Short-term Rentals in Denver, CO

White Paper

David L. Corsun, Ph.D., Karen Xie, Ph.D., & Cheri A. Young, Ph.D.
Fritz Knoebel School of Hospitality Management
University of Denver

Joy Burns Center
2044 E Evans Avenue
Denver, CO 80218
303-871-4268
david.corsun@du.edu

EXECUTIVE SUMMARY

Key findings from our study of 408 STR renters in the City and County of Denver are provided below. They, along with full explanations of the methodology, are fully explained in the sections that follow.

- Extrapolating from these data, and assuming an STR occupancy rate of 40% for the City and County of Denver, we estimate that annual STR rents total approximately $13.6 million. Note that these figures are based only on the properties listed on VRBO.
- If the lodger's tax was applied to these rents they would generate approximately $2 million in additional tax revenue for the City and County of Denver.
- Also assuming a 40% occupancy rate, STR renters' ancillary spending while visiting, not including STR rent or transportation to Denver, is approximately $21.28 million per year.
- Only about 17% of respondents recalled paying a lodging tax, 9% remembered *not* paying one, and nearly 75% did not know or could not remember paying a lodging tax on their STR stay.
- Almost 55% of STR renters reported that paying a lodging tax would have had no impact on their decisions to travel to Denver and to rent an STR. Another 25% were not sure whether the tax would have affected their decisions.
- STR renters significantly underspent hotel guests on a per person per day basis in terms of ancillary spending.
- 44% of the STR renters surveyed prefer staying in hotels for business travel, less than 11% prefer staying in STRs, and 32% do not travel for business.
- 73% of the STR travelers surveyed prefer staying in STRs for leisure travel, 5% prefer hotels, and 22% have no preference.
- Location and a dislike of big hotel chains were the most influential factors in the choice of an STR over a hotel for leisure travel.
- Price, location, and safety and security were the most influential factors indicated when people choose a hotel over an STR for leisure travel.
- Only high frequency business travelers had factors other than location that were more than halfway between somewhat and very influential in the choice to stay in a hotel rather than an STR when traveling for business. These factors were the ability to earn loyalty points and the certainty of knowing what they will find in the way of facilities and services.

INTRODUCTION

The growth of the so-called sharing economy has included a proliferation of properties available for short-term rental to visitors to a location. These properties range from a room in an occupied home (which includes rental apartments, condominiums on up to private, freestanding homes) to an entire, non-owner occupied unit, regardless of size. These rentals are advertised on a variety of websites, some of which offer only properties available in their entirety. Among the most prominent of these sites is VRBO (vacation rental by owner). While Airbnb is probably best known, many of the rentals to which it provides access are owner occupied. Increasingly, municipalities are considering legislation that addresses the short-term rental (STR) lodging market, particularly in terms of non-owner occupied units. Among the reasons for such legislation is that hoteliers and others argue STRs are advantaged by benefiting from the marketing efforts of the municipality without contributing to the lodging tax base that supports these marketing efforts. The City and County of Denver is currently considering such legislation. While STRs are increasing in popularity, little scholarly attention has been devoted to them (Guttentag, 2015), or for that matter, to the STR guests in terms of their search process, decision making, spending patterns while renting an STR, what impact paying a lodgers tax would have on their behavior, and whether there are differences between leisure and business travelers who rent STRs.

This absence of information on STR guests may be due to mass media's almost exclusive focus on STR hosts: those who rent out their spare couches, beds, bedrooms, entire homes or even an entire island on a short-term basis (Wortham, 2011). This coverage has focused on whether hosts are paying lodging taxes and abiding by local zoning and building codes (Conti, 2014); problems with vandalism (Nash, 2015; "The Rise of the Sharing Economy," 2013); and whether individuals are buying up real estate for STR purposes (Hamm, 2014), negatively affecting the residential housing supply (Carrns, 2015) and subsequently increasing rents, as claimed in San Francisco (Said, 2012).

In an effort to shed light on the questions before City Council, this white paper explores the outstanding areas noted above using a sample those who rented STRs in the City and County of Denver.

METHOD

Through direct contact with an STR owner who lists on VRBO, the research team used snowball sampling to access a total of 22 of Denver's STR owners, all of whom list their properties through VRBO. These owners provided the research team with access to the contact information of property renters during the two year period ending November, 2015. A sample of 788 renters was assembled; each had rented one of the approximately 411 properties listed on VRBO and located in Denver. Although 477 properties came up on a recent search (1/17/2016) of available STRs in Denver, 66 were located outside the City and County of Denver. Each individual renter received an email from the research team explaining the nature of the study and a request to participate. The email included a link to an online survey instrument to which respondents replied; the measures used in this survey were specifically created for the study. Survey respondents were offered the opportunity to be entered in a drawing for one of three $250 gift cards; 408 usable surveys were received, which is a response rate of 51.8%. Note, however, that some analyses may include fewer respondents than the total number as occasional missing data points prevented us from using these cases.

RESULTS

Prior to addressing the areas of interest regarding STR renters, we present respondent demographics in Table 1. The majority of respondents were married, female, and White. They worked full-time; more than 38% had a four-year college degree and nearly 42% had an advanced degree. Most had no children under 18 living at home, and over 82% owned their own homes. Mean household income was over $117K.

Table 1
Sample Demographics

Marital status n=389	Single	Married	Separated	Divorced	Widowed	Living with someone
	10.28%	78.15%	0.0%	4.11%	2.31%	5.14%

Gender n=389	Male	Female	Transgendered
	32.65%	67.10%	0.26%

Race/ethnicity n=367	White (non-Hispanic)	African American	Latino/ Hispanic	Asian/ Asian Indian	Native American/ Native Alaskan	Pacific Islander/ Native Hawaiian	Other
	87.74%	1.09%	6.81%	1.63%	0.54%	0.27%	1.91%

Employment n=389	Part-time	Full-time	Seasonal	Don't work	Other
	13.88%	58.87%	0.77%	10.28%	16.20%

Education n=390	High school/GED	Some college	2-year college degree	4-year college degree	Masters degree	Doctoral degree	Professional degree (JD, MD)
	2.82%	11.03%	5.90%	38.46	29.49%	4.87%	7.44%

Children (under 18) living at home n=388	0	1	2	3	4
	71.65%	11.60%	13.14%	3.35%	0.26%

Do you own or rent your home? N=389	Own	Rent	Living with parents/ family/friends (no rent)	Other
	82.26%	15.17%	3.35%	0.26%

Household income n=367	Mean	Std. Dev.	Min	Max
	$117,193.50	$41,887.15	$10,000	$155,000

Table 2 displays the summary statistics for the survey items measured on a continuous scale (e.g., dollars). Summary statistics for variables for which responses were measured in categories are

inappropriate; such categorical measures require the reporting of response frequencies, which can be found in Table 3.

Table 2
Summary Statistics for Continuous Variables

	Observations	Mean	Std. Dev.	Min	Max
How much did you spend per night on the STR, including non-refundable fees?	402	$226.93	$120.10	$10.71	$683.33
Average nights stayed	406	5.67	4.80	1	31
During your STR stay, how much did your travel party spend on the following per day:					
-Dining out	379	$106.61	$151.75	$0.00	$1857.43
-Groceries	353	$44.85	$38.77	$0.00	$333.33
-Transportation (not including getting to Denver)	267	$57.34	$38.77	$0.00	$500.00
-Shopping/retail	292	$72.66	$82.84	$0.00	$666.67
-Sporting events	160	$48.89	$131.71	$0.00	$1000.00
-Performances (concerts, theater, etc.)	163	$38.69	$68.25	$0.00	$333.33
-Movies	121	$2.27	$4.68	$0.00	$25.00
-Museums	185	$11.37	$14.41	$0.00	$75.00
-Night clubs, bars, pubs, etc.	210	$70.37	$192.88	$0.00	$2500.00
-Outdoor recreation (rafting, biking, etc.)	170	$29.13	$51.12	$0.00	$333.33
-Amusement parks (Elitch, Waterworld)	121	$9.02	$19.72	$0.00	$120.00
-Spa treatments	120	$10.08	$22.66	$0.00	$125.00
-Gambling	107	$5.17	$35.83	$0.00	$360.00
-Other	126	$107.51	$480.87	$0.00	$5000.00
Total travel party spending per day	408	$354.71	$481.22	$0.00	$5958.33
Total per person spending per day	406	$73.68	$77.55	$0.00	$744.79
How many children under 18 live in your house?	388	1.49	0.86	1	5
Other than this stay in Denver, how many times have you stayed in an STR in the past year?	344	3.83	2.28	1	11
Personality dimensions					
-Extraversion	382	9.12	2.93	2	14
-Agreeableness	380	10.79	2.05	4	14
-Neuroticism	382	4.94	2.01	2	12
-Conscientiousness	381	11.98	1.74	6	14
-Openness to experience	382	10.92	1.94	6	14

Table 3
Response Frequencies of Categorical Variables

Were you charged a lodging tax? n=406	Yes	No	Don't know/Can't remember				
	17.24%	9.36%	73.4%				
If the owner charged the Denver lodging tax of 14.85%, would that have influence your decision to use an STR? n=330	Yes	No	Not sure				
	20.61%	54.24%	25.15%				
If an STR had NOT been available for your trip to Denver, would you have… n=390	Not visited Denver	Visited but shortened my trip	Stayed the same amount of time but at alternative lodging				
	11.79%	30.26%	57.95%				
How many trips of any length have you taken for LEISURE purposes in the last year? n=398	0	1-3	4-6	7+			
	1.76%	48.99%	38.44%	10.80%			
When traveling for leisure do you prefer to stay in: n=398	Hotel	STR	No preference				
	4.77%	72.86%	32.15%				
How many trips of any length have you taken for BUSINESS purposes in the last year? n=398	0	1-3	4-6	7-9	10-12	13-15	16+
	43.97%	34.67 %	9.55%	4.02%	3.77%	1.01%	3.02%
When traveling for business do you prefer to stay in: n=395	Hotel	STR	No preference	Don't travel for business			
	44.05%	10.89%	12.91%	32.15%			
After eliminating those who don't travel for business: n=268	64.93%	16.04%	19.03%				
Did you rent: n=407	Entire unit	Private bedroom/bath	Private bedroom/shared bath	Other			
	95.82%	0.49%	0.0%	3.69%			

Paying Lodger's Tax

In general, STR hosts have not been charging guests hotel taxes. In many locations around the world, as in Denver, renting out one's home on a short-term basis (less than 30 days, for example, in Denver) is

considered illegal. Thus, for governments to tax something that is essentially illegal presents a quandary. Much like taxing the illegal sale of heroin, imposing hotel taxes on STRs hints at implicit legitimization. Clearly selling recreational heroin is illegal while the renting of one's home in some cities is still being argued in the courts as to its legality. Whether legal or not, "governments are starting to pay closer attention" to the issue of tax collection (Carrns, 2015). As a result, Airbnb has begun collecting lodging taxes for hosts in six locations (for a list of these cities see: https://www.airbnb.com/help/article/653/in-what-areas-is-occupancy-tax-collection-and-remittance-by-airbnb-available) and hosts in other locations are supposed to charge and collect the lodging taxes themselves.

Despite STR hosts' reluctance to collect and pay hotel taxes, the question remains whether travelers would resist paying hotel taxes on STRs. They may be accustomed to searching for the "final price" for travel-related goods and services after fees and taxes given the pricing strategies of the airline industry and hotel sector. In the airline industry, travelers are being asked to pay separately for baggage, priority seat assignments, and food and beverage. In the hotel sector, some hotels charge resort fees (to cover the cost of bottled water, internet, phone calls, and the gym, for example) using what is commonly referred to as "drip" pricing (Elliott, 2012). With drip pricing, the hotel or online travel agency (e.g., Expedia) initially advertises only the price of the hotel room, revealing additional mandatory charges later as a traveler proceeds through the buying process. Thus, if consumers have become savvy and accustomed to fees and hence search for "total cost" pricing before making a hotel purchasing decision, would the same logic apply to the STR purchasing decision? Thus, the following important questions arise:

- Will STR guests recall whether or not they paid a lodging tax?
- Will STR guests eschew choosing an STR if lodging taxes are being levied?

What we found: Approximately 17% of respondents recalled paying a lodging tax and slightly over 9% unequivocally remembered not paying a tax. Nearly 75% of respondents did not know or remember paying such a tax on their STR in Denver. Slightly more than 20% of respondents indicated that having to pay a lodging tax would have influenced their STR rental decision; nearly 55% said a lodging tax would have no impact and 25% were not sure. These results are graphically represented in Figures 1 and 2.

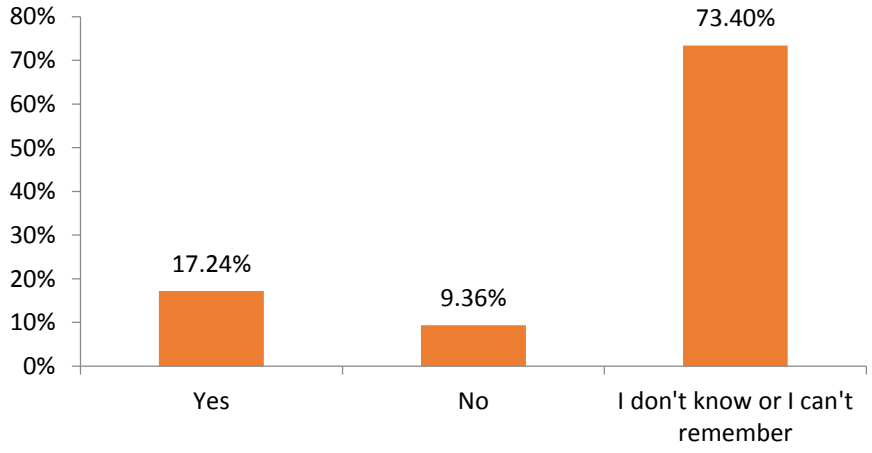

Figure 1
Were you charged the Lodger's Tax?

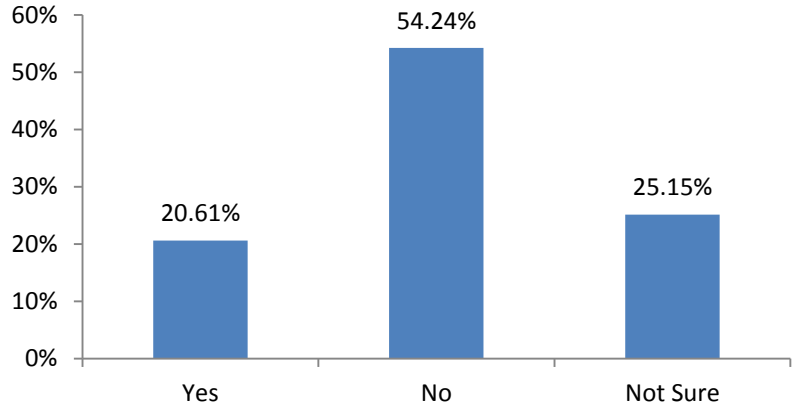

Figure 2
Would having to pay the Lodger's Tax have influenced your STR rental?

Spending

In the section that follows we present the data around renters' spending on both the STR itself and on other activities in which they partook while in Denver. First, our interest was in the rental and other non-refundable fees paid by STR renters.

What we found: The average nightly STR rent, including non-refundable fees, was $226.93.

While some cities have commissioned studies to determine the economic impact of STRs (e.g., Galveston, Texas; Myrtle Beach, South Carolina), Airbnb has produced its own economic impact studies in various cities across the globe. It found that Airbnb guests (referred to as "travelers") spend more and stay longer in comparison to hotel guests in the same city (http://blog.airbnb.com/economic-impact-airbnb/). The assumption is that by saving money on their accommodations, Airbnb travelers have more money to spend on other tourist-related, ancillary activities and services. Given that our study was conducted in Denver, Colorado (a city not studied by Airbnb regarding economic impacts) and focused on VRBO (a peer-to-peer accommodations platform focusing on vacation rentals primarily), we questioned whether spending patterns would mimic those of the Airbnb studies. While Denver, Colorado homes listed on VRBO are not vacation homes per se, the overwhelming majority are entire homes (despite a few listings that are separate spaces within the host's home such as a private bedroom with private bathroom and its own sitting area or a private bedroom with shared bath with no sharing of the kitchen or other areas). Given that renting an entire home may be more expensive than renting shared spaces, we questioned whether VRBO guests' ancillary (non-lodging) spending would exceed that of hotel guests in the Denver, Colorado area.

- Will STR guests' total ancillary spending (on restaurants, entertainment, and other tourist-related products and services) be greater than that of hotel guests?

What we found: Since our sample consisted of only STR renters, we needed to access archival data regarding hotel guests' ancillary spending in order to address this question. The most recent such data are for the 2014 fiscal year and are available through Visit Denver, the city's convention and visitor's bureau. The STR renters in our sample spent an average of nearly $74 per person per day on non-lodging items while hotel guests spent $132 per day on average (Longwoods International, 2015).

In contrast to claims by Airbnb, these data show that STR renters' ancillary spending is below that of hotel guests. This finding is likely influenced by the low number of business travelers in our sample. Data from the Denver hotel visitor market show that business travelers outspent hotel leisure travelers by an average of $21/day. Having a more even mix of respondents who rented STRs for business travel in our sample would likely have increased the average ancillary spending. However, it is somewhat telling that only 10 of 408 respondents were traveling for purely business reasons. It may well be that business travelers are significantly underrepresented in the population of STR renters, though their representation may change over time. Figures 3 and 4 provide a breakdown on the STR rent and fees paid and ancillary spending, respectively. STR rent and fees is shown for the length of the stay. The average per night rent was reported at the beginning of this section; percentages are the % of the sample for each range. Ancillary spending is presented on a per day, per person basis.

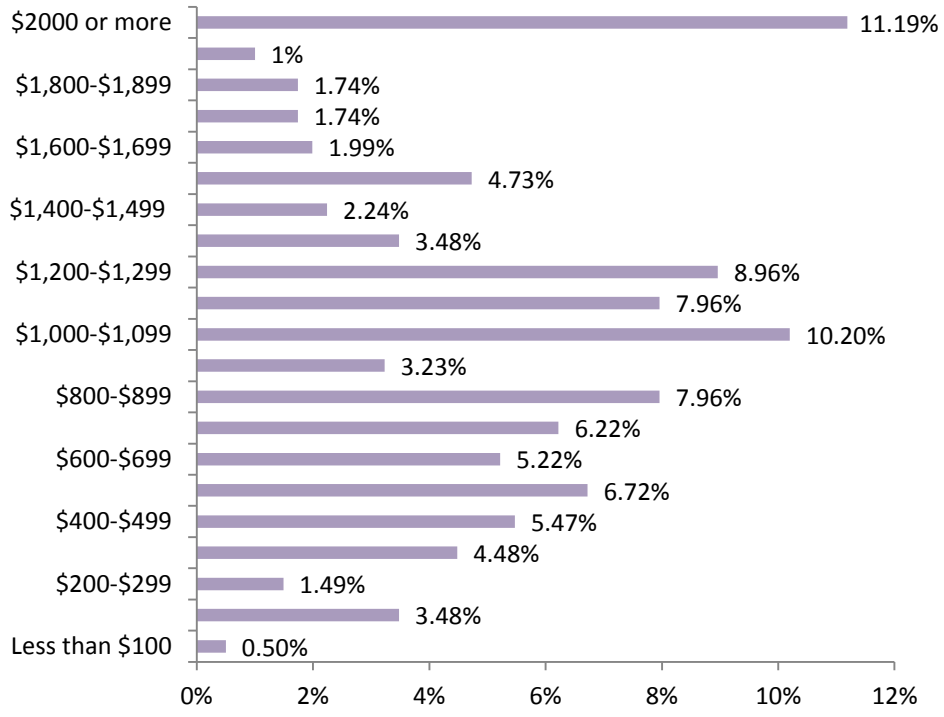

Figure 3
Total spending on the STR including cleaning fees, taxes, and/or non-refundable fees

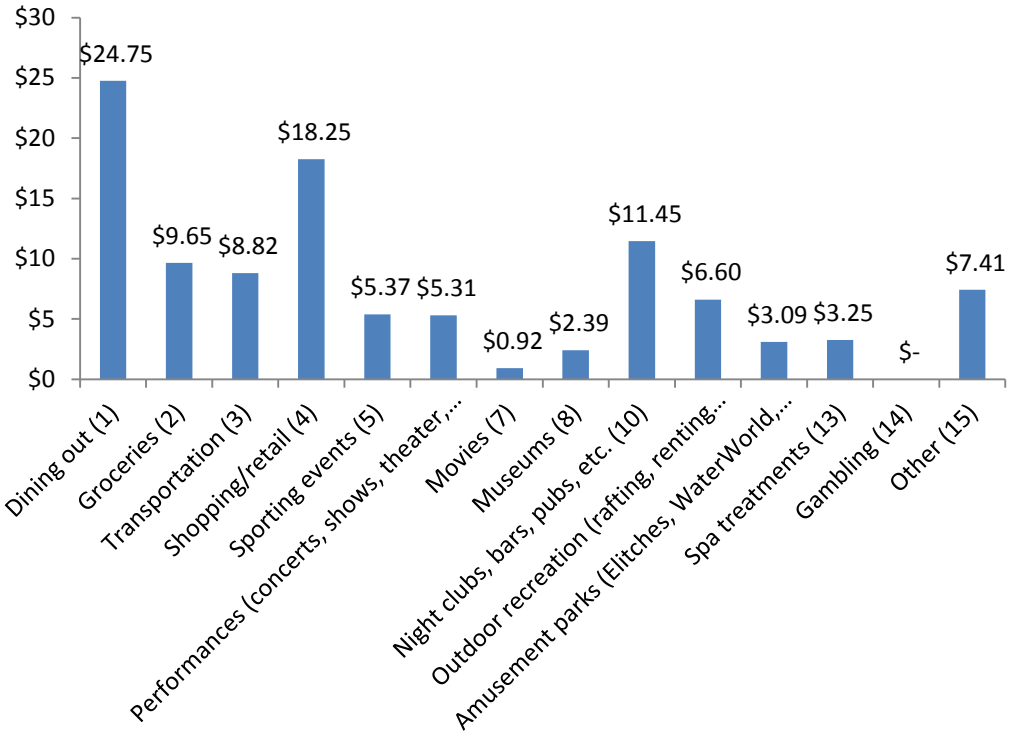

Figure 4
Average per day, per person spending on other activities while renting the STR

Survey participants were asked how not having the STR lodging option would have influenced their visiting behavior. Just under 12% of respondents indicated that they would *not* have visited Denver without this option; a little more than 30% would have come but shortened their stay; and 58% would have come for the same length of time but stayed in alternative lodging. Table 4 presents spending on STR rent per night and ancillary spending per night per person for each of the three behavioral intention categories. The most price sensitive group was those who would have visited Denver but shortened their trips had STRs not been available. They spent the least on average for both STR rent and on ancillary activities.

Table 4
STR spending by behavioral intention

Behavioral intention	Average STR rent/night	Average ancillary spend/group/night	Average ancillary spend/person/night
Not visited Denver (group 1)	$235.56	$359.50	$74.93
Visited but shortened the trip (group 2)	$219.56	$325.97	$72.48
Stayed the same amount of time at alternative lodging (group 3)	$232.38	$383.11	$76.22

Estimated economic impact

As shown in Table 2, the average STR rent/night was $226.93. We used this figure in computing the estimated annual STR rent revenue for the City and County of Denver. The mean group ancillary spending of our sample was $354.71 on a per night basis, and the ancillary spending per person per night was $73.68. Below we provide several levels of projection based on STR occupancy. Note that these projections assume that our sample of respondents is representative of all STR renters in Denver. Additionally, these projections are based on the assumption that the properties in which our respondents stayed are representative of the population of available STRs in Denver. A recent search of VRBO (1/16/2016) revealed a total of 477 available units. An examination of each of these units resulted in the elimination of 66 that were in the Denver Metro Area, but not in the City and County of Denver, and would, therefore, not produce lodger's tax revenue for Denver. Some ancillary revenue is likely to accrue to Denver businesses, and to the City and County via sales tax, from people staying in these 66 units, but we do not include them in our projections. Further, we assume that the group sizes of those we surveyed would be equivalently represented in the population of Denver's STR renters. Finally, we assume the STRs are available for rent 365 days/year. Since actual availability may be for fewer days, the occupancy rate projections are somewhat conservative. Note that these figures are based only on the properties listed on VRBO. It is worth keeping in mind that if the VRBO properties in Denver are rented for three out of every seven nights, the result would be an occupancy rate of over 42%. Also worth noting is that, as shown in Table 2, the average number of nights per stay in our sample was 5.67.

Table 5
Estimated economic impact of STRs on Denver

	20% occupancy	40% occupancy	60% occupancy
Group ancillary spending	$10,642,364	$21,284,728	$31,927,092
Projected total annual STR rent	$6,808,581	$13,617,161	$20,425,741
Estimated economic impact	$17,450,945	$34,901,889	$52,352,833
Lodger's Tax revenue	$1,004,266	$2,008,531	$3,012,797

STRs versus hotels

To date, no research has sought to fully understand STR renters in the Denver market or their preferences. In order to gain such an understanding, we asked respondents which type of lodging (hotel vs. STR) they prefer when traveling for leisure or business. Figure 5 provides STR renters' lodging preferences when on a leisure trip and Figure 6 does the same for business trips.

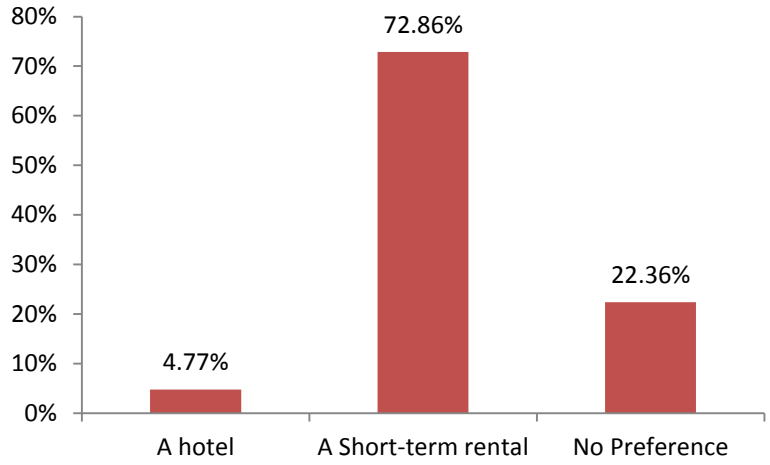

Figure 5
Lodging preference for leisure trips

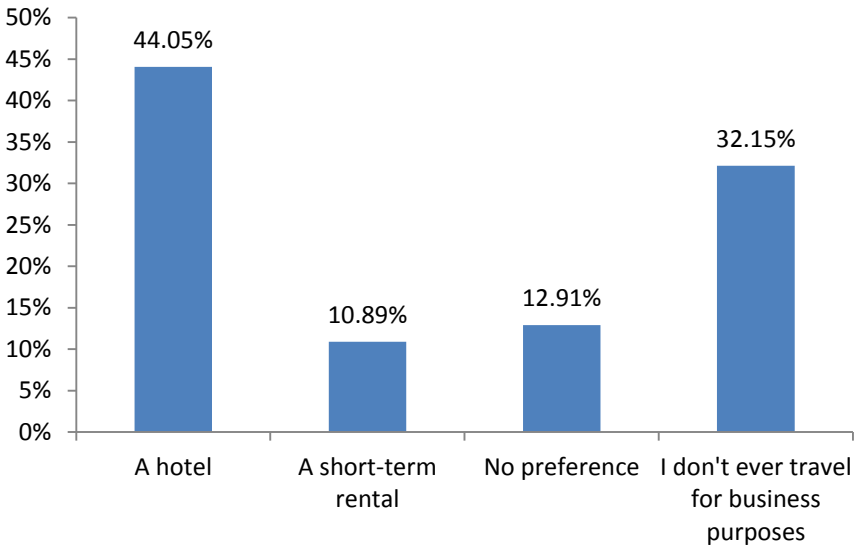

Figure 6
Lodging preference for business trips

In an effort to understand these preferences in greater depth, we asked respondents about their leisure and business travel behavior. Specifically, we inquired how many trips were made for each purpose in the prior 12 months. Doing so enabled us to examine the travel frequency behavior of those who prefer STRs. Figures 7 and 8 share the raw distribution of the leisure and business travel frequency of those who expressed a preference for staying in STRs.

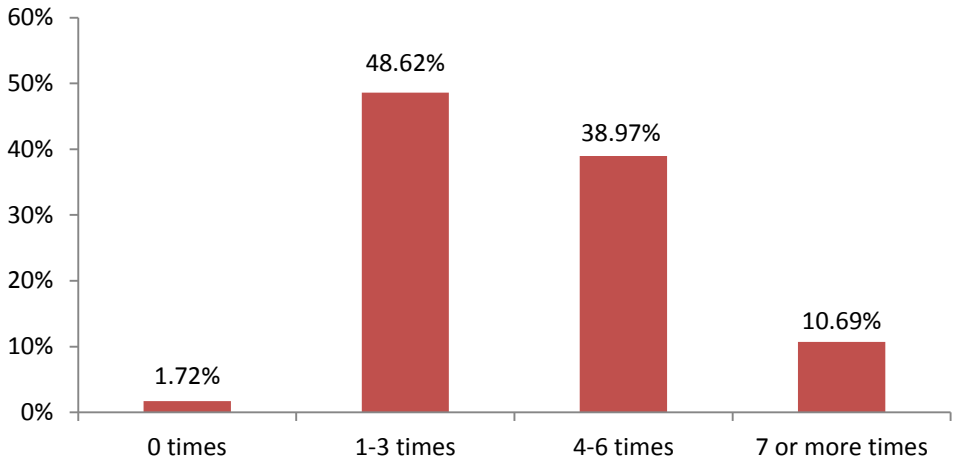

Figure 7
Annual leisure travel frequency among those who prefer to stay in STRs for leisure

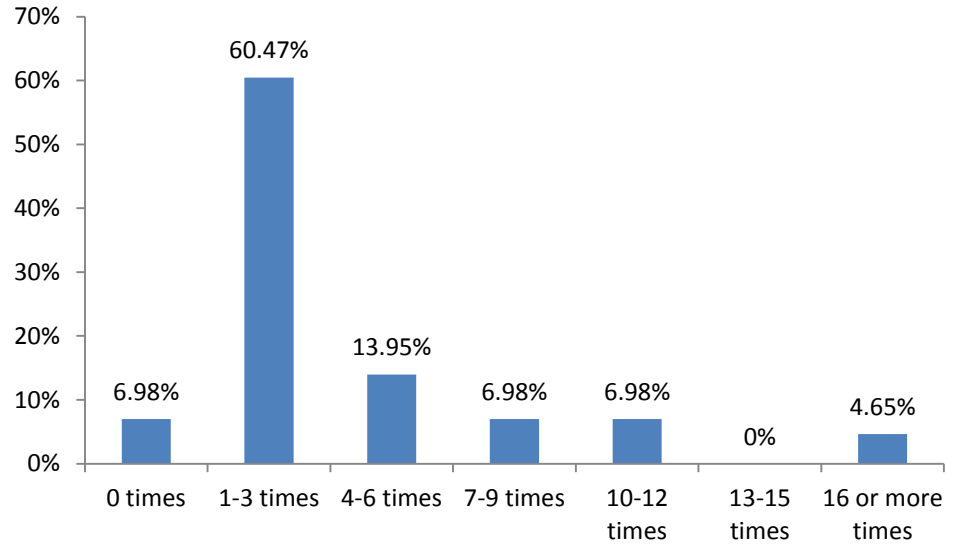

Figure 8
Annual business travel frequency among those who prefer to stay in STRs for business

We then grouped those who expressed a preference for STRs for leisure and business trips by low, medium, and high frequency of leisure and business travel. Figures 9 and 10 display how heavily represented each frequency group is in terms of STR preference for leisure and business travel, respectively. The data indicate that nearly half the travelers who prefer STRs for leisure were medium or high frequency leisure travelers, while fewer than 20% of those who prefer STRs for business were medium or high frequency business travelers.

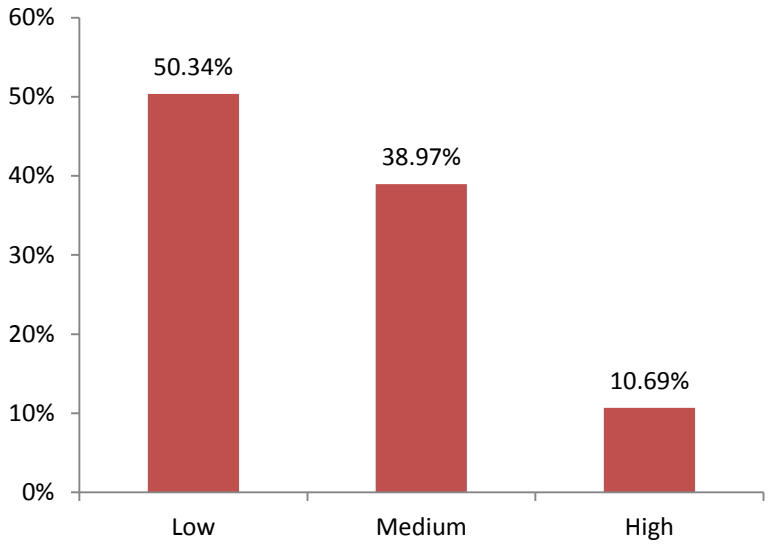

Figure 9
Preference of STRs for leisure trips by leisure travel frequency

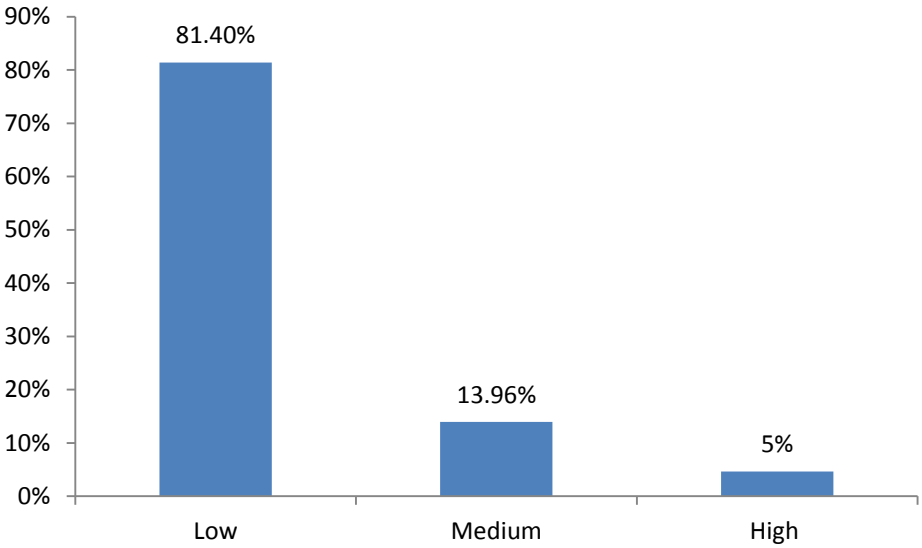

Figure 10
Preference of STRs for business trips by business travel frequency

When the data around the business and leisure trips made by participants who prefer STRs are aggregated across leisure and business trips, one gets a sense of the overall travel frequency of those who prefer STRs. Respondents were aggregated into three traveler categories based on trip frequency: 70% of those who prefer STRs are low-frequency travelers, 25% of are medium frequency travlers, and 5% of them are high-frequency travlers.

Influencers of STR usage

One area of particular interest is developing a better understanding of who STR renters are and what factors influence their decision to stay in STRs. To assess this area we asked respondents to report on the number of STR stays, other than their stay in Denver, they experienced in the year prior to our survey. Using the number of stays as the response variable, we performed an estimation using a variety of demographic variables as predictors. Specifically, we used marital status, gender, race, household income, employment status, education, number of children living at home, and whether the respondent owned or rented his or her home as predictor variables. The demographic variables failed to significantly predict number of STR stays (F=1.24, p=.162).

These same demographic variables were used as predictors of the number of trips (leisure and business combined) taken in the prior year. In this case, the demographics significantly predicted 20% of the variation in the response, number of trips (F=1.88, p=.002). Not surprisingly, those with a household income of $100K or above generally have made more trips than those under $20,000, with an exception being those in the $120K-$129,999 annual household income group. No difference was found in trip frequency between those earning between $20K and $100K when compared with those under $20K. Those working seasonally traveled more than full- or part-timers. Last, those with a single child living at home traveled less than did those without children. There was, however, no difference between those with two or more children at home and those without.

Several questions of interest regarding the attributes of hotels and STRs, and how they influence decision-making, merit examination.

- Among STR guests, what attributes are most influential in choosing an STR over a hotel for leisure trips?
- What attributes are most influential in choosing hotel accommodations over an STR for leisure trips? Do these attributes differ based on lodging preference (hotel, STRs, no preference) for leisure trips?
- What are the most influential attributes in preferring a hotel instead of an STR for business trips? Do these attributes differ for frequent business travelers versus infrequent business travelers?

What we found: To address the first of these questions, respondents were asked to rate how influential a variety of attributes were when choosing an STR over a hotel for leisure travel. The two most influential were location (rated highest at 4.75 on a five-point influence scale) and a dislike of big hotel chains (4.5). Four other factors were quite influential (4.25), though not quite so as the two mentioned above. These four factors were price, free internet/wireless, length of trip, and being near to restaurants, shopping and grocery stores. The influence factors and their ratings on a five-point influence scale (a score of five being highly influential) are displayed graphically in Figure 11.

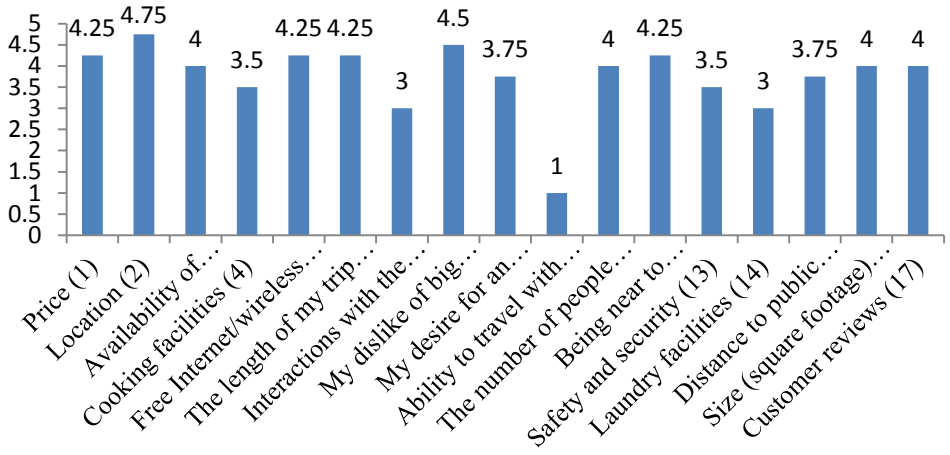

Figure 11: Factors influencing the choice of STR over a hotel

The second pair of questions examined the attributes most influential when STR renters do choose hotels for leisure travel. Three factors stood out: Price, location, and safety and security. Lodging preference for leisure had a marginal effect on the influence weights respondents' assigned to the attributes shaping the choice to book a hotel over an STR for leisure. The top three factors were the same whether the respondent's preference was STR, hotel, or there was no preference. What changed across the three groups was how influential each factor was. Scores for all three were highest among those who had no preference, slightly lower for those who preferred hotels and lower still (though probably not significantly) for those with an STR preference. Not unexpectedly, those who prefer hotels for leisure had a couple of other factors that were somewhat influential: Food and beverage options and a liking for being served. Figure 12 displays the leisure preferences for the three groups.

The final set of questions addressed STR renters' preferred lodging type while traveling on business. Of the 268 respondents who indicated they travel for business, 65% prefer to stay in hotels when traveling on business, 16% prefer STRs, and 19% have no preference.

In examining what factors influence STR renters when considering a hotel as opposed to an STR for business travel, only those respondents who travel for business were considered. We worked from the business travel frequency categories discussed earlier – low-, moderate-, and high-frequency business travelers. The distribution of our sample is heavily weighted toward low-frequency business travelers (nearly 81%). Another 13% travel moderately frequently for business and only about 6% travel with high frequency for business. For all three groups, location is the most important factor and the only one that was very influential. Only high frequency travelers had factors other than location that were more than halfway between somewhat and very influential. These factors were the ability to earn loyalty points and the certainty of knowing what they will find in the way of facilities and services.

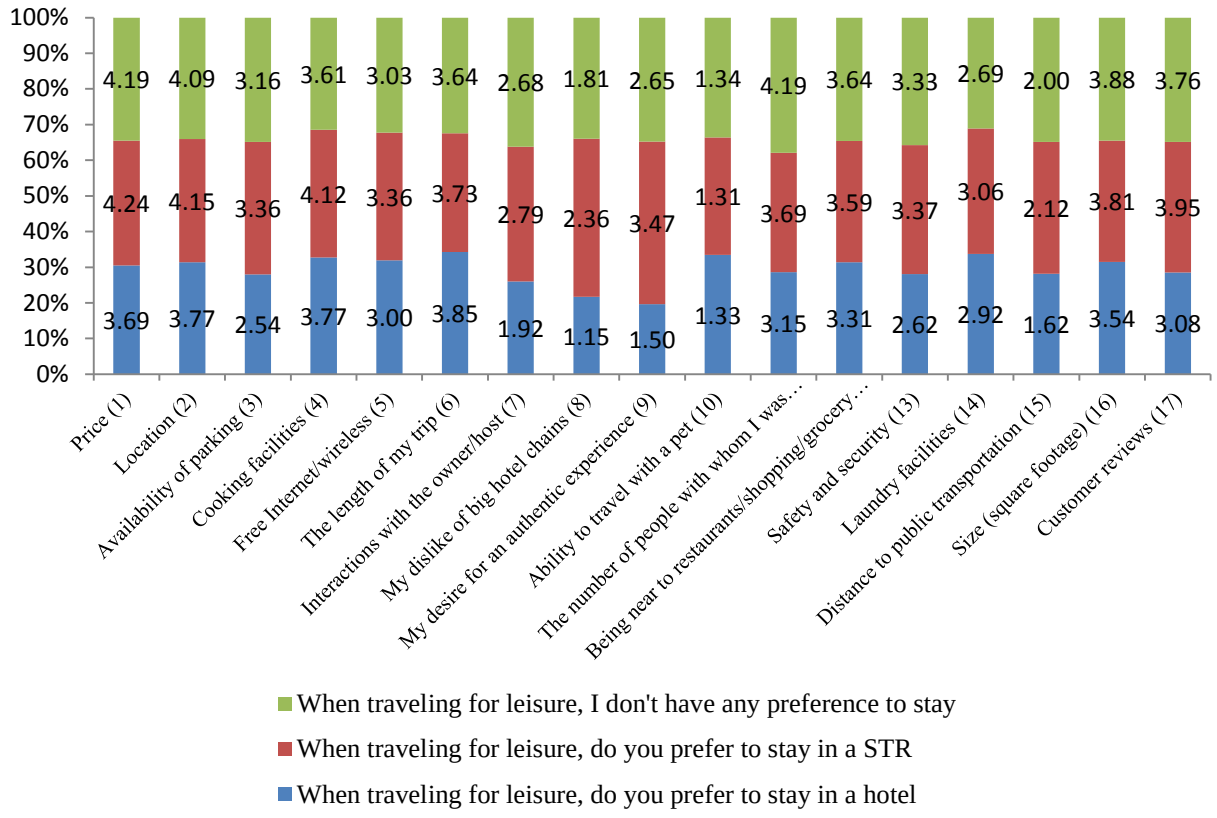

Figure 12: Influence factors by lodging preference

Personality

In addition to a demographic profile of STR renters, our interest extended to formulating a psychographic profile. Most personality research employs a five factor model of personality. Each factor is measured on a continuum and the factor names are the anchors at one end of the continuum for each. The factors are easily recalled using the acronym, OCEAN. The factors are openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Using the five personality factors as predictors of the number of previous STR stays as outcomes, we modeled regression estimations that revealed relationships between openness to experience and agreeableness and the number of previous STR stays, though the personality dimensions explain only a very small percentage of the variation in STR stays.

The relationship between openness and STR stays was positive, meaning that the more open one is the more STR stays one has had. This finding was expected. There is still a newness to STRs; despite increasingly widespread usage, they are definitely not as mainstream as are hotels. Those who are more open are more likely to experiment with non-traditional alternatives to the mainstream, like STRs.

Agreeableness, though, was negatively related to STR stays; the more agreeable, the fewer stays. One can infer a certain logic to this finding. Agreeableness is, in part, about not rocking the boat – accepting the status quo. It makes sense that those high in agreeableness wouldn't be particularly interested in

trying STRs when hotels are satisfying their needs well enough. Table 6 displays the regression output for predicting STR stays with the five dimensions of personality.

Table 6
Personality and STR stays

Factor	Coefficient	Std. Error	*t*-value	*p*-value	Regression equation
Openness	0.14	0.07	2.04	0.04	F (5,318) = 1.87
Conscientiousness	0.01	0.07	0.07	0.95	p = 0.0996
Extraversion	-0.03	0.05	-0.66	0.51	R-square = 0.0285
Agreeableness	-0.17	0.07	-2.46	0.01	Adjusted R-square =
Neuroticism	-0.03	0.07	-0.41	0.69	0.0133

DISCUSSION AND LIMITATIONS

This exploratory study provides an informative first look at those who stay in STRs. Among the most important questions STR owners have is whether legislation that subjects their properties to lodging taxes will affect their businesses. These data indicate that the majority of renters are unaware of whether tax was charged and only 20% of renters would have been influenced in their decision to rent an STR. These results are also important to municipalities considering legislation to legalize STRs and charge renters the same lodging tax as applies to hotels. Also important to municipalities and local businesses is the ancillary spending driven by STR renters. In contrast to claims by Airbnb, these data show that STR renters' ancillary spending is below that of hotel guests. This finding is likely influenced by the low number of business travelers in our sample. Data from the Denver hotel visitor market show that business travelers outspent hotel leisure travelers by an average of $21/day. Having a more even mix of respondents who rented STRs for business travel in our sample would likely have increased the average ancillary spending. However, it is somewhat telling that only 10 of 408 respondents were traveling for purely business reasons. It may well be that business travelers are significantly underrepresented in the population of STR renters.

Although the entire sample rented an STR on the trip about which we asked, more than half considered staying in a hotel for this trip. Likewise, nearly half the sample failed to consider staying in a hotel. This finding speaks to the degree to which STRs have become mainstream, particularly when the sample demographics are considered. Our sample was highly educated, the vast majority owned their own homes, and average household income was nearly $120K. These were not the spendthrift Millennials talked about as driving the sharing economy.

STR usage, as mentioned above, seems almost exclusively driven by leisure travel. The findings around leisure preferences and search processes all seem to point to a growing loyalty to STRs. Nearly as high a percentage of business travelers in the sample preferred hotels to STRs while on business as did leisure travelers prefer STRs. The good news for the hotel industry is that for now it appears to be holding onto higher paying, higher spending business travelers.

Despite the important findings of this study, it is not without limitations, which include the small, convenient sample of VRBO hosts acquired and the focus on a single U.S. city. VRBO guests, unlike current Airbnb guests, appear to have higher disposable income and rent entire spaces only. However,

these guests may represent the future of STRs as it seems they will increasingly capture more mainstream market segments. Additionally, respondents were asked about their preferences regarding choice of STRs or hotels for leisure and business trips, but when faced with the actual purchase decision, intentions may not be perfect predictors of behavior. Thus, future research should examine actual purchase decision making (retrospectively, perhaps, or even during using anthropological methods) and compare and contrast STR travelers based on income and room type (entire home versus private bedroom versus shared bedroom). Ideally, more research is needed on the psychographic characteristics of individuals associated with STR usage, and the attractiveness of STR attributes over hotels (Guttentag, 2015). Furthermore, what attributes influence their purchasing decision of one STR over another? Are STR guests loyal to particular STR platforms (e.g., Airbnb, VRBO, etc.)?

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