



REPORT | 20 APRIL 2017

Airbnb, Housing, and The District of Columbia

As requested by The Coalition for Nonprofit Housing and Economic Development (CNHED)

John M. Eason, Ph. D., Assistant Professor of Sociology, Texas A&M University in consultation with Airbnb
Policy Research and Data Science

EXECUTIVE SUMMARY

Airbnb is a platform that empowers ordinary people to open their homes to travelers looking for authentic experience and connection. In recent years, District of Columbia residents have turned to hosting through Airbnb to supplement their income while sharing what they love about the city.

In light of this trend, we were asked by **The Coalition for Nonprofit Housing and Economic Development (CNHED)** to study the potential impact of home sharing on the residential housing market of Washington, D.C. (*N.B. CNHED has not taken a position on the impact of short-term rentals, or proposals to regulate the short-term rental market.*)

We engaged in a comprehensive analysis of Airbnb and housing market data, and present the following key findings in this report:

- “Entire home” Airbnb listings **represent a very small fraction** -- only 2% -- of the District’s housing stock.
- Most of these listings are **only shared occasionally** -- nearly 60% of “entire home” listings are rented less than 90 days per year.
- A tiny fraction of “entire home” listings -- **a fifth of one percent of the city’s housing stock** -- have hosted enough to reach plausible long-term rental rates.
- Across District of Columbia neighborhoods, **Airbnb presence is uncorrelated with growth in rent prices**, across both single-family and multi-family housing.

FOREWORD

The Coalition for Nonprofit Housing and Economic Development (CNHED) is a nonprofit association with 140 members working to foster just and equitable community development solutions that address the needs and aspirations of low- and moderate-income District of Columbia residents by convening, advocating, and educating diverse stakeholders. Ultimately, we believe that all District residents should be part of thriving, livable communities that are socially, racially, and economically just. One of CNHED's primary goals is to advocate for the preservation and expansion of affordable housing in the District.

The District is now one of the most expensive housing markets the United States, particularly for low-income residents. More than half of all rental households in the District pay more than 30% of their income on housing and a staggering one-third pay more than half of their income toward rent.¹ The District has a severe shortage of affordable housing; there are only 44 affordable and available apartments for every 100 extremely-low-income households that need them.² Therefore, families with low and moderate incomes have little left over each month for other basic necessities like clothing, transportation, and food. Such budgetary constraints also make these families more likely to be one job loss or illness away from homelessness; the District already has the highest percent per capita of homelessness in the United States.

CNHED launched the Housing For All Campaign in 2010, in the belief that every resident deserves a safe and quality home at a price they can afford. Through our Housing For All Campaign, thousands of residents have engaged in specific public education actions to make safe, affordable housing a higher funding and regulatory priority in the District. CNHED and the Campaign focus on the entire *Continuum of Housing*, which represents the full range of housing options, from supportive housing to affordable rental housing to supporting tenant purchase to single-family homeownership, among a range of solutions.

The District is fortunate to have leaders who have prioritized affordable housing funding in recent years, while recognizing that we must continue to deliver not just funding, but also new solutions to the District's affordable housing crisis and the creation of economic opportunities. CNHED believes that must we continue to increase the production of new affordable housing, as well as preserve existing affordable multi-family housing. CNEHD does not support any practice or policy that would significantly or meaningfully reduce the availability, creation or preservation of affordable housing in the District. At the same time, CNHED does recognize an ever-evolving economy as well as availability of services and products that help make the District a contemporary, diverse, and inclusive community.

¹ Housing Security in the Washington Region. July 2014. Prepared by the Urban Institute and the Metropolitan Washington Council of Governments. Retrieved from http://www.urban.org/research/publication/housing-security-washington-region/view/full_report.

² National Low Income Housing Coalition. [The Gap: The Affordable Housing Gap Analysis 2017](#).

CNHED requested this report to equip itself and others with additional data and information about the short-term rental market in the District so that we can all better understand its impacts -- both housing and economic.

As the District grapples with homelessness, housing instability, displacement, and lack of housing supply, CNHED supports and advocates on behalf of the following principle programs because they are essential to developing a robust *Continuum of Housing* that serves all District residents, particularly the most economically vulnerable.

- **Housing Production Trust Fund** (Trust Fund) is the flagship vehicle for preserving and developing affordable housing in the District of Columbia. The Trust Fund, administered by the DC Department of Housing and Community Development, provides loans and grants through a competitive process to non-profit housing providers and mission-driven for profit developers for new construction and preservation. It also can be utilized by renters wishing to exercise their Tenant Opportunity to Purchase Act rights to keep their housing affordable. The Trust Fund is supported by a dedicated revenue from the District's Deed Transfer and Recordation Taxes, in addition to appropriations from the general fund. Critically, the Trust Fund helps to keep residents from being displaced from the District's changing neighborhoods and assists its vulnerable residents. The law requires that 40% of the funds must be designated for assisting households with extremely-low incomes (0-30% of the Area Median Income); 40% must be targeted for low-income households (31-50% AMI); and 20% for low- moderate-income households, 51-80% AMI. CNHED supports a minimum annual funding level of \$125 million for this essential housing affordability resource.
- **Local Rent Supplement Program** (LRSP) is modeled after the federal Section 8 program, and supplements housing costs at the tenant-, project- and sponsor-based levels. Tenant-based vouchers allow residents to enter the open market to find the housing option that is best for them by making up the difference between market rent and affordable rent (30% of household income). Vouchers distributed at the project- and sponsor-based levels are attached to specific units (instead of to tenants) and distributed to organizations that develop or lease those units and make them available to tenants at qualifying income levels. This locally funded program is administered by the DC Housing Authority with the goal of producing and maintaining affordable housing options in the District. LRSP is a critical resource to ensure that Trust Fund can meet its 0-30% AMI income target.
- **Targeted Affordable Housing** (TAH) is subset of the Local Rent Supplement Program, which serves tenants needing a long-term subsidy in order to avoid homelessness but who do not require ongoing supportive services or only require less intensive services. CNHED supports fully funding TAH each year to the levels needed to meet the goals of ending chronic homelessness identified in the District's Homeward DC plan.
- **Permanent Supportive Housing** (PSH), as defined by HUD, is permanent housing in which supportive services are provided to assist homeless persons with a disability to live independently. CNHED supports the use of PSH programs that comply with the

Housing First and other evidence-based models (e.g. Recovery Housing) for chronically homeless individuals. PSH can be offered in a scattered-site model where tenants receive rental assistance, single-site models, where the entire building is dedicated to PSH, or set-asides, whereby certain units are designated for PSH tenants. PSH housing may result from the production of new housing stock, or through leasing existing units. CNHED supports fully funding PSH to the levels needed to meet the goals of ending chronic homelessness identified in the Homeward DC plan.

- **Tenant Opportunity to Purchase Act (TOPA)** gives tenants who wish to remain in rental units that are about to be sold the first right to buy their building or assign their rights to another party. Through TOPA, tenant associations may choose to create a limited-equity cooperative where residents each own a share of the property; most only open membership to low- and moderate-income residents. Alternatively, tenant associations may choose to partner with an affordable housing developer to the building as a rental property, generally in exchange for a commitment to rehabilitate the building and maintain the units as affordable for a set period of time. Every year, TOPA presents opportunities to preserve thousands of affordable units and prevent displacement of low-income residents throughout the District by retaining affordability, even in the midst of rapidly gentrifying neighborhoods. The Trust Fund's First Right Purchase Assistance Program is available on a rolling application basis for tenant associations exercising their TOPA rights and provides gap funding for acquisitions to preserve affordable housing with multi-decade covenants.
- **District Opportunity to Purchase Act (DOPA)** is similar to TOPA in that it provides the District with the first right of refusal for any multi-family rental properties that are offered for sale and meet certain affordability criteria. DOPA has a similar, concurrent timeline to that of TOPA; however, the District's right of first refusal is subservient to tenants' rights under TOPA. Ideally, the District would exercise DOPA in order to preserve affordable rental housing that is at risk of being lost because tenants choose not to exercise their TOPA rights or are unsuccessful in exercising them. The Department of Housing and Community Development currently is in the final stages of completing draft DOPA regulations to enable DOPA to go into effect within the next fiscal year.
- **Home Purchase Assistance Program (HPAP)** helps low- and moderate-income District residents purchase their first homes through down payment and closing cost assistance. HPAP acts as a second mortgage, which is repaid. Qualified participants can currently receive up to \$80,000 down payment assistance and up to \$4,000 closing cost assistance from the Department of Housing and Community Development to purchase single-family houses, condominiums, and cooperative apartments. Down payment assistance is critical for low- and moderate-income residents, especially in District's expensive housing market. In addition to the financial assistance, HPAP recipients also receive intensive financial and home buyers' education.

INTRODUCTION

Since 2008, Airbnb has become an economic lifeline making it possible for long-time residents to pay bills, save for retirement, and stay in the city they love. Ordinary people and families are taking what is typically one of their greatest possessions -- their homes -- and use it to generate supplemental income. As District of Columbia residents open their doors to travelers, policy makers are increasingly interested in the interaction between home sharing and housing.

In light of this trend, we were asked by **The Coalition for Nonprofit Housing and Economic Development (CNHED)** to study the potential impact of home sharing on housing and neighborhood change in the District.

We find that **88% of Airbnb hosts in Washington, D.C. are sharing space in their permanent home. With 4% stating that home sharing saved them from eviction or foreclosure,**³ the annual earnings⁴ for a typical D.C. host totaled \$5,800 last year.

During 2016, the District of Columbia's Airbnb community contributed **\$258 million in economic activity** to the city -- this includes **both income earned by Airbnb hosts and money spent by Airbnb guests** at restaurants, cafes, shops, and other small businesses. More than 290,000 Airbnb guests visited D.C. in 2016, and **84% of these travelers stated the home sharing platform "makes them more likely to return"**.⁵

It is critical that all neighborhoods remain inclusive and affordable for District residents. Therefore, **we explore the relationship between home sharing and rental prices at the zip-code level and push beyond aggregate statistics to achieve a comprehensive analysis of the platform's presence in the city.**

If the practice of home sharing were encouraging an irreplaceable conversion of long-term rental units in the District of Columbia, we would expect to see rents disproportionately increase in neighborhoods where home sharing was more prevalent.

This is, in fact, not the case.

Instead, we find that rent growth and Airbnb penetration are uncorrelated across both multi-family and single-family housing. This means that the size of the Airbnb community is not a driver of rental prices in Washington, D.C.

³ Based on data from Airbnb 2016 Community Compact Survey.

⁴ Host earnings includes the listing price plus the cost of any additional guests and excludes service fees, taxes, and cleaning fees. The framework is meant to reflect the total host revenue, which is most comparable to rent collected by landlords and is used throughout the report.

⁵ Based on data from Airbnb 2016 Community Compact Survey.

KEY FINDINGS⁶

FINDING 1: Airbnb booked “entire home” listings are a very tiny fraction of the District’s housing.

When determining the impact of Airbnb on housing in the District of Columbia, it is important to remember the scale of Airbnb. Over a third of active Airbnb listings⁷ in D.C. are private or shared rooms, where the host is present during a traveler’s visit. Of the 303,312⁸ total units of housing in the city, **only 8,700 entire home listings have ever hosted a trip via Airbnb -- this represents less than 3% of Washington, D.C. housing units.**

During 2016, there were 7,100 entire homes hosting at least one trip. This represents only 2.3% of Washington, D.C. housing units. A much smaller fraction of these units are available for the majority of the year. Only **0.22% of housing units** represent entire homes on Airbnb that were booked for more than half of the past year.

TABLE 1
AIRBNB ENTIRE HOME LISTINGS IN WASHINGTON, D.C. AS PERCENT OF TOTAL HOUSING STOCK

Airbnb entire home listings in Washington, D.C. that...	Number of entire home listings	Number of entire home listings as percent of Washington, D.C. housing units
Have ever been displayed on Airbnb.com	14,100	4.6%
Have ever hosted a trip	8,700	2.9%
Have hosted a trip in the past year (2016)	7,100	2.3%
Are active listings, as of January 1, 2017 (i.e. displayed on Airbnb.com). ⁹	6,000	2.0%

⁶ This analysis includes only entire home listings, which are the best Airbnb proxy for housing units. Not all entire home listings are necessarily housing units that could (legally) accommodate a long-term tenant. All Airbnb bookings are included in the analysis, including short-term rentals (rentals for fewer than 30 consecutive days) and long-term stays (rentals for 30 consecutive days or longer).

⁷ 35% of active Airbnb listings as of January 1, 2017, were designated as private or shared rooms by the host.

⁸ '2011-2015 American Community Survey 5-Year Estimates', Table DP04, April 2017.

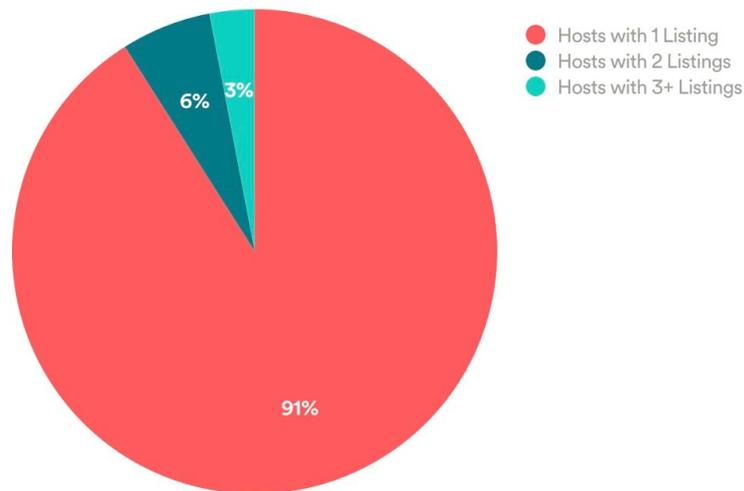
⁹ Active listings are listings that are displayed on Airbnb.com, regardless of whether the listing hosts a trip, has availability, or is subsequently removed from the website.

Are active booked listings, as of January 1, 2017 (i.e. displayed on Airbnb.com and have accepted at least one booking). ¹⁰	3,700	1.2%
Are active listings, as of January 1, 2017, which were booked for over half the year in 2016.	670	0.22%

FINDING 2: Most “entire home” listings are only shared occasionally.

Most entire home listings are shared only occasionally. **For example, 36% of entire home listings in the District of Columbia during 2016 were rented less than 30 days, and 60% were rented less than 90 days.** The data suggests that most hosts rent space that would likely not be available on the long-term rental market.

FIGURE 1
PERCENTAGE OF ENTIRE HOME HOSTS BY NUMBER OF ACTIVE ENTIRE HOME LISTINGS¹¹



¹⁰ Active booked listings are listings that, as of January 1, 2017, are displayed on Airbnb.com and have accepted at least one booking ever.

¹¹ As of January 1, 2017

TABLE 2 shows how frequently entire home listings in Washington, D.C. hosted guests during the past year (2016). We only observe annual hosting frequency for hosts who have been on the platform for over a year.

Thus, to ensure that annual hosting frequency is not deflated by newly-activated listings, TABLE 2 reflects annual hosting patterns for all listings that were first active on, or before, January 1, 2016, and therefore have a year’s worth of hosting.¹² 50% of the entire home listings that hosted guests in Washington, D.C. last year were hosted for fewer than 60 nights during the entire year; over 76% were hosted for less than half the year. About 9% of entire home listings hosted more than 270 nights last year.

TABLE 2
2016 HOSTING FREQUENCY FOR ENTIRE HOME LISTINGS ON AIRBNB IN WASHINGTON, D.C.

Number of nights hosted annually	Percent of entire home Airbnb listings in Washington, D.C.
1 - 30	36%
31 - 60	14%
61 - 90	9%
91 - 120	6%
121 - 180	11%
181 - 270	15%
More than 270	9%

While we cannot know for certain why hosts are hosting only occasionally, we know that 88%¹³ of District of Columbia hosts share their permanent home.

In fact, many District residents share their home only during large events (inaugurations, conferences, college graduation, etc.) to supplement their income. Given these trends, we conclude that in most cases the entire home listing is a primary home being rented while the resident is traveling for work or vacation.

In addition, the majority of hosts rent space that is most likely not available for long-term rental. This is because “entire home” rentals include a range of dwellings including accessory units like small bedrooms over a garage or a portion of a dwelling with a separate entrance. Moreover, some of these listings are traditional bed and breakfasts. Estimates of the impact of home sharing are rather conservative given that we cannot fully account for the wide range in “entire home” listings within Washington, D.C.

¹² To best represent annual hosting patterns, listings without at least a year’s worth of hosting behavior are excluded from the analysis. Excluding newly-activated listings avoids artificially inflating the lower end of the histogram for number of nights hosted.

¹³ Based on data from Airbnb 2016 Community Compact Survey.

FINDING 3: Most District of Columbia hosts share their homes in order to make a modest income, but not frequently enough to financially outpace long term renting.

Most hosts who share entire home listings in Washington, D.C. earn modest supplemental income. When comparing the average long-term rental income with Airbnb earnings, we see that most hosts make less significantly less money hosting on Airbnb than they could by renting to a tenant month-to-month.

The typical entire home listing in Washington, D.C. earned \$8,200 in 2016¹⁴, which amounts to about \$680 per month. In comparison, average monthly rent in Washington, D.C. is \$2,299.¹⁵ That is, renting to a long-term tenant tends to be more lucrative, typically, than hosting guests on Airbnb. Only 670 entire home listings in Washington, D.C. hosted more than the break-even threshold of 182 nights in 2016 to out-compete the long-term market.

Providing further evidence of how the vast majority of Airbnb listings in Washington, D.C. are not being pulled off the long-term housing market for use as “full-time” short-term rentals we find that in 2016 only 670 listings (0.22% of the total number of Washington, D.C. housing units) were rented for more than 182 nights.

Again, we cannot know for certain why hosts do not rent on Airbnb enough to earn more than long-term renting, but we can hypothesize that, in most cases, the entire home listing is a primary home being rented while the resident is traveling for work or vacation, or otherwise away from her home.

TABLE 3
COMPARISON OF TYPICAL AIRBNB INCOME PER LISTING VERSUS AVERAGE LONG-TERM RENTAL INCOME PER HOUSING UNIT

	Average annual rent in Washington, D.C.	Typical annual Airbnb income for entire home listing in Washington, D.C.	Number of Airbnb listings rented above break-even threshold	Units as % of all housing units
Entire City, All Bedrooms	\$2,299 x 12 months = \$27,588	\$8,200	670	0.22%

¹⁴ The annual earnings per typical listing are calculated as the median earnings across all entire home listings that hosted at least one trip in the past year (2016). To avoid deflating the median by newly-created listings, only listings that were active at the beginning of the study period (January 1, 2016) are included, to best represent the typical annual earnings. (Without controlling for newly-created listings, the median annual earnings per entire home listing is \$8,200). The median is taken instead of the average because the distribution of host earnings is not normally distributed, but heavily right-tailed. With a right-tailed distribution, the median is a better measure of central tendency than the mean (average). The average is skewed upwards by the right tail (to about \$14,400).

¹⁵ Long-term rental rates as of February 2017 in Washington, D.C. are taken from [Rent Jungle](#). Accessed April 2017.

Albeit simplified, this analysis illustrates that, for the vast majority of District residents sharing/short-term rental is not typically more lucrative than renting on the long-term market. Indeed, most Airbnb hosts are not renting their entire unit listings at a rate that incentivizes taking the listing off the market.

In the following sections, we consider neighborhood variation in rental rates. An even more detailed analysis of Airbnb activity, may consider variation in rental offerings (studio suites versus one-bedroom units versus two-bedroom units), and adjustments for the operating costs of short-term hosting versus long-term landlording; but the findings are likely to show the same bottom line: **District of Columbia residents who use Airbnb occasionally, earn modest amounts of money, and are not full-time vacation rental operators who take housing off the long-term rental market.**

FINDING 4: Airbnb activity is minimal across all of the District's eight wards.

To complement the city-wide analysis, we explore the scope of Airbnb's host community in District by ward. Certain trends in the housing market may disproportionately affect particular area within a city, and as Washington, D.C. neighborhoods evolve, different wards express unique concerns. As a result, many stakeholders are interested in Airbnb's potential impact in their own ward.

We find that Airbnb penetration is low across all wards. There is no ward within the District where the Airbnb host community occupies a significant portion of the housing stock.

TABLE 4 shows the number of active, booked entire home listings¹⁶ by ward, along with the share of the housing stock those listings represent.¹⁷ The final column represents Airbnb entire home listings that earned more than the ward's average long-term rent¹⁸ in 2016, as a share of the ward's housing stock.

In all eight wards, a tiny number of these listings exist (ranging from one-third to one-fiftieth of one percent of local housing stock.) Moreover, these homes are outliers. They do not represent earnings that a typical host might expect to earn from a full-time Airbnb listing.

¹⁶ Active booked listings are listings that, as of January 1, 2017, are displayed on Airbnb.com and have accepted at least one booking ever.

¹⁷ Ward-level housing stock data is available in the last Decennial Census, available at [NeighborhoodInfo DC](#). Accessed April 2017.

¹⁸ Long-term rental rates at the neighborhood level in Washington, D.C. are taken from [Rent Jungle](#). We estimate each ward's average rent by averaging rents across all neighborhoods within the ward. Accessed April 2017.

TABLE 4
AIRBNB ENTIRE HOME LISTINGS PENETRATION BY WARD

Ward	Number of active, booked entire home listings	Active, booked entire home listings as a percent of ward housing stock	Entire home listings that outearn the local long-term rental market as a percent of ward housing stock
1	760	2.01%	0.19%
2	1080	2.47%	0.33%
3	220	0.52%	0.03%
4	210	0.65%	0.05%
5	370	1.06%	0.14%
6	990	2.33%	0.36%
7	40	0.11%	0.02%
8	30	0.08%	0.02%

FINDING 5: “Entire home” listings on Airbnb are not a driver of housing prices.

In the District, as elsewhere, a rising demand for housing has contributed to an increase in housing prices. Rent growth has outpaced income growth, and meanwhile, affordable housing production has slowed significantly.¹⁹ These trends are not a recent phenomenon.

To evaluate the interaction between home sharing and these forces, we study changes in vacancy rates and rental prices over the span of Airbnb’s growth. While home sharing has become popular in Washington, D.C., vacancy rates have remained steady (See FIGURE 2), according to U.S. Census data.²⁰

Rental vacancy rates have fluctuated seasonally around an average of 6% for the last 16 quarters. **If the practice of home sharing were encouraging irreplaceable conversion of long-term rental units, we would expect a falling vacancy rate to accompany Airbnb growth. This is not the case.**

¹⁹ Rivers, Wes. “Going, Going, Gone: DC’s Vanishing Affordable Housing.” *DC Fiscal Policy Institute Report*, March 12, 2015.

²⁰ U.S. Census Bureau Housing Vacancy Survey: *Quarterly Vacancy and Homeownership Rates by State and MSA*, [Tables 4 and 4A](#). Accessed April 2017.

FIGURE 2
WASHINGTON, D.C. METRO RENTAL VACANCY RATE OVER TIME²¹



While this trend is reassuring for District residents and families sharing their homes, we want to dig deeper to study the price effects that home sharing may have at a more local, neighborhood level. To do this, we merge Airbnb listing data with publicly available rental price indices from Zillow Research.²² Though Airbnb’s city-wide footprint is small, we test whether greater neighborhood Airbnb penetration has driven growth in rental prices across neighborhoods.²³

We find no evidence of any statistical relationship between growth in rents and Airbnb presence in a neighborhood.

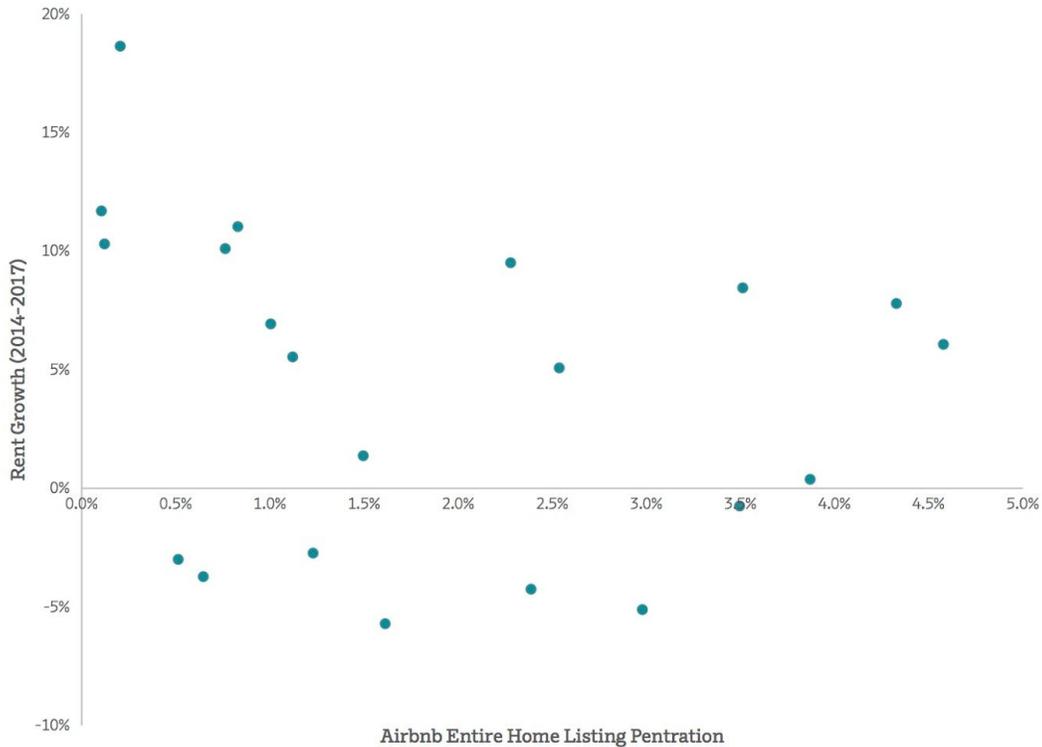
²¹ Figure 2 plots the rental vacancy rate for the D.C. Metropolitan Statistical Area, by quarter, 2012-2016. The data are from the U.S. Census Bureau Housing Vacancy Survey: *Quarterly Vacancy and Homeownership Rates by State and MSA*, [Tables 4 and 4A](#). Accessed April 2017.

²² [Zillow Rental Index Data](#). Accessed April 2017.

²³ To match listing data to available rental data, we run this analysis at a zip code level.

FIGURE 3 plots medium-term multi-family unit rent growth against Airbnb penetration for all of the Washington, D.C. zip codes included in the Zillow data. The line of best fit through these data is negative and statistically insignificant.²⁴

FIGURE 3
WASHINGTON, D.C. MULTIFAMILY UNIT THREE-YEAR RENT CHANGES AND AIRBNB PENETRATION BY ZIP CODE²⁵

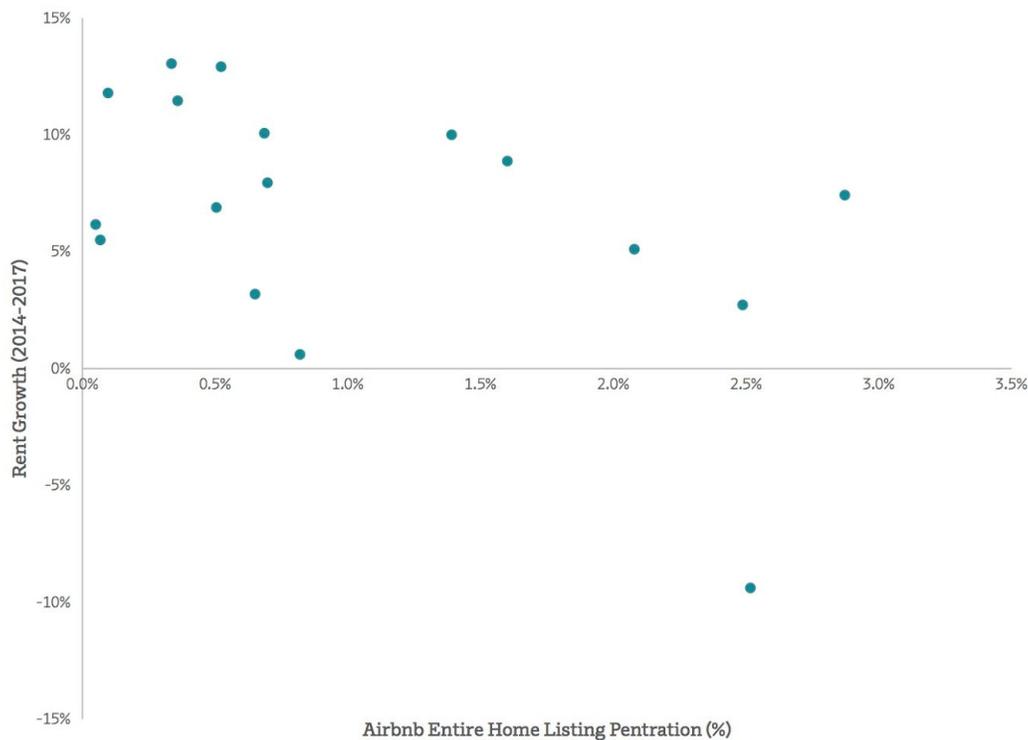


²⁴ The regression coefficient in the bivariate regression of rent growth on Airbnb penetration is -1.07.

²⁵ Growth in rental prices of multi-family units (on the y-axis) is measured over a three-year horizon, from January 2014 to January 2017, which represents the time period over which Airbnb growth could have plausibly affected housing supply. Airbnb penetration (on the x-axis) is defined as active Airbnb listings (as of January 1, 2017) divided by the number of residential housing units in that zip code. These listings largely came onto the platform in the years over which we measure rent changes. Each observation is a zip code included in Zillow's multi-family residence rent data.

FIGURE 4 repeats the exercise using rents across single-family housing units.²⁶ The line of best fit through these data is also negative and statistically insignificant.²⁷ If Airbnb adoption was contributing to rising rents, we would expect to see a positive relationship across both measures. To the contrary, there is no statistically or economically significant relationship in either chart.

FIGURE 4
WASHINGTON, D.C. SINGLE FAMILY UNIT THREE-YEAR RENT CHANGES AND AIRBNB PENETRATION BY ZIP CODE²⁸



²⁶ Zillow rental rate data for single- and multi-family residences include potentially different zip codes (though the majority overlap), because certain zip codes are comprised of predominantly one type of housing.

²⁷ The regression coefficient in the bivariate regression of rent growth on Airbnb penetration is -2.91.

²⁸ Growth in rental prices of single family units (on the y-axis) is measured over a three-year horizon, from January 2014 to January 2017, which represents the time period over which Airbnb growth could have plausibly affected housing supply. Airbnb penetration (on the x-axis) is defined as active Airbnb listings (as of January 1, 2017) divided by the number of residential housing units in that zip code. These listings largely came onto the platform in the years over which we measure rent changes. Each observation is a zip code included in Zillow's single family residence rent data.

CONCLUSION

Home sharing in Washington, D.C. appears to be a relatively small phenomenon -- representing about 2% of housing units. District of Columbia hosts tend to rent only occasionally, earning modest but meaningful supplemental income that helps to support their families and make ends meet. Moreover Airbnb presence in a neighborhood is uncorrelated with local growth in rent prices.

Hosting patterns, earnings, and census data on housing appear to support the hypothesis that Airbnb hosts in the District are not materially impacting the housing market.

APPENDIX

While **The Coalition for Nonprofit Housing and Economic Development (CNHED)** asked Airbnb to study the potential impact of home sharing on the residential housing market of Washington, D.C., *the organization did not analyse or review the underlying data in this report, and has not taken a position on the impact of short-term rentals, or proposals to regulate the short-term rental market.*

John Eason of Texas A&M University was compensated for his time.