the District would convert a portion of existing rent-controlled units into designated affordable units with covenants. Once the conversion takes place, the converted unit would operate in the same way as an Inclusionary Zoning unit: its rents would be capped at the desired affordability target for the duration of the covenants, and the unit would be made available only for income-eligible tenants. In return, the landlord would receive financing support from the District that is the equivalent of the difference between the rent-controlled rent and the capped-rent.
- The District can finance Inclusionary Conversions with a one-time cash infusion, similar to a Housing Production Trust Fund loan, or with annual operating subsidies similar to the Local Rent Supplement Program. If funded as an annual subsidy, the support for each unit would be equivalent to the difference between the prevailing rent and the maximum rent the landlord can charge. If funded as a one-time cash infusion, the support would be equivalent to the present value of the annual operating subsidy over the lifetime of the covenants and can potentially be incorporated during a capital event such as refinancing.
- Because of where rent-controlled units are, the highest number of Inclusionary Conversion units can be in parts of the city where existing affordable housing programs have not been successful.
- And, because the model relies on financing the gap between a subsidized unit and the lower rents in rent-controlled buildings, Inclusionary Conversions would require a much smaller public subsidy than needed under current affordability programs.

The report is organized in the following way: Chapter two provides detailed information on rental housing including the number, type and location of units for rental apartments, the rent-controlled stock, and the shadow rental market. Chapter three evaluates the ability of the rental housing stock to meet the affordability needs in the city. Chapter four evaluates whether rental housing—and specifically rent-controlled units—in the District has been a source of economic inclusion, and whether rent-controlled units have helped tame displacement. Chapter five presents the Inclusionary Conversion tool that utilizes the District's existing rental stock to create affordability and inclusion through public subsidies. Chapter six provides conclusions and additional considerations for policymakers.

TWO | THE LANDSCAPE OF RENTAL HOUSING IN THE DISTRICT OF COLUMBIA

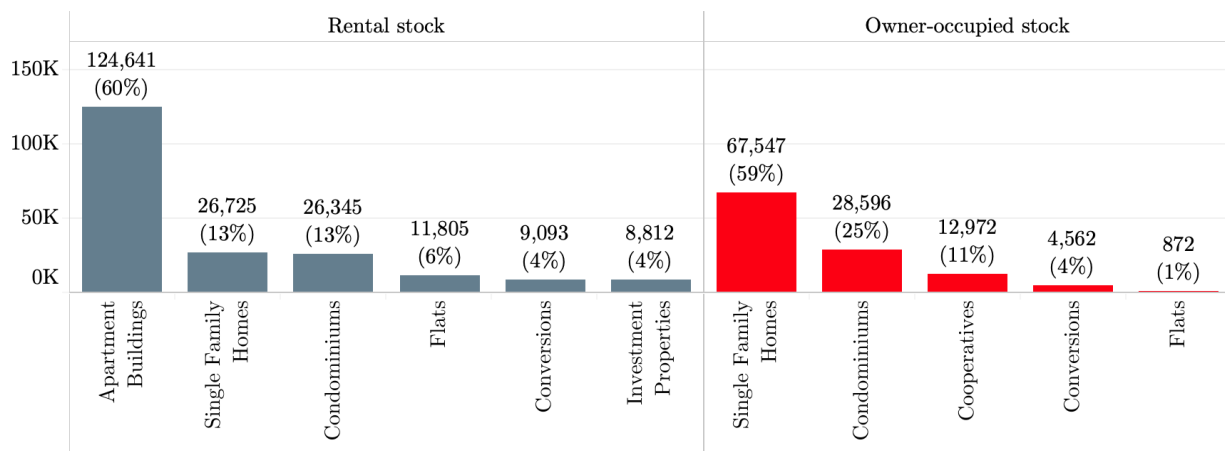
The District of Columbia is largely a city of rentals. Of the estimated 322,000 housing units (excluding those owned by the federal government, foreign governments, universities, or charitable or religious organizations),¹⁹ 114,550 are occupied by their owners.²⁰ The remainder—207,400 units, or 64 percent of the housing stock—are potentially rentals.²¹

Figure 2 – Housing units by type of unit and by occupancy characteristics, 2019

All housing units

Rental stock	207,421
Owner-occupied stock	114,550
Total	321,971

...and by type of unit



Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.

Note: The number of units for multi-family rental buildings and co-ops are not always noted in the CAMA files. When this is the case, the number of units is estimated by the number of different addresses for the building. Owner occupied count includes co-operatives, that are almost always owner occupied, but not noted in that way in the tax extract. This is because the taxable entity is the cooperative that owns the building, and not individual shareholders (who own the units).



¹⁹ This estimate excludes 3,276 units owned by institutions such as churches and universities, the federal government, and foreign governments. With these all combined, we estimate the total number of housing units to be 326,000.

²⁰ Presented here is the number of properties (single-family units and condominiums) that qualified for the District's homestead exemption, and 11,000 units in cooperative buildings, which are not coded for homestead deduction in administrative files but are almost always occupied by their owners DC Cooperative Housing Coalition, "Co-Ops 101: Cooperative Housing Ownership in Washington, DC," (Washington D.C., 2012).

²¹ This number is qualified as a "potential" figure, as it might include homes owned and occupied by those not domiciled in the District or vacant units. The American Community Survey estimates that nearly 116,000 housing units (38 percent of all housing units and 41 percent of the occupied housing units) are occupied by their owners. It also projects that the vacancy rates in rental housing is at about 10 percent.

The primary source of rental housing in D.C. is rental apartments, which are income-generating units in multi-family buildings. For these buildings, a single entity owns and (usually) operates the building (Table 1). A sizeable portion of these units are also subject to the District's rent control laws, which apply to units in buildings that are older (built or received their building permit before December 31, 1975) and larger (more than four units).²² Rent control laws restrict rent increases for current tenants and limit the use of evictions.²³ For apartment buildings built after 1975 or with four or fewer units, rents are not restricted, though buildings built after 2007 must meet the District's inclusionary zoning requirements, setting aside a share of their units as affordable.

Table 1 – Type of units in D.C.'s rental stock

Type of unit	Rented or owned?	Notes
Apartments (including subject to rent control)	Units in multi-family buildings intended for renting.	A single company owns (and usually operates) the building.
Condominiums	Units in multi-family buildings intended for ownership. Can be a rental if the owner chooses to let.	Units owned by individual owners, building managed by a company.
Conversions	Units in buildings converted from rental to condominiums or from single-family homes into multi-family units. Can be in the rental stock if the owner chooses to let.	After conversion into a condo, the units in the multi-family building are owned by individual owners.
Investment properties	Units in condominium buildings owned by investors who do not live in them. Rentals.	Owners of the units are investors—could own more than one unit in the building. Building managed by a separate company.
Cooperatives	Units in buildings collectively owned by occupants, and typically restricted from rental use. (Sometimes converted from rental apartments.)	Owners own “shares” in the entire building and grounds, which entitles them to live in one of the units.
Flats	Units in small subdivided dwellings such as rowhouses. At least some portion are rentals.	The owner can offer all units for rent or live in one unit and let the others.
Single-family homes	Single-family dwellings. The owner could occupy it or rent it.	Could be managed by the owner or a management company.

Source: Integrated Tax System use codes

The second source of rentals in the city is the shadow rental market. These are rental units in condominium buildings including investment properties, conversions, flats, and single-family homes. The District also has a small number of cooperative housing units (approximately 4,500 units, or 1.5 percent of the overall stock) where owners own “shares” in the entire building and grounds, which entitles them

²² Regardless of unit type, a landlord who owns five or more units in a building built before 1975 is also subject to rent control.

²³ Department of Housing and Community Development, “[What You Should Know About Rent Control in the District of Columbia](#)” (Washington, D.C., 2018).

to live in one of the units. Cooperatives are not a significant source of rental units in D.C., as their organizational bylaws typically restrict renting of the units.

The presence of a large shadow rental market means that units move in and out of the rental stock frequently. We compared tax records from 2006 and 2019 and found 126,000 condominiums and single-family homes that have been continuously on the tax rolls since 2006.²⁴ Of these, 87,000 were owner-occupied in 2006, but by 2019 approximately 20,000 (more than one in five) had become rentals. Conversely, of the 39,500 condominiums and single-family homes that were rentals in 2006, nearly 15,000 (38 percent) were, as of September 2019, owner-occupied (Appendix Exhibit 12 on page 95).

Between 2006 and 2019, shadow rental market units have left the rental stock more frequently in Wards 4 and 5 (where 47 percent of condominiums and single-family homes of the combined housing stock in these two wards have reverted to owner-occupancy), and previously owner-occupied units have moved into the shadow rental stock most frequently in Ward 2 (36 percent). Administrative data show that single-family homes are more likely to move out of the rental stock—perhaps making room for the District's growing families who want to own a house in the city—and condominiums are more likely to move into the rental stock.²⁵

Rental apartment buildings are not entirely resistant to change, either. The core of the city's rental stock—the 124,600 units in rental apartment buildings—comprise only 60 percent of the total rental stock (Figure 2). Compared to the shadow rental market, units in rental apartment buildings are more stable. In fact, one quarter of today's rental units are in apartment buildings built before World War II. Many of these are over 100 years old.²⁶ But some have, and others will eventually be demolished to make room for new development, and yet others will leave the rental stock because they will be converted into condominiums or into a cooperative building. Administrative data suggest that since 2006, about 9,770 rental apartment units have been converted into an ownership structure (Appendix Exhibit 13 on page 95).²⁷ Among these, 48 buildings restructured themselves as cooperatives between 2006 and 2009, removing 726 units from the rental stock. The remainder, or about 9,000 units, became condominiums, and of these, one third are now occupied by their owners.

²⁴ Since then, the District added 24,000 more such units, mostly condominiums. For details, see Yesim Sayin Taylor, “[Tax Practices That Amplify Racial Inequities: Property Tax Treatment of Owner-Occupied Housing](#),” (D.C. Policy Center, 2018).

²⁵ In fact, comparing 2006 and 2019 (not just tracking the same house but looking at the whole stock) we find that the share of all housing units in the rental stock increased from 31 percent to 36 percent, and that this has been entirely driven by the growth in the number of rental condominiums (and the rate at which their owners let them).

²⁶ This estimate is based on the initial year of construction, as recorded in the Computer Assisted Mass Appraisal datasets. Many of these buildings have undergone significant enough renovations to be recorded in assessment histories.

²⁷ D.C. Policy Center researchers found another 11,000 units that were characterized as rental apartments in 2006 and reclassified as flats in 2019. This may be an administration reclassification rather than a true conversion; so, we left them out of the analysis. Of this group, only 821 were shown to be owner-occupied in 2019, so this change did not have much impact on the rental stock.

Measured this way, the impact of conversions on the overall rental stock appears to be small. However, excluded from these counts are units on land that has been subdivided or combined, and therefore cannot be reliably tracked through administrative records. In her book, *The politics of staying put*,²⁸ Professor Carolyn Gallaher estimates that between 2000 and 2007, some 1,147 rental apartment buildings with 26,645 units were converted into condominiums.²⁹ Some of these units were purchased by their previous tenants under the District's Tenant Opportunity to Purchase Act (TOPA). But in others, where tenants did not exercise their TOPA rights, or have signed away those rights, the units have often been redeveloped into expensive units with prices the former tenants would not have been able to afford. There is presently no data available to quantify what Professor Gallaher calls "exclusionary displacement" across the entire city, but in her sample of seven buildings that changed ownership through TOPA, she finds that four units out of ten that went through TOPA ended up as units beyond the means of their former low- and middle-income occupants^{30, 31}

1. *Where is the rental housing in the District of Columbia?*

Rentals are everywhere in the city, but they are particularly concentrated in Ward 6. Ward 6's nearly 39,500 rental units account for 69 percent of its housing (Figure 3). Most of these units are relatively new: approximately 21,000 of the 55,100 rental units in this ward have been built since 2000—many in entirely new or revitalized residential neighborhoods such as NoMa, Navy Yard, and most recently, the Wharf at the Southwest Waterfront.

Such a concentration of newly constructed buildings means a smaller share of Ward 6's rental housing is subject to rent control laws than elsewhere in the city. Rent-controlled units across the city account for 23 percent of housing and 35 percent of all rental units, but in Ward 6, the comparable shares are 8 percent and 12 percent, respectively (Appendix Exhibit 14 on page 96). Ward 4 has the fewest rental units, because it is largely zoned for single-family housing, and has both fewer housing units and a high home ownership rate (55 percent, compared to the citywide average of 36 percent). Ward 8 also stands out, as its rental stock accounts for 81 percent of all the housing in this ward (only 6,000 units are

²⁸ Carolyn Gallaher, *The Politics of Staying Put: Condo Conversion and Tenant Right-to-Buy in Washington, DC* (Temple University Press, 2016).

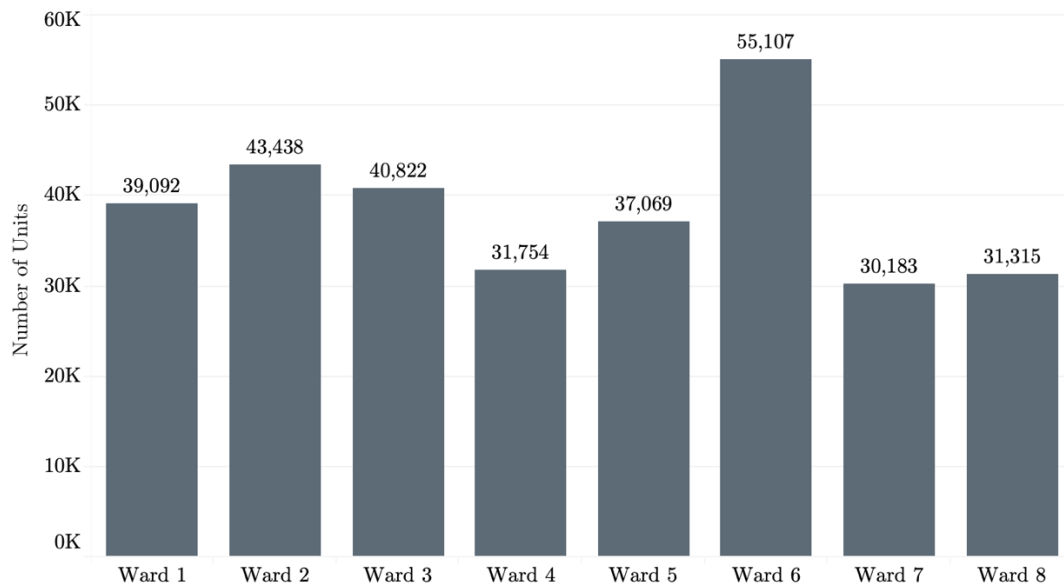
²⁹ The source for these numbers is data provided to the author by the Department of Consumer and Regulatory Affairs.

³⁰ Derek Hyra, "Book Review - Carolyn Gallaher 2016 - The Politics of Staying Put: Condo Conversion and Tenant Right-to-Buy in Washington DC, Temple University," *International Journal of Urban and Regional Research* 41, no. 2 (2017): 366–67.

³¹ It is very difficult to analyze the existing TOPA data to effectively evaluate the outcomes. The Department of Housing and Community Development keeps track of TOPA notices, but the outcome – whether the building has been sold or not, or whether the tenants took over the building through a sale—is not tracked. An analysis of TOPA notices from DHCD's Rental Conversion and Sales Division for January 1, 2017 to October 21, 2019 (obtained from the Urban Institute) shows that the city received 7,348 TOPA related notices required by law on 4,168 properties. Of these, it appears that 782 properties received a response from the tenants. Of these, we cannot ascertain the size of 23 of the properties. Among the remainder, 374 were single-family homes, 244 were two to four units, and 141 were five or more units.

occupied by their owners in Ward 8), and its rent-controlled stock accounts for 41 percent of its entire housing stock.

Figure 3 – Rental housing by ward, 2019



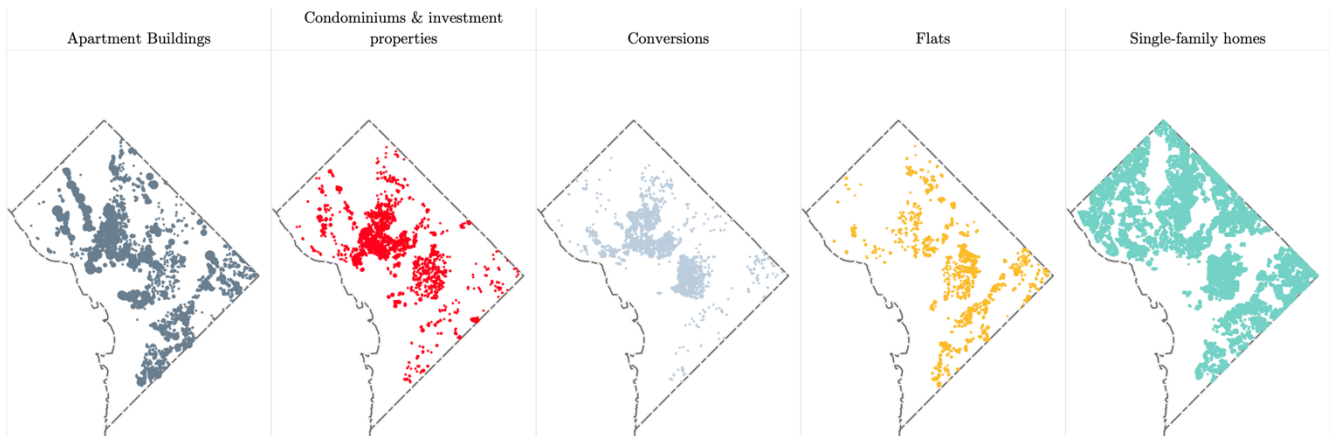
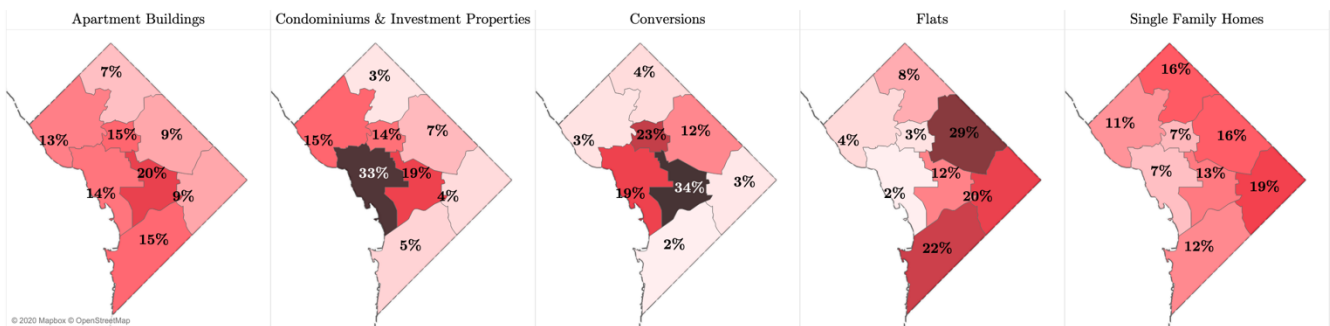
Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



The distribution of rental units across the city largely follows zoning, general development patterns, and the city's history (Figure 4, top panel). Rental apartment buildings are present in every ward across the city but vary greatly in age, type, and other characteristics (such as the size of the building or the units within it). Wards 1 and 8, each, have over 18,000 units in rental apartment buildings, but these are mostly older buildings: dating before World War II in the case of Ward 1, and the period between the mid-1950s and the late 1960s in the case of Ward 8.

The greatest concentration of rental condominiums and investment properties is in Ward 2—an attractive place for the young and affluent. In contrast, across Wards 7 and 8, where incomes are not always high enough to support home ownership, condominiums and conversions account for less than five percent of the housing stock. The approximately 26,000 single-family homes rented by their owners are also spread out—in every ward, at least 20 percent of single-family housing units are rentals. Such rentals are most common in Ward 7 (approximately 5,100 single-family rentals), followed by Wards 4 and 5 (over 4,000 units each).

Figure 4 – Location of rental housing units, by building type, 2019

Distribution of rental units across the city*...and by ward*

Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



2. Characteristics of rental apartments

The District's 124,641 apartment units, distributed across 3,121 buildings, constitute the core of its rental stock. These buildings show a dramatic variety in size, location, and the combination of unit sizes, reflecting the market conditions of where and when they were built. It is useful to think of the city's housing history alongside its changes in population, as population is a strong predictor of housing demand. In this context, the four distinct periods in the District's population history produce four distinct periods of its rental housing production history.

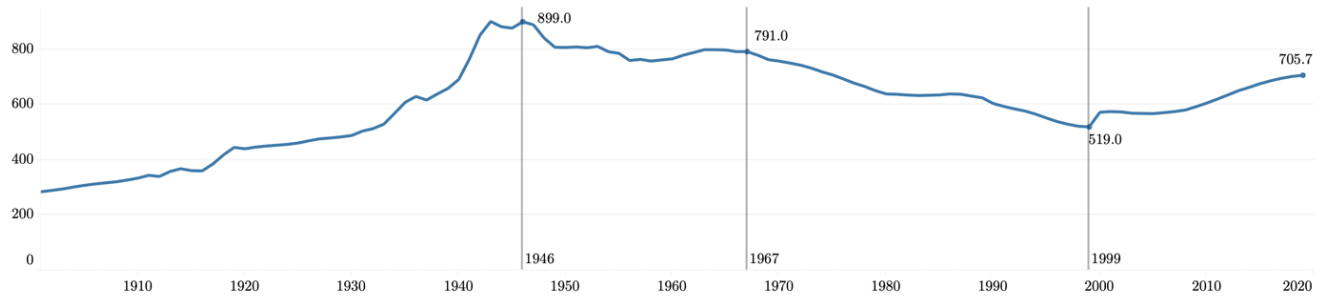
The first period of rental apartment construction follows along the continuous population increase that began before the turn of the 20th century and lasted through the end of World War II. During this period, the District's population grew especially fast and peaked right before World War II, when it stood at 899,000 residents (Figure 5, top panel). One third of the rental apartment units (38,700 units) and 40 percent the rental apartment buildings (1,320 buildings) that serve D.C. residents today were

constructed during this time (Figure 5, middle panel). Nearly half of this construction took place after 1936, as the city undertook a massive effort to build new homes in anticipation of the spending from New Deal programs. Construction happened all over the city during this period, but especially north of the downtown areas, along 16th Street and Connecticut Avenue (Figure 5, bottom panel).

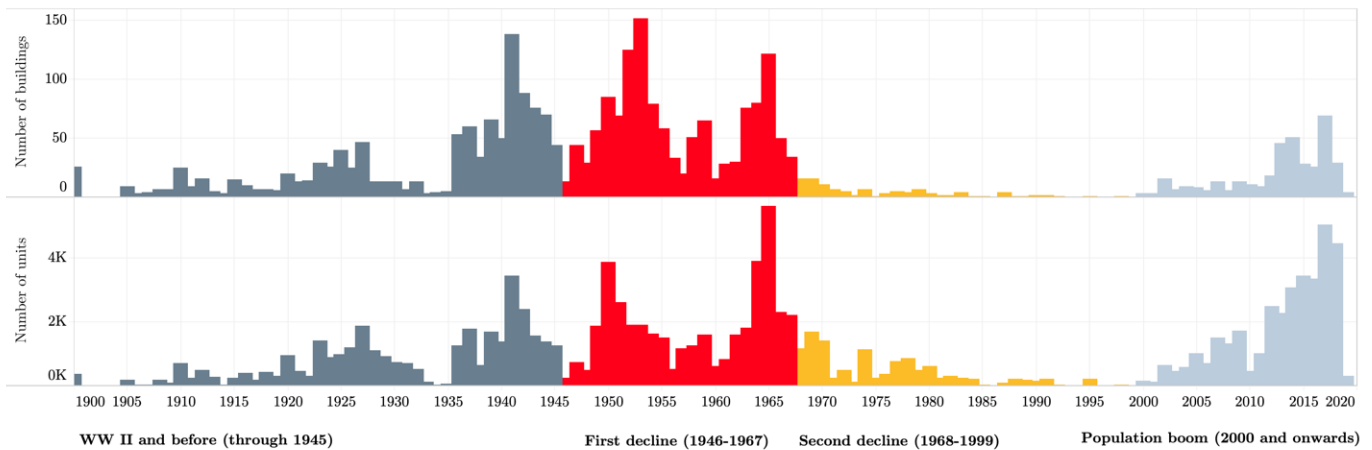
Figure 5 – Apartment buildings by construction period

D.C.'s population and rental apartment construction since 1900

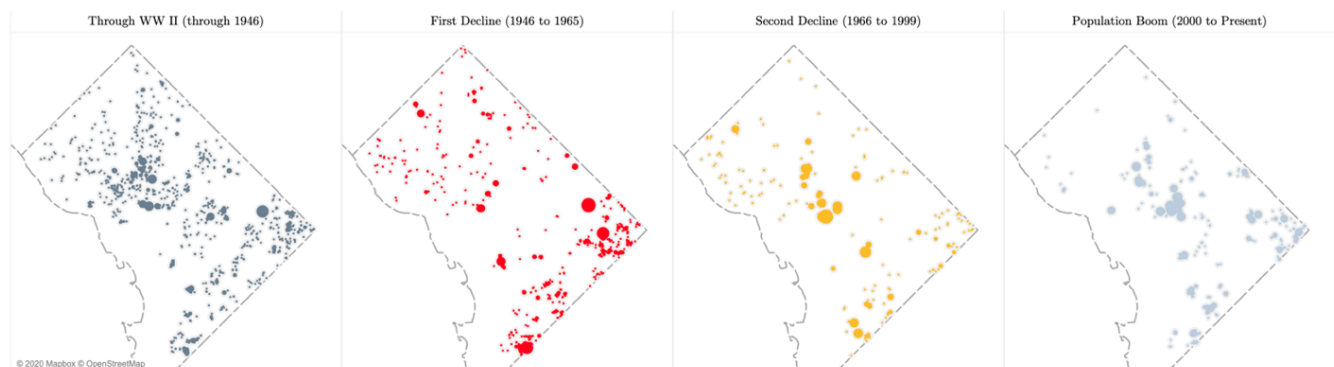
District population: 1900 to 2019



Construction activity by year



The location of apartment buildings by when they were built



Source: Population data from the U.S. Bureau of Census. Housing database compiled by the D.C. Policy Center

Note: The map shows 195,000 units, missing largely the condominiums which we could not map based on available information. Size of the circles indicate the number of units in a single building.

The next period of construction history is the “First Decline” between 1946 and 1965. Much like many other central cities in the U.S., the District lost some of its population to the suburbs during this time with increased car ownership and rapid construction of roadways. Additionally, some white families left after school desegregation (with the *Bolling v Board of Education* case in 1954), and the city’s urban renewal efforts that began in the mid-1950s pushed many Black families either to neighborhoods in the southeast quadrant or out of the city entirely. But despite the decline in population by about 100,000 residents, construction activity remained strong with the delivery of 1,200 buildings and 35,650 units. More of the construction during this period was in neighborhoods east of Anacostia River; much of the small walk-up apartment stock that populates Wards 7 and 8 dates from this period.

The period of “Second Decline” began in 1965, as the city’s population decline deepened after the riots in 1968 and continued through 1999. During this 31-year period, the city’s population fell by more than 260,000 residents. There was still some construction activity at the beginning of this period—of the 194 apartment buildings with 16,300 units built (and still serving the city’s renters), 127 (with over 8,700 units) were built before 1970, and 37 (with over 4,000 units) are buildings that today are owned by the District of Columbia government or a charitable organization with a focus on affordability. However, construction activity came to a standstill after 1985: Only 14 buildings were built between 1985 and 1999—a rate of less than one per year—and only five were built between 1991 and 1999. It is important to note that, even though the District’s population fell dramatically, during this period, the number of households did not decline as fast as the population, keeping housing demand somewhat intact ³².

The fourth and the final period began in 2000, when the District’s population began rebounding. Since then, the District has experienced one of the strongest periods of rental apartment production, despite the effects of the Great Recession. During this 20-year period, the city has added 375 new apartment buildings (12 percent of all rental buildings in the District) with 34,000 units (almost one quarter of all units). That is, the city’s rental apartment construction in recent years has been as strong as it was the period leading up to World War II, but the buildings are both much larger and more concentrated in parts of the city that have continued to experience substantial change.

The mix of new and old construction in the District gives the city’s rental apartment buildings a diverse profile. More than two thirds of all apartment buildings (2,358 buildings) are low-rise buildings of two or three levels, with about 20 units each, and without elevators. Nearly 90 percent of these walk-up rental buildings in the District were built prior to 1965 (Appendix Exhibit 15 on page 96).³³ Today, these buildings dominate the landscape in neighborhoods east of the Anacostia River (Appendix Exhibit 16 on page 97) and provide 24,400 of the 29,400 rental apartment units in these neighborhoods. In contrast, nine out of ten of the 764 buildings with elevators are in neighborhoods west of the Anacostia

³² David Rusk, “[Thermometer of City Health: Count Households, Not Noses](#),” (D.C. Policy Center, 2017).

³³ Included in this count are approximately 175 buildings with nearly 5,000 units for which we could not find a date of construction.

River. These buildings are relatively new (315 buildings with nearly 33,000 units were built after 2000), and on average have five times the number of units as are in walk-up buildings, with an average of 104 units in each.

Apartment buildings subject to rent control

The District's rent control laws date back to 1973, but the basis of its current law is the *1985 Rental Housing Act* (See Appendix I for a history of the rent control laws in the District). By design, rent control laws apply to a fixed stock—in D.C.'s case, buildings that received their building permits by December 31, 1975. But this does not mean that the stock remains at the 1985 levels: over the 35 years that have passed since enactment of the 1985 Rental Housing Act, the District has lost somewhere between 15 and 30 percent of its rent-controlled stock.

Table 2 – Taxable rental apartment buildings and units by regulatory period

		Number of Buildings	Number of Units
Under rent control or potentially under rent control	Built before 1976	2,052	68,299
	Built in 1976 or 1977	6	769
	Unknown	99	3,810
	Total	2,157	72,878
Not subject to rent control	Unregulated (1978 to 2007)	52	5,967
	Subject to Inclusionary Zoning requirements (2007 onwards)	146	25,006
	Total	198	30,973
Grand total		2,355	103,851

Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



The D.C. Policy Center estimates that the District currently has at least 68,300 rent-controlled units in 2,050 multi-family rental apartment buildings, but could possibly have as many as 72,900 rent-controlled units spread across 2,157 separate buildings (Table 2).³⁴ This is the equivalent of 57 percent of all units in rental apartment buildings (excluding those owned by the D.C. government or managed

³⁴ These are rent-controlled units in apartment buildings only. Rent control laws apply to landlords—for example, those who own more than five units in a condominium building; but we have no reliable way of estimating how many units fall under this criterion. But this number does not appear to be high: here are 38,500 rental units in multi-family buildings other than rental apartment buildings, and only 766 of them are in buildings with more than five units.

by nonprofits, and including those not subject to rent control), 35 percent of all units that are currently being rented (including the shadow rental market), and 23 percent of the total housing stock (Figure 6).

When the District first enacted the 1985 Rental Housing Act, its total rental stock was an estimated 162,000 units, according to a 1990 estimate by the Urban Institute.^{35,36} However, no data are available on how many of these units would have been subject to rent control. Another piece of evidence comes from a 1988 study the Urban Institute conducted for the District's Department of Consumer and Regulatory Affairs, which noted that about two thirds of these properties were subject to rent control.³⁷ This would suggest a rent-controlled stock size of 101,000 units at the time of the enactment of the Rental Housing Act, but that figure could include units in buildings other than rental apartments. For purposes of this report, D.C. Policy Center researchers use an estimate based on apartment building directories published at the time, which puts the number of rent-controlled units in rental apartment buildings at approximately 85,000.³⁸ This base figure of rental apartment units already serving the city at the time suggests that the District has lost at least 15 percent of its rent-controlled units in rental apartment buildings. If the actual base figure is closer the earlier Urban Institute estimate of 101,000 units, the loss could be as high as 30 percent.

The loss of 15 percent of rent-controlled units in apartment buildings over 35 years is a relatively small when compared to the experiences of other jurisdictions with rent control ordinances.³⁹ For example, only 10 years after San Francisco extended its rent control laws to buildings with fewer than five units, the number of rental units in such buildings had declined by 15 percent, and the number of tenants in these buildings had declined by 25 percent—a much swifter decline what than D.C. has seen. Similar magnitudes of unit loss have been documented for New York and New Jersey municipalities with rent control ordinances. (See [Appendix II](#) beginning on page 75 for a review of the literature on the impacts of rent control across the nation.)

In every part of the city except for Ward 6, the rent-controlled stock constitutes at least half of the rental apartment units. Ward 6, by contrast, holds the greatest number of rental apartment units but the fewest number of rent-controlled units, because many of the multi-family buildings in Ward 6 have been constructed after 2000. The estimated 4,700 rent-controlled units in Ward 6 make up 18 percent of

³⁵ Margery A. Turner, *Housing Market Impacts of Rent Control - The Washington D.C. Experience* (Urban Institute, 1990).

³⁶ Accounts from newspaper articles from the time put the number of potentially rent-controlled units at 120,000, but without specifying the source of this information. A Washington Post article titled "[Lines draws in the D.C. rent control battle](#)" by Kenneth Bredemeier, published on March 17, 1985, reports the existence of 120,000 apartments under rent control, but provides no source for this information.

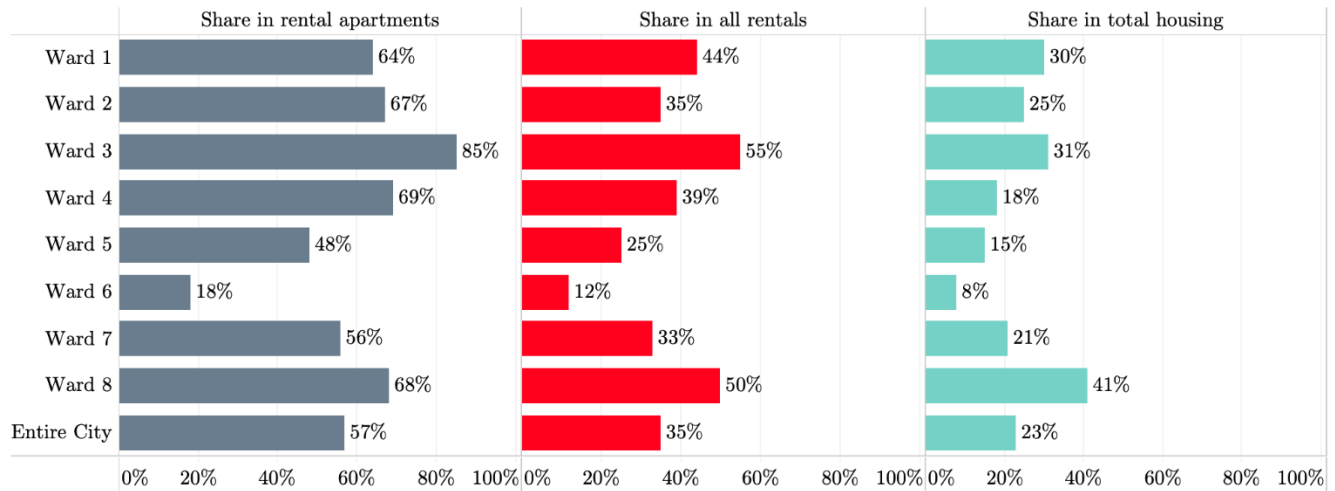
³⁷ Margery A. Turner, "[Rent Control and the Availability of Affordable Housing in the District of Columbia: A Delicate Balance](#)" (Urban Institute, 1988).

³⁸ Developed using information Lusk's District of Columbia Apartment Directory for 1990.

³⁹ Although these comparisons are always difficult since housing market conditions are significantly different across these jurisdictions. We thank Elissa Silverman for this point.

its rental apartments, 12 percent of its overall rental stock, and only 8 percent of the entire housing stock in the ward.

Figure 6 – The share of rent-controlled apartments, by ward



Source: Housing database compiled by the D.C. Policy Center.

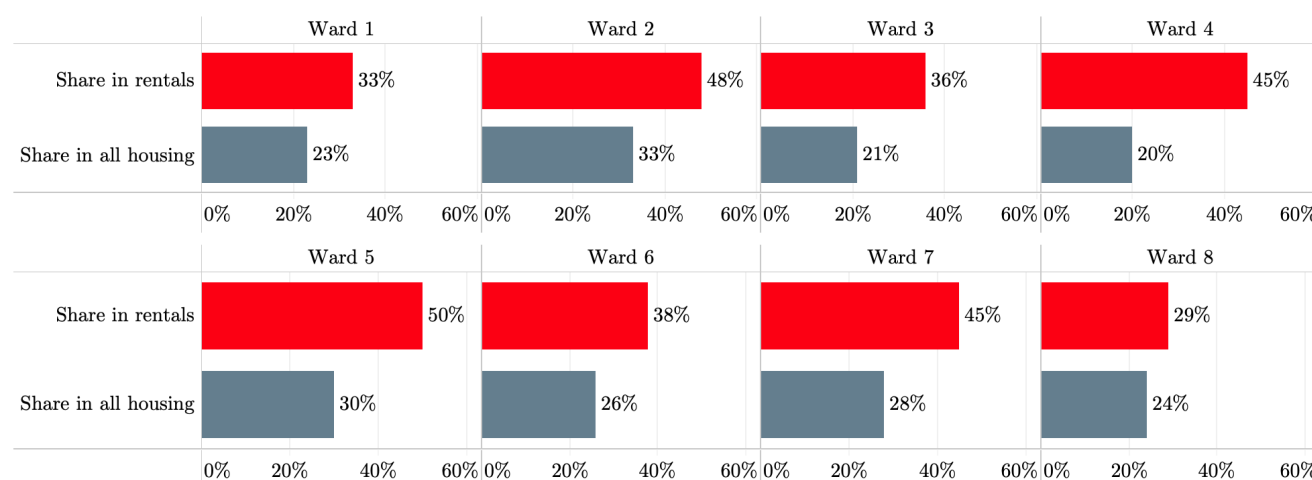


Meanwhile, Ward 3 has the largest number (13,674) and share (85) of rent-controlled units across all rentals, but these units are concentrated in large buildings along transportation corridors. The rent-controlled stock in Ward 8 is also large, but it looks very different from the stock in Ward 3. Here, 13,115 rent-controlled units are spread across 625 smaller buildings with an average of 20 units (compared to an average of 85 units in Ward 3). Units under rent control account for a lower share of the rental market in Ward 8 compared to Ward 3 (68 percent of rental apartment units and half of the entire rental stock), but a larger share of the entire housing stock including those units occupied by their owners (41 percent in Ward 8, compared to 31 percent in Ward 3).

The shadow rental market

The District's shadow rental market, with its estimated 82,780 units in 35,750 buildings, accounts for 40 percent of its rental stock. In each ward across the city, the shadow rental market provides at least one quarter of rental housing and one fifth of the total housing stock; and in Ward 2, which has the highest number of shadow rental market units, the shadow rental market accounts for nearly half of the rental housing (47 percent) and one third of the entire housing stock (Figure 7).

Figure 7 – The shadow rental market's share in rental units and total housing, by ward



Source: Housing database compiled by the D.C. Policy Center.



Nearly two thirds of the units in the shadow rental market are single-family homes and condominiums (each category contributes about 26,500 units), and another 20,000 units are spread across 7,150 smaller buildings with fewer than five units. Ward 2, on its own, accounts for one third of the condominiums rented out in the shadow rental market, but only 6 percent of the single-family homes. The greatest number of single-family homes rented out by their owners is in Ward 7, where 57 percent of the units in the shadow rental market (5,100 units out of approximately 9,000) are single family homes. Ward 4 contributes 4,246 single-family homes to the District's shadow rental market—while it is a smaller number than Ward 7's, these units account for 65 percent of all shadow rental market units in this ward (Appendix Exhibit 18 on page 98).

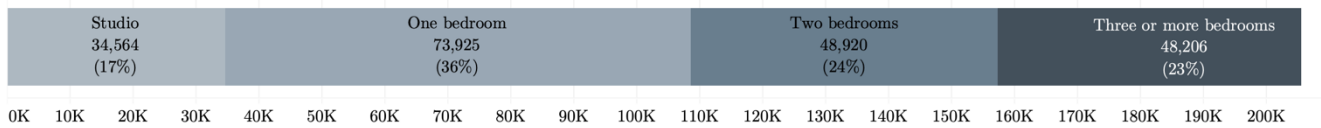
3. Can the District's rental housing serve households of all sizes?

While units in rental apartment buildings tend to be small, the presence of a large shadow rental market means that there is a mix of differently sized rental units in the District.⁴⁰ This report estimates that 17 percent of the District's rental housing (rental apartments and shadow rental units combined) is studios, 36 percent is one-bedroom units, 24 percent have two bedrooms, and 23 percent have three or more bedrooms (Figure 8). These larger units can be found everywhere, but almost always as a part of the shadow rental market.

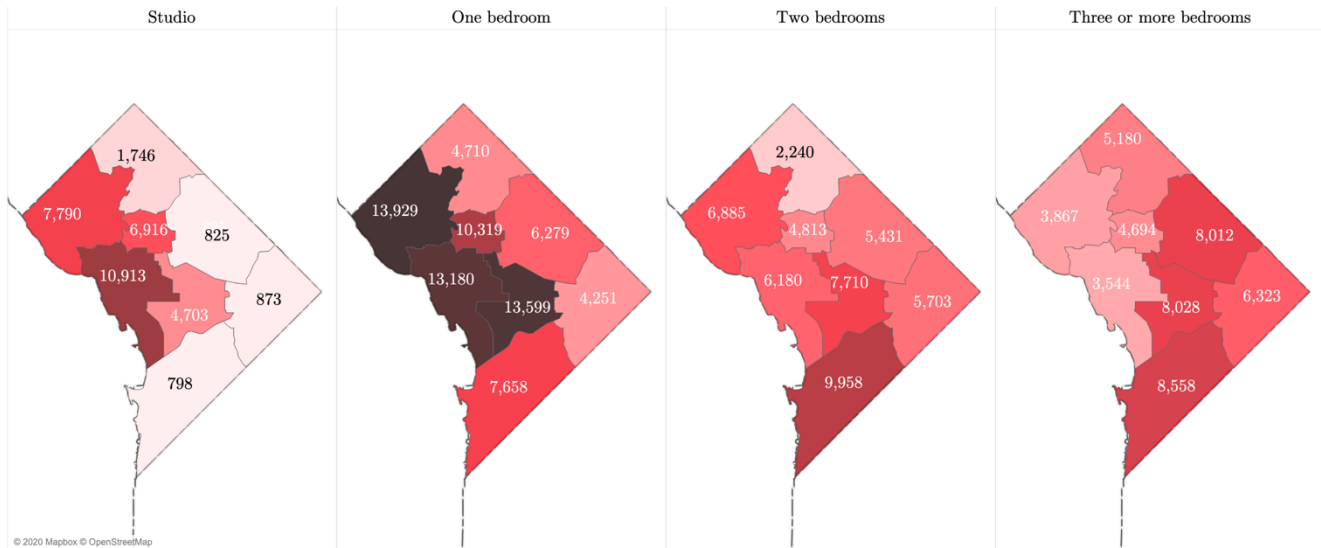
⁴⁰ Data on unit sizes in rental apartment buildings are not publicly available. This section uses data compiled by CoStar, which show that most rental apartments are small—studios or one-bedrooms—regardless of the period when they were built. Of the 3,121 apartment buildings, there is information on the size of units for only 1,363 buildings, but these collectively account for 101,872 units (or 80 percent) of the rental apartment units in the District. Computer Assisted Mass Appraisal records do not provide any information on the unit sizes in rental apartment buildings, but have this information for single-family homes, condominiums, and conversions.

Figure 8 – Rental housing by unit size

Share of differently sized units across all rentals



Estimated number of rental by unit size and ward

**Source:** Housing database compiled by the D.C. Policy Center.**Note:** Unit sizes are estimated using CoStar data separately for the rent-controlled stock and the entirety of the rental apartment units. The information on unit sizes for the shadow rental market is from the Computer Assisted Mass Appraisal database.

One-bedroom apartments account for nearly half of the city's rental apartment stock (an estimated 62,250 units), and studios account for another fifth (an estimated 24,900 units). Only 5 percent of rental apartment units in the District of Columbia have three or more bedrooms (an estimated 6,250 units).⁴¹ Furthermore, the share of small units in rental apartment buildings has remained stable over time (around 70 percent of the stock), except for the units constructed during the period of Second Decline: 42 percent of the units built during this period had two or more bedrooms (Appendix Exhibit 21 on page 100).⁴²

Perhaps the biggest change in unit sizes since 2000 is the shift from studios to one-bedroom apartments. Through 1966, it was common to see studios in newly constructed buildings: about one quarter of the

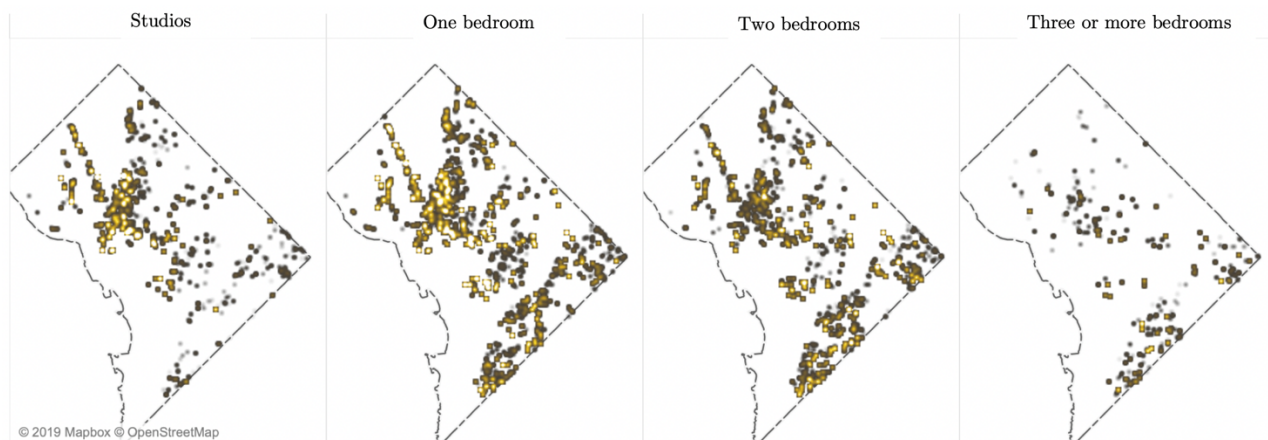
⁴¹ The American Community Survey, on the other hand, finds only 162,190 rental units in the District, regardless of the type of unit. According to their count, of these, 13 percent are studios, 42 percent are one-bedroom units, 40 percent are two- or three-bedroom units, and slightly less than 5 percent are four-bedroom units.

⁴² As noted previously, this is also the period in which the fewest units were built, and more of them were owned or tax exempted by the D.C. government (about one quarter of units).

units produced then were studios. In comparison, only 14 percent of the units constructed since 2000 are studios, and the majority are one-bedroom units.⁴³

Rental apartment units with three or more bedrooms are rare, and typically are found in neighborhoods east of the Anacostia River. In Ward 7, for example, one is twice as likely to find rental apartment units with three or more bedrooms (9.7 percent of the stock in this ward) than the entire city. In Ward 8, such large apartments make up nearly 15 percent of the stock. Studios and one-bedroom apartments are concentrated in central parts of the city. While it is possible to find one-bedrooms everywhere (ranging from 40 percent in Ward 2 to 56 percent in Ward 4), studios are rare in Wards 5, 6, 7, and 8. They are most concentrated in Ward 2 (44 percent of the stock), neighborhoods along Connecticut Avenue, and along 16th Street NW (Figure 9).

Figure 9 – Density of different rental apartment units across the city



Source: Integrated Tax System Public Extract, Costar, Common Ownership Lots spatial file.

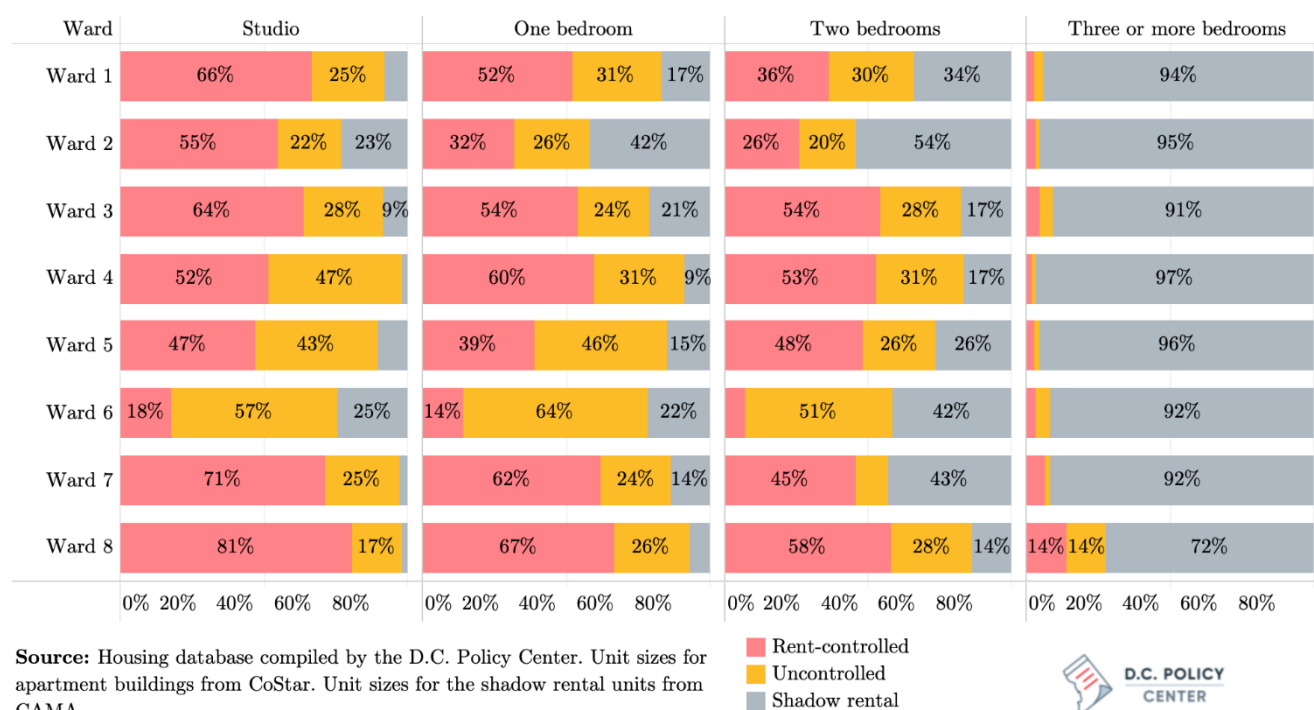


Rent-controlled apartments tend to have fewer bedrooms than units in more recently constructed buildings. Rent-controlled apartments have a larger concentration of studios (27 percent, compared to 17 percent across all rental apartments) and a smaller concentration of units with two or more bedrooms (29 percent, compared to 32 percent across all rental apartments, and 24 percent compared to all rentals, including the shadow rental market). In all wards across the city, the smaller units (studios and one-bedrooms) constitute over half the rent-controlled stock. The exception is Ward 8, where 57 percent of all rent-controlled units have two or more bedrooms, and over 10 percent of the units have three or more bedrooms.

⁴³ As such, while the common perception is that recently built units are smaller in square footage, median size has slightly increased from 682 square feet (for units built through World War II) to 764 square feet (for units built after 2000). It is possible that one-bedroom apartments built today are smaller than one-bedrooms of the pre-1946 period, but because there are more of them, and they are bigger than studios, the average size is larger. For details see the [Methodology Appendix](#), and specifically Appendix Exhibit 2 on page 82.

The shadow rental market fills an important void in the landscape of rental housing in the District by providing larger units with three or more bedrooms that can serve larger households (Figure 10). Over half of the units in the shadow rental market (nearly 42,000 units, Appendix Exhibit 23 on page 101) have three or more bedrooms, in stark contrast to rental apartment units, where similarly-sized units are only 5 percent of the stock. Across all wards in the city (except for Ward 8), the shadow rental market supplies over 90 percent of rental housing with three or more bedrooms; in Ward 8, this share is 72 percent. In Ward 4, there appear to be only 55 units with three or more bedrooms in rental apartments; compared to 5,310 similarly sized units in the shadow rental market. Furthermore, the shadow rental market supplies over half the two-bedroom units in Ward 2, over one third in Ward 1, and approximately 40 percent in Wards 6 and 7. These distributions of unit sizes matter greatly for inclusion and affordability, as they show that rental apartments, and especially rent-controlled units, offer few options to households of four or more people outside the neighborhoods east of the Anacostia River.

Figure 10 – Share of units by source of stock across differently-sized units in each ward



Ultimately, the District's capacity to create affordability and economic inclusion through its rental stock depends on rents, which is the focus of the next chapter.

THREE | HOW AFFORDABLE IS THE DISTRICT OF COLUMBIA'S RENTAL HOUSING?

This chapter compares prevailing rents to the income profiles of District households to examine the extent to which rental housing can meet renter demand at different income levels. This analysis shows that rent-controlled housing offers a significant discount over the uncontrolled stock—apartments that were constructed in the post-rent control period. Rent differentials are especially large in parts of the city where housing is generally expensive, and where rents have increased faster, and for larger sized units, regardless of their location.

However, rental apartment buildings have too few units to meet the demand from renters. They face pressures both from the bottom (many lower-income households and not enough apartments in their rent range) and from the top (many higher-income households and not enough apartments in their rent range). In this environment, rent control laws have been an effective means of keeping rents low in parts of the city where a strong housing demand would otherwise push rents higher. But, when both high-income and low-income households compete for the same unit, lower rents in rent-controlled units do not automatically create housing opportunities for lower income households.

The units in the shadow rental market help relieve the pressures on the market for rental apartments buildings. The shadow rental market provides both very expensive homes and very inexpensive homes. Analysis of market valuations of the shadow rentals suggests that there could be as many as 13,000 deeply affordable homes (meaning that rents do not exceed 30 percent of their income for households earning under 30 percent of Area Median Income) that can potentially serve lower-income renters, and as many as 51,000 units that can serve as affordable those who earn under 80 percent.

1. How much lower are rents in rent-controlled buildings?

Full and reliable information on rents is difficult to collect. Publicly available data on rents can vary wildly depending on the methodology used to compile the rent information, or the goal of the dataset.⁴⁴ For example, the American Community Survey collects rent data from renters, but rent estimates are increasingly unreliable for smaller geographical units such as census tracts—especially for single-year survey data—making American Community Survey unsuitable for the level of detail necessary for this analysis. Commercial websites such as Zillow look at comparable units and tax assessments to estimate rent; others rely heavily on advertised rents, but do not factor in concessions, or otherwise account for the rent that is actually paid by renters.

⁴⁴ Joshua Feldman and Graham MacDonald, “Rents are too high. Here are three ways to get the data we need to fix that,” Urban Institute (Washington DC, 2019).

This study uses information from CoStar, a private company specialized in real estate research, to examine prevailing rents across rental apartments. We chose CoStar because this data source presents various advantages over other data sources. First, CoStar tracks rents per unit and per square foot for most apartment buildings in its database, as well as rents by unit size. Since CoStar is focused on the income-generating capacity of rental buildings, their database separates the asking rent from the effective rent, keeping track of both concessions and vacancy rates. However, the CoStar database does not track all rental apartments in the District, and its count of units does not always match the unit information in administrative databases. Of the 3,121 rental apartment buildings that are in the District's tax database, CoStar tracks 1,777 (approximately 99,000 of the 124,600 units) and has rent information for 976 (approximately 75,400 units).⁴⁵

Rents in all rental apartment buildings

According to CoStar data, in 2019, the median effective rent that prevailed across all taxable rental apartment buildings in the District of Columbia was \$1,512 per month.⁴⁶ Given how the data are presented in CoStar, this should be interpreted in the following way: the average rent for half of rental apartment buildings in the District was under \$1,512 per month.⁴⁷

Effective rents across different apartment buildings show a great variation by size and location and could go as low as \$650 per month and as high as \$7,750. Not surprisingly, rents vary greatly across wards: they are usually higher where home prices are also high, and lower where home prices are low. Ward 2 is most expensive: its median rent of \$2,034 is more than twice the median rent that prevails in Ward 7 (\$973 per month).

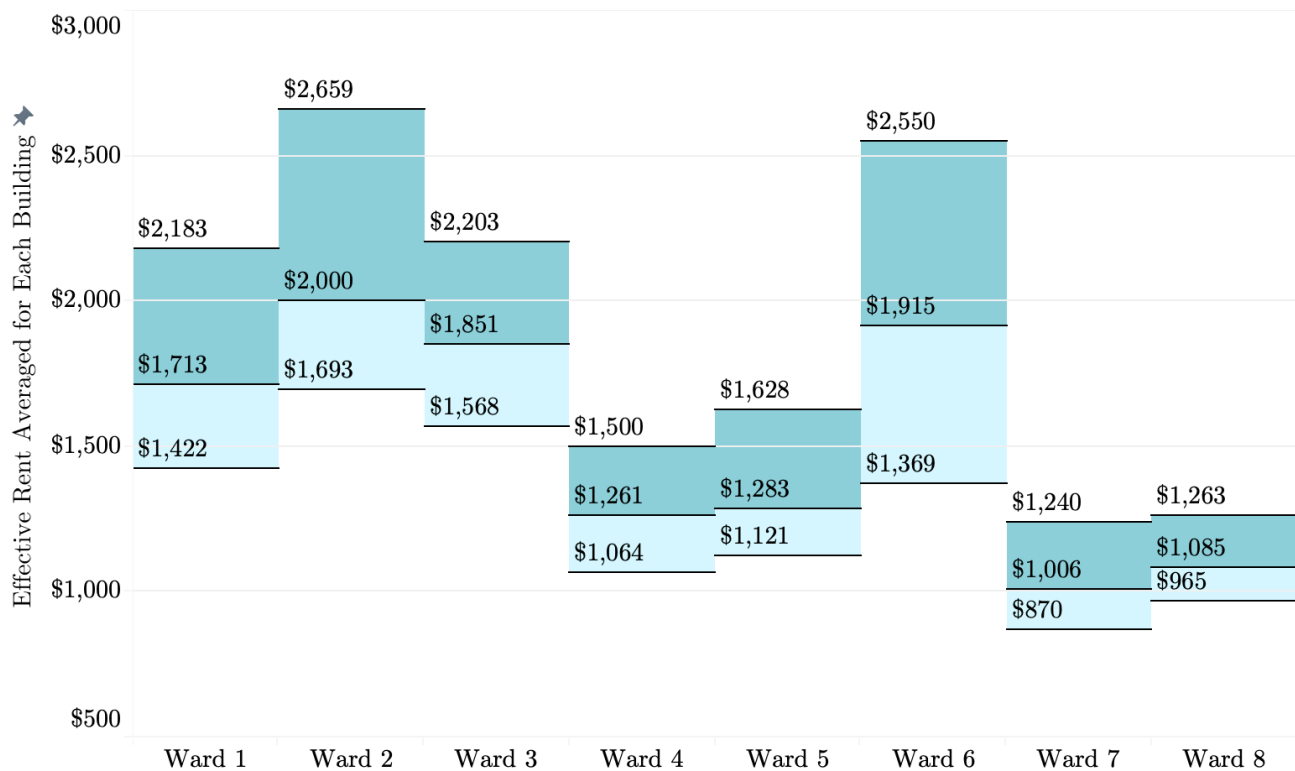
Rents vary substantially within the same ward as well, and variations are greater for more expensive wards. In Ward 6, for example, the bottom quartile monthly rent (\$1,369 per month) is \$1,100 lower than the top quartile rent (\$2,259 per month). This is largely a reflection of the mix of old and new rental apartments in this ward. In Ward 2, where 85 percent of rental apartments are in buildings under rent control, this differential is still large, at just below \$1,000. To compare, the differential between the bottom and top quartile rents is only \$314 in less-affluent Ward 8, and under \$500 in Wards 4 and 7 (Figure 11).

⁴⁵ The American Community Survey, on the other hand, finds only 162,190 rental units in the District, regardless of the type of unit. According to its count, of these 13 percent are studios, 42 percent are one-bedroom units, 40 percent are two- or three-bedroom units, and slightly less than 5 percent are four-bedroom units.

⁴⁶ This figure excludes tax exempt apartment buildings, which are either owned by the D.C. government or by a nonprofit with an affordability mission. When these units are included, the estimated median rent is \$1,449.

⁴⁷ The estimated number of taxable apartment units for the same year is 107,000.

Figure 11 – Rent quartiles across rental apartment buildings, by ward



Source: CoStar



The variation in rents across different parts of the city becomes even more obvious when considering rents for differently sized units. When displayed this way, the data once again reveal the difficulty of finding potentially affordable units with two or more bedrooms outside of Ward 7 and 8 (Figure 12).⁴⁸ For rental apartments with two bedrooms, a household able to spend \$1,400 on rent each month can potentially afford units in three quarters of the buildings in Wards 7 and 8. To have a similar reach, the monthly rent budget for the same household would have to extend up to \$3,720 in Ward 2 and \$3,340 in Ward 6. The gaps are greater for units with three or more bedrooms: the top quartile rent is under \$1,600 in Wards 7 and 8, approximately \$4,600 in Wards 3 and 6, and north of \$5,300 in Ward 2, where such large units are rare.

⁴⁸ It is important to note that rent coverage by CoStar accounts for about 57 percent of all units tracked by administrative data and becomes increasingly weak when one considers the unit size. The details on CoStar's coverage are provided in the Methodology Appendix.

Figure 12 – Rent quartiles by ward and unit size

		25th percentile	Median	75th percentile
Studio	Ward 1	\$1,209	\$1,453	\$1,631
	Ward 2	\$1,475	\$1,711	\$1,961
	Ward 3	\$1,342	\$1,505	\$1,662
	Ward 4	\$925	\$1,106	\$1,313
	Ward 5	\$1,006	\$1,042	\$1,343
	Ward 6	\$1,373	\$1,741	\$2,023
	Ward 7	\$738	\$862	\$917
	Ward 8	\$843	\$886	\$999
One bedroom	Ward 1	\$1,366	\$1,817	\$2,028
	Ward 2	\$1,832	\$2,120	\$2,488
	Ward 3	\$1,590	\$1,775	\$1,995
	Ward 4	\$1,057	\$1,246	\$1,499
	Ward 5	\$1,050	\$1,223	\$1,442
	Ward 6	\$1,342	\$1,783	\$2,372
	Ward 7	\$814	\$927	\$1,060
	Ward 8	\$904	\$1,000	\$1,069
Two bedrooms	Ward 1	\$1,718	\$2,446	\$2,945
	Ward 2	\$2,535	\$3,009	\$3,715
	Ward 3	\$2,284	\$2,610	\$3,078
	Ward 4	\$1,264	\$1,511	\$1,871
	Ward 5	\$1,311	\$1,574	\$1,952
	Ward 6	\$1,852	\$2,665	\$3,338
	Ward 7	\$987	\$1,192	\$1,389
	Ward 8	\$1,019	\$1,156	\$1,312
Three bedrooms	Ward 1	\$1,660	\$2,056	\$3,214
	Ward 2	\$3,057	\$3,986	\$5,268
	Ward 3	\$3,890	\$4,004	\$4,586
	Ward 4	\$1,657	\$1,948	\$2,637
	Ward 5	\$1,875	\$2,291	\$2,921
	Ward 6	\$1,963	\$3,075	\$4,628
	Ward 7	\$1,413	\$1,578	\$1,673
	Ward 8	\$1,324	\$1,501	\$1,684

Source: CoStar

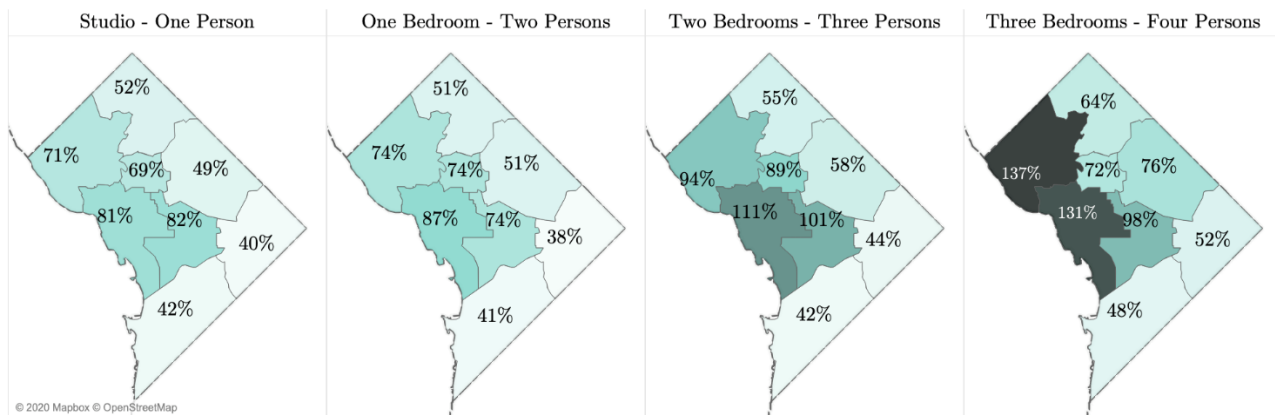


What do these rents mean for affordability? To assess this question, this report compares the income necessary to keep rent affordable (we use this term to mean that rent expenditure is under 30 percent of the renter household income) to the Area Median Income, as this comparison is the basis of affordability programs in the District. The median income for a single-person household is used for a studio apartment, a two-person household for a one-bedroom unit, a three-person household for a two-

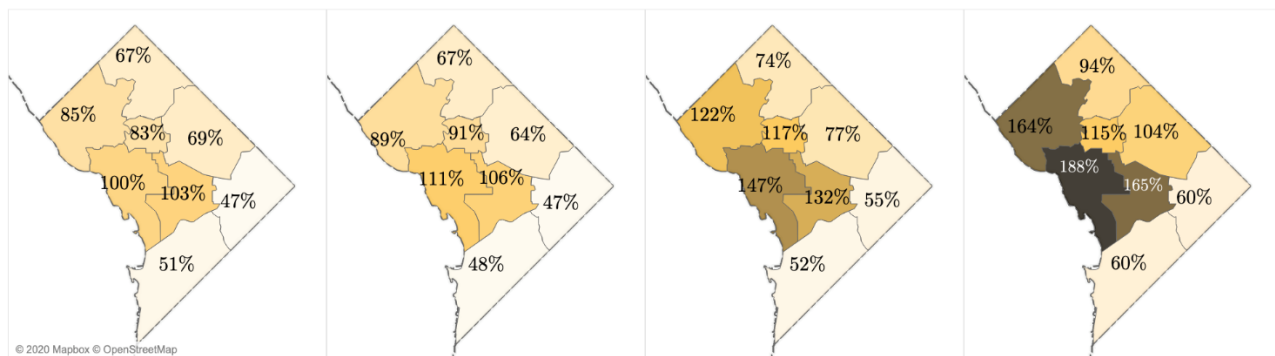
bedroom unit, and a four-person household for a three-bedroom unit. This analysis shows that larger households must earn more relative to the Area Median Income to be able to afford a unit, and the income threshold for affordability increases faster in neighborhoods west of the Anacostia River. For example, a single-person household earning the full Area Median Income (\$84,900 for 2019) can afford units in three quarters of rental apartment buildings across any ward in the city (notes as the 75th percentile rent below). But for a family of four earning the Area Median Income (\$121,300 for the same year) 75th percentile rents are affordable in Wards 4, 7, and 8 only, and, realistically, only in Wards 7 and 8, where larger units are more common.(Figure 13, bottom panel).

Figure 13 – Share of area median income a household must earn to afford a rental apartment, by ward and unit size

Minimum share of Area Median Income necessary to keep rent affordable for median rent in the ward



Minimum share of Area Median Income necessary to keep rent affordable for 75th percentile rent in the ward



Source: CoStar



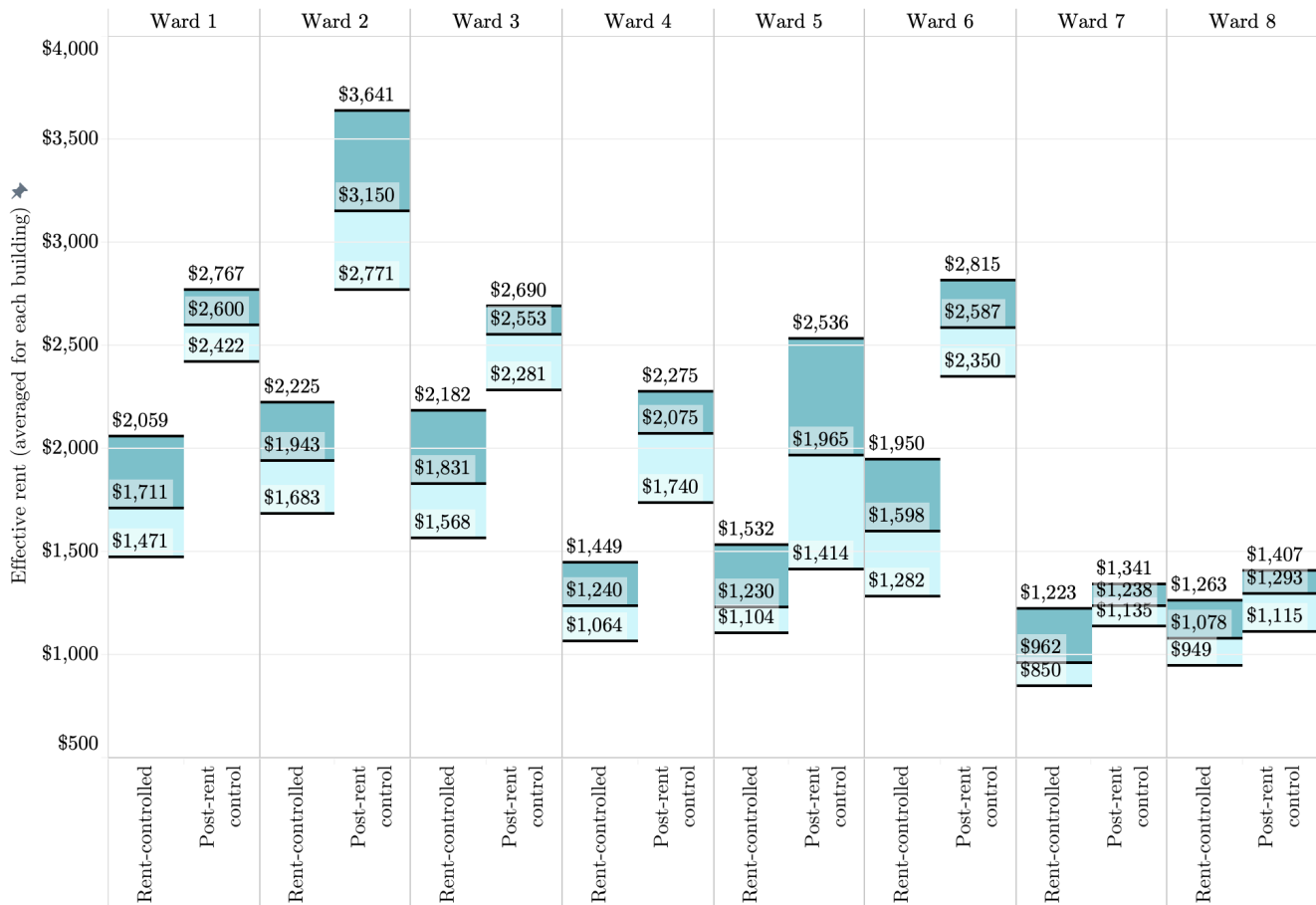
Rents in rent-controlled units

Rents in rent-controlled buildings can be significantly below the rents in uncontrolled buildings (Figure 14). CoStar data suggest that the median rent-controlled building in the District commands a rent of

\$1,442 per month (averaged across all its units). This is less than 60 percent of the rent the median unit commands in the uncontrolled stock (\$2,554 per month). The median rent for the rent-controlled stock, regardless of unit size, is highest in Ward 2 (\$1,943 per month) and lowest in Ward 7 (\$962 per month). In Ward 3, where 85 percent of the taxable rental apartment units are subject to rent control, the monthly rent in the median rent-controlled building is nearly \$720 lower than in the median uncontrolled building. In Ward 6, where the rent-controlled stock is 21 percent of all units in rental apartments, this difference is nearly \$1,000.

Figure 14 – Rent quartiles in the rent-controlled and post-rent control apartment buildings

25th, 50th, and 75th percentile rent



How prominent are rent-controlled units in the ward?

	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
% rent-controlled units in all rental apartments	77%	75%	85%	80%	58%	21%	91%	96%

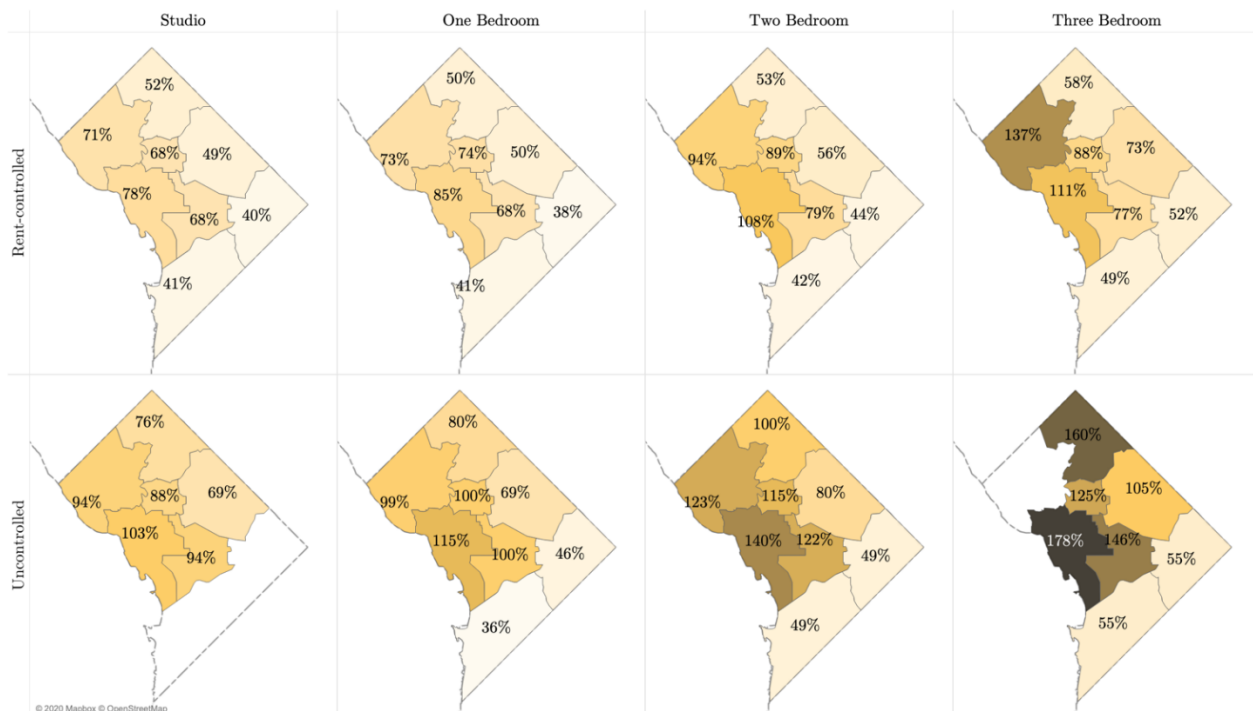
Source: Housing database compiled by the D.C. Policy Center; rents from Costar.

Note: Excludes buildings under construction. The data presented are average effective rents per building (rents after concessions).

Rent control laws have the smallest impact on rents in Wards 7 and 8, suggesting that rents in these wards have been growing at a slower pace than the rest of the city: the median rent differentials between the rent-controlled and post-control stock in these wards are under \$300. This is not necessarily trivial, as it represents a 22 percent discount over the post-rent control stock in Ward 7, and a 16 percent discount in Ward 8. But it is relatively small compared to elsewhere in the city, where the rent-controlled stock can offer a discount of up to 40 percent.

That there are sizeable differences between the rents in rent-controlled units and uncontrolled units may seem unsurprising, but it is an important finding. The interest in tightening rent control laws in the District of Columbia is sometimes driven by the concern that the features of the District's rent control laws that allow faster rent increases than the standard CPI+2%—for example, when units turn over or remain vacant for long periods of time, or when tenants sign a voluntary agreement to increase rents in return for amenities—have too much of an impact. But the prevailing rents show wide rent differentials between the rent-controlled and uncontrolled stock, suggesting that the exceptions to the CPI+2% rule may be weakening the impact of rent control, but not diluting it in a way that makes rent control irrelevant.

Figure 15 – Share of Area Median Income necessary to be able to afford the median unit, by rent control status and ward



Source: Housing database compiled by the D.C. Policy Center and CoStar.

The impacts of the rent differentials between the rent-controlled and the uncontrolled stock becomes more obvious when one compares the affordability of rent-controlled units to uncontrolled units. As before, this chapter uses the term affordable to mean that the rent expenditures are at most 30 percent of the annual household income.

Across all wards in the District, the median rent for studio apartments is affordable at about 80 percent of Area Median Income for the rent-controlled stock—that is, an annual income of \$67,950 for single person household. To rent a studio apartment from the uncontrolled stock in Ward 3, and keep their rent expenditure under 30 percent of their income, the same household must earn \$87,500—a nearly \$20,000 difference in annual income (Figure 15). A two-person household can afford a one-bedroom rent-controlled unit in Ward 1 if they earn \$71,800 (74 percent of Area Median Income), but their income needs to rise by more than \$26,000 to afford an uncontrolled unit in the same ward (\$97,050 or 100 percent of the Area Median Income). The similar income differential that would render an uncontrolled one-bedroom equally affordable as a rent-controlled one is \$31,000 in Ward 6, but only \$7,700 in Ward 7. And the additional income necessary to move from a rent-controlled three-bedroom apartment to an uncontrolled one while keeping rent burdens the same is \$39,000 in Ward 5, \$81,000 in Ward 2, and \$128,000 in Ward 4.

Despite these large differences in rents, rent control has not created a broad level of deep affordability (defined to mean that the unit is affordable at 30 percent of Area Median Income) across the city, and especially for larger households. The units that are affordable to very low-income residents are those in Wards 7 and 8 that are smaller than three bedrooms. These median building in these wards, regardless of their coverage by rent control laws, can serve households that earn 50 percent of Area Median Income, and only about one tenth of the buildings in Wards 7 and 8 have low enough rents to be affordable at 30 percent of Area Median Income for households with one to two persons.

2. Can rental apartments meet affordability needs in the District?

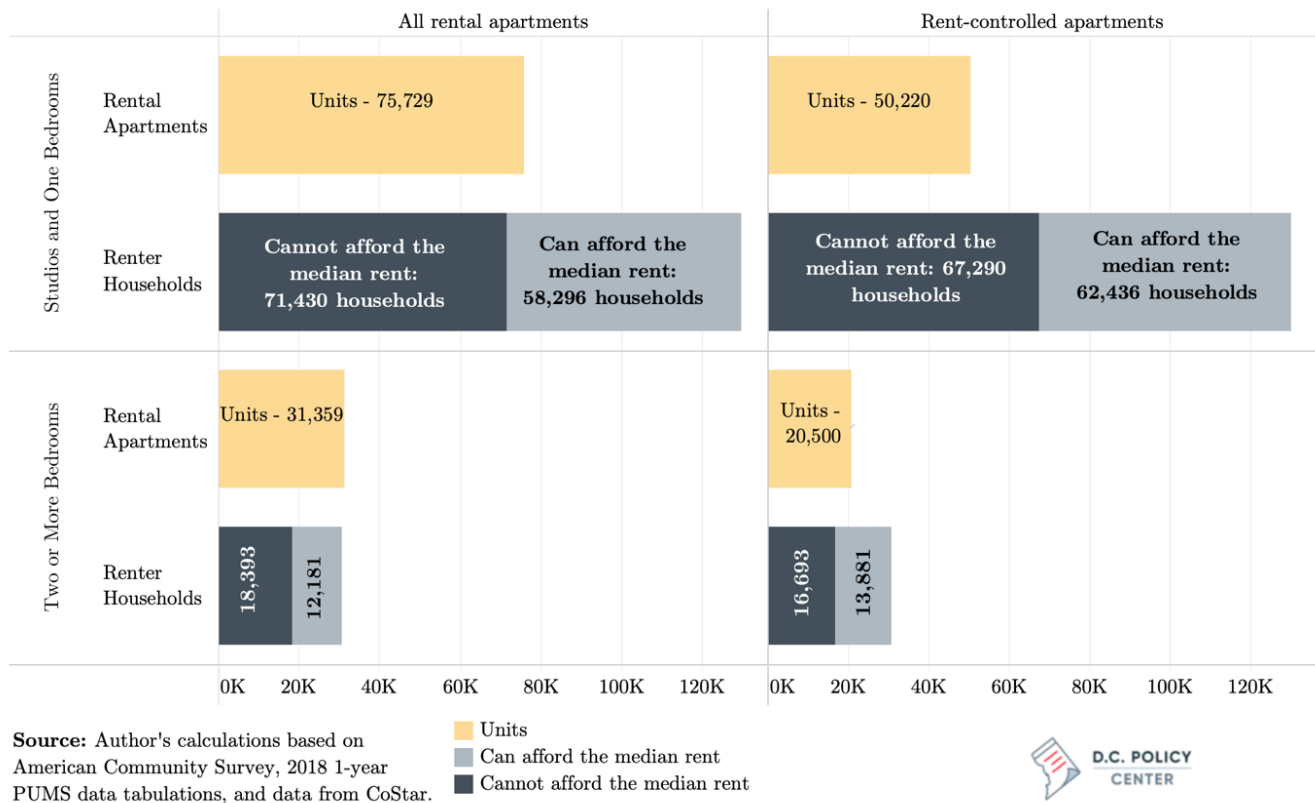
Of the District's 124,600 rental apartments, approximately 107,000 are fully taxable, and approximately 72,800 units appear to be under rent control. An analysis of the District's renters and their incomes shows that there are simply too few rental apartments to serve the demand from renter households.

First, there are not enough rental apartments to serve all renters in the District. The District has an estimated 162,000 renter households with varying incomes, but only 124,600 apartments, including subsidized units. The remaining renters are served by the shadow rental market.

Second, a significant share of households with high rent burdens are small households (Figure 16). Given the prevailing median rents in the entire rental apartment inventory, an estimated 71,430 of

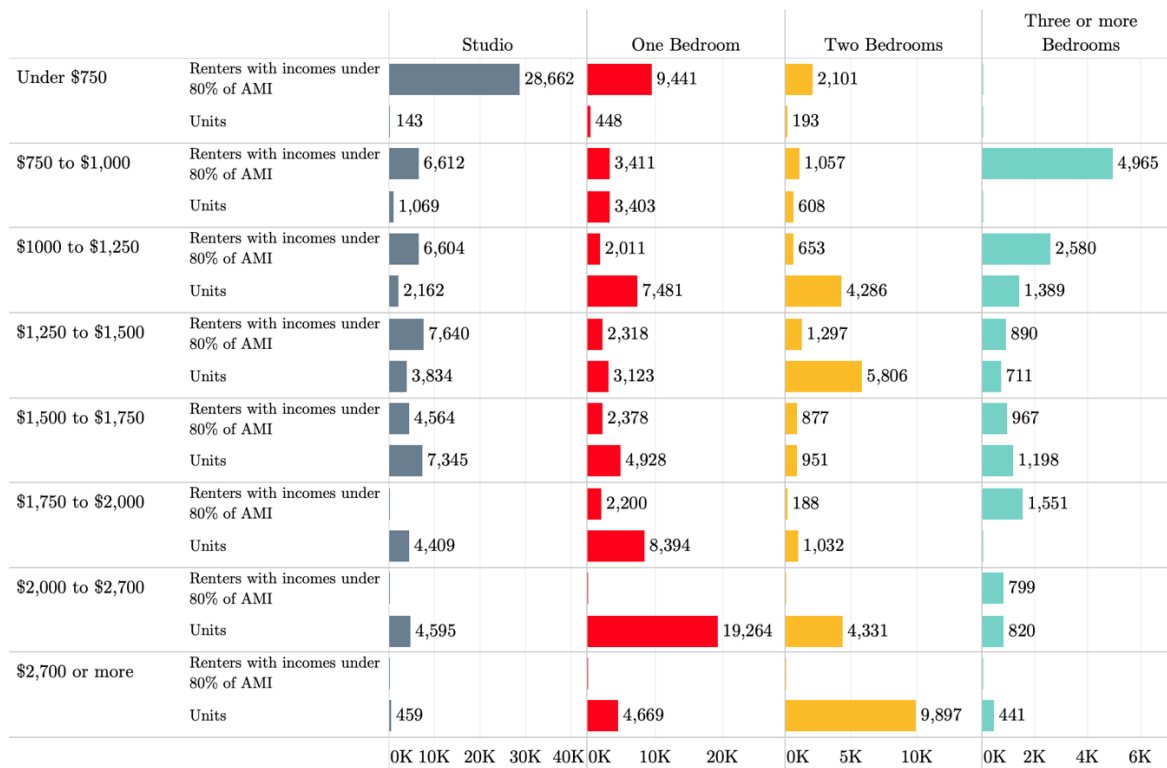
households with one or two persons do not make enough to keep their rent expenditures under 30 percent of their income. And they must compete against approximately 58,300 households that earn more. Rent-controlled units have lower rents, and judging by median rents, could potentially serve many more low-income households without burdening them—67,290 households earn enough to live in a rent-controlled unit unburdened. But there are even fewer units—50,220—available to cover these lower-income households, even if they exclusively housed renters from this income bracket.

Figure 16 – Rental apartments by size and rent control status, compared to the number of households that can afford to live in them



Third, there is a lot of pressure from the bottom. Of the 93,000 households that earn less than 80 percent of Area Median Income, 38,000 can pay at most \$750 to keep housing affordable. To compare, there appear to be fewer than 800 rental apartment units with a rent below \$750 (Figure 17). As a result, these renters must seek housing in more expensive units. This pressure from the bottom is intensified by the 17,000 households that earn between \$30,000 and \$40,000 per year, and therefore should be paying a rent of \$750 to \$1,000 per month to keep their rents affordable. However, there are only 5,000 rental units that charge this rent—most of them one-bedroom apartments.

Figure 17 – Affordable rents for renters earning under 80 percent of Area Median Income and the number of apartment units at that rent band



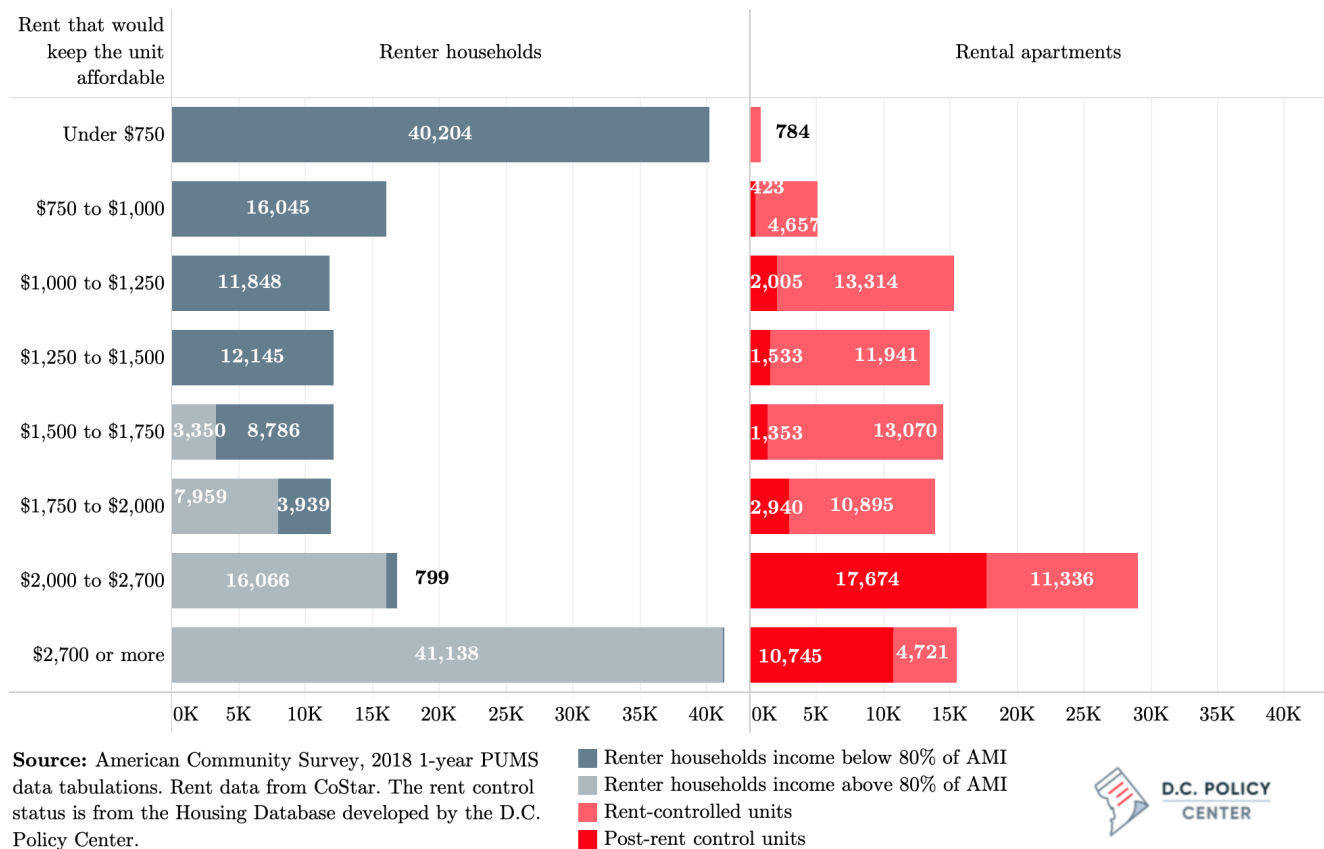
Source: Household Incomes are from the ACS 2018 1-year PUMS data tabulations. Rents are from CoStar. The units are from the housing database developed by the D.C. Policy Center.



Fourth, there is also a lot of pressure from the top. Competing with the 40,200 renter households who must keep their monthly rents under \$750, are the 41,100 households that conceivably can spend over \$2,700 per month on rent and still not be rent-burdened (Figure 18). Of this group, all have incomes above 80 percent of the Area Median Income (by definition), and therefore understandably are not a priority under the District's affordability programs. For them, the District's rental apartment buildings offer fewer than 15,500 units with rents over \$2,700 per month (including 4,700 units under rent control). With their higher incomes, these households could help drive rents up for units that are not under rent control. But for the rent-controlled units, the higher-income renter households simply compete on the same terms as lower-income households.

Given these pressures on rental apartment units, how are the renters' needs being met? For that, we turn to the shadow rental market.

Figure 18 – All renters and rental units in apartment buildings, by income status and rent control status



3. Is the shadow rental market closing the affordability gap?

In an overall market with more renter households than apartment units, the shadow rental market plays a substantial role in meeting demand for rental housing. This report has shown previously that the shadow rental market is an important source of larger rental units. In this section, the analysis also shows that it is an important source of affordability.

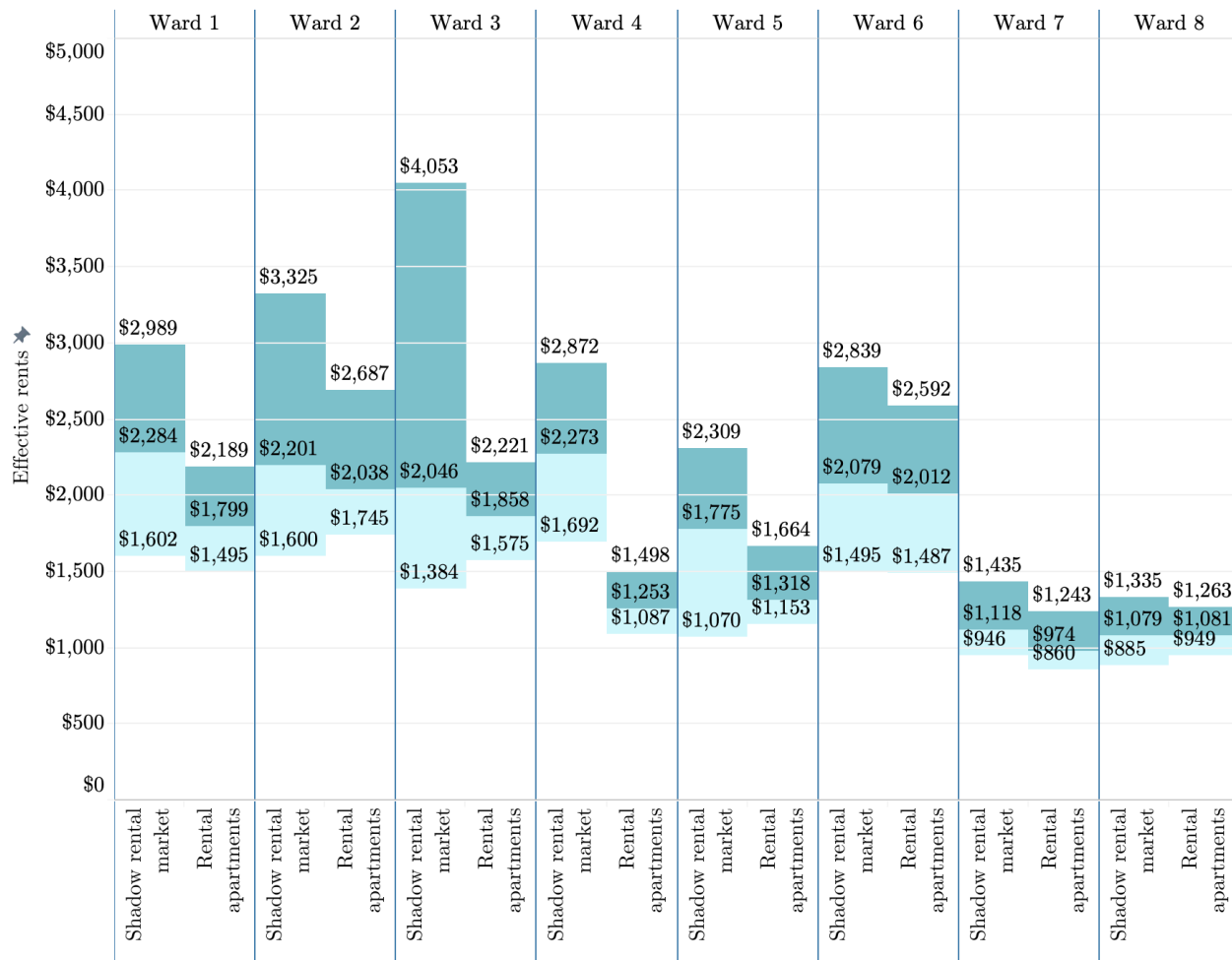
CoStar data do not include comprehensive information on rents for the shadow rental market. Therefore, this report uses information from tax records to impute the rents that landlords might be able to command if they put their units in the shadow rental market. The methodology for deriving potential monthly rents is explained in [Appendix III](#) (on page 87).

Based on this analysis, the potential median rent for the District's shadow rental market is estimated to be \$1,868 for rental apartment units. The median rent gaps are greatest in Ward 1 (\$480) and Ward 5 (nearly \$1,000), and smallest in Wards 6 and 8 (under \$100). The rents in the shadow rental market are also more varied—with bigger differences between the lower- and upper-quartile rents. However, this is

largely a reflection of the variation in types of units, which could include basement apartments as well as mansions.

This analysis shows that in every ward except Ward 8, the median rent for the shadow rental market is greater than the median rent per month, or about \$410 more than the median rates that prevail for units in rental apartment buildings (Figure 19). This estimate is characterized as “potential” because, unlike the rents for apartments (which are directly collected from each building), the estimated rents for the shadow rental market are imputed from taxable assessments.

Figure 19 – Rent quartiles in the shadow rental market compared to rental apartments, by ward



Source: Housing daatabase compiled by the D.C. Policy Center and CoStar.



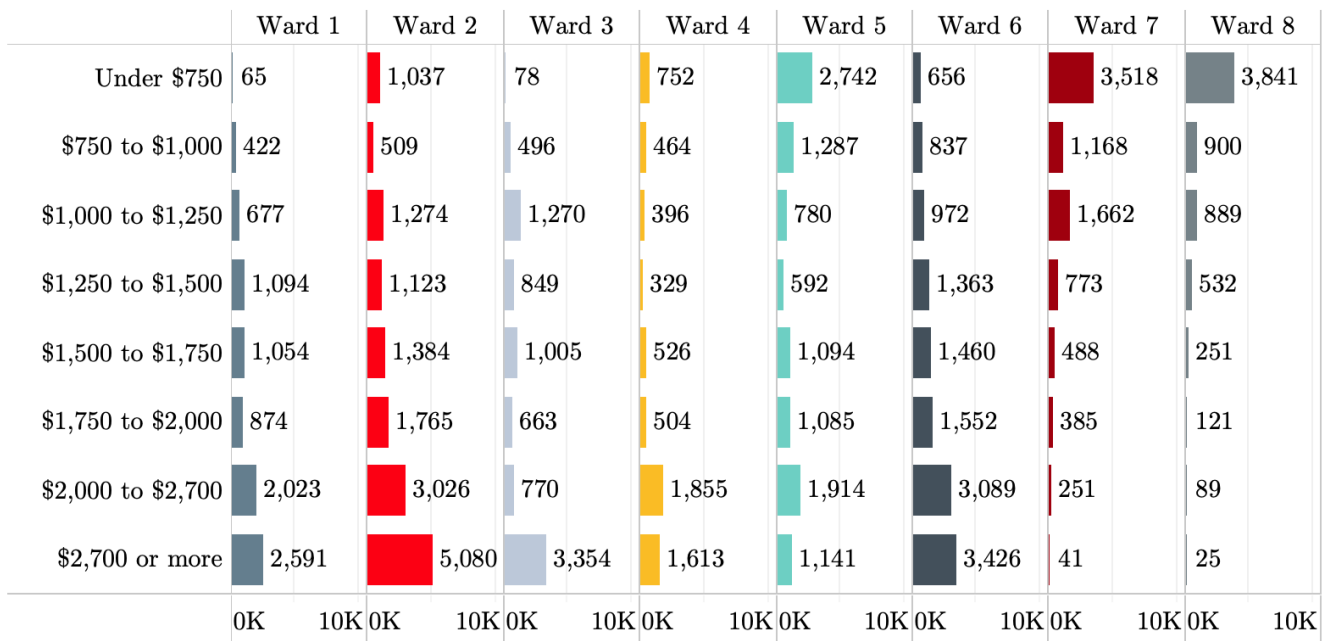
By offering a combination of both low-priced and high-priced units to renters, the shadow rental market relieves the pressures on the rental apartment buildings both from the bottom and from the top.

Grouping the shadow rental market units by their estimated rents, there appear to be 12,700 units that

could potentially serve the lowest end of the rental market, with rents at or below \$750 per month (Figure 20). Most of these units are in Wards 5, 7, and 8.

There are many high-priced units too: an estimated 17,000 units, or approximately 22 percent of the units in the shadow rental market, likely command monthly rents above \$2,700 per month. This is outside the affordability threshold for any household that earns less than 80 percent of Area Median Income, regardless of household size. Most of these units are in Wards 2, 3, and 6.

Figure 20 – Rents in the shadow rental market, by rent band and by ward



Source: Housing database compiled by the D.C. Policy Center.



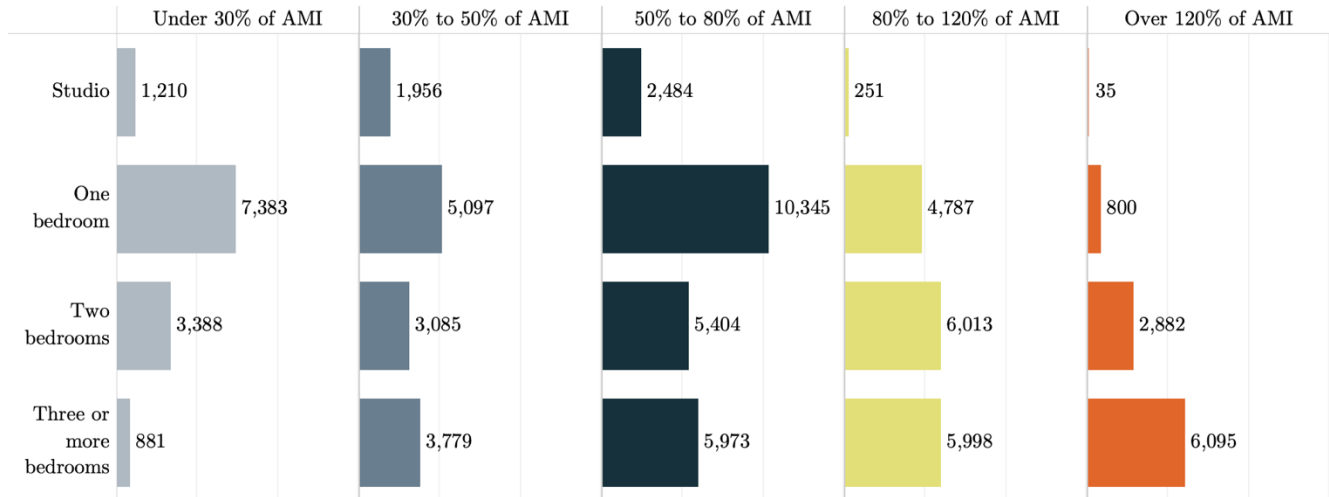
What does this mean for affordability? The shadow rental market might supply as many as 51,000 units that are affordable at 80 percent of Area Median Income, based on these estimates, and potentially 13,000 units that are deeply affordable, at 30 percent of Area Median Income (Figure 21).⁴⁹ Among the units affordable at 80 percent of the Area Median Income nearly half are one-bedrooms, one quarter are two-bedrooms, and one in five have three or more bedrooms.

The estimated 11,000 shadow rental market units that meet some level of affordability test for families of four or more are an important source of housing and reduce some displacement pressure. But the shadow rental market, too, fails to provide deep affordability for families of three or more. Approximately 3,400 units can potentially be affordable for a family of three with an income at or

⁴⁹ This estimate is based on the 72,000 shadow market units for which researchers can conduct this analysis.

under 30 percent of Area Median Income, and fewer than 900 units can potentially be affordable for a family of four that earns the same.

Figure 21 – Units in the shadow rental market, by affordability criteria and by size



Source: Housing database compiled by the D.C. Policy Center.



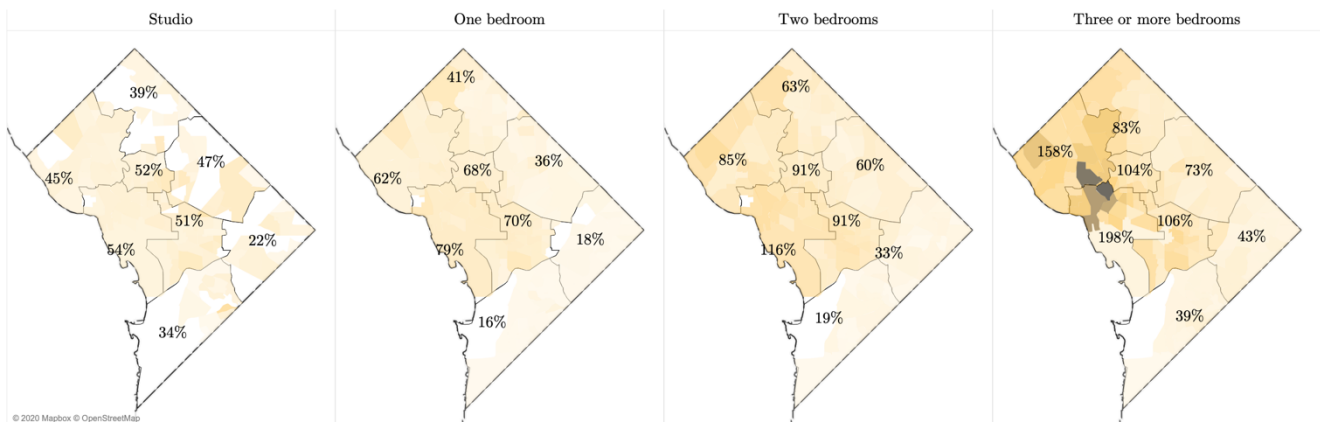
Despite higher median rents, the shadow rental market offers a greater variety of units at a greater variety of rents than in rental apartments, including the rent-controlled units (Figure 22). The median rents for smaller shadow rental market units—studios and one-bedroom units—are lower than the median for comparable rent-controlled units. As an example, the median one-bedroom unit in the shadow rental market can potentially be affordable for a household of two earning under \$64,000 per year, whereas a similarly sized unit in a rent-controlled building would require \$10,000 more in income. Why does this difference exist? It is likely because of the type of units—conversions from single-family homes into multiple units including basement apartments—can be smaller in size than one-bedroom apartments in rent-controlled units, or possibly have separately metered utilities that add to the monthly cost. Rents in the shadow rental market could also be lower because of lower levels of services and maintenance where the tenants do not receive services common in rental apartment buildings such as concierge, could be responsible for the general upkeep of the unit, or receive limited or no support from the landlord to maintain the grounds.

For larger units, rent-controlled stock typically offers lower rents, but only west of the Anacostia River. For example, in Ward 3, a family of four must earn over one and a half times the Area Median Income (nearly \$183,000 in 2019) to be able to afford a shadow rental market unit of three or more bedrooms—that is, \$19,000 more than what is required for a rent-controlled unit in the same ward. But this does not mean that households have a large number of options to choose from in rent-controlled buildings: the shadow rental market offers 22,000 units with three or more bedrooms (25 percent of all shadow rentals) and rent-controlled apartments offer fewer than 3,000 (four percent of all rent-controlled units).

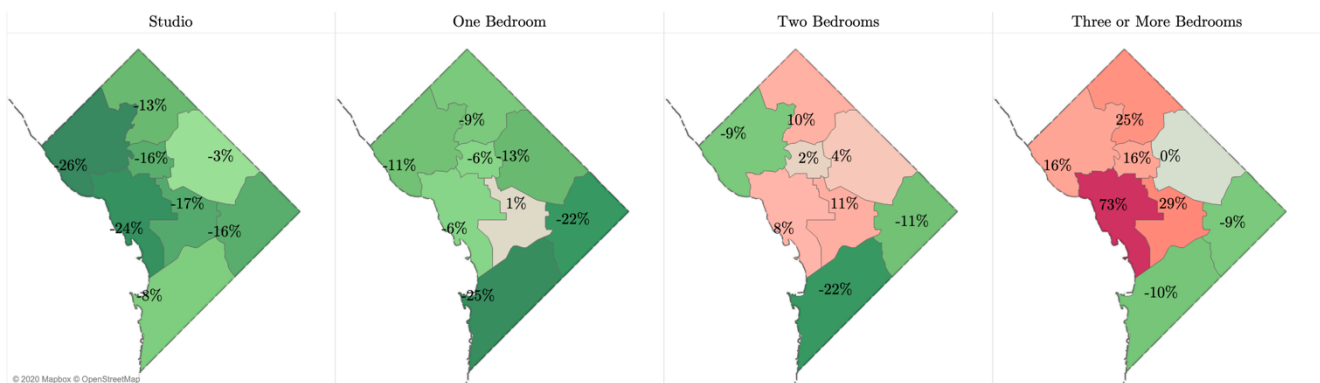
Finally, the shadow rental market provides affordability to larger households in almost every part of Wards 7 and 8: For the median three-bedroom unit, a family of four would have to earn 43 percent of the Area Median Income in Ward 7 (\$52,150 in 2019) and 39 percent in Ward 8 (\$47,300)—an amount \$9,000 to \$12,000 less than the required incomes for the rent-controlled stock in these same wards.

Figure 22 – Affordability of the median home, shadow rental market and the rent-controlled stock

Share of AMI required to keep the median shadow rental unit affordable by unit size and ward



Shadow rental market discount (or premium) over the median rent-controlled unit



Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



This chapter has shown that rental housing is an important source of affordability, and that both rent-controlled apartments and the shadow market are important to provision of affordable units. The next chapter examines whether the city's rental housing market can also create economic inclusion by mixing renters of different income levels across neighborhoods.

FOUR | HOW MUCH DOES THE DISTRICT OF COLUMBIA'S RENTAL HOUSING ADVANCE ECONOMIC DIVERSITY AND INCLUSION?

The District of Columbia is an economically segregated city where higher-income households and lower-income households typically live far away from each other (Appendix Exhibit 25). In previous research, the D.C. Policy Center linked the city's economic segregation to its housing market: neighborhoods where housing is most affordable are separate and far away from neighborhoods where housing is most expensive.⁵⁰ This chapter examines whether rental housing is helping break the geographic link between housing costs and resident incomes by creating opportunities for lower-income residents to live in higher-cost (and often better-resourced) neighborhoods.

The financial barriers that households must overcome in order to rent a unit are lower than the financial barriers to buying, so rental housing is generally thought to serve those who have fewer means. But, as shown in the previous chapter, there is a substantial amount of pressure on the District's rental market from high-income households. Where rents can rise, these households can bid them up. Rent-controlled units, which can be found everywhere in the District, and on balance have lower rents, can potentially be a means of creating more inclusive neighborhoods if they can serve lower-income residents. Shadow rental market units, on the other hand, provide a greater mix of rents across neighborhoods and unit sizes.

This chapter compares rent-controlled housing to the shadow rental market to examine the extent to which each contributes to creating economically diverse neighborhoods in the District of Columbia. This analysis shows that rent-controlled housing is still somewhat economically segregated. Across neighborhoods where rents are high, renters' estimated rent burdens are relatively low, and where rents are low, renters' estimated burdens are high. The shadow rental market does appear to distribute housing burdens more evenly across neighborhoods of a ward, and across the entire city, suggesting that it could be a greater source of economic inclusion.

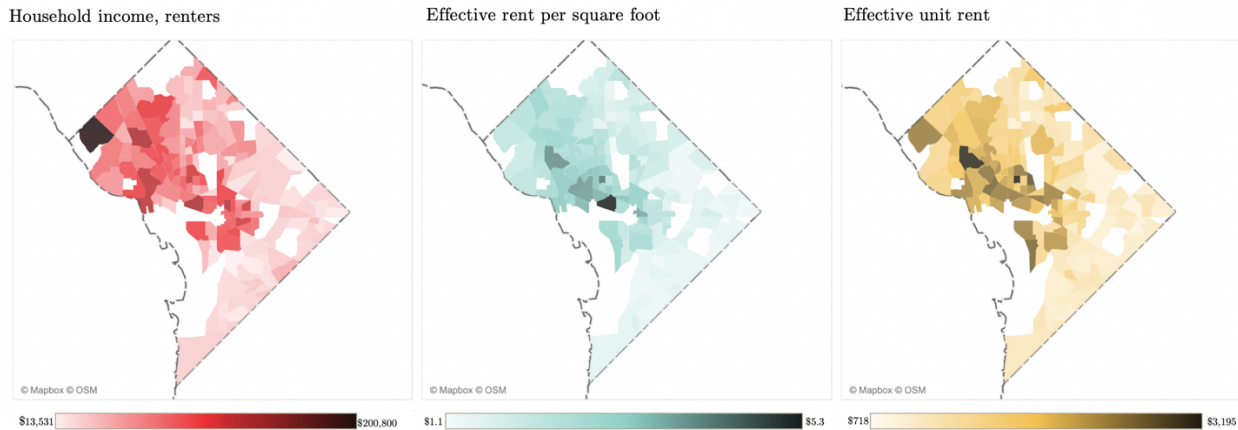
The presence of rent-controlled housing is positively correlated with longer tenure and a smaller loss of residents of color, suggesting that rent-controlled stock, at some level, could be playing a role in mitigating displacement.

⁵⁰ Sayin Taylor, "Taking Stock of the District's Housing Stock."

1. Is rental housing in the District a source of economic diversity?

Incomes and rents that prevail across rental apartments do not always move together in the District of Columbia. Renters' household incomes are highest in Wards 2, 3, and 6, and lowest in Wards 5, 7, and 8 (Figure 23, left panel). Rents—whether measured per square foot or per unit—also loosely follow this pattern, but the relationship between renter household incomes and rents is not particularly strong.

Figure 23 – Incomes and rents that prevail in rental apartments across the District of Columbia, 2019



Source: Table S2503, Financial characteristics ACS five-year data summary for 2013-17



Correlation coefficients for income, rents, and housing values

Variable 1	Variable 2	Measured at the level:	Correlation Coefficient
Median renter household income	Average effective rent per sq. ft.in rental apartments	Building (for rents)	0.56
Median renter household income	Average effective rent per sq. ft.in rental apartments	Building (for rents)	0.59
Median renter household income	Median effective rent per sq. ft.in rental apartments	Census tract	0.69
Median renter household income	Median effective rent per unit in rental apartments	Census tract	0.69
Median renter household income	Estimated median rent in the shadow rental market	Census tract	0.66
Median homeowner household income	Median value for a home with a mortgage	Census tract	0.90

Source: ACS Table 2503, Financial Characteristics, 2014-18 ACS Five-Year Estimates and CoStar.

The correlation coefficient between renter incomes and effective rents per square foot is 0.56 when measured for buildings⁵¹ and 0.68 when measured for census tract.⁵² Similarly, the correlation coefficient

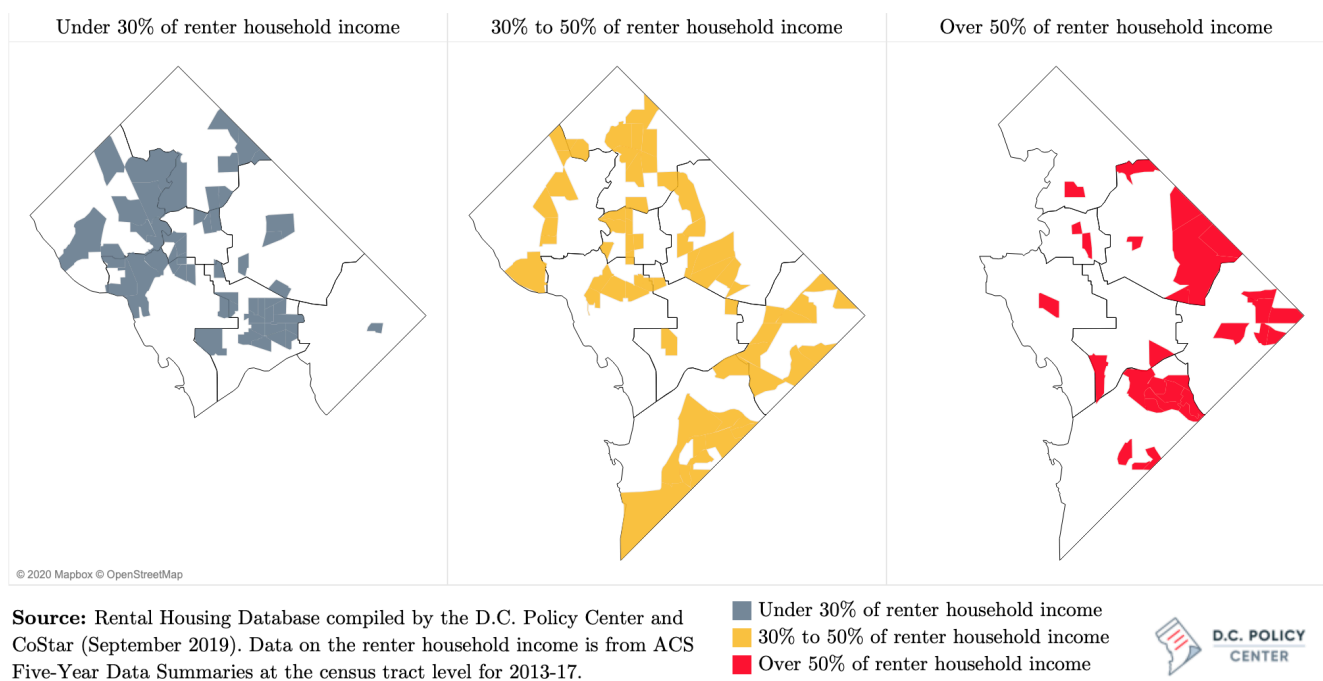
⁵¹ Information on the incomes of renters in each apartment building is not available. For this exercise, researchers instead used the renter income that prevailed in the same census tract as each apartment building.

⁵² In this exercise, researchers correlate renter incomes in each census tract to the median rents that prevailed across all rental apartments in that census tract.

between renter household income and unit rents is 0.59 when measured at the building level and 0.69 at the census tract level. The shadow rental market displays the same feature: the correlation coefficient between median renter income and the median rent measured across census tracts is 0.69. In comparison, incomes and home values are much more strongly related for homeowners: the correlation coefficient between household incomes for homeowners with a mortgage and housing value is 0.90 when measured at the census tract level (Figure 23, bottom table).

Can this weaker relationship between rents and renter incomes across different neighborhoods be an indicator of greater income mixing across rental housing compared to owner-occupied housing? The answer is yes, if units with high rents and units with low rents can be found close to each other and serve renters of different income levels, thus creating economic inclusion. But this weaker link between renter incomes and rents could also simply be a consequence of rent control. Since rent control caps rent growth but does not have income targeting, higher-income households can as easily occupy lower-priced units, breaking the link between incomes and rents. This would not be an indicator of economic inclusion, just inflexible rents.

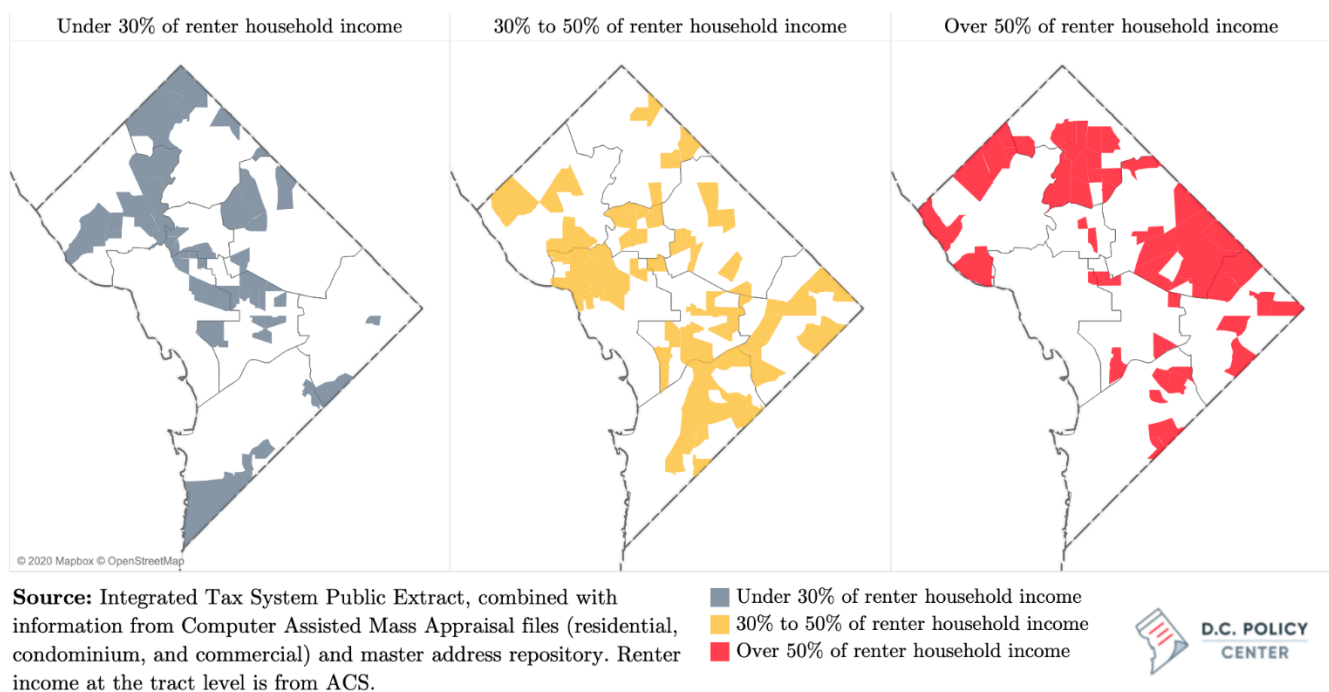
Figure 24 – Renter's estimated rent burdens for the rent-controlled stock, by census tract



To the extent that renters of disparate income levels are still sorted into disparate neighborhoods, D.C.'s rental housing could be economically segregated. While this report does not have any direct evidence of such economic segregation (this would require household level income data, such as from tax returns, be linked to a D.C. address in a rent-controlled building), it indirectly gauges the existence of economic segregation by estimating rent burdens in high- and low-rent neighborhoods. A comparison of

renters' estimated burdens shows that across the District's rent-controlled units, renters' estimated burdens are higher in places where rents are lower, and renters' estimated burdens are lower where rents are higher. Over one third of the census tracts with rent-controlled housing are in neighborhoods where the median renter income is high enough to keep rent burdens under 30 percent. But not even one of these tracts is in Ward 8, even though the median rent-controlled unit for all sizes in Ward 8 are affordable at under 50 percent of Area Median Income. In Ward 7, there appears to be only one such tract. In Ward 4, where the estimated rents in rent-controlled buildings are only about \$200 more expensive, only in one tract estimated rent burdens were severe (exhausting over half of renter income), compared to 16 such tracts east of the Anacostia River (Figure 24).

Figure 25 – Renter's estimated rent burdens for the shadow rental stock, by census tract



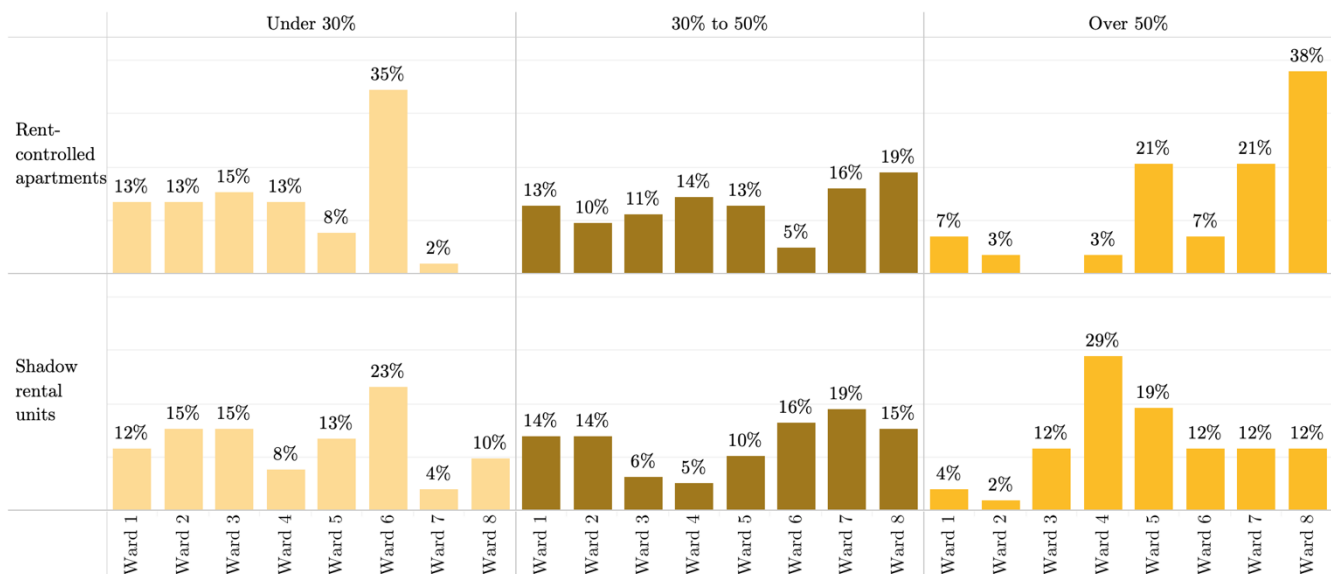
Units in the shadow rental market—though on average more expensive—have kept housing burdens lower in more neighborhoods across the District of Columbia.⁵³ An estimated 28 percent of tracts across the city have shadow rental units in which renters can live without being burdened, seven of those tracts are east of the Anacostia River (compared to only one for rent-controlled buildings), and five are in Ward 8 (compared to none). In Ward 4, in half the tracts with rent-controlled buildings, rent burdens are under 30 percent; for shadow rental units, this share is one in five (Figure 25).

⁵³ This is partly because the shadow rental market has a larger footprint than rent-controlled units: We could find shadow rental market units in 170 of the 177 census tracts in the District, but only 143 tracts have rental apartments under rent-control. There is also more variety in quality, allowing a greater rent variation.

The shadow rental market also distributes estimated housing burdens more evenly across the city compared to the rent-controlled stock. Looking at the distribution of census tracts where median rents in rent controlled buildings would not burden the median renter in the same tract, this analysis finds 35 percent of such tracts are in Ward 6 (due to higher renter incomes and higher rents), while only 2 percent are in Ward 7, and none are in Ward 8 (in both cases, due lower incomes and lower rents) (Figure 26, top left panel). The shadow rental market creates a more even distribution of affordable tracts in the city with 4 percent in Ward 7 and 10 percent in Ward 8 (Figure 26, bottom left panel). Similarly, census tracts with extremely high estimated rent burdens—defined as those where the median rent is greater than 50 percent of median renter income—are concentrated in Wards 5, 7, and 8 for the rent-controlled stock (with none in Ward 3), and estimated burdens in the shadow rental market are much more evenly distributed across the eight wards compared to apartments in rent-controlled buildings.

Figure 26 – Distribution of census tracts across wards, by rent burden band

Share of census tracts across wards, by rent burden band



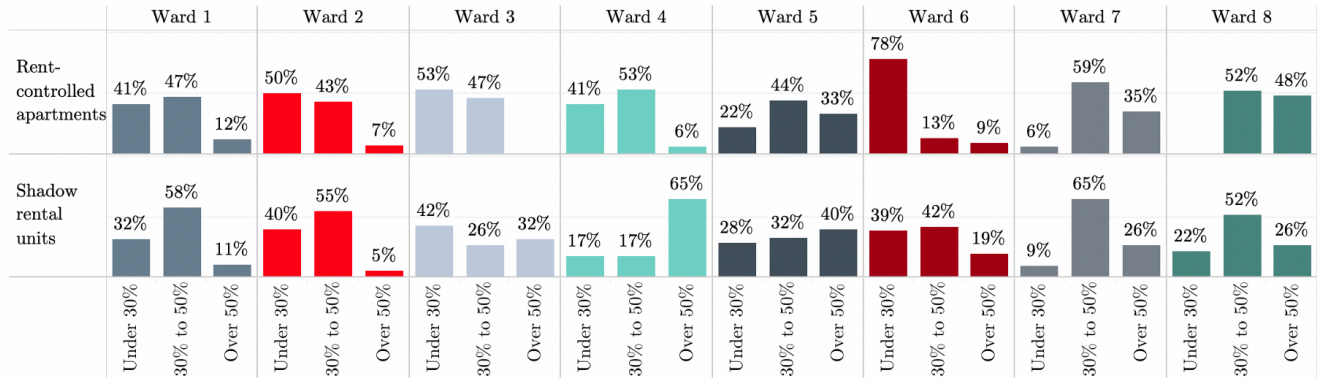
Source: American Community Survey, five-year summaries for 2014-2018 and the housing database compiled by the D.C. Policy Center.



Census tracts are also more evenly distributed across different burden bands within each ward for the shadow rental market. Ward 8's rent-controlled buildings offer the lowest rents in the city, yet, there does not appear to be any census tracts in this ward where the median renter income is sufficiently high to keep the rents affordable—that is, under 30 percent of household income (Figure 27). But when looking at the city's shadow rental units, 22 percent of the tracts in Ward 8 are affordable for the median renter. In contrast, in Ward 6, where rents in rent-controlled buildings are the highest in the

city, the share of census tracts where this rent is affordable (equivalent to 30 percent or less of the median renter households) is 78 percent. The share for the shadow rental market is 39 percent.

Figure 27 – Share of census tracts by estimated rent burdens within each ward



Source: American Community Survey, five-year summaries for 2014-2018 and the housing database compiled by the D.C. Policy Center.



2. Can rent-controlled housing help reduce the risk of displacement?

The concentration of low rents and high rent burdens in the same neighborhoods is a cause for concern, as additional increases in rents for rent-burdened households could result in displacement. One benefit of rent control to renters is that, by keeping rent growth predictable, it can allow renters to stay in the same unit over longer periods of time. This is particularly important in gentrifying neighborhoods with rapidly increasing housing prices.

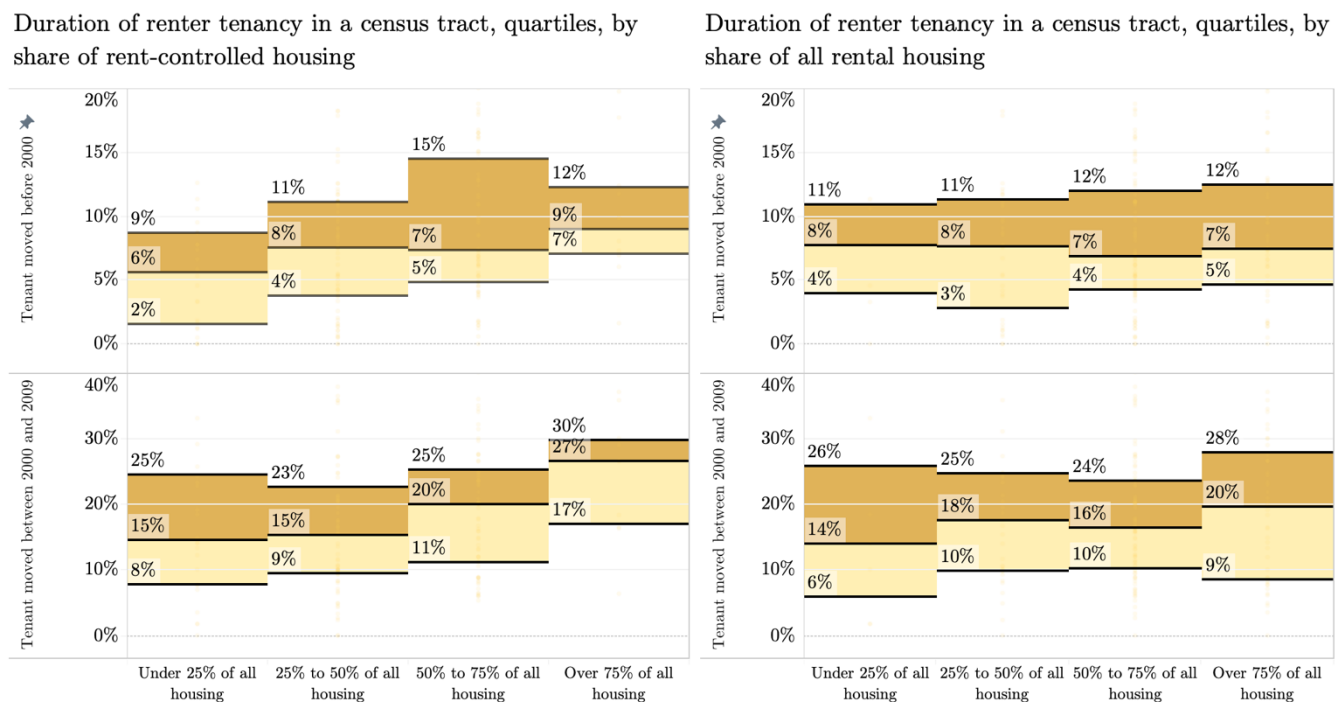
While direct evidence of increased tenure (at the household and unit level) is not available, indirect evidence—which links tenant tenure to the presence of rent-controlled units in the same census tract—suggests that more renters stay in place in census tracts where rent control units are a larger share of housing. Data from the five-year period between 2014 and 2018 suggest that an estimated seven percent of renters across the District reported moving into their current home sometime before 2000, the period before the city's population boom. Another 20 percent of renters reported that they moved into their current unit sometime between 2000 to 2009, the period during which the District added 30,000 new residents but lost 38,000 Black residents.⁵⁴

Comparing these reported tenancy durations to the share of rent-controlled units in a census tract shows that a strong presence of rent-controlled stock is positively correlated with a longer tenant

⁵⁴ Yesim Sayin Taylor, "Tax Practices That Amplify Racial Inequities: Property Tax Treatment of Owner-Occupied Housing," (D.C. Policy Center, 2018)."

tenure. Across tracts where rent-controlled units make up over 75 percent of the entire housing stock, nine percent of renters had moved into their unit before 2000. The same share is six percent for tracts where rent-controlled units make up less than one quarter of the housing stock.⁵⁵ For renters who moved in between 2000 and 2009, the probability of staying through 2018 is 12 percentage points higher in neighborhoods where the rent-controlled stock is at least three quarters of all housing stock, compared to census tracts where rent-controlled housing constituted less than one quarter of all housing (Figure 28).⁵⁶ This relationship does not extend to the entire rental stock. There does not seem to be any statistically significant relationship between tenancy duration and prevalence of all rental units (including non-controlled apartments and shadow rental market units). The variations of the concentration of all rental housing cannot at all explain the variations in tenant tenure.⁵⁷

Figure 28 – The share of renters who moved in during each period, by the prevalence of rent-controlled housing and total rental housing in the same census tract (quartiles)



Source: ACS 5-year summaries for 2014-2018 and the housing database compiled by the D.C. Policy Center.



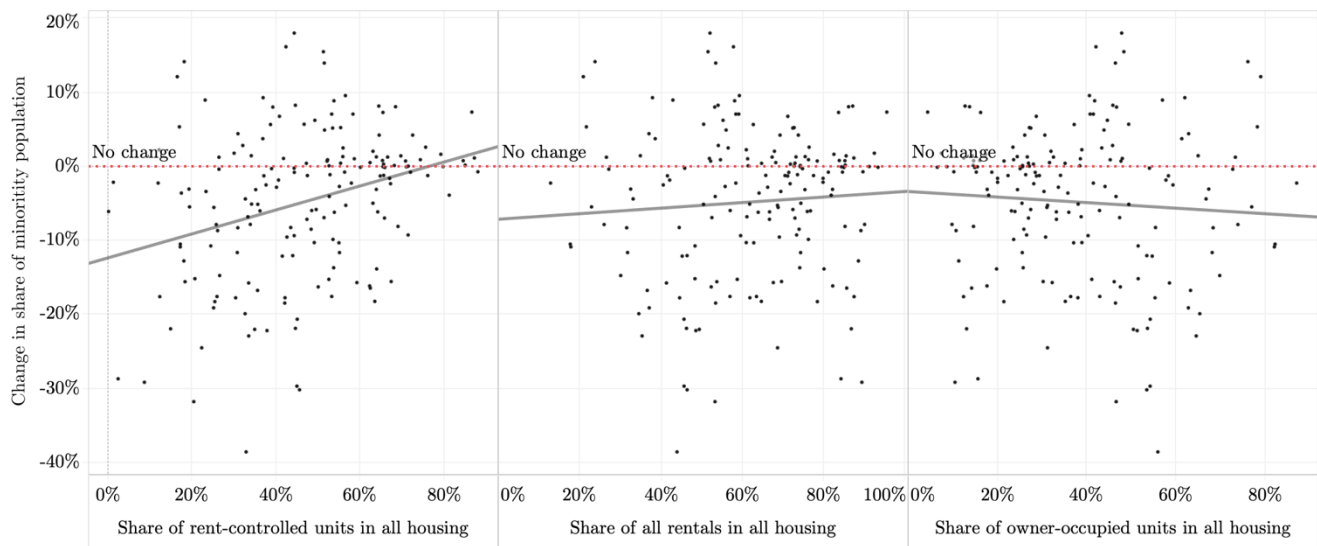
⁵⁵ Using a Wilcoxon-Mann-Whitney test, we find that this difference in median tenancy between tracts with under 25 percent and over 75 percent of their housing comprised of rent-controlled units, is statistically significant at the 5-percent level, but not at the 1-percent level.

⁵⁶ Similarly, this difference is statistically significant at the 5 percent level, but not at the 1 percent level.

⁵⁷ While Figure 25 shows that renters who moved into their unit between 2000 and 2009 are 6 percentage points more likely to still be in the same unit if their neighborhood is mostly made up of rentals, this difference is not statistically significant.

A strong presence of rent-controlled units also is positively correlated with a smaller loss (and in a handful of tracts, a modest gain) of minority population in the same census tract. Between 2010 and 2018, the District's minority population⁵⁸ increased by approximately 50,000 new residents (and its Black population increased by nearly 10,000),⁵⁹ but this overall growth does not mean that displacement of people of color has stopped. During this period, the share of people of color in the entire population increased only in 63 of 179 census tracts; in 113 tracts where population increased, the share of people of color declined. The median decline in these tracts was eight percentage points and the median change in the share of minority residents across all census tracts was negative two percentage points.

Figure 29 – Change in the share of minority population and the composition of the housing stock, by census tract



Source: American Community Survey, five-year summaries for 2014-2018 and the housing database compiled by the D.C. Policy Center. The term "minority population" refers to residents who are characterized as other than white in the American Community Survey.



The analysis finds that the losses were less severe across neighborhoods with a larger presence of rent-controlled units. The model suggests that a 10-percentage point increase in the share of rent-controlled units in a neighborhood is associated with a 1.6 percent increase in the share of minority population (Figure 29, left panel).⁶⁰ This relationship is even stronger if the analysis excludes census tracts that

⁵⁸ To clarify, the term here refers to nonwhite population following how the U.S. Census Bureau uses the term. In the District, there is no majority population by race or ethnicity.

⁵⁹ This is a comparison of the single-year population estimate from ACS in 2010 (309,221 \pm 0.4%) to the single-year population estimate for 2018 (319,777 \pm 0.6).

⁶⁰ This estimate is statistically significant at 0.1 percent. The model suggests that the variation in the share of rent-controlled units can explain about 10 percent of the variation in the change in the share of minorities.

have lost population.⁶¹ The same model has no explanatory power when applied to the share of all rental housing and the share of owner-occupied housing (Figure 29, middle and left panels).⁶²

As we have shown before, rent-controlled housing is everywhere, and it is much lower than other types of rentals or owner-occupied housing. Yet in its current form, rent-controlled buildings are not creating affordable rents in parts of the city where affordability is most needed for low-income residents. And even though presence of rent-controlled housing is positively correlated with staying in place, and less displacement for communities of color, rent-controlled housing is not an effective source of economic inclusion. This is a missed opportunity for the city.

In the next chapter, the report turns to an evaluation of a potential policy tool that can take advantage of the diversity in rent-controlled units to create affordable housing units, especially in parts of the city where it has been extremely difficult to produce publicly subsidized housing.

⁶¹ It should be noted that rent-controlled units are prominent in some neighborhoods where the share of minorities has been historically low. The model presented here is giving greater weight to these neighborhoods.

⁶² The relationship between the share of all rentals in the entire housing stock and the change in the share of minorities is still positive, but not statistically significant; the sign switches for owner-occupied housing, but the model, similarly, lacks explanatory power.

FIVE | HOW CAN THE DISTRICT USE ITS EXISTING RENTAL HOUSING TO CREATE INCLUSIVE NEIGHBORHOODS?

Up to this point, this report has provided extensive information on the District's rental housing. It has shown that there are too few rental apartment units to house all renters, and the paucity of units is squeezing both high-income and low-income renters into the moderately priced units in the middle. Furthermore, while the rents for District's rent-controlled units are lower, the tenants who live in them are economically segregated from higher-income households.

This report's analysis of the District's rent-controlled stock has revealed two of its important strengths related to affordability and inclusion: the rent-controlled stock typically has lower rents than the uncontrolled stock, and it is present in every ward of the city, especially in areas where it is hard to produce or preserve affordable housing using public funds. A third feature of the rent-controlled stock is that it is resilient. While the District has lost somewhere between 15 to 30 percent of its rent-controlled stock since 1985, this loss compares favorably to what has happened in other places with similar rent control laws.

This chapter therefore proposes a policy tool to take advantage of these characteristics in order to create designated affordable units with multi-year covenants. Because this tool uses the existing stock to create affordability and inclusion, it is referred to as the Inclusionary Conversion program.

1. Inclusionary Conversion program design

Under the Inclusionary Conversion model, the city would convert a small portion of existing rent-controlled units into designated affordable units. Once the conversion takes place, the converted unit would operate in the same way as an Inclusionary Zoning unit: the rent would be set below a certain income level that reflects the city's affordability targets, and only households in the eligible income band would be offered the unit. In return, the landlord receives public support that is the equivalent of the difference between the rent-controlled rent and the affordable rent. This support can be in the form of a one-time subsidy during a capital event (much like a soft loan from the Housing Production Trust Fund), or in the form of annual subsidies through the covenant period (much like project-based local rent supplements).

Regardless of the financing approach, the Inclusionary Conversion program follows two simple principles:

1. Use the rent-controlled stock to convert units into designated affordable housing, because they are everywhere, and their rents are relatively lower.
2. Rather than committing an entire building for affordable use, convert a small share in each building to further establish economic inclusion without dramatically changing the overall income profile of a building.

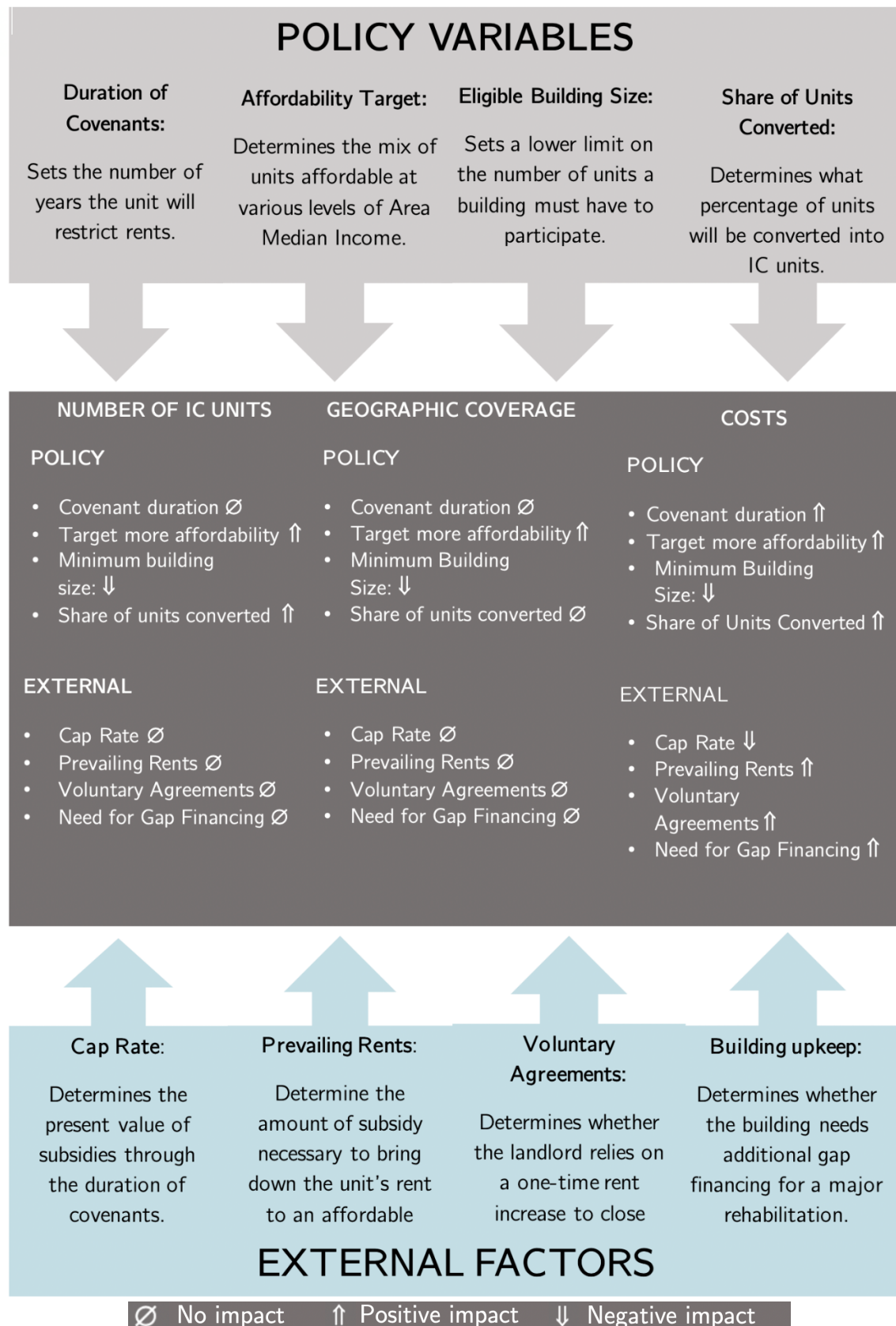
To estimate the how many affordable housing units the Inclusionary Conversion program could produce, and at what cost, the D.C. Policy Center developed a simulation model. The section below summarizes the model's parameters, while a more detailed explanation is presented in the [Methodology Appendix](#) of this report (beginning on page 80).

Policy Variables

The policy variables that could affect the number of units, their geographical coverage, and the amount of required subsidy (and therefore the cost of the program) include the following:

- *Size or type of the buildings that would be included in the conversion program.* For example, the District of Columbia might limit the program to larger buildings (based on the number of units in a building), older buildings (based on the year of construction or major renovation), or even location. As an example, this report only models the building size measured in units: a higher threshold for the required number of units reduces the number of eligible buildings, thereby reducing the potential number of Inclusionary Conversions, and shrinks the geographical coverage, mostly away from east of the Anacostia River communities. But it would not be difficult to extend the analysis to include age, proximity to transportation corridors, or location.
- *Share of units that would be converted.* This policy variable determines how much of a building is put under rent caps. A higher cap will convert more units, at a higher cost. A higher cap, if it overwhelms the building, can also significantly alter the revenue from uncapped units. This report models a 10 percent cap (the midpoint of current Inclusionary Zoning requirements).
- *The conversion policy.* Because the Inclusionary Conversion would apply to already occupied buildings, they would have to be brought into the program as the units turn over. However, conversions could begin immediately if existing vacant units are converted. A higher share of vacancy conversions will create a greater number of conversions at the beginning of the program, but it would not change the number units, geographical coverage, or costs. To illustrate how existing occupancy and turnover can impact conversions, this report models a program that converts three quarters of vacancies every year.

Figure 30 – Inclusionary Conversion design



- *The duration of covenants.* The District of Columbia must determine the number of years through which the units would be under affordability covenants, or otherwise set aside for affordable use. A longer duration means higher costs.
- *The distribution of affordability targets.* A policy focused on creating affordability for lower-income households would cap rents at a lower level, resulting in higher subsidy. For example, if the city set a goal of keeping units affordable at 60 percent of the Area Media Income, the rents for a studio apartment would be capped at \$1,274.⁶³ Thus, a studio with a rent of \$1,000 per month would not be eligible for a subsidy. But the same unit would become eligible if the affordability goal is set at 30 percent of Area Median Income since the required rent limit would be \$637. In this way, an affordability target focused on supporting lower-income households would increase both the number of eligible units and the amount of necessary subsidy. The lower maximum allowable rents would also expand the geographical coverage of the program, expanding it to lower-rent parts of the city.

There are also external factors that the District cannot influence by policy:

- *Prevailing rents.* As shown in this report, rents in rent-controlled buildings vary greatly across the city. The costs of conversion are necessarily higher for buildings where rents are higher.
- *The capitalization rate (cap rate).* The capitalization rate is used in commercial real estate to indicate the rate of return that is expected to be generated on a real estate investment property.⁶⁴ The cap rate only matters to the program if the District is financing Inclusionary Conversions through a one-time cash infusion at the time of a capital event, like a refinancing. A higher cap rate would mean a higher discount rate of future rents, and therefore lower costs to the city. Changes in the cap rate would only impact costs, and not the units or their geographical coverage.
- *Presence of a voluntary agreement.* A landlord could be considering refinancing as a direct result of a voluntary agreement that requires investments in the property. In this case, the

⁶³ The Area Median Income for a single-person household is \$84,900. At 60 percent of the Area Median Income, the maximum rent is $(84,900 \times 0.6 \times 0.3) / 12 = \$1,274$.

⁶⁴ The cap rate is derived by dividing the property's net operating income by its market value. The higher the operating income relative to the market value, the higher the cap rate, thus signaling a higher discount rate for future revenue from the building. Theoretically, each building has a different cap rate reflecting the various risk associated with investing in it: its age, location, and status, type, tenants' solvency, term or structure of tenant leases, as well as overall market conditions. The cap rate is also affected by systemic risk such as deterioration in macroeconomic fundamentals. The District's real property tax assessors use a city-wide cap rate (adjusted for location and characteristics of buildings) to estimate market assessment for an income-generating property like a rental apartment building. To do so, they use the same formula: divide the net operating income (obtained from the landlord) by what they think the appropriate cap rate is for the building.

refinancing would rely on future income from a one-time increase in rents that are beyond what would otherwise be allowed under rent control. If this were the case, then the subsidy costs for the city would increase because the gap between the market rent and the capped rent would be higher.

- *Additional financing for major rehabilitation.* The costs can also increase if the District provides additional financing for buildings that need significant renovations. This will bring the Inclusionary Conversion program closer in character to a preservation program, thereby ensuring that rent-controlled buildings in need of major rehabilitation stay under rent control. While the state of a building's disrepair is not under the District's control, the city can choose whether to include rent-controlled units that need major rehabilitations in the Inclusionary Conversion program.

Table 3 – Model capabilities: what is presented and what can be simulated

<i>Model parameter</i>	<i>Presented</i>	<i>Model capability</i>
Building size	Minimum unit size of 20, 40, and 100.	Any continuous variable between 20 and 280.
Share of units converted	10 percent	Any continuous variable between 0 and 100
Conversion policy	75 percent of vacant units are converted, rest follows turnover	Any continuous variable between 0 and 100.
Duration of covenants	15 years and 40 years	Any positive number
Combination of affordability targets	Affordable at 50 percent of AMI and 80 percent of AMI	Any combination of shares that add up to 100 for the following affordability targets: <ul style="list-style-type: none"> • under 30 percent of AMI, • 30 to 50 percent of AMI, • 50 to 60 percent of AMI, • 60 to 80 percent of AMI, • 80 to 100 percent of AMI, • 100 to 120 percent of AMI.
Capitalization rate	5.4 percent (average for rent-controlled buildings per CoStar)	Any positive number.
One time increase in rents	Not allowed, and 10 percent increase	Any positive number.
Additional financing	Incorporated into the model as a share of gross revenue, but not presented.	Any number between 0 and 1

How does the financing work?

The District can implement the Inclusionary Conversion program using two different financing approaches:

- *Convert during refinancing with one-time funding.* Under this approach, the District would implement the conversion following a capital event, such as refinancing. The value of the subsidy would be the present value of the amount of the rent the landlord forgoes (that is, the difference between the capped rent and the prevailing rent) over the duration of the covenants. The covenants would be recorded with the deed identifying the Inclusionary Conversion units (or defining the landlord's responsibility) and the rules regarding rent caps. The District could require participation in the Inclusionary Conversion program (similar to Inclusionary Zoning) or set aside a certain budget for each year and ask for requests for proposals from landlords (similar to how the city distributes funding from the Housing Production Trust Fund).
- *Convert with annual subsidies.* Under this approach, District would commit to a financial subsidy over the duration of the covenants for all converted units. This could be cash payments for rent, tax abatements, or a combination of the two depending on the conversion rate and the city's affordability targets. The program can be implemented in a manner similar to project-based local rent supplements, or it could be implemented gradually (or at once) across all rental buildings, if there are no legal impediments.

Under both approaches, the only pieces of information needed from the landlord are the prevailing rents and information on vacant units, both of which are easily verifiable.

Advantages of the program:

Regardless of the policy parameters and specific design choices, the program has the following distinct advantages:

1. *It creates many affordable units in parts of the city where existing affordability programs have not been successful.* Because of where rental apartment buildings are located, the greatest number of conversions will be in Wards 1, 2 and 3.
2. *It has much lower costs to the city than most current affordable housing programs.* Because the subsidy is covering the difference between the rent-controlled rent and the affordable rent, the costs to the government are much lower than most current housing programs. This is true whether the city implements it as an operating subsidy (similar to Section 8 voucher or tenant-based local rent supplement) or a one-time cash infusion following a capital event (similar to the HPTF loans for production and preservation).

3. *It has the potential to create a greater degree of economic inclusion than what has been created in the past.* Because the program is focused on converting only a modest share of units in each instance, as opposed to entire buildings, it creates economic inclusion in each participating building by bringing tenants of different income levels into the same building.

3. Potential number of units and the unit pipeline

The potential number of units depends on the share of units set aside for covenants, the minimum size of buildings included in the program, and the affordability target. The D.C. Policy Center has developed a model that can be simulated for different combinations of policy levers (Table 3). For illustrative purposes, this section presents the estimated number of units under two different affordability targets (capping rents at 50 percent of AMI and 80 percent of AMI) with three different size limitations for eligible buildings (with a minimum of 20 units, 40 units and 100 units). This example uses 10 percent as the share of units that would be converted—that is, the midpoint of current Inclusionary Zoning requirements.

Figure 31 presents the results of these simulations. It shows that with the deeper affordability target of 50 percent of Area Median Income, the District can produce an estimated 3,905 Inclusionary Conversion units if the program is limited to large buildings with 100 or more units, and nearly 5,300 Inclusionary Conversion units if the program is expanded to buildings with 20 or more units. If rents were capped to be affordable at 80 percent of AMI, the corresponding number of Inclusionary Conversion units would be between 2,500 and 2,900, depending on the minimum building size.

Figure 31 – Potential number of Inclusionary Conversion units

Share of units converted: 10%

Affordability Regime	Minimum Building Size	
Rents capped at 50% of AMI	20 Units	5,277
	40 Units	4,976
	100 units	3,905
Rents capped at 80% of AMI	20 Units	2,924
	40 Units	2,865
	100 units	2,446

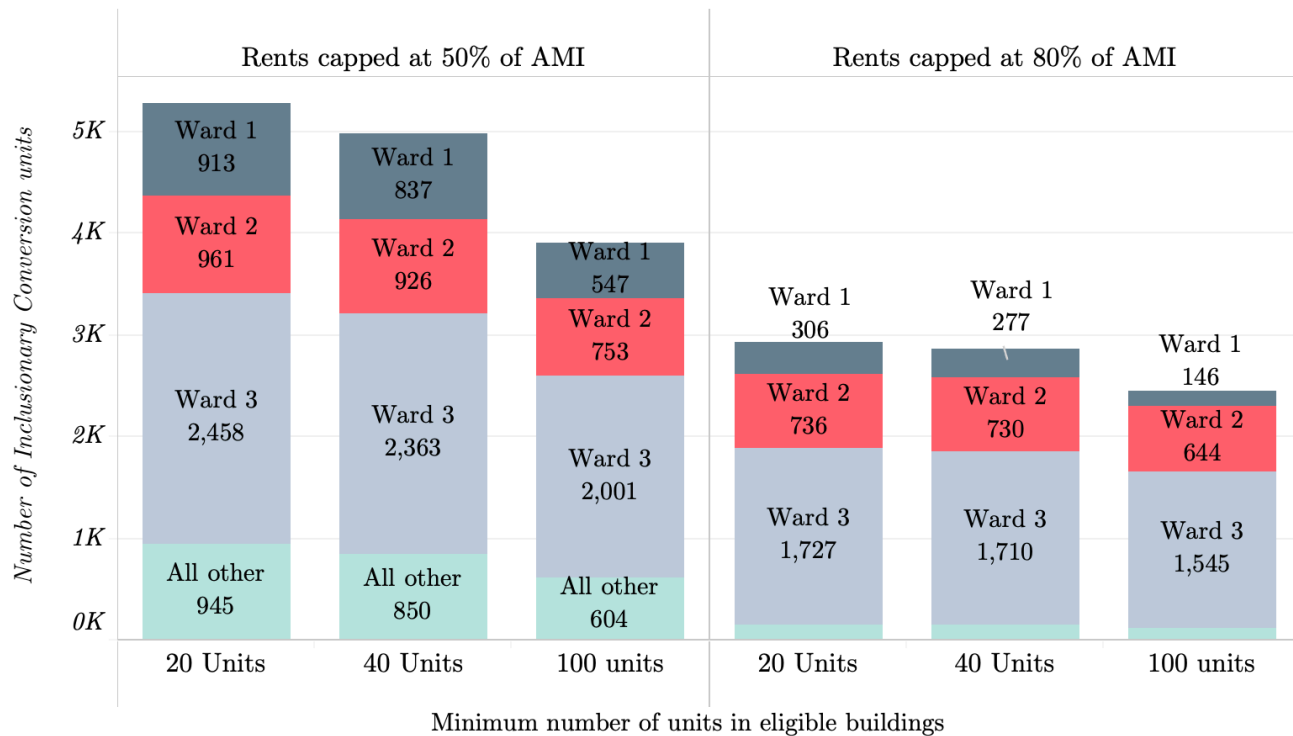
Source: Simulations run by the D.C. Policy Center



Under the modeled policy choices, the greatest number of units would be created in Wards 1 and 2, and especially Ward 3 (Figure 32). This outcome is driven by the location of rent-controlled apartment buildings and their prevailing rents. For example, it does not appear that a significant number of units would be converted in Wards 5, 7, and 8 if the affordability target were set at 80 percent of Area Median Income, because most units already rent below this threshold; Wards 4 and 6 similarly do not generate a large number of Inclusionary Conversion units because they have few rent-controlled buildings, even though they have higher prevailing rents. Even with a deeper affordability target set at 50 percent of Area Median Income, Wards 4 and 6 would produce an estimated 300 units each; Ward 5, an estimated 150 units; Ward 7, 120 units; and Ward 8, approximately 100 units.

Figure 32 – Distribution of Inclusionary Conversion units

Share of units converted: 10%



Source: Simulations run by the D.C. Policy Center.

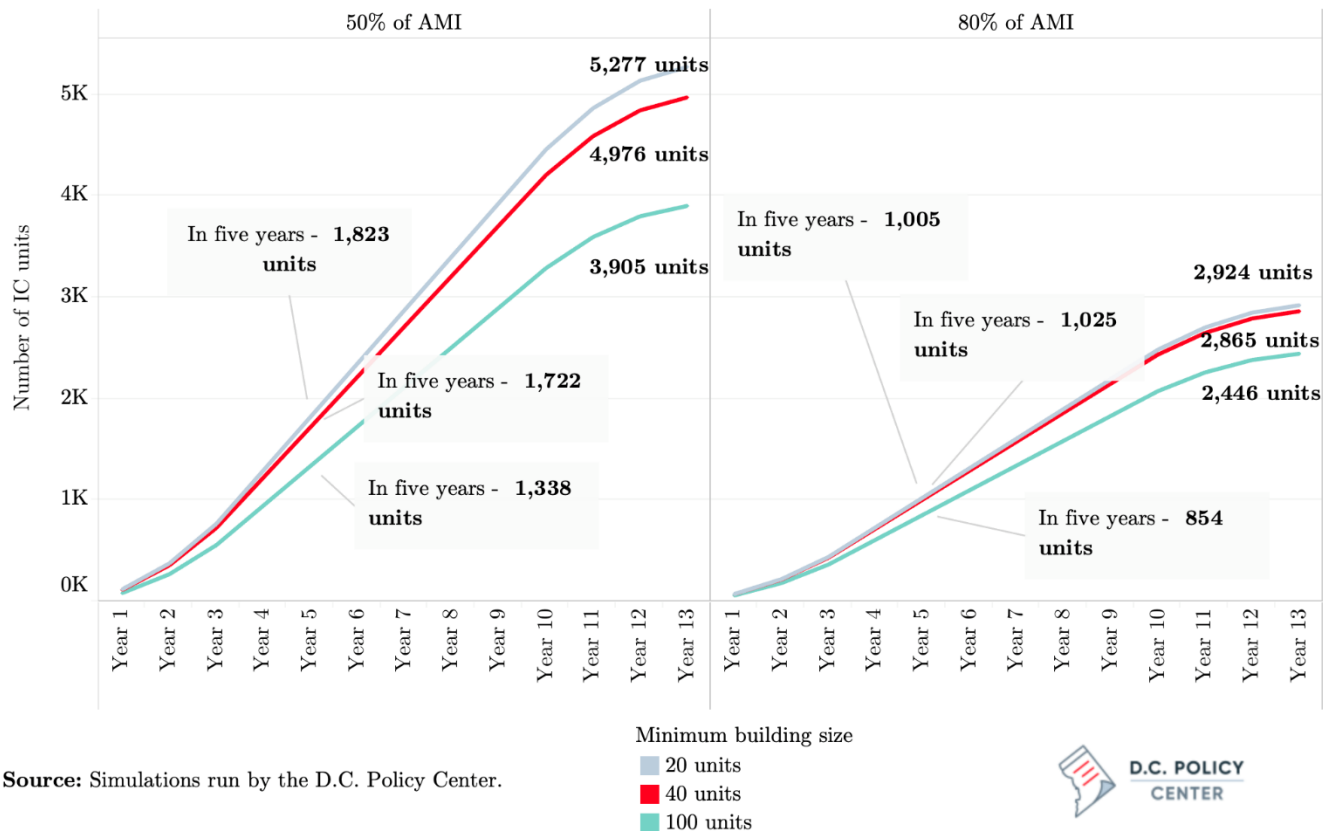


Not all these units will come online at the time of program implementation. If the District implements the conversions at the time of a refinancing event, with a HPTF-like loan, conversions will happen over time, as each building goes through its refinancing cycle. The landlord decision to refinance is sensitive to the business cycle and interest rates, and reliable estimates are not available for how many units go

through refinancing every year. The presence of a voluntary agreement could also be a trigger.⁶⁵ Based on conversations with industry leaders, this analysis uses the assumption that buildings go through refinancing about every 10 years. This means the Inclusionary Conversion program will begin with modest numbers, will reach about 30 percent of its potential by its fifth year, and will likely reach full potential in 13 years (Figure 33).

Figure 33 – Potential pipeline under a one-time Housing Production Trust Fund-like financing

Conversion rate: 10%

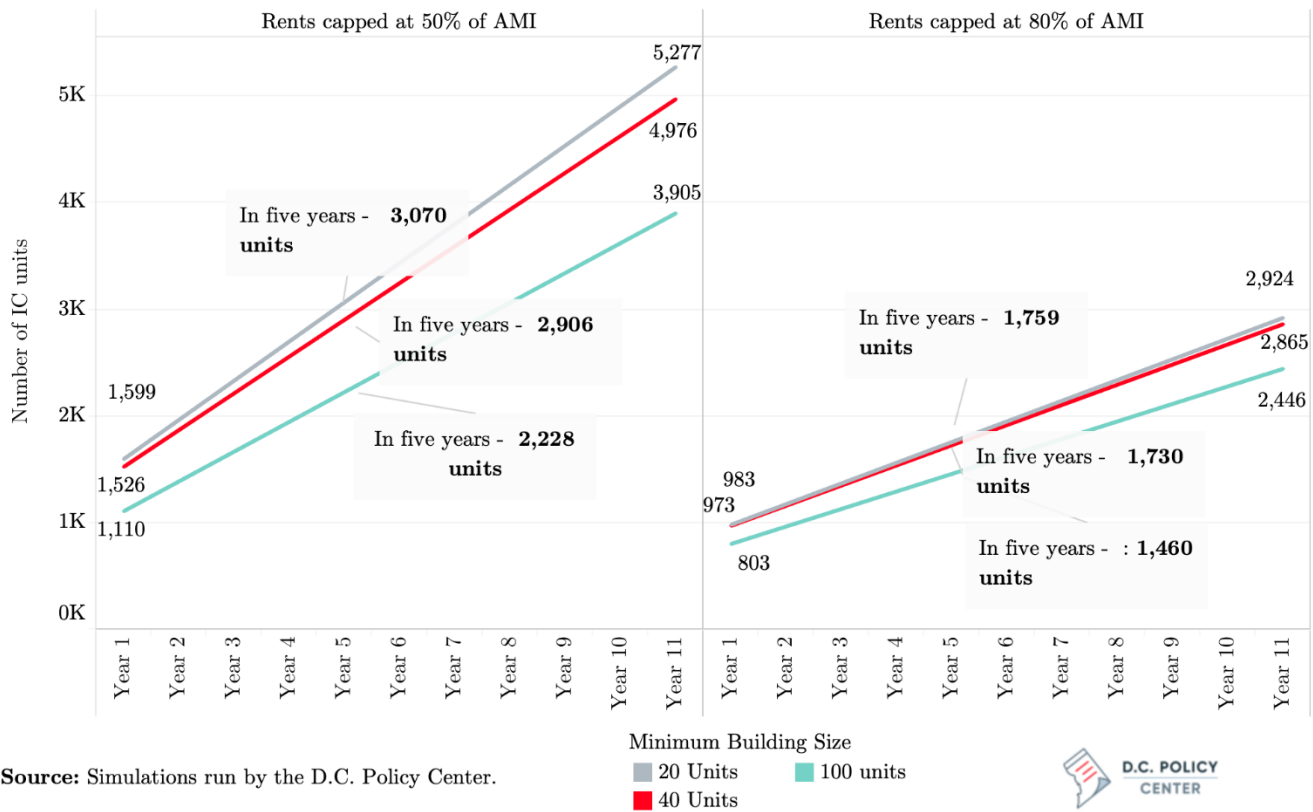


Even if the city implements the program at once, immediately converting the units in return for an annual subsidy, only about 30 percent of the Inclusionary Conversion units would likely be immediately available through existing vacancies (Figure 34). In this case, the program can reach its full potential over approximately 11 years if about 10 percent of the units turn over each year.

⁶⁵ As shown in the Appendix, this number has ranged between 10 and 20 buildings each year. However, no information is available on the number of units covered by these agreements.

Figure 34 – Potential pipeline with local rent supplement-like subsidies

Share of units converted: 10%



The reach of the program could be expanded by extending it to cover all rental apartment buildings constructed before 2007, when the District implemented its inclusionary Zoning program. But as shown earlier, little construction took place between 1975 and 1999 (approximately 7,000 units, some of which are already publicly subsidized affordable units). Such an expansion will likely add about 600 more units at a 10 percent conversion rate.

4. Estimated costs

The costs of adopting the Inclusionary Conversion program will depend on several variables, some dictated by policy design, and some by the market (Figure 30). Any policy choice that reduces the rent threshold (thereby creating affordable housing for lower-income households) or increases the duration of covenants will increase costs.

The city would also incur the costs differently if Inclusionary Conversions are treated like HPTF-type projects with a one-time cash infusion compared to an approach where they are funded by an annual subsidy similar to the project-based local rent supplement. In the first case, the costs would be most sensitive to the cap rates and would be incurred immediately at the time of conversions. In the latter

the costs would continue through the life of the covenants and they would presumably be most sensitive to changes in the CPI.

Costs under one-time cash infusion approach

Modeling the one-time cash infusion approach offers a sense of how the per-unit cost of conversion will compare to the per-unit costs of production and preservation under current HPTF programs. To illustrate the potential costs under a one-time cash infusion, the report models the following assumptions and program choices:

- *The cap rate is assumed to be 5.4 percent.* This rate is chosen because it is the average cap rate across all multi-family buildings according to CoStar. This is lower than the cap rate than the Office of the Chief Financial Officer's baseline cap rates for Class B and Class C buildings, regardless of their location,⁶⁶ and therefore brings a level of conservativeness to the model.⁶⁷
- *Two different policy choices for covenant durations.* In one scenario, the model uses 40 years—the current required duration for rental properties receiving HPTF loans. In the second, the model uses 15 years as the approximate duration of borrowing for rental properties.
- *Two different affordability targets.* As before, the model considers a scenario where rents are capped at 50 percent of AMI, and another scenario where rents are capped at 80 percent of AMI.
- *Two different rent profiles after refinancing:* The first scenario modelled is one where rents increase at CPI+2%, which is what is currently allowable under D.C.'s rent control laws. The second models a 10 percent one-time increase in rents to show how costs could change if the landlord enters into a voluntary agreement or is seeking a temporary exemption to meet a critical capital investment or maintenance need.
- For purposes of this example, findings are only presented for buildings with 100 or more units to illustrate how costs vary by different affordability targets and the duration of the covenants.

⁶⁶ The OCFO's Reference Materials for Appraisers suggest that the lowest cap rate for Class B buildings is 5.5 percent, and the highest cap rate is 6.6 percent. These rates vary by location. For Class C properties, the comparable cap rates are 5.8 percent and 7.2 percent. This information is available on page 7 of the [Tax Year 2020 Pertinent Data Book For The District Of Columbia](#).

⁶⁷ The model presented in this report is capable of estimating costs at different cap rates. We find that each 10-basis point change in the cap rates change the costs to the D.C. government by about 1 percent.

These estimates suggest that creating one Inclusionary Conversion unit with rents capped at levels affordable at 50 percent of Area Median Income would require a one-time subsidy of \$96,000 for a 15-year covenant and \$155,000 for a 40-year covenant (Figure 35). At an affordability target of 80 percent of Area Median Income, the corresponding unit costs are lower, at \$49,400 and \$79,500 per conversion. These are averages across the city weighted by where the units are likely to be created (Wards 1, 2, and 3, where rents are relatively higher). If the city were to impose all inclusionary conversion requirements on all rent-controlled buildings, it would have to spend between \$63.5 million per year (for broader coverage and deeper affordability) to \$11.5 million per year (for narrower coverage and shallower affordability) for 10 years.

Figure 35 – Estimated costs for the Inclusionary Conversion program under a one-time cash infusion scenario

Rent Increase	Rents capped at	Covenant Duration	Location	Unit cost of conversion - weighted city average	Annual cost to the city	Total cost
CPI+2%	50% of AMI	15 years	Entire City	\$96,306	\$39.4M	\$394M
		40 years	Entire City	\$154,964	\$63.5M	\$635M
	80% of AMI	15 years	Entire City	\$49,382	\$11.5M	\$115M
		40 years	Entire City	\$79,459	\$18.4M	\$184M
One-time 10% increase	50% of AMI	15 years	Entire City	\$107,968	\$49.2M	\$492M
		40 years	Entire City	\$173,729	\$79.2M	\$792M
	80% of AMI	15 years	Entire City	\$59,759	\$18.2M	\$182M
		40 years	Entire City	\$96,157	\$29.2M	\$292M

Source: Simulations run by the D.C. Policy Center.



How do these estimates compare to the costs of production and preservation through HPTF? A direct comparison of these unit costs to those of current HPTF projects is difficult with publicly available information, because the HPTF supports a mix of projects, majority of which are significant rehabilitations or new constructions, which are, by their nature, costlier. Also, the reported loan amounts and per unit costs for the HPTF are not the only source of financing for HPTF-financed projects: they exclude developers' own equity, private loans, and additional loans or subsidies from HUD or other sources.

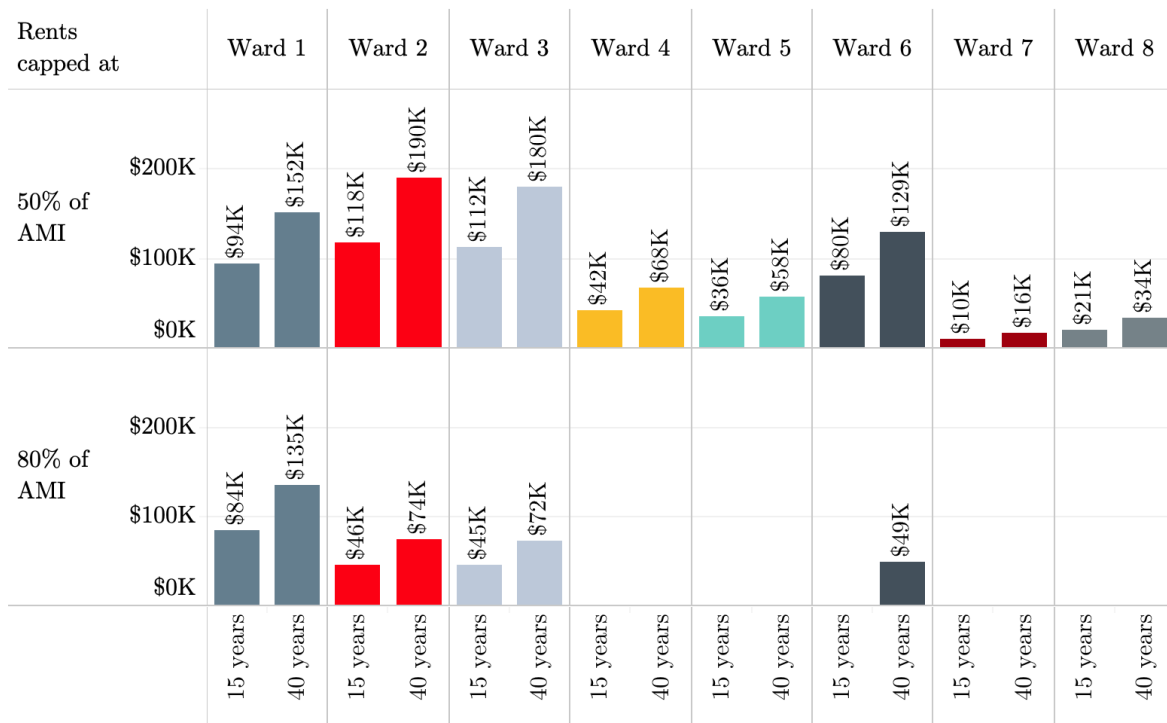
In the simulations presented, the two scenarios most similar to existing HPTF programs are those with 40-year covenants that do not allow for rent increases (similar to HPTF refinancing supports), and those with one-time rent increases (most comparable to HPTF substantial rehabilitation loans.) The estimated citywide cost of conversion under these scenarios are \$155,000 and \$174,000 per unit when rents are capped at 50 percent of Area Median Income. And while these seem high compared to the average cost of units to HPTF under its current mix of projects, this is largely because the *Inclusionary Conversion* program creates units where it has been too costly to produce affordable units through the production and preservation programs supported by the HPTF. Also, the simulation simply caps all rents at 50 percent—a deeper affordability target than what the HPTF currently produces.⁶⁸

Figure 36 – Estimated unit cost of Inclusionary Conversions, by ward

Model assumptions

Minimum building size: 100 units

Share of units converted: 10 percent



Source: Simulations run by the D.C. Policy Center.



⁶⁸ When researchers run the model with an affordability distribution that replicates the current HPTF production, the comparable unit costs decline to \$108,000 for straight conversions and \$136,000 for projects with a major rehabilitation. To replicate the HPTF production, researchers ran the model with rents capped at 30 percent of AMI for 20 percent of the units, capped at 50 percent for 30 percent of the units, at 60 percent for another 30 percent of units, and at 80 percent of AMI for the remaining 20 percent of the units.

The estimated unit cost for conversions in Wards 2 and 3 under a 40-year covenant where rents are capped at 50 percent of Area Median Income are \$190,000 and \$180,000 respectively (Figure 36). While not small, these are not unusual numbers as far as subsidies go for deeply affordable units. And they are well below the amount necessary to build from scratch such units in Wards 2 and 3, even if it is assumed that there is room under current zoning to build them. Similar costs for Wards 7 and 8 are \$35,000 and \$23,000 respectively for the longest covenants and the most liberal rent-increase assumptions.

These analyses show that Inclusionary Conversions can be transformative for the city's affordable housing supply, especially if it focused on providing deep affordability as modelled with the rents capped at 50 percent of Area Median Income, but which could also be a mix of affordability targets similar to the requirements of the HPTF. All parts of the District will see an increase in affordable housing, but the impacts would be greatest in Wards 1, 2, and 3, with costs that can be contained.

Costs under operating subsidies

If the District government were to pay for the Inclusionary Conversion program through an annual operating subsidy similar to project-based Local Rent Supplements, the city would commit to a series of payments, potentially increasing at CPI+2% over the duration of the covenants.

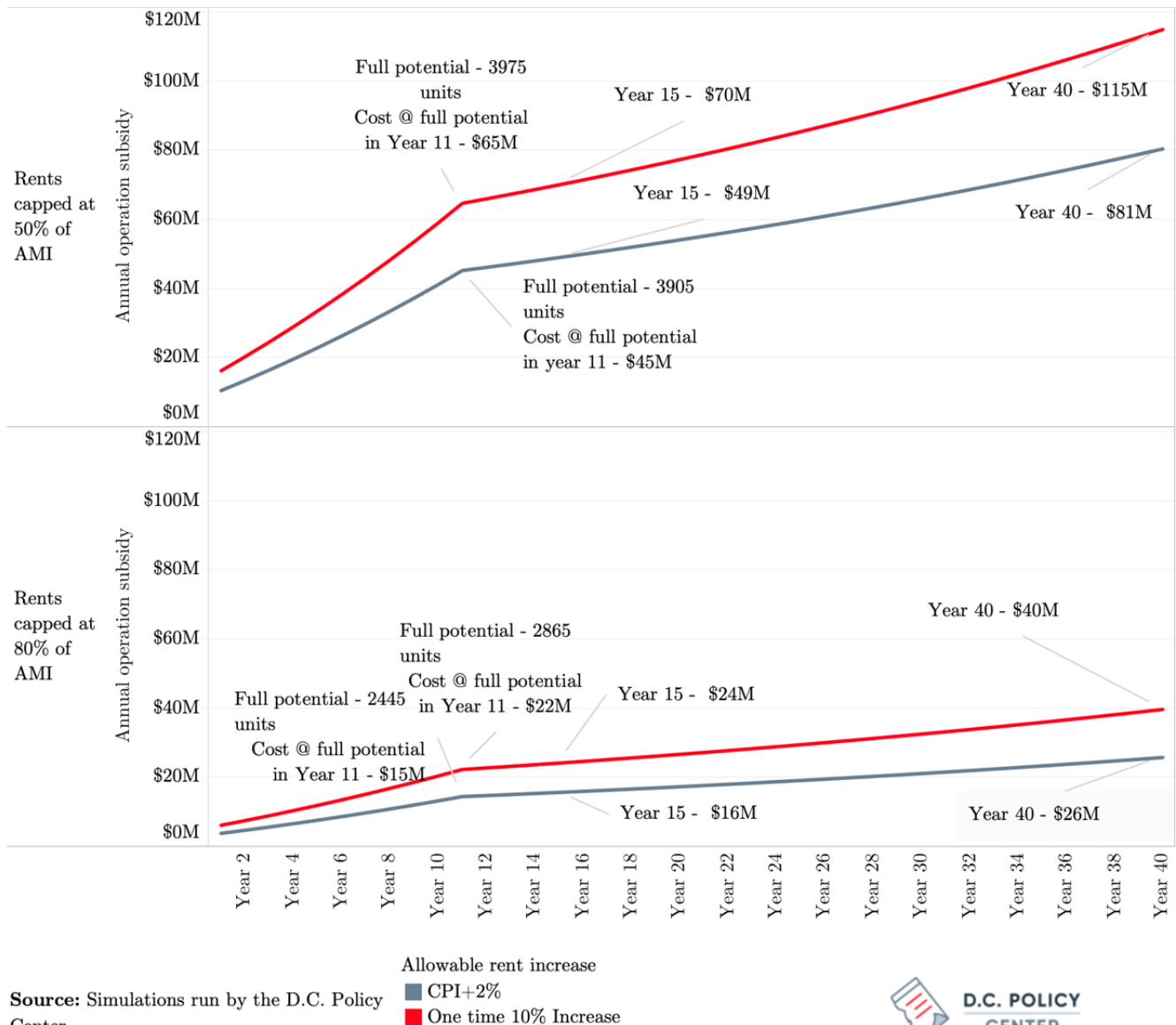
Under this scenario, units would be gradually converted through turnover, so costs would increase faster until when conversions are completed (year 11 in the presented pipeline). At this time, the required annual subsidy would be an estimated \$45 million to \$65 million if rents were capped at 50 percent of Area Median Income, and an estimated \$15 million to \$22 million if the rents were capped at 80 percent of Area Median Income, adjusted for inflation and allowable rent growth (Figure 37).

After the program reaches its full potential, the annual subsidy will only grow by CPI+2%.⁶⁹ Because the Inclusionary Conversion program would be funded by an annual subsidy, the duration of the covenants would not change the required public expenditure per year; it would, however, affect the period over which the District would commit to make such payments.

⁶⁹ In the chart, the estimated annual subsidy is growing by 2 percent only.

Figure 37 – Estimated annual funding required by the Inclusionary Conversion program, if administered as an operating subsidy

Minimum Building Size: 100 units
Share of units converted: 10 percent

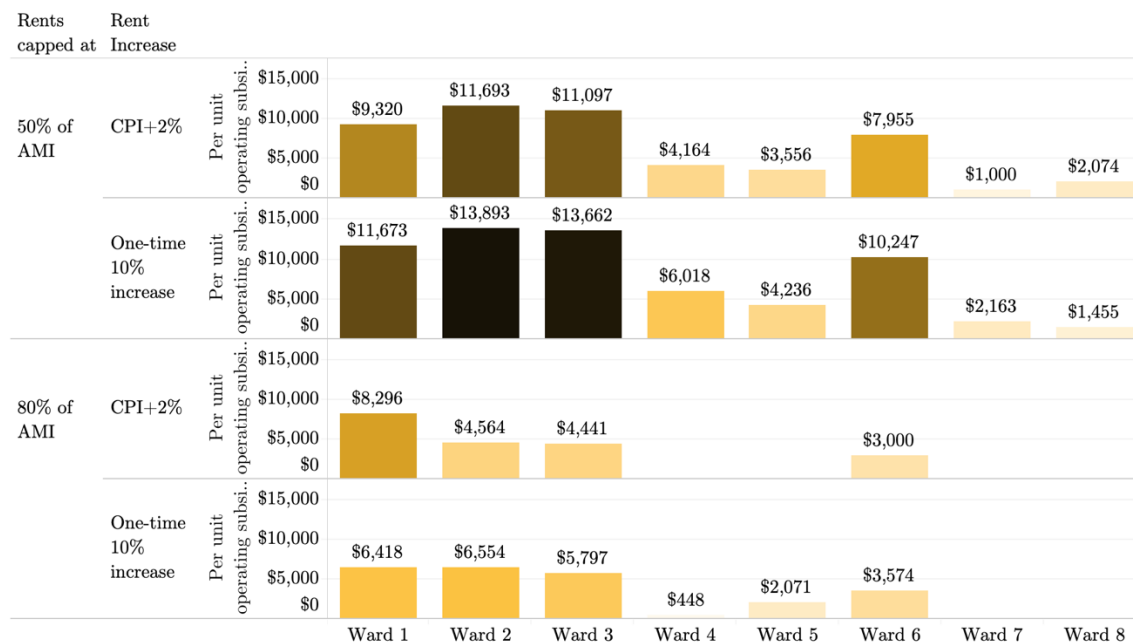


The per-unit operating subsidy necessary to support Inclusionary Conversions could also compare favorably to the subsidies available from the federal Section 8 multi-family program and the District's own local rent supplement program. The annual subsidy per unit is estimated to be \$9,500 across the entire city if rents are capped at 50 percent of Area Median Income, and \$4,500 if capped at 80 percent of the Area Median Income. These costs would be higher for parts of the city where rents are high (Figure 38). Comparison of these subsidies to the federal Section 8 tenant-based voucher program and the District's own Local Rent Supplement Program are not perfect (voucher amounts are driven

multiple eligibility criterion for the households), but instructive.⁷⁰ For example, in the Cleveland Park tax assessment neighborhood in Ward 3, the DC Housing Authority, which administers these vouchers, sets the rent limit at \$2,467 for a unit with one bedroom (excluding utilities).⁷¹ For a family of two earning 80 percent of the Area Median Income (\$77,640), the maximum available annual subsidy cannot exceed \$6,324, regardless of the actual rent for the unit.⁷² This is an amount greater than the amount estimated under the Inclusionary Conversion program, which targets affordability at same income level (\$4,441).

Figure 38 – Per unit operating subsidy of the Inclusionary Conversions by ward (first year only)

Minimum building size: 100 units
Share of units converted: 10%



Source: Simulations run by the D.C. Policy Center.



Using tax abatements to pay for affordability

So far, this report has described the costs of an Inclusionary Conversion program as an annual subsidy that can be incorporated into the District's operating budget. The city can also offer landlords a tax

⁷⁰ Voucher limits are set under the U.S. Department of Housing and Urban Development's Small Area Fair Market Rent guidelines and show that the subsidy amounts could be higher than what we estimate to be necessary for the Inclusionary Conversion approach.

⁷¹ Available [here](#). We thank Luke Lanciano for the pointer.

⁷² I.e., the difference between 30 percent of the household income (\$23,280) and the annual housing expenditure under the Fair Market Rent (\$2,467 x 12 = \$29,604).

abatement in return for a commitment to capping the rents at certain affordability levels. To be sure, whether paid for by a tax expenditure or an operating expenditure, the program's fiscal impact on the city would be the same. However, examining the necessary tax reductions that can support the Inclusionary Conversion program can still be instructive as it highlights that rent-controlled buildings have significantly different rent structures, and a policy that offers the same level of subsidy to all buildings would help some buildings more than the others.

Figure 39 – Estimated median property tax rate if D.C. paid for the Inclusionary Conversion program with a tax abatement

Minimum building size: 100 units
Share of units converted: 10%
Allowable rent increase: CPI+2%

Rents capped at:	Entire City	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Under 50% of AMI	0.31%	0.32%	0.36%	0.51%	0.45%	0.51%	0.35%	0.32%	0.30%
Under 80% of AMI	0.64%	0.58%	0.68%	0.75%			0.67%		

Estimated number of units that can be converted with a full tax abatement to eligible buildings

Rents capped at:		What can a full tax abatement buy?
Under 50% of AMI	Inclusionary Conversion units with a 10-percent conversion rate	3,905
	Estimated number of Inclusionary Conversion units the city can afford with a full tax abatement	3,835
Under 80% of AMI	Inclusionary Conversion units with a 10-percent conversion rate	2,446
	Estimated number of Inclusionary Conversion units the city can afford with a full tax abatement	2,438

Source: Simulations run by the D.C. Policy Center.



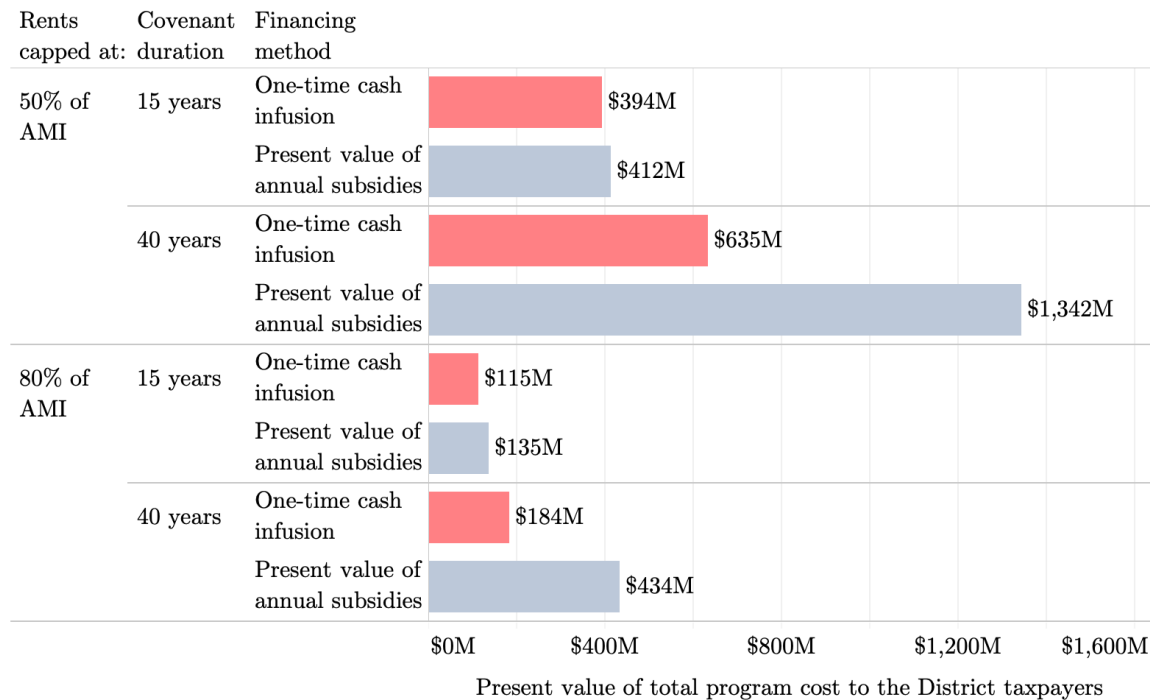
Based on this analysis, if the city pursues an affordability target of 50 percent of Area Median Income, it can likely pay for the annual subsidies by reducing the real property tax rate from the current \$0.85 per \$100 value to \$0.31 per \$100 value (Figure 39, top panel). However, these rates are averaged across all eligible buildings that are contributing units; there are some buildings in the sample where the subsidy amount is too high relative to the tax obligation, and even a full tax abatement could not pay for a 10 percent conversion requirement. These buildings have relatively lower values, reflecting the variations in other characteristics—such as building age, location, and state of its repair—that impacts its tax assessment. In fact, a full tax abatement can support a slightly lower number of units than a 10-percent conversion rate (Figure 39, bottom panel).

Comparing the two financing models of one-time cash infusion and annual operating subsidies

There are advantages and disadvantages attached to the two financing approaches (a one-time cash infusion and an annual operating subsidy). Perhaps the biggest difference is in costs, especially for longer-term covenants (Figure 40).

Figure 40 – Comparison of Inclusionary Conversion costs under different financing arrangements

Minimum building size: 100 units
Share of conversions: 10 percent
Cap rate: 5.4 percent
Allowable rent increase: CPI+2%



Source: Simulations run by the D.C. Policy Center.



In every scenario explored in this analysis, the one-time cash infusion has a lower cost measured in today's dollars when compared to the present value of annual operating subsidies: It is \$20 million less expensive when rents are capped to create affordability at 80 percent of Area Median Income with 15-year covenants, and \$710 million less expensive for 40-year covenants at 50 percent of Area Median income.

The main reason for the diverging costs under these two different financing approaches is the discount rate that drives the calculation of present-day value of the two benefits. Under a one-time subsidy, the future income the landlord is forgoing is discounted by the cap rate, which takes into consideration both

the potential income growth and risks in the real estate market. In the latter, the discount rate is the statutory cap on rent increases.

The simulations presented here use a 5.4 percent cap rate to discount the future incomes of rent-controlled buildings. This, it turns out, is a greater discount rate than the CPI+2%, hence producing lower present values. But this raises an important question about how to think of allowable rent increases under a rent-control model. CPI+2% is only indirectly related to the conditions in the real estate market. CPI is backward-looking, as it is based on the increase in the cost of living (including housing costs) in the previous year, whereas cap rates are forward-looking, incorporating the expected changes in demand and supply and the potential risks and opportunities in the real estate market. As a result, the CPI+2% rule will sometimes underestimate and sometimes overestimate the rent growth the market would support. That the present value of the subsidy is greater under the CPI+2% rule suggests that, at least for now, it is overestimating what the market can bear. And if the District ties its subsidies to this rate, it runs the risk of paying too much (or too little) compared to the required subsidy.

There are, however, other salient differences between these two financing approaches:

- *Conversion risk.* Under the annual subsidy approach, the landlord receives the subsidy only after the unit is converted. The city does not assume any risk if tenant turnover is slower than anticipated. Under the one-time cash infusion approach, the landlord receives the subsidy upfront, and city bears the risk of slower tenant turnover that would reduce the pace of conversions. This risk is greater when the required share of conversions is higher and could be minimized if the share of conversions is kept under 7 percent of all units, which is the current vacancy rate across all rent-controlled buildings.
- *Structural impact on rental housing.* That cap rate itself is also sensitive to policy: by simply adopting inclusionary conversions, the city could impact the cap rates. The most obvious reason would be the commitment to a lower rent over a long period of time could depress building values. Other variables in the model could have similar structural impacts: for example, if the conversion rates are high, they could change the income profiles of tenants (and therefore the revenue profile of the building) significantly altering its value.
- *Maintenance risk.* Under the annual subsidy approach, the subsidy can motivate the landlord to keep the building in good repair. Under a one-time cash infusion approach, the District commits to refinancing up front, and is susceptible to landlord negligence, especially under the 40-year covenant version when the city would rely on the landlords' good faith to keep the units in good repair over a long period of time. (This is also a consideration with current HPTF funding.) While under both approaches, the city would need to invest substantially in compliance, under

an annual subsidy model, the consequence of poor maintenance can be immediately addressed by withholding the subsidy.

- *Fiscal impact.* Under the annual subsidy approach, the city makes a long-term financial commitment with rapidly increasing costs that could not be fully recognized in its budget and financial plan, which only extends to four years. Under the one-time cash infusion approach, because the subsidy for each cohort is one-time and is not recurring (unlike an operating subsidy, such as a voucher or a tax exemption), its fiscal impacts are contained and certain.

Extensions to the model

The Inclusionary Conversion model could be extended to ensure that a certain number of units are delivered each year, or the number of units are maximized for a given amount of funding. Such extensions are briefly discussed below:

- *Cap and trade.* The baseline model with one-time financing reflects a mechanism design with a DOPA-like structure where the conversion process begins with a notification from the landlord about the landlord's intention to refinance. But the city does not need to wait for the natural occurrences of refinancing: Under this alternative program design, the District would set ward-level targets for the creation of Inclusionary Conversion units, and then issue a request for proposals. The city can then choose the lowest bidder so long as ward-level targets are being met. In this way, the share of units would be allowed to fluctuate across buildings, shifting funding to those where the unit cost of conversion is lowest. To ensure that each building has a certain mix of rents, the number of eligible units in a building can be capped.
- *Additional support for major rehabilitation.* The baseline model does not assume that the District provides additional support for major rehabilitation for buildings with limited revenues and therefore limited ability to borrow. It only assumes that the infusion from the District would be equal to the present value of rent subsidies to keep the units affordable over the period of covenants. The District can provide additional financial support in return for more Inclusionary Conversion units, especially if the building is in extensive disrepair and would need more of a cash infusion at the time of closing to make the refinancing possible.
- *Weights attached to unit sizes or rehabilitation characteristics.* The District can incentivize, for example, two-bedroom units over smaller units by attaching a preference for conversion of these larger units. Similarly, the District can create a preference for types of rehabilitations in line with the District's environmental goals.

Implementation concerns

While the goal of this report is not to provide detailed recommendations on how the program could be implemented, it may be useful to describe some implementation concerns the city would have to consider to ensure that the Inclusionary Conversion tool can serve as intended: reducing housing burdens for lower-income District residents while creating economic inclusion across the entire city:

- *Who will administer the program and verify incomes?* An important decision regarding the implementation of Inclusionary Conversions is program administration. At present, income verification for some housing programs are done by the Department of Housing and Community Development; for some, by the District of Columbia Housing Authority; and for some, it is left to landlords. Under the Inclusionary Zoning program, landlords are required to re-verify income every 12 months, and prospective tenants participate in a lottery when a unit turns over. In contrast, income verification is done by the District of Columbia Housing Authority for the Housing Choice Vouchers. For the Inclusionary Conversion program, a central office that provides income verification and serves as a triage for directing tenants to buildings would likely serve the program best. In this way, current voucher or rent supplement recipients who are placed in an Inclusionary Conversion unit would no longer require a subsidy (or would require a smaller one), allowing the District to divert these resources to other tenants in need of housing support.
- *How will eligibility be allowed to change from year to year?* Household incomes can change over time, and households that enter an affordability housing program may no longer meet the requirements for that program in later years. This means the city must decide whether income eligibility is checked periodically, and whether the eligibility test would make some allowances in income growth beyond the affordable rent growth. If these rules are too strict, tenant turnover could increase considerably; if they are too weak, then the benefits would be less targeted over time. Under the current Inclusionary Zoning rules, for example, tenants who lose their eligibility must move out, although it unclear how these rules are enforced.
- *How will units that already meet Inclusionary Conversion requirements be included into the program?* Some units in rent-controlled buildings could have tenants that already earn below the affordability target. As noted in Section Four, an estimated 7 percent of renters in the District have moved into their units sometime before 2000, and a smaller percent could have moved even earlier in 1970s and 1980s. These tenants could often be retired or close to retirement and would possibly become income-eligible for an Inclusionary Conversion unit. And if these tenants have occupied their unit for a long period of time, their rents could already be at or close to the rent cap under the affordability requirements. The District must therefore decide whether these units would be counted as Inclusionary Conversion units (and begin receiving subsidies). Providing

subsidies for these units mean locking their affordability in for longer periods of time, ensuring that these tenants can stay in place. The same concerns would be true for rent-controlled buildings in parts of the city where the rents are already low.

- *How will the District ensure that landlords maintain their buildings through the duration of covenants?* This is a concern for current HPTF projects with 40-year covenants as well. It appears that those projects fully expect to refinance using additional supports from the HPTF when their units age sufficiently to require major maintenance. This means there are truly no projects that are fully supported for what is needed to commit to a 40-year covenant.
- *Caps for affordable units.* In order to ensure that no building loses its mix of incomes for residents (where higher rents from higher-income tenants help subsidize lower rents for lower-income residents), the city could consider capping the number or share of units that can participate in an affordability program.

It is also important to note that none of the implementation issues explored above would be unique to the Inclusionary Conversion tool. All housing programs must balance allocating public subsidies where they are needed the most with ensuring that tenants are not facing uncertainties because of eligibility rules. All housing programs must provide an incentive for the landlord to participate. And all housing programs must invest significantly in compliance. Similar constraints inevitably exist for Inclusionary Conversions.

SIX | CONCLUSIONS

As renter incomes rise in the District, the pressures on rental housing are becoming stronger. As this report has shown, there are not enough rental apartments to serve all renter households. And this pressure comes both from the bottom and from the top: for every household that would need to keep its rent expenditure under \$750 per month for rent to be affordable (that is, less than 30 percent of household income), there is at least one household that can pay upward of \$2,700 without being rent burdened. This competition for rental housing is increasingly contributing to segregated neighborhoods, especially for the rent-controlled stock where rents are capped, but units can serve any resident of any income level. This is apparent because rent burdens higher in parts of the city where rents are low, and lower in parts of the city where rents are high.

On use of public subsidies

In solving its housing and affordability crises, D.C. must work on more than one front. One such front is public subsidies for housing. In the current environment of higher-income rents, and fewer affordable units, the District has made significant investments into housing affordability. A recent review of the District's Fiscal Year 2020 budget shows that in this year, the city invested upward of \$840 million in housing services, including \$95 million for rental assistance (which is less than half the tax expenditures such as mortgage deduction for home homeowners), \$30 million in public housing, and nearly \$175 million in affordable housing production and preservation.⁷³ As a result, the city now reports having nearly 53,000 housing units with rents capped at levels affordable to households that earn below 80 percent of Area Median Income.

The District has used a variety of strategies, including leveraging federal assistance through bond issuance, loans for affordable housing production and preservation projects, inclusionary zoning, and a local rent supplement. Yet there are also potentially some units that could soon convert to market-rate as their covenants run out. Based on data compiled in the "D.C. Preservation Catalogue," there are an estimated 6,100 subsidized rental units whose covenants will run out by the end of 2030, and another 8,100 units whose covenants will expire by 2035.⁷⁴

This report's proposed Inclusionary Conversion tool is designed to leverage D.C.'s current resources more efficiently, and not a wholesale solution for the city's affordability crises. Specifically, it considers how the city could tap into its rent-controlled housing stock, which has relatively lower rents than the

⁷³ Office of the Budget Director, [D.C. Council The District's Commitment to Affordable Housing](#), (December 2019).

⁷⁴ Peter Tatian. "[Cataloging where DC should preserve affordable housing as the city's population continues to grow](#)" (Urban Institute, Washington, D.C., 2019).

uncontrolled rental stock and is also concentrated in more expensive parts of the city where existing public programs have struggled to produce subsidized housing. The below-market rents in rent-controlled buildings mean the city can convert them into affordable units with a smaller subsidy, and by doing so in small batches, can create economic inclusion without significantly altering the tenant or revenue profile of the building. All other features of the Inclusionary Conversion approach, including implementation concerns, are identical to those in existing programs for subsidized housing (such as the need for some type of government intervention to ensure that subsidized units are allocated to those who meet income eligibility limits, some type of continued eligibility rule which ensures that while units are allocated to those who need them the most, strict eligibility does not lead to high turnover rates, a strong compliance mechanism to ensure that landlords commit to keeping their buildings up, among others.)

On increasing the housing supply

Ultimately, solving the housing crises in the District will require much more than subsidized housing, and must employ tools to increase housing supply of all types, including housing for middle-income renters. Land is arguably among the most scarce—and the most valuable—asset in the District of Columbia. This report therefore takes as its view that the city's policy efforts should focus on using land as productively as possible, specifically through less restrictive land use practices: increasing allowable density as much as possible and easing infill development. The city can also improve the regulatory environment by hastening the pace of the issuance of construction permits, which at present create a significant barrier for new development. And some of these changes will require changing commonly held beliefs about what creates value and beauty in a thriving, inclusive city.

On the need for a broader perspective for rental housing

Importantly, this report's analysis of the rental housing in the District of Columbia shows that the city must also think beyond rental apartments when formulating its rental housing policies. As shown in this report, the shadow rental market—the units built for ownership but let by their owners—fills a significant gap in meeting housing demand by offering a greater variety of units at a greater variety of prices across all parts of the District of Columbia. As Ethan Seltzer notes in a recent essay at the City Observatory, more housing—especially through infill—means more landlords:

“Build an ADU [Accessory Dwelling Unit], and you are now both a homeowner and landlord. Convert a single household dwelling into a duplex or triplex, and you’ve become a landlord.”⁷⁵

⁷⁵ Ethan Seltzer, “[Want more housing? Build a landlord](#),” (City Observatory, 2019).

The District, with its commitment to ADUs and infill development, likewise, has chosen to pursue housing policies that depend upon current homeowner's willingness to become landlords. However, absent from the current housing and zoning debates in the District of Columbia are a more comprehensive view of rental housing and a discussion of a more comprehensive rental housing policy. Perhaps the most important takeaway from this study, and the part that is left unanswered, is how the District can reshape its rental housing policies to consider what would convince a large number of homeowners to become future landlords—and what would continue to convince them to keep their units as rentals. This could mean enabling better financing mechanisms for Accessory Dwelling Units; it could mean reducing uncertainties that could impact “small” landlord more deeply, such as obtaining construction permits; or it could mean helping landlords and tenants negotiate contracts with that can help minimize future conflicts.

APPENDIX I – THE HISTORY OF RENT CONTROL LAWS IN THE DISTRICT OF COLUMBIA

The District of Columbia's rent control laws date back to 1973, following the end of the federal price controls. That year, the federal government authorized the city to enact rent control policies if, after a series of public hearings, the municipal officials concluded it was a necessary measure. Following a year of hearings, the District moved forward with rent control, capping rents at 112.3 percent of the rent charged on February 1, 1973. Rent increases were permitted only to offset changes in inflation levels or if a landlord could demonstrate serious financial hardship.⁷⁶

When adopting the 1973 law, city leaders saw rent control as a long-term tool for providing housing of minimum quality at reasonable prices for low-income families.^{77,78} In the early 1970s, federal housing assistance was on the decline, and the District did not have the financial resources to replace federal housing aid with local dollars. During the Senate hearing on the Rent Control Act of 1973, then-Vice Chairman of the D.C. Council, Sterling Tucker noted, “the shortage of decent housing at moderate rents has reached crisis proportions in this metropolitan area.”⁷⁹ Opponents criticized the bill for its long-term aspirations, arguing that a large portion of the population had no need for rent control, and the bill was a pretext for creating low-income housing.⁸⁰

The District's rent laws were expanded when the city adopted the Rental Accommodations Act of 1975, set to expire two years after its effective date, imposed a rent ceiling that could only be increased under a limited and rare set of circumstances. Technically, landlords were permitted to make an annual return of up to eight percent on rental units, and capped rent increases following renovations to 125 percent of their original rate. The law “[did] not permit landlords to include debt service as an operating expense in calculating the rate of return... [which] reduce[d] the landlord's rate of actual return, in some cases to

⁷⁶ For a detailed history of this earlier law, see the law review article by Wade Wetherington, “[The District of Columbia Rental Housing Act of 1977: The Effect of Rent Control on the Rental Housing Market](#),” *Catholic University Law Review* 27, no. 3 (1978): 607–26.

⁷⁷ According to Wetherington, rent control laws were unconstitutional if they were not in direct response to an emergency that affected most of a locale's residents.

⁷⁸ The very first federal act that imposed rent control expired in 1953. In its aftermath, New York City was the only jurisdiction with rent control. Several other jurisdictions had established rent review boards and boards to handle tenant grievances and complaints. In 1971, President Nixon imposed a 90-day freeze on prices, wages and rents pursuant to the Economic Stabilization Act of 1970, to reduce inflation from 4 percent to 1.9 percent. The federal price controls ended in 1973, precipitating the current wave of rent controls. See [Wetherington \(1978\)](#).

⁷⁹ Rent Control Act of 1973: Hearing on H.R. 4771 Before the Subcommittee on Public Health, Education, Welfare, & Safety of the Senate. Committee on the District of Columbia, 93rd Cong., 1st Sess. 20 (1973), Statement of Sterling Tucker, Vice Chairman, D.C. Council. Cited in [Wetherington \(1978\)](#).

⁸⁰ *Ibid.*

nothing.”⁸¹ The severity of these measures was lessened slightly by the next legislative action: The Rental Housing Act of 1977.⁸²

Eight years after the Rental Housing Act of 1977 was enacted, D.C. passed the Rental Housing Act of 1985, which is the basis of the District's current rent control law. The law capped rent increases, not rents, for units in all multi-family buildings with five or more units built before 1975. Confusingly, when the law first passed, these controls were referred to as “rent ceilings,” suggesting that rents could not be above a certain level. But the law did not define any such level. Instead, the law stipulated various ways rents can be adjusted (including through capital improvements, changes in inflation, and increase or decrease in services provided), leaving the actual increases in rents to the government's discretion.⁸³ It was characterized as a “[m]oderate system that explicitly seeks to maintain the profitability of rental housing investments.”⁸⁴

The Rent Control Reform Amendment Act of 2006 standardized the annual rent increases by capping them by the local Consumer Price Index (CPI) plus 2 percent (CPI+2%).⁸⁵ The 2006 law also removed the term “rent-ceiling,” directing the city to replace every instance of this term's use in the 1985 Act with different, “appropriate,” language. Landlords were allowed to increase rents by 10 percent for vacant units, but could ask for a higher rent if there were an identical unit in the building with a higher rent, so long as this increase were no more than 30 percent.⁸⁶ There are further restrictions if a unit is occupied by an elderly tenant or person with disabilities: for these units, rents cannot increase by more than the CPI and, regardless of the CPI change, by no more than 5 percent.⁸⁷ The 2006 Act also allowed (as before) overriding these caps through the filing of a “hardship petition” by landlords if they can demonstrate that their rate of return is less than 12 percent. Since then, this clause has been amended twice. In 2017, the city allowed landlords to raise rents if they had not heard back from the government within a set amount of time.⁸⁸ The city also adopted a measure to invalidate a landlord's

⁸¹ Ibid.

⁸² D.C. Law 2-54, 24 DCR 5334, effective March 16, 1978.

⁸³ Section 206 of D.C. Law 6-10, 32 DCR 3089, effective July 17, 1985.

⁸⁴ Margery Austin Turner, [Housing Market Impacts of Rent Control: The Washington, D.C., Experience](#) (The Urban Institute, 1990).

⁸⁵ D.C. Law 16-0145, 53 DCR 4889, effective Aug. 5, 2006.

⁸⁶ Department of Housing and Community Development “What You Should Know About Rent Control Laws in the District of Columbia,” page 2 (2018).

⁸⁷ Brian McCabe, [“Rent Control, Explained,”](#) Greater Greater Washington, September 13, 2016.

⁸⁸ The Rent Control Hardship Petition Limitation Amendment Act of 2016, D.C. Law 21-197, 63 DCR 15030, effective Feb. 18, 2017.

application if the affected tenant is elderly, disabled, or makes less than 60 percent of the Area Median Income.^{89,90}

Landlords can also increase rent following capital improvements or the installment of additional services and facilities.⁹¹ This allowance was authorized by the 1985 Rental Housing Act, but was later modified in 1989 to state that increases imposed on a tenant's monthly rent to pay for capital improvements must be temporary and cannot be included in the base rate used to calculate the allowable rent increase.⁹² Finally, landlords and tenants can voluntarily agree to an increase in rents in return for improved services. These voluntary agreements must be signed by at least seventy percent of the tenants, and must specify the rent increases, and the changes in services or additional capital improvements or maintenance that will follow from them. The Department of Housing and Community Development's Rental Accommodations Division must review and approve the voluntary agreements (but their decision can be challenged and reversed by administrative courts or by the Rental Housing Commission). According to the Department of Housing and Community Development, voluntary agreements are rare. The city receives somewhere between 10 and 30 such petitions each year (and some are for single-family homes), which appears to represent somewhere between 0.4 percent to 1 percent of all the buildings covered by the rent control law (Appendix Exhibit 20). Information is not available on the outcomes of all petitions. Among the 167 petitions where it was possible to track an outcome, 80 percent of the voluntary agreements were approved, about 5 percent were rejected, and 15 percent did not move forward.

⁸⁹The Elderly and Tenants with Disabilities Protection Amendment Act of 2016, D.C. Law 21-239, 64 DCR 1588, effective Apr. 7, 2017.

⁹⁰ The Elderly Tenant Rental Housing Capital Improvement Relief Amendment Act of 1993 had stipulated a similar set of rules twenty-five years earlier but had exempted tenants earning less than \$40,000 per year (as opposed to the now 60 percent of area median income). D.C. Law 9-0154, 39 DCR 5673, effective Sept. 26, 1992.

⁹¹ Jonathan Nisly, "[DC Has Rent Control, but If Landlords Aren't Making a 12% Profit They Can File a Hardship Petition and Raise Rent](#)," Great Greater Washington, 2016.

⁹² The Capital Improvements Amendment Act of 1989 D.C. Law 8-48, 36 DCR 5788, effective Oct. 19, 1989.

APPENDIX II – REVIEW OF LITERATURE ON THE IMPACT OF RENT CONTROL ON HOUSING QUALITY AND QUANTITY, DISPLACEMENT, AND INCLUSION

Evidence suggests that rent control measures can have various impacts on a city's housing stock and affordability, which are in turn related to the type and extent of the city's rent control policies. Broadly speaking, researchers have found that while rent control measures keep rents from rising as quickly as they would otherwise for the affected units, they also reduce the quantity and quality of available housing stock over time,⁹³ as some landlords respond to lower revenues by selling or converting rental buildings to condominiums, declining to rent units that require extensive maintenance, or expending fewer resources on rent-controlled buildings through maintenance or renovations.

Do rent control policies reduce the housing stock?

One criticism of rent control policies is that they shrink the supply of rental units by making developers less inclined to build new housing, even when new buildings are not subject to existing regulation. The possibility of future profit-curbing legislation, then, makes building new residences far less appealing to developers. Several studies show that the impact of rent control laws is greatest on the rent-controlled stock itself, as rent control incentivizes landlords to convert their rental apartment buildings to condominiums to escape the impacts of the law. In San Francisco, rent-controlled buildings were 10 percent more likely to be turned into condos than comparable non-controlled buildings,⁹⁴ while New York City has lost 152,000 units of rent-stabilized housing since 1993.⁹⁵ In New Jersey, rent-controlled cities have about 25 percent fewer rental units than do non-controlled municipalities.⁹⁶

However, other studies have also shown rapid growth in housing during times of especially restrictive rent control, such as New York's construction boom during the periods of the federal housing price controls during and after World War I and World War II. Other evidence focuses on "relative growth," such as what is presented in a 1980 study on New Jersey.⁹⁷ By comparing the rate of construction between 1970 and 1972 (pre-rent control) and 1975 and 1977 (post-implementation of rent control

⁹³ Martin Micheli and Torsten Schmidt, "Welfare Effects of Rent Control — A Comparison of Redistributive Policies," *Economic Modelling* 48 (August 1, 2015): 237–47.

⁹⁴ Rebecca Diamond, Tim McQuade, and Franklin Qian, "The Effects of Rent Control Expansion on Tenants, Landlords, and Inequality: Evidence from San Francisco," 2019.

⁹⁵ Kim Barker, "Behind New York's Housing Crisis: Weakened Laws and Fragmented Regulation," *The New York Times*, 2018.

⁹⁶ Joshua D. Ambrosius et al., "Forty Years of Rent Control: Reexamining New Jersey's Moderate Local Policies after the Great Recession," *Cities* 49 (December 1, 2015): 121–33.

⁹⁷ John I. Gilderbloom and Lin Ye, "Thirty Years of Rent Control: A Survey of New Jersey Cities," *Journal of Urban Affairs* 29, no. 2 (May 2, 2007): 207–20.

ordinances), the authors find that while apartment construction fell by 52 percent in New Jersey cities which had implemented rent control policies, construction fell by 88 percent in cities that had not.⁹⁸ Other studies suggest that rent control does not have a measurable effect on supply: a 2007 study on rent decontrols in Boston found that decontrolling rents (in 1985, 1989, 1993, and 1998) had “little effect on the construction of new housing.”^{99,100}

Do rent control laws reduce the quality of the housing stock?

When rents are restricted, landlords may pull back on maintenance,¹⁰¹ or simply stop renting deteriorating units that are in disrepair.¹⁰² In New Jersey, for example, rent-controlled housing units are more likely to have consistent plumbing problems.¹⁰³ The evidence for deteriorating quality is weaker in jurisdictions where the rent control laws allow for price increases, as opposed to immovable price ceilings.¹⁰⁴ Others show that when rent control laws result in less maintenance and capital investments by landlords, the tenants sometimes invest in improvement and maintenance costs themselves.¹⁰⁵

Do rent control laws reduce housing values?

Rent control, by design, limits operating incomes, which, in turn, depresses the values of apartment buildings under rent control. For example, when New York City adopted its universal rent control laws, the sales prices for multi-family buildings impacted by the change have reportedly declined by over 17 percent.¹⁰⁶ But recent evidence suggests the impacts could extend further and depress values for entire neighborhoods, not just the rent-controlled stock.

⁹⁸ Cited in Jake Blumgart, “[In Defense of Rent Control](#),” (Pacific Standard, 2017). Also see “[Local Rent Control Initiative: Proposition 10 Analysis](#),” LURN Network. October 2018.

⁹⁹ David P. Sims, “[Out of Control: What Can We Learn from the End of Massachusetts Rent Control?](#),” *Journal of Urban Economics* 61, no. 1 (January 1, 2007): 129–51.

¹⁰⁰ For a review of economists’ disagreements on the impact of rent control legislation on the housing stock, see also Blair Jenkins, “[Rent Control: Do Economists Agree?](#),” *Econ Journal Watch* 6, no. 1 (2009): 73–112.

¹⁰¹ Robert P. Albon and David C. Stafford, “[Rent Control and Housing Maintenance](#),” *Urban Studies* (Sage Publications, Ltd., 1990).

¹⁰² Bengt Turner and Stephen Malpezzi, “[A Review of Empirical Evidence on the Costs and Benefits of Rent Control](#),” *Swedish Economic Policy Review* 10, no. 1 (2003): 11–56.

¹⁰³ Ambrosius et al., “[Forty Years of Rent Control: Reexamining New Jersey’s Moderate Local Policies after the Great Recession](#),” *Cities* 19 (2015): 121–133.

¹⁰⁴ Nandinee K. Kutty, “[The Impact of Rent Control on Housing Maintenance: A Dynamic Analysis Incorporating European and North American Rent Regulations](#),” *Housing Studies* 11, no. 1 (January 1996): 69–88.

¹⁰⁵ Choon-Geol Moon and Janet G. Stotsky, “[The Effect of Rent Control on Housing Quality Change: A Longitudinal Analysis](#),” *Journal of Political Economy* 101, no. 6 (1993): 1114–48; Joseph Gyourko, 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* 45, no. 3 (March 1, 2008): 693–729; Edgar O. Olsen, “[What Do Economists Know about the Effect of Rent Control on Housing Maintenance?](#),” *The Journal of Real Estate Finance and Economics* 1, no. 3 (1988): 295–307.

¹⁰⁶ Kathleen Howley, “[Rent Control Law Sends New York Building Values Tumbling](#),” *The Wall Street Journal*, June 25, 2019.

Between 1970 and 1994, all rental units in Cambridge built prior to 1969 were subject to strict caps on rent increases and restrictions on the removal of units from the rental stock. In 1994, a state-wide referendum removed the rent control ordinance, enabling landlords to begin to charge market rents.^{107,108} The elimination of rent control raised the market values of both decontrolled and never-controlled properties in Cambridge. Researchers' estimates suggest that during the rent control era, rent-controlled properties were valued at a discount of about 45 to 50 percent relative to never-controlled properties with comparable characteristics in the same neighborhoods. Further, values across all properties increased, especially those in the same neighborhood as the rent-controlled buildings. Overall, removal of rent control increased values by \$2 billion between 1994 and 2004. Of this total effect, only \$300 million is accounted for by the direct effect of decontrol on formerly rent-controlled units, while \$1.7 billion is due to the indirect effect. That is, more than half of the capitalized cost of rent control was borne by owners of never-controlled properties.

Do rent control laws reduce displacement?

When combined with strong anti-eviction rules, rent control can increase the duration of renters' tenure, and thereby help reduce displacement. Tenants in rent-controlled housing have a greater incentive to stay where they are, especially if their monthly rent is significantly lower than market rate. The secondary benefit from this impact on tenure in gentrifying neighborhoods can help existing residents remain during times of change, or even increase inclusion.

Some evidence does support the idea that rent control does help increase tenancy duration and help reduce displacement. In San Francisco, for example, tenants who live in rent-controlled buildings are between 10 and 20 percent less likely to move than residents renting at the market rate.¹⁰⁹ Similar effects were observed in Santa Monica and New York.¹¹⁰

However, the same research also shows that while tenancy can increase for some tenants, displacement (and economic segregation) can increase if landlords take their units out of the rental market. In the Bay Area, landlords are legally allowed to offer their tenants monetary compensation for leaving, so they can lease the unit at a higher rate. In practice, these transfer payments from landlords are common and can be quite large. But importantly, when rents by law are restricted, landlords can still evict tenants, by either moving into the property themselves, or by taking their buildings out of the

¹⁰⁷ David H Autor, Christopher J Palmer, and Parag A Pathak, "[Housing Market Spillovers: Evidence from the End of Rent Control in Cambridge, Massachusetts](#)," *Journal of Political Economy*, vol. 122, 2014.

¹⁰⁸ The referendum passed on a tight vote of 51 percent to 49 percent, but 60 percent of Cambridge residents favored keeping the ordinance.

¹⁰⁹ Rebecca Diamond, "[What Does Economic Evidence Tell Us about the Effects of Rent Control?](#)," 2018.

¹¹⁰ Amee Chew and Sarah Treuhaft, "[Our Homes, Our Future: How Rent Control Can Build Stable, Healthy Communities](#)," (Oakland, CA, 2019).

rental market and converting them to condominiums. A recent study, which utilizes a quasi-experimental variation in the assignment of rent control in San Francisco, shows that this effect could be so large that the number of low-income renters that are displaced could be much larger than the number of those who stay in place longer.¹¹¹

San Francisco's rent control ordinance was enacted in 1979, in the form of regulated rent increases linked to the CPI. The ordinance exempted smaller multi-family units (with fewer than five units), similar to D.C.'s rent control laws. A 1994 ballot initiative lifted this exemption, adding small multi-family buildings constructed before 1979 to the rent-controlled stock. This created differential treatment of small buildings built prior to or post 1980, allowing for a policy experiment. The study uses panel data with address-level migration decisions and housing characteristics and compares the migration decisions of renters who lived in small buildings built before 1980 to those who lived in small buildings built between 1980 and 1990. The authors find that between five and ten years after the law change, the tenants in newly rent-controlled buildings were 19 percent less likely to have moved to a new address. These effects of limited mobility are stronger among older households and households with longer tenancy at the same address (prior to the law change). These effects are also somewhat higher for racial minorities.

Thus, the newly imposed rent-control on smaller buildings did help counter displacement, but other, less desirable impacts also followed. Landlords have several means of removing their units from the rent-controlled stock: they can move into the units themselves, convert their buildings into cooperatives, or simply pay tenants to move away. These payments are frequent and can be quite large. The study found that rent-controlled buildings were 8 percentage points more likely to convert to a condo than buildings constructed after 1980 (and thus not subject to rent control). Following these conversions, small buildings built before 1980 showed a 15 percent decline in the number of renters compared to buildings built after 1980. Furthermore, the number of tenants declined by 25 percent in these buildings compared to before the imposition of rent control.

The decline in the number of tenants in the newly rent-controlled units suggests that units were taken out of the rental stock, thus increasing rents and increasing housing costs. Shifting units out of the rental stock into (typically more expensive) condominiums likely increased the pace of displacement and increased income inequalities—exactly the opposite of what rent control was intended to do. The presence of restricted land use (and discriminatory) practices can magnify this negative feedback. There are hints of this in the District of Columbia's housing market, which remains highly segregated.¹¹²

¹¹¹ Diamond, Mcquade, and Qian, "The Effects of Rent Control Expansion on Tenants, Landlords, and Inequality: Evidence from San Francisco."

¹¹² Sayin Taylor, "Taking Stock of the District's Housing Stock."

Similarly, in San Francisco, five neighborhoods host 60 percent of the entire city's affordable housing stock.¹¹³

Another way of thinking about the ability of rent control laws to create inclusive neighborhoods is to consider whether they can mix high- and low-income renters in the same buildings or in the same neighborhoods by offering lower rents to lower-income households. Because rent-control lacks income targeting, it does not automatically translate into lower housing burdens for lower-income households. In California, for example, the presence of rent control did decrease the number of housing-burdened middle-income families (those earning between \$35,000 and \$75,000 a year) but had no significant effect on the number of lower-income families who were rent-burdened. Importantly, evidence suggests that a significant number of high-income residents reap the benefits of rent control. For example, as of 2013, 57.3 percent of rent-controlled units in California were rented by middle- and high-income renters. In fact, low-income renters (57.1 percent of whom did not live in rent-controlled housing) were more likely to live in a property built before 1980—the cutoff date for rent control in the state—if it was in a city not subject to rent control policies.¹¹⁴ Similarly, wealthy professionals occupied the bulk of rent-controlled units in Cambridge.¹¹⁵

¹¹³ Adam Brinklow, “[San Francisco Renters: More than 60 Percent Have Rent Control](#),” (SF-Curbed, 2018).

¹¹⁴ Christopher Thornberg et al., “[An Analysis of Rent Control Ordinances in California](#)” (California Apartment Association, 2016).

¹¹⁵ Autor, Palmer, and Pathak, “Housing Market Spillovers: Evidence from the End of Rent Control in Cambridge, Massachusetts.”

APPENDIX III – METHODOLOGY

The analysis presented in this study relies on a combination of data sources, including administrative data from the District of Columbia government, data from private sources, and other publicly available data from the U.S. Census. The basic information on the rental stock is gleaned from the Integrated Tax System Public Extracts and housing characteristics tracked by tax assessors and made publicly available through three separate Computer Assisted Mass Appraisal (CAMA) data sets: one for residential buildings, one for condominiums, and one for commercial buildings. The data are mapped using the Common Ownership Lot spatial file available from the District's open data repository. The District's Real Property Tax Assessment dataset tracks condominium units individually, and not entire buildings, since each condominium unit has a unique owner. These units have been compiled into different condominium buildings by using the Condo Regime file, which is also publicly available.

It is important to note that the housing and household picture presented in this report reflects the findings based on available data, but it is extremely hard to paint a completely accurate picture of housing units and households in the District due to the fluid natures of both. Characteristics of housing units change all the time, through vacancies, subdivisions, and the ways units are shared sometimes by multiple households and sometimes by a single household. Households change, too, through marriage, divorce, or other events.¹¹⁶ The best we can do is take a snapshot, which is what this report does, but continuously be mindful of the limitations of such snapshots.

Also, in some cases, it is hard to reconcile Census data based on the American Community Survey with the District's administrative data on housing. While the overall numbers of housing units estimated in this study are close to those estimated by the Census, there are bigger gaps for rental housing. This study estimates that there are approximately 207,000 units in the District, that are potentially rental, including vacancies. Of these, about 72,000 units are in the shadow rental market as according to tax records they are not owner-occupied. In contrast, the Census Bureau estimates that there are 164,000 renter households in the District. That would imply about 43,000 units are vacant at any given time. This is about 20 percent rental housing—a much higher vacancy rate than what the Census predicts (about 10 percent). Further, the vacancy rate in apartment buildings is now hovering around 7 percent. That means more than half the units in the shadow rental market not occupied by their owners are vacant. That seems like a very big number, which makes it hard to reconcile the renter household estimates by the Census with the D.C. Policy Center's estimates of rental units. Furthermore, excluded from this count are units that operate illegally—without a Certificate of Occupancy—which would further increase the discrepancy. This author cannot offer a way of reconciling these numbers.

¹¹⁶ I thank Stephen Swaim for this important point.

1. Classification of units by use type

The study uses the city's own classification of property types to classify units into different groups of housing. The Office of Tax and Revenue assigns each tax unit a use code and a related description, which can be found in the Integrated Tax System Use Codes Lookup file available at opendata.dc.gov. The codes selected for this study, their short descriptions, and their grouping used in the study, are presented below.

Appendix Exhibit 1 – Use Codes and groupings

Use code	Description (from the Office of Tax and Revenue)	Grouping used in the study
21	Residential-Apartment-Walk-Up	Apartment buildings
22	Residential-Apartment-Elevator	
29	Residential-Multifamily, Misc.	
15	Residential-Mixed Use	Condominiums
16	Residential-Condo-Horizontal	
17	Residential-Condo-Vertical	
24	Residential-Conversions-Less than 5	Conversions
25	Residential-Conversion-5 units	
26	Residential-Cooperative-Horizontal	Cooperatives
27	Residential-Cooperative-Vertical	
28	Residential-Cooperative-More than 5	
126	Coop-Horizontal-Mixed Use	
127	Coop-Vertical-Mixed Use	
23	Residential Flats-Less than 5	Flats
216	Condo-Investment-Horizontal	Investment properties (Condominiums)
217	Condo-Investment-Vertical	
11	Residential-Row-Single-Family	Single-family homes
12	Residential-Detached-Single-Family	
13	Residential-Semi-Detached-Single-Family	
19	Residential-Single-Family-Misc.	

Source: Integrated Tax System Use Code Look Up and author's deliberations.

2. Determination of rental and owner-occupied stocks

The District's Real Property Tax Database tracks homeowners who qualify for homestead deduction, which exempts a certain amount of the value of a home from real property taxes. The Integrated Tax System Public Extract tracks these units by assigning a homestead code (HSTCODE in the database) of 1 (for homestead properties) and 5 (for homestead properties owned by low-income seniors and disabled individuals who also qualify for a tax rate cut).

The study makes the following assumptions:

- All units that do not receive a coding of 1 or 5 are potentially available for rent. This can include vacant units.

- All units in rental apartment buildings are potentially available for rent, even when they are vacant.
- All units that are in cooperatives are owner-occupied. While tax rolls do not track individual units in cooperative buildings or their occupancy status, by design, most cooperatives ban or limit rental use in their buildings.

3. Estimating the number of units in multi-family buildings

The real property tax database tracks taxable entities. In the case of single-family homes, the taxable entity and the housing unit are the same. However, in multi-family buildings, additional steps are necessary to estimate the total number of units in a building. The estimation process varies for condominiums, rental apartments, and cooperatives.

Each condominium unit is a separate taxable entity, so counting condominium units is relatively easy. What is necessary is to assign them to a single building. To do so, this analysis used additional data from the District's Office of Tax and Revenue and the Office of the Chief Technology Officer. These include the [Condo Regime File](#), which assigns units to different condominium entities; and the [Condo Relate Table](#), which assigns the unique Square Suffix Lot (SSL) identifier for each taxable condominium to a Condo Regime identifier, and each Condo Regime to a lot in the District. The latter is done through MAT_SSL (the Approval Lot Identifier assigned by the Office of Tax and Revenue), which can then be matched with SSL each in the [Common Ownership Lots](#) spatial dataset for mapping with other types of housing. Researchers were unable to map all these condominiums using the common ownership lots. The full set of condominium buildings (including those that no longer exist) can also be mapped using the [Condo Approval Lots](#) spatial file.

Appendix Exhibit 2 – Rental apartment buildings and number of units, by building size

Building Size (by units)	Number of Taxed Entities	Number of Units
Zero or unknown	138	? (estimate ~4,000)
Under 5	121	220
5 to 9	737	5,126
10 to 19	945	12,659
20 to 49	636	19,453
50 to 99	221	15,583
100 or more	324	71,600
TOTAL	3,122	124,641

Source: D.C. Policy Center estimates and CoStar.

For rental apartment buildings, this analysis drew on three sources of data: The first one is the [Computer Assisted Mass Appraisal \(CAMA\)](#) datafile for residential units, which sometimes record the number of units in each rental apartment building. CAMA data was the primary source, when available. For buildings that do not have this information in the CAMA dataset, the next source was CoStar, a private data source. But even CoStar does not have the total number of units for all buildings. When this information was not available, researchers used the [Address Residential Units](#) datafile, which is a part of the Master Address Repository, for condominiums and rental apartments. This dataset separates the street address and the unit address for each unit in a multi-family property. For condominiums, it also provides the SSL identifier but for apartment buildings, since the unit is not the taxpayer, no SSL identifier is presented. Researchers matched street addresses to estimate the number of units in a building.

This exercise produced an estimated number of units for 2,984 of the 3,121 rental apartment buildings in the District. It is not known how many units are in the remaining 138 buildings. If these buildings are of average size, then this analysis is missing about 4,000 units.

4. Estimation of units by size in multi-family buildings:

There is no administrative data on the size of units in rental apartment buildings, by number of bedrooms. For this, researchers turned to CoStar, which partially covers this information. The table below compares the number of units estimated through the methodology described in the previous section, and the number of units for which CoStar has bedroom information. Overall, researchers were able to estimate the data on the number of bedrooms for 82 percent of all rental apartment units. However, this share changes over different periods. For buildings built before World War II, data are available for 79 percent of all units. The information is more robust for the two periods of decline with information on the number of bedrooms in units covering 92 percent and 98 percent of total number of units respectively for the First Decline and the Second Decline periods. The data are thinnest for the buildings built since 2000. For this period, an estimated 34,100 units have been constructed, but information on bedroom sizes is only available for 21,000 units, or 62 percent of the total.

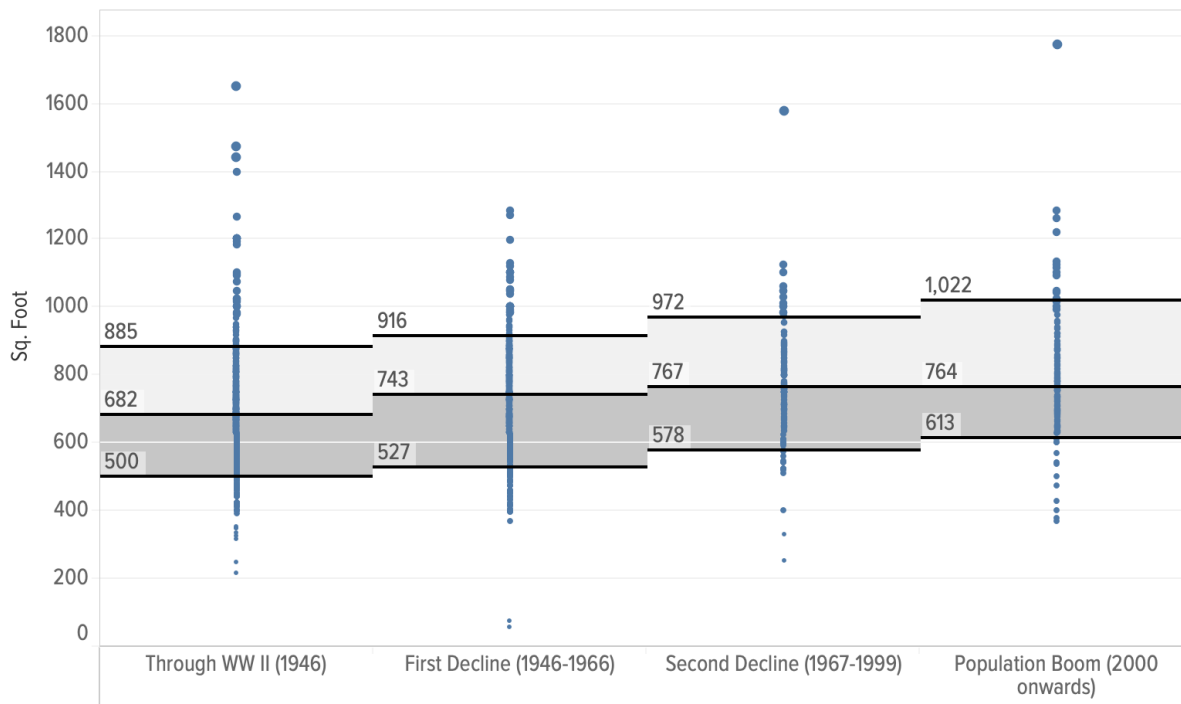
Appendix Exhibit 3 – Rental apartments by construction period

Construction period	Estimated number of units	Buildings with information on unit sizes in CoStar	CoStar coverage
Through World War II	36,926	29,275	79%
First Decline	36,370	33,630	92%
Second Decline	17,243	16,843	98%
Population Boom	34,102	21,053	62%
All	124,641	101,872	82%

Source: D.C. Policy Center estimates and CoStar

CoStar also provides information on average unit size by square footage in a building but does not break it down any further. Data on average unit sizes is available for 1,159 buildings with 101,800 units. Among these units, the median unit size is 725 square feet. Interestingly, according to CoStar data, unit sizes have been increasing over time: for units built before World War II, the median size was 682 square feet, but 90 percent of the units were smaller than 885 square feet and 90 percent were larger than 500 square feet. For units built after 2000, the 10th percentile, median, and 90th percentile figures are 613 square feet (largest of all periods), 764 square feet (second largest since the period of the Second Decline), and 1,022 square feet (nearly 140 square feet larger than what this figure was before World War II). There is less certainty about this data since it is an average of averages, and there is even less data available on average unit sizes for units built since 2000. For this recent period, the general perception is that unit sizes have been becoming somewhat smaller. For these reasons, the relevant chart is only presented as a reference point here in the appendix, rather than in the main report.

Appendix Exhibit 4 – Rental apartment unit sizes by the period of construction: 10th percentile, median, and 90th percentile



Source: Integrated Tax System Public Extract, and Costar



5. Estimation of rents by unit size in multi-family buildings

As previously mentioned, the CoStar database is estimated to track 64 percent of all rental apartment units in the District of Columbia. Coverage is strongest in Ward 3 (95 percent of all units), and weakest in Ward 6 (45 percent of all units) and Ward 8 (49 percent). CoStar's coverage is even weaker for rent data: the units for which CoStar has rent information (averaged across the building in which the unit is located) are only 57% of the units that are tracked by administrative data (approximately 71,000 units). Rent coverage is, once again, strongest for Ward 3 at 81 percent and weakest for Ward 6 at 39 percent. Rent information is available for only half of the rental units in Wards 4 and 6, and less than half in Wards 7 and 8 (in addition to Ward 5).

Appendix Exhibit 5 – Rental apartment buildings and number of units, by building size

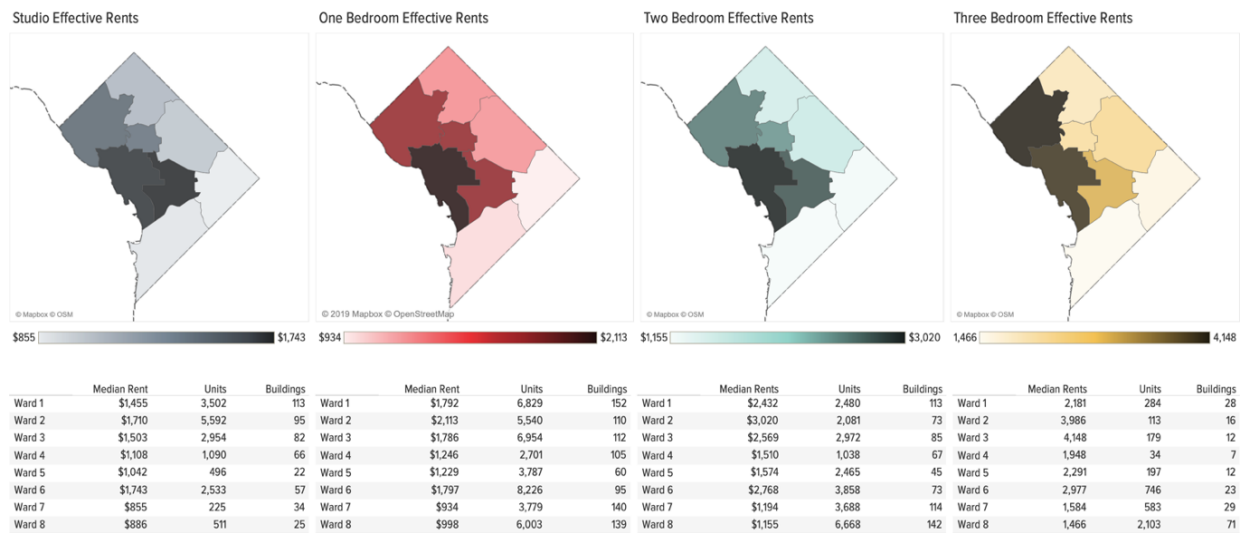
Ward	Number of Units - Administrativ..	Number of Units - Costar Data	Share of Admin Data	Units with Rent	Rent Data Coverage
Unknown	178				
1	18,616	12,780	69%	11,562	62%
2	16,927	13,824	82%	12,804	76%
3	15,691	14,886	95%	13,193	84%
4	8,144	4,988	61%	4,164	51%
5	11,102	4,999	45%	4,039	36%
6	24,567	13,175	54%	12,247	50%
7	11,121	6,438	58%	5,251	47%
8	18,295	8,977	49%	7,899	43%
All	124,641	80,067	64%	71,159	57%

Source: Rental Housing Database compiled by the D.C. Policy Center and CoStar (September 2019)



Rent information by unit size can be particularly elusive for some types of apartments in certain wards. For example, rent information for studios draws from fewer than 500 units in Wards 5 and 8, and only 225 units for Ward 7. Similarly, rent data on three-bedroom units rely on fewer than 200 units in Wards 2, 3, 4, and 5.

Appendix Exhibit 6 – Median rents by ward and size



6. Estimation of the number of rent-controlled units

The definition of the rental stock subject to rent control is in part built on exemptions for which data are not always available. To that end, once researchers compiled the dataset of all rental units, they accounted for the following exemptions:

1. Publicly owned properties or those receiving public assistance:

What we could do: We excluded all properties that are owned by the D.C. government or are receiving a tax exemption because the property is owned or managed by a nonprofit with an affordability mission. This eliminated 17,400 units in 487 different buildings. Of these, 5,200 are public housing units, and the remainder are owned by exempted nonprofits. We did not include in this count housing units owned by exempt nonprofits that are not focused on housing affordability.

What we could not do: The Rental Housing Act exempts buildings that receive other forms of housing support (excluding local rent subsidies). The analysis does not incorporate this exemption since landlords are not required to remain in these programs, and once they stop receiving federal housing vouchers, they are subject to rent control.

2. Properties that received their building permits after 1975:

What we could do: We used the “Actual Year Built” information in the District’s CAMA database to identify buildings that fall under this criterion. When this information was not

available from CAMA, we used information from CoStar. Following Tatian and Williams (2011), we also separately tracked buildings built in 1976 and 1977, as these buildings could have received their building permits before December 31, 1975.

What we could not do: The law also includes in the rent-controlled stock any new unit added to an existing structure built before 1980. We implicitly tracked this by looking at current units but did not have a way of explicitly identifying such units. The law also requires that units in a new structure built after demolishing a rent-controlled building be subject to rent control (unless there are more units in the new building). We have no means of tracking this.

3. *Housing accommodation of 4 or fewer rental units:*

What we could do: We limited our analysis to rental apartment buildings with five or more units.

What we could not do: We did not investigate whether buildings with fewer than four units have owners that own more than four units in multiple dwellings. Tatian and Williams (2011) find this to be a relatively small number. In their analysis, which uses mailing addresses of owners to determine the applicability of rent control laws, they find potentially 1,900 units subject to rent control owned by owners with five or fewer units in their portfolio. The researchers do not know how many own four or fewer units (this information is not provided in their report), but the analysis included some owners with five units.)

4. *Exemptions for which we could not account:*

- a. Cooperatives with four or more units but fewer than four shareholders: The analysis excluded all cooperatives, because most of cooperatives strictly limit rental use of properties.
- b. Buildings under rehabilitation programs with support from the Department of Housing and Community Development.

7. *Assessment of the rents in shadow rental market properties*

To estimate the affordability of shadow rental market properties, we followed the methodology developed in an earlier D.C. Policy Center report, *Taking Stock of the District's Housing Stock*, which is briefly summarized here.

The shadow rental market includes units that are generally constructed with the intent of being owner-occupied. These include single-family homes, condominiums, conversions, flats, and investment properties. According to administrative records from the tax office, there are, however, 82,780 such properties that are not actually occupied by their owners.

We based the affordability estimates on the capacity of each unit. This required us to identify the number of bedrooms in each unit and then ascribe them to the appropriate household size. We assumed that a studio apartment would be appropriate for a single-person household, a one-bedroom unit can house a household of two at most, a two-bedroom unit can hold a household of three, and a household of four or more would have to be in a unit with a minimum of three bedrooms.

Appendix Exhibit 7 – Types of units included in the shadow rental market analysis

Description (group)	Description	
Condominiums	Residential-Condo-Horizontal	12,126
	Residential-Condo-Vertical	14,136
	Residential-Mixed Use	83
Conversions	Residential-Conversion-5 units	552
	Residential-Conversions-Less than 5	8,541
Flats	Residential Flats-Less than 5	11,805
Investment Properties (Condominiums)	Condo-Investment-Horizontal	1,474
	Condo-Investment-Vertical	7,338
Single Family Homes	Residential-Detached-Single-Family	6,964
	Residential-Row-Single-Family	14,634
	Residential-Semi-Detached-Single-Family	5,093
	Residential-Single-Family-Misc	34
Grand Total		82,780

While CAMA data provides bedroom information for most units, when this information was missing, we estimated the number of bedrooms based on unit size: we assumed that the average size of a room is 400 square feet. We reduced the number of rooms calculated in this manner by one to account for living space. Using this methodology, we were able to include 81,008 of the 82,780 units in our analysis.

Appendix Exhibit 8 – Units excluded from the shadow market analysis because of lack of information

Beginning number	82,780
Single-family (detached, semi-detached, row)	(52)
Condominiums	(11)
Conversions	(562)
Flats	(38)
Investment properties	(1,109)
Number of units included	81,008

To estimate the rents for each unit, we used taxable assessment information. We assumed that the assessments correctly capture the operating income from the unit when it is rented out. We then used a cap rate of 5.4 percent to estimate the net operating income from each unit—the market cap rate reported by CoStar for Washington, D.C. multi-family residential buildings. We divided this by 12 to estimate the monthly rent.

To determine affordability, we compared the annual rent expenditure to the Area Median Income by each household size. We also compared this figure to the median renter income in the neighborhood to elaborate on the share of income residents spend on rent. We compared this to ACS to check our estimate. ACS reports the estimated median gross rent as a share of median household income (both owners and renters) for 174 Census Tracts. This “burden” metric does not differentiate between rental apartments and units in the shadow rental market. Our estimates for “burdens” which compares our estimated rents for the shadow rental market to the median household income reported for the census tract by ACS are within the error margin of ACS estimates for 82 of the tracts. The interested reader can request this data from the authors.

The table below presents the number of units by size and affordability level at the ward level.

Appendix Exhibit 9 – Units by ward and affordability

Share of AM...	Suitable For (copy)	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Over 120 Percent	Studio	1	4	17	1	3	3		1
	One Bedroom	32	404	67		2	37		2
	Two Bedrooms	239	1,312	202	13	13	390		
	Three or More Bedrooms	425	1,219	1,852	475	106	612	3	
80 Percent to under 120 Percent	Studio	10	108	24		5	23		1
	One Bedroom	434	1,985	307	6	15	739	3	
	Two Bedrooms	1,282	1,769	530	129	199	1,797	4	
	Three or More Bedrooms	1,130	297	664	1,225	1,015	1,461	39	26
50 Percent to under 80 Percent	Studio	249	1,108	109		19	520	2	7
	One Bedroom	1,925	3,699	1,720	152	374	3,134	3	1
	Two Bedrooms	1,207	562	682	507	1,128	1,964	99	26
	Three or More Bedrooms	526	32	59	2,012	2,350	783	742	301
30 Percent to under 50 Percent	Studio	308	1,112	520	23	67	595	10	9
	One Bedroom	697	347	1,408	604	1,200	1,465	113	25
	Two Bedrooms	233	14	164	290	644	257	1,155	442
	Three or More Bedrooms	35	3	4	131	377	36	2,125	1,342
Under 30 percent	Studio	30	1,022	19	18	26	69	33	32
	One Bedroom	27	7	10	678	2,405	317	2,308	2,214
	Two Bedrooms	7	3		169	543	109	1,352	1,606
	Three or More Bedrooms	4			5	144	164	295	613

Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.



8. Displacement models

The displacement models are simple linear regressions that regress the change in the share of minorities in each census tract on the share of certain type of housing (rent-controlled, all rentals, owner-occupied). Below are the relevant statistics for each of the three models:

Rent-controlled units

Equation: Change in share of minorities = 0.161765*Share of Rent-Controlled Units + -0.124003

Coefficients				
Term	Value	StdErr	t-value	p-value
Share of rent-controlled units	0.161765	0.0391054	4.13664	< 0.0001
intercept	-0.124003	0.0197373	-6.28265	< 0.0001

Model statistics:

Number of modeled observations:	168
Number of filtered observations:	11
Model degrees of freedom:	2
Residual degrees of freedom (DF):	166
SSE (sum squared error):	1.57861
MSE (mean squared error):	0.0095097
R-Squared:	0.0934498
Standard error:	0.0975176
p-value (significance):	< 0.0001

All Rentals

Equation: Change in share of minorities = $0.0375129 \times \text{Share of Rental Housing} + -0.0717851$

Coefficients				
Term	Value	StdErr	t-value	p-value
Share of Rental Housing	0.0375129	0.0422451	0.887982	0.375835
intercept	-0.0717851	0.0273591	-2.62381	0.0095059

Number of modeled observations:	168
Number of filtered observations:	11
Model degrees of freedom:	2
Residual degrees of freedom (DF):	166
SSE (sum squared error):	1.7331
MSE (mean squared error):	0.0104404
R-Squared:	0.0047276
Standard error:	0.102178
p-value (significance):	0.375835

Owner-occupied housing

Equation: Change in share of minorities = $-0.0375129 \times \text{Share of Owner Occupied} + -0.0342722$

Coefficients				
Term	Value	StdErr	t-value	p-value
Share of Owner Occupied	-0.0375129	0.0422451	-0.887982	0.375835
intercept	-0.0342722	0.0178782	-1.91699	0.056957

Number of modeled observations:	168
Number of filtered observations:	11
Model degrees of freedom:	2
Residual degrees of freedom (DF):	166
SSE (sum squared error):	1.7331
MSE (mean squared error):	0.0104404
R-Squared:	0.0047276
Standard error:	0.102178
p-value (significance):	0.375835

9. Modeling Inclusionary Conversions

The underlying assumption that drives the model is that landlords will be willing to take cash infusions from the D.C. government when they are refinancing their units. In return, they will set aside a certain portion of their units for long-term affordable use.

The inputs for the model are the following:

- Location and size of rent-controlled apartment buildings

- Prevailing rents in rent-controlled apartment buildings
- Prevailing vacancy rates
- Mix of differently sized units
- Taxable assessments.

The model used for estimating the public funding necessary to convert existing rental units into affordable units relies on information from CoStar. CoStar tracks information on 1,517 buildings constructed before 2006 (our modeling universe), with 77,425 units. Of these, we exclude 13,000 units in 731 buildings because CoStar has no information on unit rents. These are typically smaller buildings – the median number of units is 12. This leaves us with 795 buildings with 64,127 units. These are typically larger buildings with an average of 78 units (or a median of 36 units).

The model is a relatively simple one, which compares the effective rents in a building to the rents that would be affordable at certain area median incomes. We replicate the model for both (1) all units, averaging through unit sizes, and (2) separately for each unit size. We make the following modifications to the CoStar data:

1. For 238 buildings with 7,000 units, we do not have any information on vacancy. For these units, we assume that the vacancy rate is 7 percent, which is the prevailing vacancy rate among those buildings that do have vacancy information.
2. As noted earlier, the number of units reported in CoStar does not always match the estimated number of units in apartment buildings based on administrative data (or data from the address repository). While we used CoStar data to run our model, we scaled the output by the discrepancy between the administrative data and CoStar data. For example, in the entire city, CoStar's sample of buildings we use for modeling has 64,127 units. Our estimate for the same buildings is 53,000 units. We also know from tax data that the total number of rental housing units that were built in our sample period is 77,000 units. We use these numbers to scale our unit estimates in the model.

Beyond that, the modeling does not require any modifications to the CoStar data, but it does rely on the following parameters:

1. Number of years for which the unit will be set aside for affordable use
2. The capitalization rate for the building that will be included in the program
3. The share of units that will be set aside in each building over time
4. The share of vacant units that could be taken over immediately
5. The mix of affordability covenants by Area Median Income
6. The minimum number of units a building must have to participate in the Inclusionary Conversion program

7. The amount of investment the building owner will make after refinancing to improve building quality as a share of total revenue (i.e., by how much will rents increase?)
8. D.C. contribution to overall improvement of the building.

10. Full list of data sources used to develop the Rental Housing Database

1. Integrated Tax System Public Extract, text file, updated regularly. The study uses one dated September 19, 2019 ([here](#))
2. Integrated Tax System Data Dictionary, text file, dated July 24, 2019. ([here](#))
3. Integrated Tax System Use Codes Lookup, text file, dated June 25, 2019. ([here](#))
4. Computer Assisted Mass Appraisal – Residential, text file, dated June 25, 2019 ([here](#)).
5. Computer Assisted Mass Appraisal – Commercial, text file, dated June 25, 2019 ([here](#)).
6. Computer Assisted Mass Appraisal – Condominium, text file, dated June 25, 2019 ([here](#)).
7. Common Ownership Lots, spatial file, dated September 19, 2019. ([here](#))
8. Condo Approval Lots, spatial file dated September 19, 2019. ([here](#))
9. Condo Regime, text file. ([here](#))
10. Condo Relate File, text file. ([here](#))
11. Condo Approval Lots, spatial file. ([here](#))
12. CoStar data extract (dated September 25, proprietary data)
13. Address residential units, text file, dated June 25, 2019. ([here](#))
14. Real Property Tax Assessment Neighborhoods, spatial File, dated June 25, 2019. ([here](#))
15. Affordable Housing, text data, dated December 13, 2019 ([here](#))
16. TOPA data from DHCD (via Urban Institute)
17. Section 8 contracts, from HUD.
18. Housing Choice Vouchers, from HUD.
19. ACS Five-year data summaries for various demographic and income characteristics.

APPENDIX IV – ADDITIONAL TABLES AND CHARTS

Appendix Exhibit 10 – Publicly subsidized affordable units, by program and ward

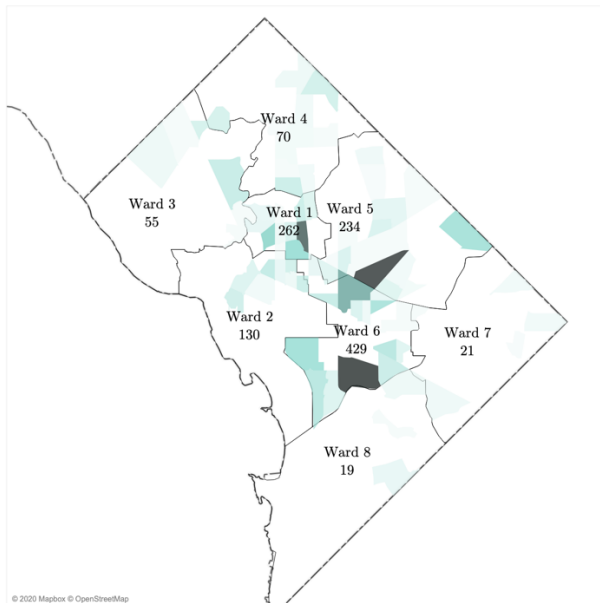
Ward	Housing Choice Voucher	Section 8 Multifamily	Local Rent Supplement - Tenant Based	Project or Sponsor Based LSRP	Public Housing	Produced since 2015 with public loans, IZ, PUDs	Grand Total
Ward 1	538	2,222	195	271	966	1,368	5,560
Ward 2	181	947	81	175	860	840	3,084
Ward 3	33	85	145		160	133	556
Ward 4	684	157	242	279	21	2,287	3,670
Ward 5	1,561	1,985	419	176	601	2,640	7,382
Ward 6	1,193	1,157	404	131	2,002	3,883	8,770
Ward 7	3,018	1,252	743	264	1,719	3,436	10,432
Ward 8	3,972	2,258	1,001	313	1,204	5,323	14,071
Grand Total	11,180	10,063	3,230	1,609	7,533	19,910	53,525

Sources: HUD, Section 8 Multifamily Contract Data, 2019; Housing Choice Vouchers Data, 2019; DC Open Data Affordable Housing Database, 2019; Public Housing Areas Database, 2019; LRSP data from FY 2019 Performance Oversight Hearings responses posted on the Council Website. The data include units in construction as well as in the pipeline. The table excludes 365 LRSP Project based units that have been awarded to providers with multiple locations across the city, but includes 340 properties built under the IZ program and are set aside for sale. The 365 units with no specific Ward designation are part of a city-wide initiative.



Appendix Exhibit 11 – Distribution of Inclusionary Zoning units and zoning

Inclusionary Zoning units including the pipeline, by census tract and ward

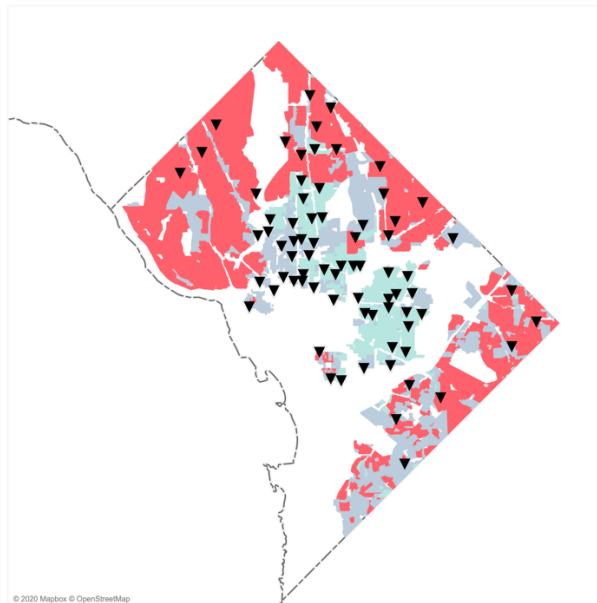


© 2020 Mapbox © OpenStreetMap

Total IZ Units



Inclusionary Zoning units and zoning



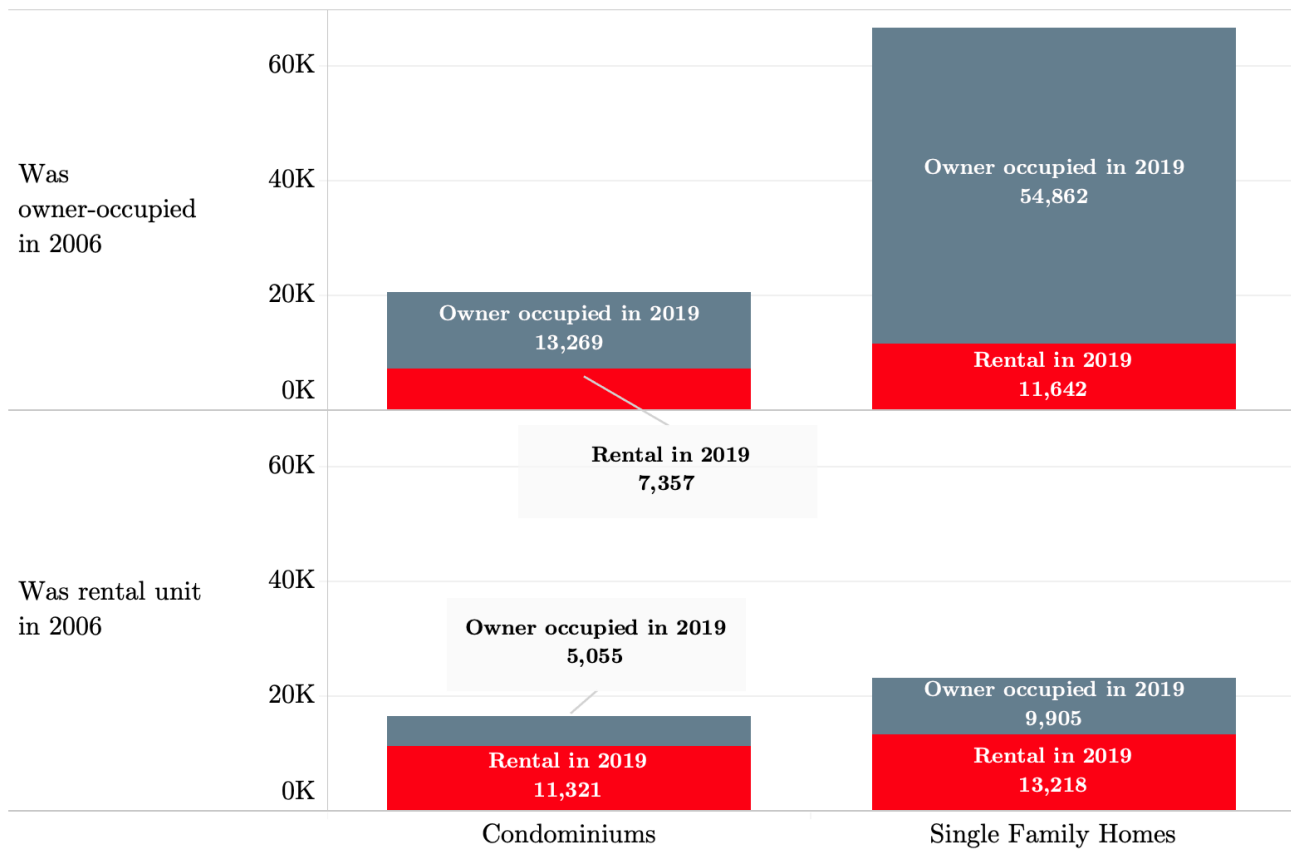
© 2020 Mapbox © OpenStreetMap

Residential apartment zoning
Residential flat zone
Residential single family



Source: IZ units from Open Data, as of September 25, 2019; Zoning from Open Data.

Appendix Exhibit 12 – Movement of shadow rental market units in and out of the rental stock



Source: Integrated Tax System public data extracts from September 2016 and September 2019.



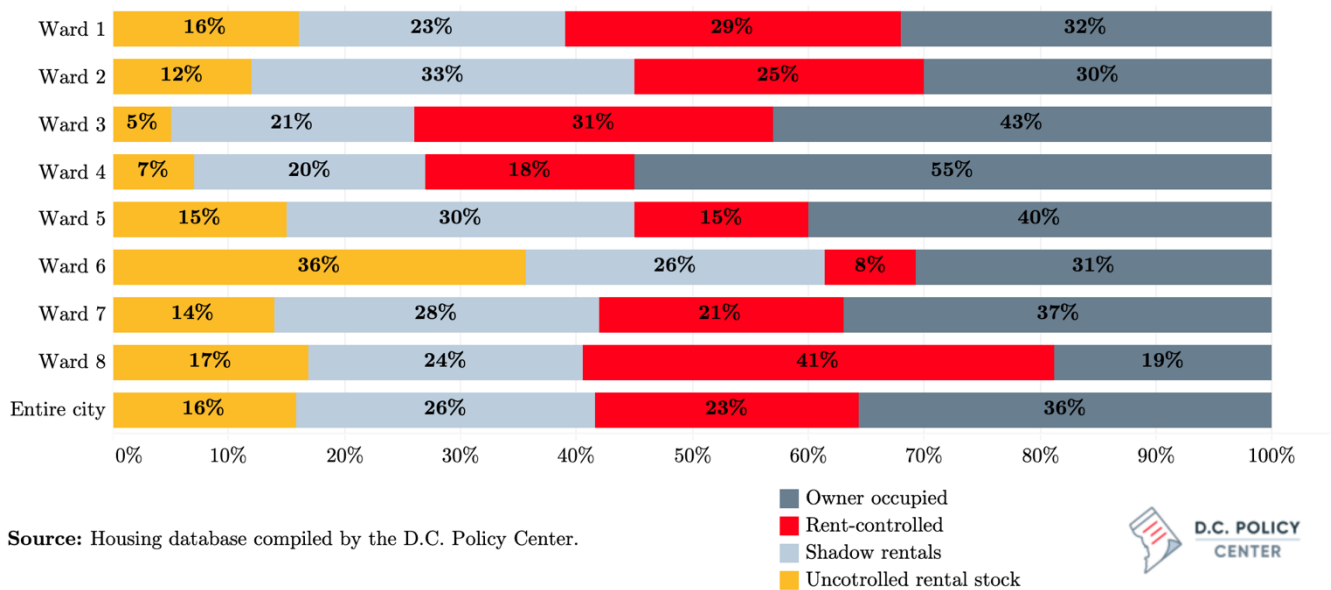
Appendix Exhibit 13 – Drainage of units out of rental apartment status since 2006

		Owner Occupied in 2019	Rental in 2019	Total
Classified as rental apartment in 2006	Conversion in 2019	3,006	6,037	9,043
	Cooperative in 2019	726		726
Total		3,732	6,037	9,769

Source: Integrated Tax System public data extracts for September 2016 and September 2019.



Appendix Exhibit 14 – The composition of the housing stock, by ward

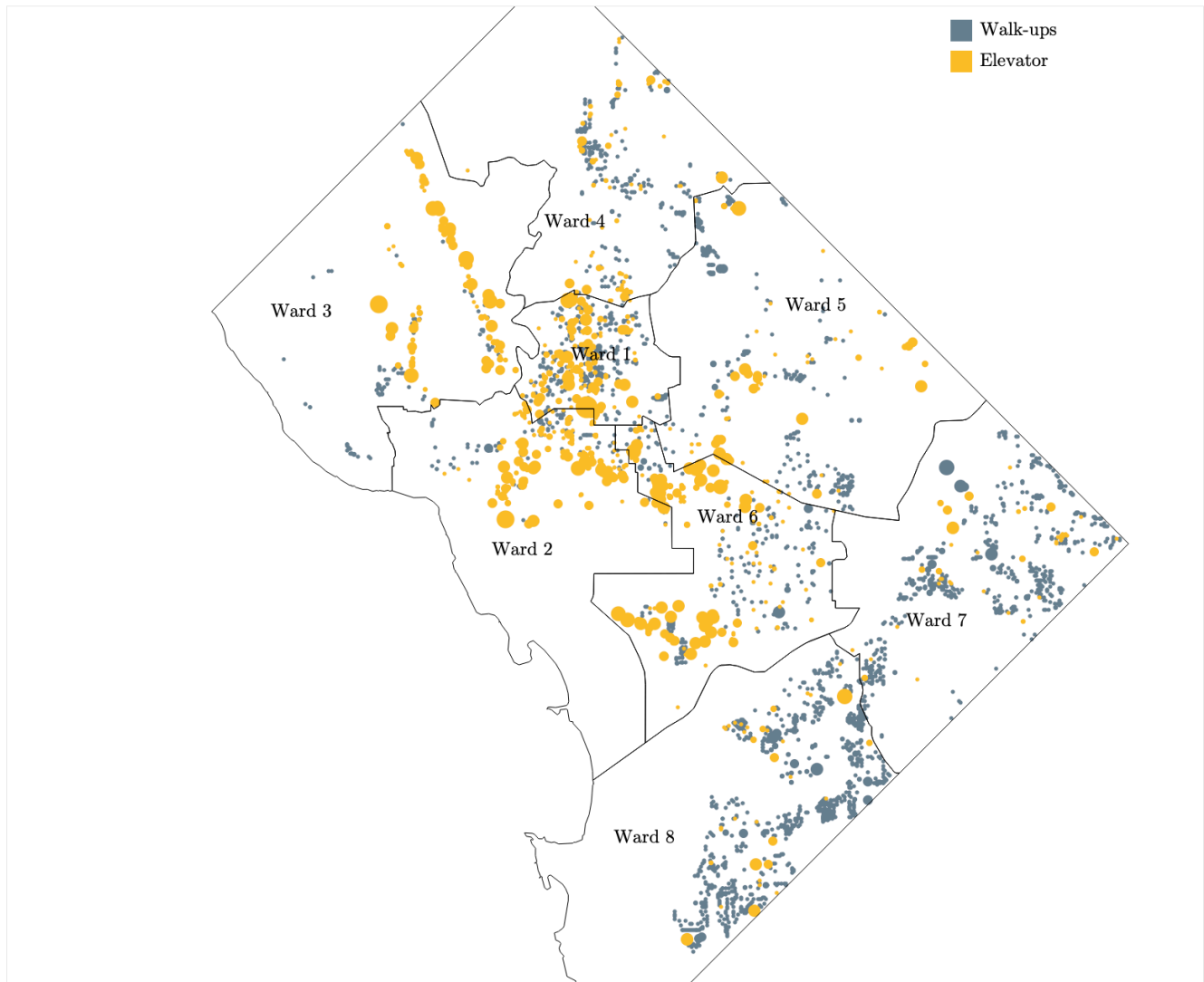


Appendix Exhibit 15 – Rental apartment buildings, by size of the building

	Buildings with elevators	Walk-ups	Total
Number of Buildings	764	2,354	3,118
Number of Units	79,284	45,292	124,576
Average Number of Units	104	19	40

Source: Integrated Tax System Public Extract, combined with information from Computer Assisted Mass Appraisal files (residential, condominium, and commercial) and master address repository.

Appendix Exhibit 16 – Rental apartments: walk-ups and buildings with elevators

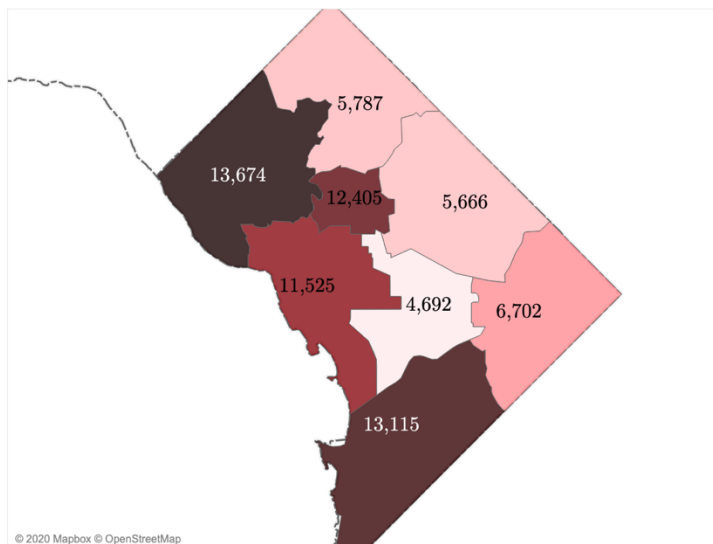


Source: Integrated Tax System Public Extract, 2019, Common Ownership Lots file, Condo Approval Files, Computer Assisted Mass Appraisal datasets, master address repository, all available at [Opendata.dc.gov](https://opendata.dc.gov).

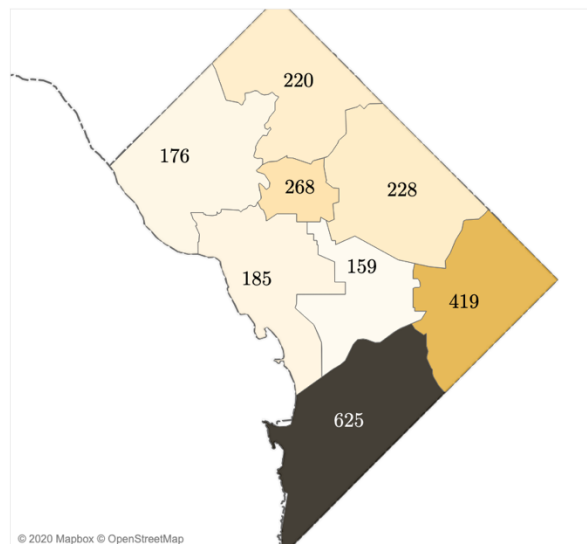


Appendix Exhibit 17 – Rent-controlled buildings and units, by ward

Units under rent control

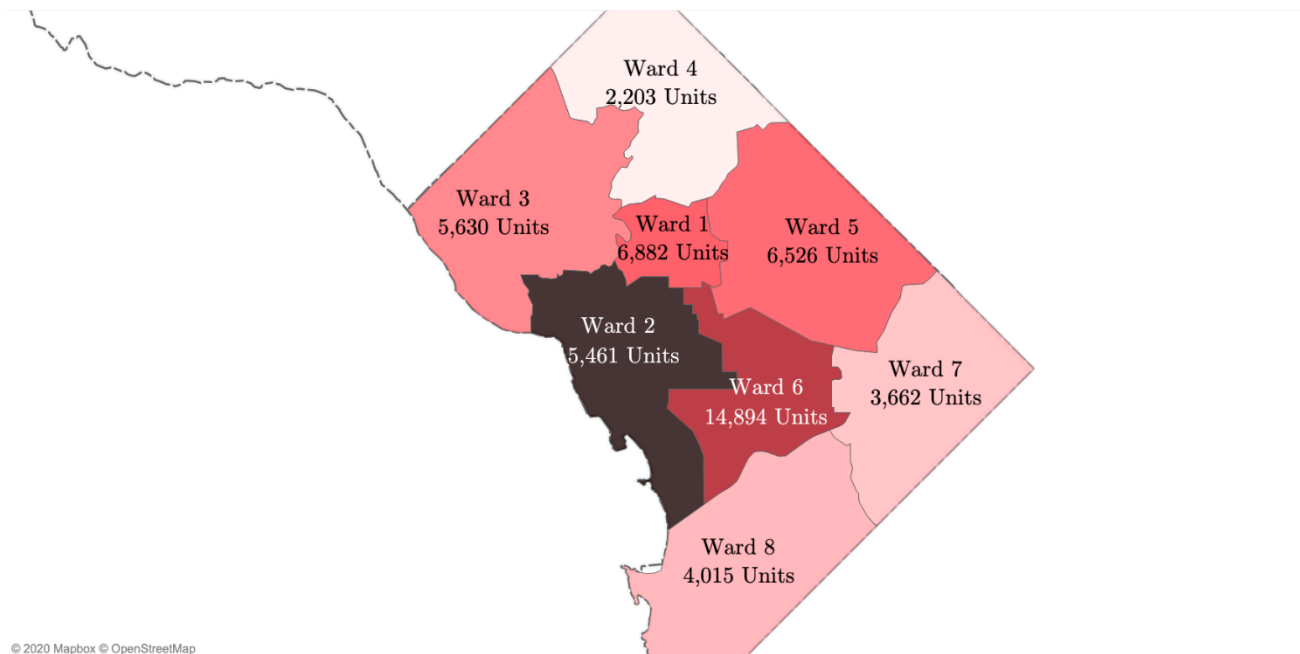


Buildings under rent control



Source: Housing database compiled by the D.C. Policy Center.

Appendix Exhibit 18 – Shadow rental market, by ward and type of dwelling



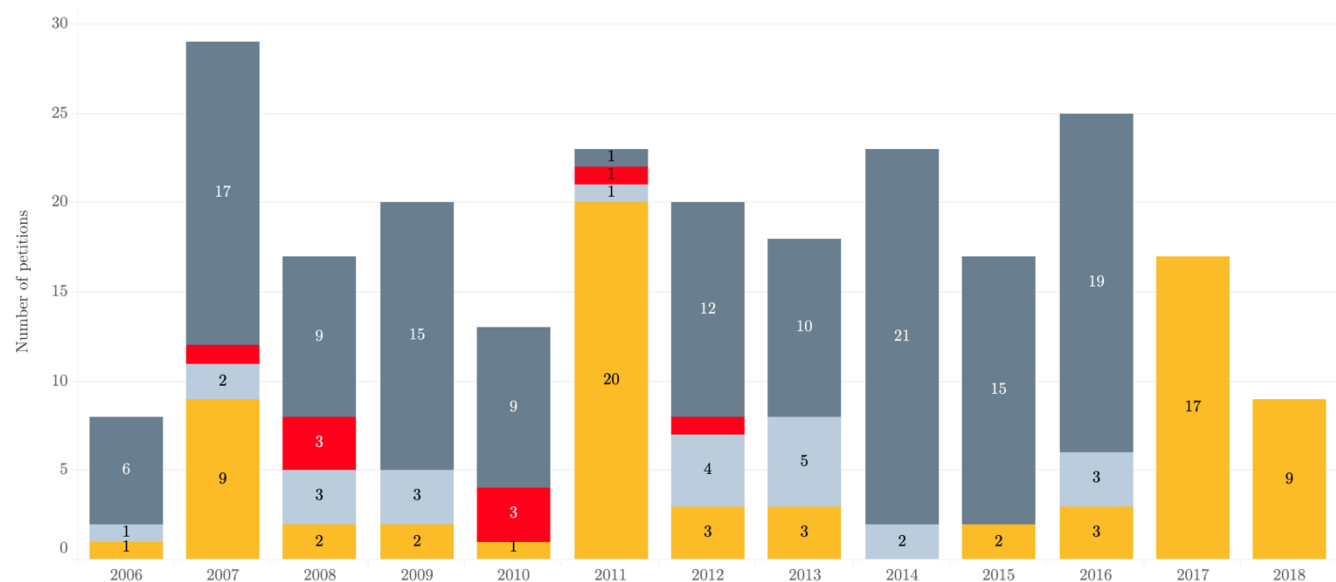
Appendix Exhibit 19 – Shadow rental market, by ward and type of dwelling, table

	Condominiums	Conversions	Flats	Investment properties	Grand Total
Ward 1	3,728	2,005	359	790	6,882
Ward 2	9,041	1,677	225	2,514	13,457
Ward 3	4,272	215	476	667	5,630
Ward 4	913	315	975		2,203
Ward 5	1,317	1,024	3,368	817	6,526
Ward 6	3,756	3,017	1,391	1,690	9,854
Ward 7	1,249	180	2,190	43	3,662
Ward 8	1,436	62	2,457	60	4,015
Grand Total	25,712	8,495	11,441	6,581	52,229

Source: Rental Housing Database compiled by the D.C. Policy Center.



Appendix Exhibit 20 – Voluntary agreement petitions and their outcomes, 2006 to 2019



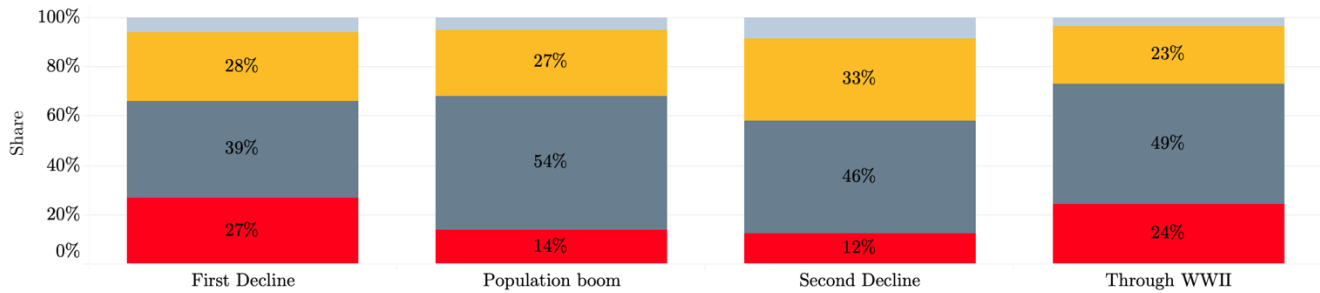
Development in July 5, 2019 through a Freedom of Information Act request filed by AOBA. Petition numbers suggest that the information for 2006 is missing 15 observations which are included in this chart with the "no information" status.

■ Approved
 ■ Disapproved
 ■ No final petition filed or petition withdrawn
 ■ No information provided or no petition/case file

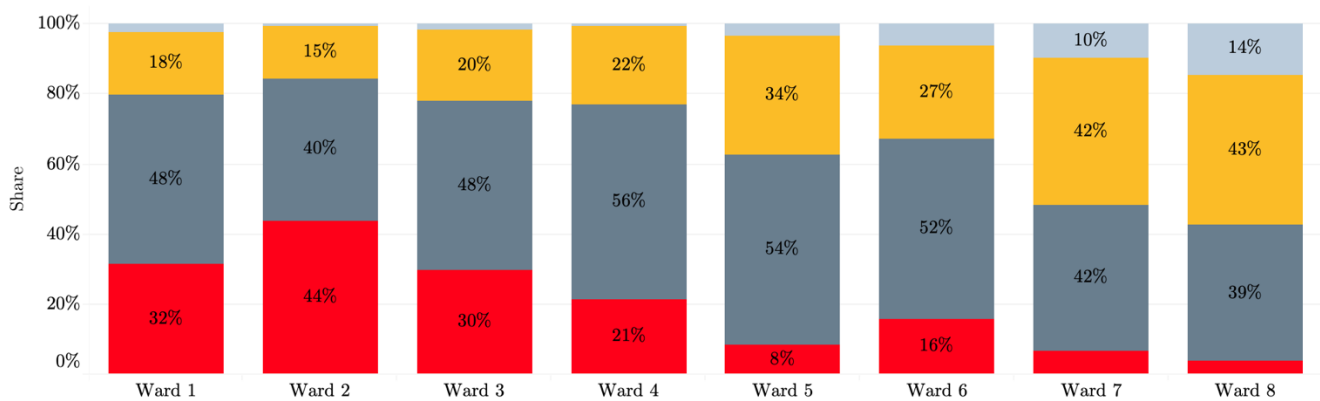


Appendix Exhibit 21 – Unit sizes by construction period and by ward

Distribution of differently sized apartments across construction period



...and across wards



Source: Housing database compiled by the D.C. Policy Center.

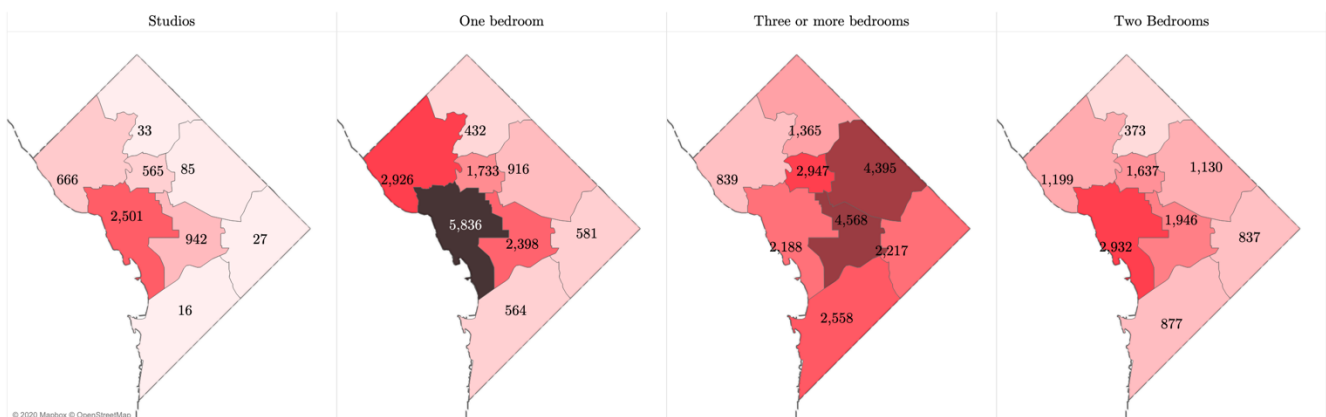
Note: Unit sizes are estimated using CoStar data separately for the rent-controlled stock and the entirety of the rental apartment units. The information on unit sizes for the shadow rental market is from the Computer Assisted Mass Appraisal database.

■ Studio
■ One bedroom
■ Two bedrooms
■ Three or more bedrooms..



Appendix Exhibit 22 – Distribution of shadow rental market units, by size and ward

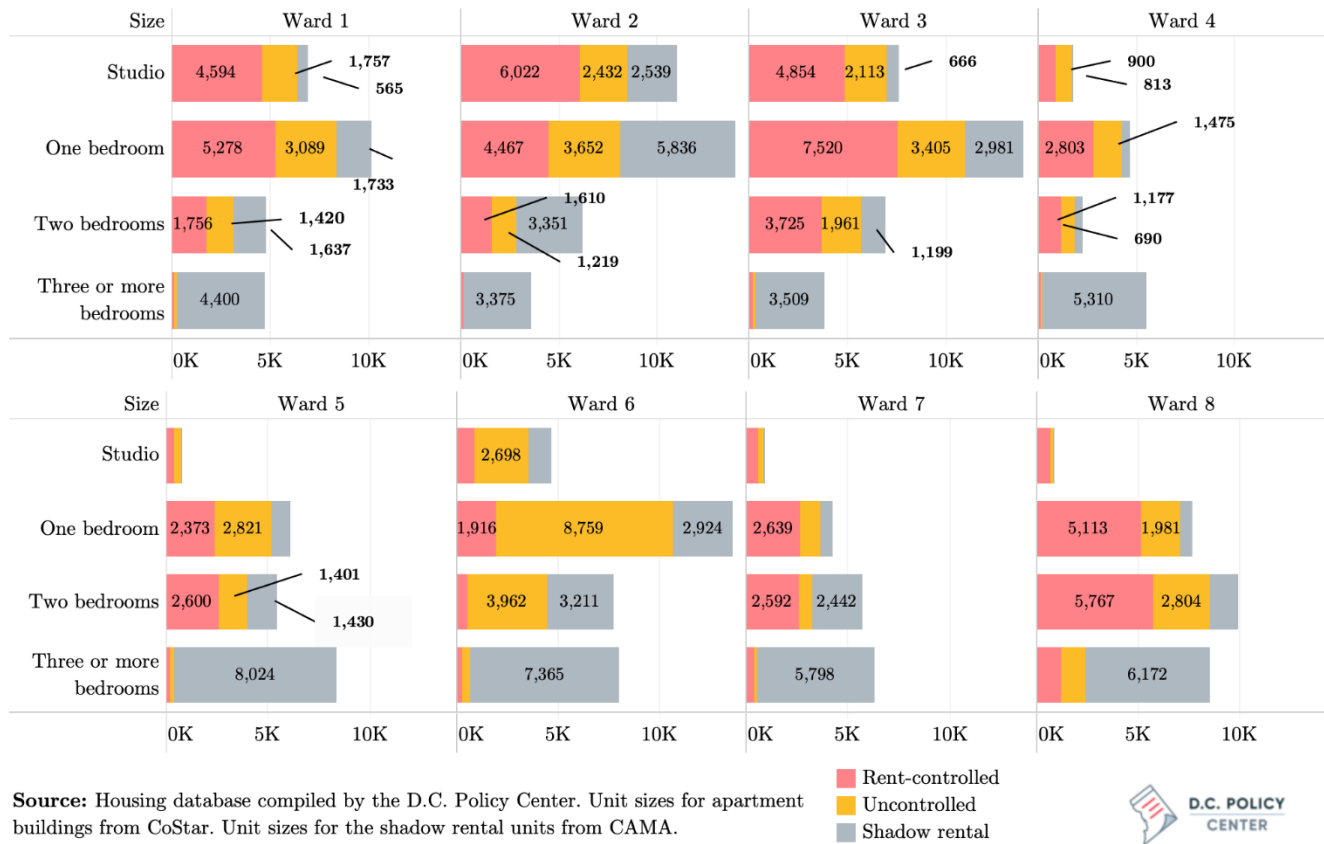
Distribution of shadow rental market units across wards by unit size



Source: Rental Housing Database compiled by the D.C. Policy Center.



Appendix Exhibit 23 – Availability of differently sized rental units in each ward, by source of stock



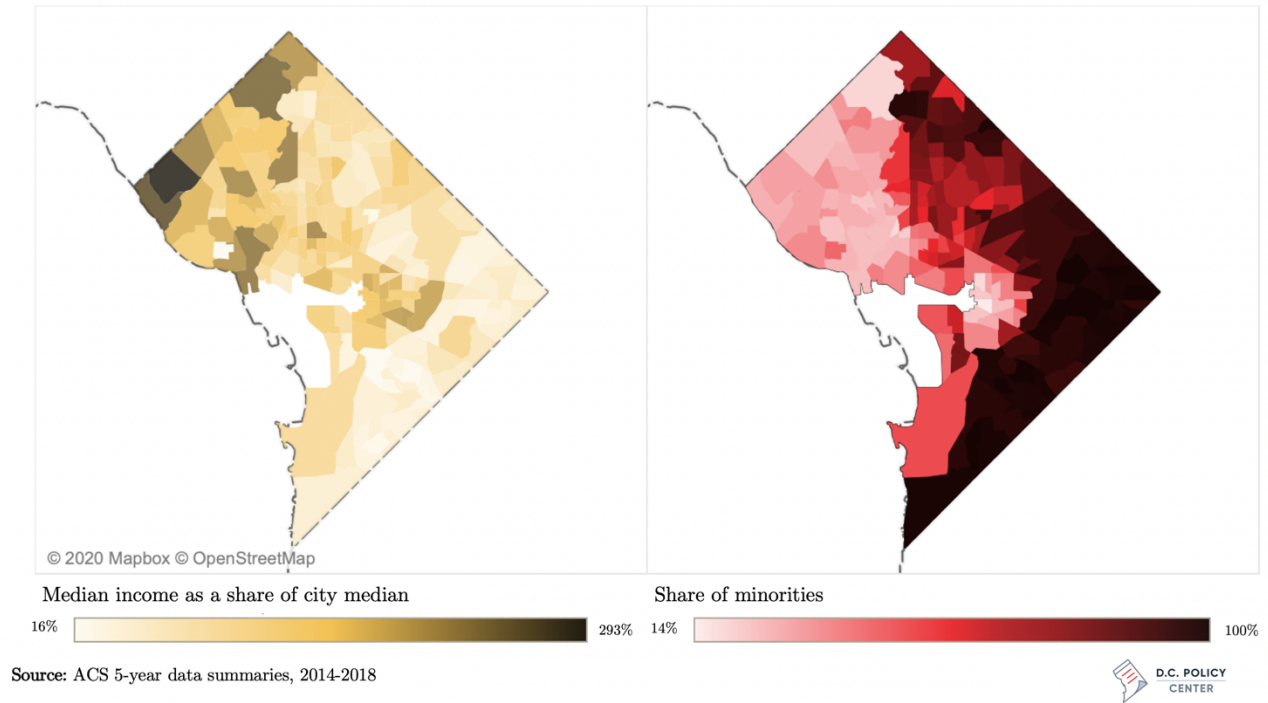
Appendix Exhibit 24 – Rents, and income necessary to afford them, by ward and unit size

	Studio - One person				One bedroom - Two persons				Two bedrooms - Three persons				Three bedrooms - Four persons			
	Median Rent	Income Limit	90th Pctl Re..	Income Limit	Median Rent	Income Limit	90th Pctl Re..	Income Limit	Median Rent	Income Limit	90th Pctl Rent	Income Limit	Median Rent	Income Limit	90th Pctl Rent	Income Limit
Ward 1	\$1,455	\$58,200	\$1,840	\$73,600	\$1,792	\$71,660	\$2,397	\$95,864	\$2,432	\$97,280	\$3,384	\$135,360	\$2,181	\$87,240	\$3,856	\$154,232
Ward 2	\$1,710	\$68,400	\$2,191	\$87,620	\$2,113	\$84,500	\$2,869	\$114,760	\$3,020	\$120,800	\$4,363	\$174,520	\$3,986	\$159,440	\$5,720	\$228,800
Ward 3	\$1,503	\$60,100	\$1,865	\$74,616	\$1,786	\$71,420	\$2,281	\$91,256	\$2,569	\$102,760	\$3,369	\$134,756	\$4,148	\$165,920	\$4,758	\$190,320
Ward 4	\$1,108	\$44,300	\$1,505	\$60,200	\$1,246	\$49,840	\$1,735	\$69,400	\$1,510	\$60,400	\$2,111	\$84,448	\$1,948	\$77,920	\$3,544	\$141,744
Ward 5	\$1,042	\$41,660	\$1,701	\$68,040	\$1,229	\$49,140	\$1,815	\$72,600	\$1,574	\$62,960	\$2,396	\$95,832	\$2,291	\$91,640	\$3,648	\$145,912
Ward 6	\$1,743	\$69,720	\$2,206	\$88,256	\$1,797	\$71,880	\$2,612	\$104,464	\$2,768	\$110,720	\$3,732	\$149,264	\$2,977	\$119,080	\$5,196	\$207,856
Ward 7	\$855	\$34,180	\$1,135	\$45,400	\$934	\$37,340	\$1,232	\$49,280	\$1,194	\$47,760	\$1,532	\$61,296	\$1,584	\$63,360	\$1,830	\$73,180
Ward 8	\$886	\$35,440	\$1,079	\$43,152	\$998	\$39,920	\$1,163	\$46,528	\$1,155	\$46,200	\$1,426	\$57,052	\$1,466	\$58,640	\$1,830	\$73,208

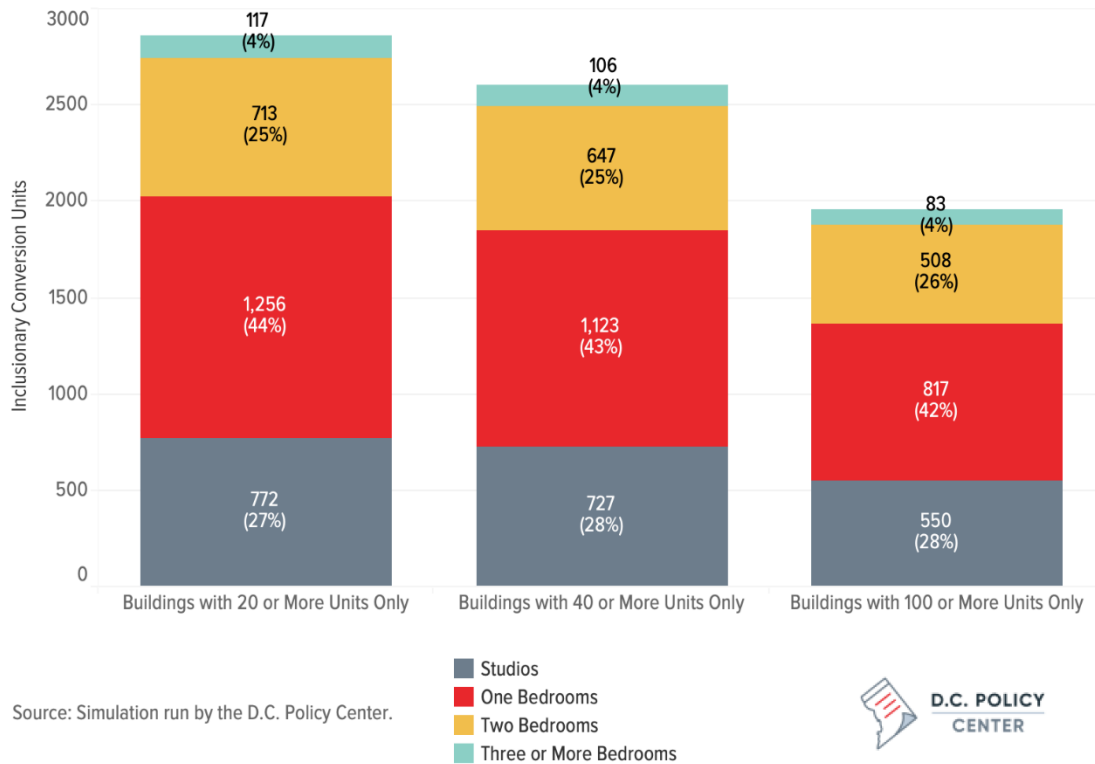
Source: CoStar



Appendix Exhibit 25 – Income and race characteristics across the District's neighborhoods



Appendix Exhibit 26 – Inclusionary Conversion units, by unit size



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