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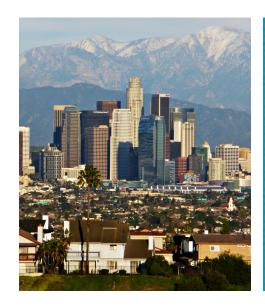








Designing Enforceable Regulations for the Online Short-Term Rental Market in Los Angeles



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Advisor: Dr. Wes Yin

Submitted to the Los Angeles Alliance for a New Economy (LAANE)

An Applied Policy Project submitted in partial fulfillment of the core requirements of the Master of Public Policy Program at the University of California - Los Angeles Luskin School of Public Affairs

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Department of Public Policy

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Client

This report is being prepared for Roy Samaan, a Research and Policy Analyst at the Los Angeles Alliance for a New Economy (LAANE). Founded in 1993, LAANE is a Los Angeles based organization who advocates for policy changes that result in "good jobs, thriving communities, and a healthy environment". Past work has included the recent campaign to raise the minimum wage in Los Angeles to \$15 an hour, the Port of Los Angeles Clean Truck Program which reduced truck emissions by 90%, and the Community Benefits Program which tied large scale development projects to living wage jobs and affordable housing. Mr. Samaan's current focus is the rise of the sharing economy in the hospitality market in Southern California and its effect on affordable housing.

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Executive Summary

Los Angeles is considered to be one of the most difficult cities to find and secure affordable housing. The rise of short-term rental companies, such as Airbnb, which allow hosts to advertise and rent out residential units to visitors, has been considered by some as compounding this crisis. In particular, attention has focused on hosts who have converted whole homes and apartments into Airbnb rental units, thereby reducing the supply of long-term rentals. Similar to many other cities, the Los Angeles City Council has responded to constituent concerns by proposing a motion to regulate the short-term rental market in residential zones. The motion would specifically restrict hosts from renting out a unit which is not their primary residence.

Concerned by the difficulty other cities have faced in enforcing their new regulations for the short-term rental market, our client, the Los Angeles Alliance for a New Economy, asked us to:

- Investigate complementary policy options to increase the enforceability of the motion;
- Recommend how to best implement the proposed regulations.

In this report, we first provide an overview of the short-term rental market in Los Angeles. We find Airbnb to be the dominant player – controlling 65% of the market – and as such, focus our analysis on a dataset of its 2015 listings. We identify 11% (1,676) of Los Angeles Airbnb hosts as renting out more than one property. These 11% are responsible for 29% (6,240) of the Airbnb listings. We conclude that the percentage of hosts who would be in violation of the proposed regulations is modest, but they have an outsized effect on the overall size of the short-term rental market. Though a modest percentage of all hosts, the total number of potential hosts in violation pose an enforcement challenge for the City of Los Angeles.

We then evaluate the strengths and weaknesses of the original motion and potential regulatory additions. We base our analysis on a literature review of all major US cities' short-term rental regulatory efforts along with expert interviews with City policy leaders, industry experts, advocates, and representatives of the major short-term rental platforms. We find that the current motion fails to address the enforceability issues of past regulatory efforts. In particular, it disincentives registration with a convoluted and expensive business registration process, and it fails to create a means for enforcement agents to easily distinguish legally operating hosts from illegal ones. We propose two additional regulations to the current motion to create a new regulatory package:

- Free and Streamlined Permitting: The City should create a streamlined permitting process for short-term rentals, possibly through the development of a separate online portal. It should be housed in the Planning Department and there should be no fee for processing the permit application. In our analysis, we further describe why this will help maximize compliance.
- Requirement for Displaying Permit ID: The City should require that hosts display their unit-specific permit number on any advertisements for short-term rentals and establish fines for those who fail to do so.

Finally, we lay out specific strategies for the implementation of our new regulatory package:

- The City should partner with other stakeholders to conduct an education campaign to raise awareness of the new regulations, the free permitting process, and penalties for non-compliance;
- The City should seek out mutually beneficial partnerships with short-term rental companies, such as Airbnb, particularly around the issues of tax collection, incorporating the City's permitting process in the company's host sign-up process, and removal of listings of known bad actors;
- The City should adopt a data-driven enforcement strategy and focus the City's limited enforcement capacity on regions where the short-term rental activity is most likely to be in violations of the proposed Council motion.

Introduction

The Sharing Economy: Disruptions in the Short-Term Rental Market

The past decade saw a boom in what has been termed the "sharing economy." This business model often taps into millennials' increased need for flexibility as well as a generational shift from ownership to access. Such companies thrive on their decreased reliance on human capital and infrastructure; they make use of underutilized resources and innovative technologies in order to lower transaction costs.^{2,3} Often considered "disruptors," these companies strategically challenge the status quo for their own and their users' benefits.⁴ These business disruptions sometimes also involve the violation or evasion of existing legal statutes and ordinances deemed negligible, inapplicable, inefficient, or outdated. Cities and municipalities throughout the United States have struggled with how to best regulate this emerging sector.⁵

Central to this new wave of peer-to-peer marketing platforms are short-term rental (STR) websites such as Airbnb, VRBO, and HomeAway. Building upon predecessors such as eBay and Craigslist, online STR platforms similarly facilitate transactions in a rapidly expanding market: individuals willing to rent part or all of their homes and travelers in need of short-term housing. Through these STR platforms, "operators" or "hosts" can advertise spaces ranging from a living room couch to large multiroom estates. Travelers have additional rental options at different price points beyond traditional hotels and motels. In exchange for this service, some STR platforms such as Airbnb charge both hosts and traveler fees for each interaction.

Short-Term Rental (STR) Platform

Websites that host STR listings and allow users to post advertisements for the unit they wish to rent out. Prominent examples include Airbnb, HomeAway, VRBO and FlipKey.

While there is healthy competition among online STR platforms, Airbnb by far surpasses other platforms in terms of sheer size. With an estimated value of at least \$20 billion, Airbnb has amassed over two million listings in over 190 countries since its inception in 2008.^{6,7,8} Airbnb currently controls an estimated 64.6% of the market in Los Angeles⁹, and its listings have surpassed that of the largest hotel chains. This success results from a combination of strategic decisions on part of the company: establishing a community-centered culture, crafting a user-friendly interface, and instituting a self-policing mechanism that enables

¹Vincent Trivett and Skift Staff, "What the Sharing Economy Means to the Future of Travel," 2013, http://skift.com/wp-content/uploads/2014/07/skift-what-the-sharing-economy-means-to-the-future-of-travel.pdf.

²Dana Palombo, "Tale of Two Cities: The Regulatory Battle To Incorporate Short-Term Rentals Into Modern Law," 2015.

³Darcy Allen and Chris Berg, "The Sharing Economy: How over-Regulation Could Destroy an Economic Revolution," n.d.

⁴ Ibid.
⁵ Dana Palombo, "Tale of Two Cities: The Regulatory Battle To Incorporate Short-Term Rentals Into Modern Law," 2015.
⁶ Biz Carson, "Airbnb Is Worth \$25.5 Billion after Raising a Massive \$1.5 Billion Round," *Business Insider*, accessed February I, 2016, http://www.businessinsider.com/airbnb-15-billion-round-values-the-company-at-255-billion-2015-6.
⁷ Privco, "PrivCo | Airbnb, Inc. Receives Series E Investment From General Atlantic LLC, Hillhouse Capital Management, Tiger Global Management LLC, And Others," accessed February I, 2016, http://www.privco.com/private-company/airbnb/funding/airbnb-inc-receives-venture-capital-investment-from-general-atlantic-llc-hillhouse-capital-management-and-tiger-glo-august-18th-2015.

management-and-tiger-glo-august-18th-2015.

"About Us - Airbnb," accessed February I, 2016, https://www.airbnb.com/about/about-us.

Roy Samaan, "Airbnb, Rising Rent, and the Housing Crisis in Los Angeles," 2015.

Michael a. Cusumano, "How Traditional Firms Must Compete in the Sharing Economy," Communications of the ACM 58, no. I (2014): 32-34, doi:10.1145/2688487.

reviews and builds trust between hosts and tourists. I Airbnb's dominance both in terms of market share and brand recognition has led to its being set as a standard for the STR industry overall. This rapid growth and dominance, however, is not without contention.

National Context

Proponents and opponents of STR platforms diverge along their cost and benefit analyses. Short-term rental proponents state that companies such as Airbnb provide a means for middle-class tenants to supplement their incomes as well as broaden their networks through short-term rentals. 12, 13 Airbnb's own survey found that 56% of its San Francisco hosts use their STR income to pay their rent or mortgage. 14 Economically, free market advocates assert that STR platforms like Airbnb decrease transaction costs by centralizing information for both suppliers and consumers leading to a more efficient market. These platforms provide a singular location for all STR advertisements and evaluative mechanisms to inform suppliers and consumers of quality and reliability. 15 In addition, STR platforms enable the use of underutilized living spaces. Airbnb and similar platforms promote the complete use of living areas, such as couches, spare rooms, or even vacation homes, that would otherwise be wasted resources. 16 Due to cheaper prices, Airbnb travelers seem to typically stay longer in their destination city than hotel guests. ¹⁷ This may lead to increased spending and economic activity in the host city. 18, 19 As a whole, advocates believe that the benefits of short-term rentals, either individually or societally, outweigh potential negative externalities.

Conversely, opponents to short-term rentals argue that STR platforms like Airbnb "alter neighborhood character," create additional traffic and parking shortage, and lead to increased safety hazards (due to increased traffic in neighborhoods as well as lack of safety regulations of STR units).^{20, 21} Furthermore, STRs and hotels operate on uneven playing fields. In addition to evading health and safety regulations enforced on hotels, the vast majority of STRs, unless specially arranged with the STR platform, do not remit the Transient Occupancy Tax (TOT) remitted by hotels. In cities with a sizable tourism industry, this tax provides a substantial revenue stream. In addition, by most cities' definition, STR hosts are operating a business and are required to pay the applicable business tax (unless they meet the small business exemption criteria). However, most online hosts do not comply since STR platforms such as Airbnb allow hosts to hide their names and addresses and continue to operate without fear of identification. These factors incentivize the commercial operation of STRs in traditionally

^{II} Benjamin G. and Geradin and Edelman Damien, "Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies like Airbnb and Uber?," 2015, 1–32.

^{II} LASTRA, "Testimonials," *Los Angeles Short Term Rental Alliance*, accessed February I, 2016, http://www.la-

stra.org/testimonials/.
Fraiberger, Samuel P., Sundararajan, Arun, Peer-to-Peer Rental Markets in the Sharing Economy, 1-14, 2015.

Tomio Geron, Airbnb Had \$56 Million Impact On San Francisco: Study

¹⁵ Benjamin G. and Geradin and Edelman Damien, "Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies like Airbnb and Uber?," 2015, 1–32.

¹⁶ Ibid.
17 Vincent Trivett and Skift Staff, "What the Sharing Economy Means to the Future of Travel," 2013, http://skift.com/wp-content/uploads/2014/07/skift-what-the-sharing-economy-means-to-the-future-of-travel.pdf.
18 Airbnb, "New Study: Airbnb Generated \$632 Million in Economic Activity in New York - Airbnb," accessed March 15, 2016, https://www.airbnb.com/press/news/new-study-airbnb-generated-632-million-in-economic-activity-in-new-york.
19 Tomio Geron, "Airbnb Had \$56 Million Impact On San Francisco: Study - Forbes."
20 Fred Brousseau, "Policy Analysis Report San Francisco," Government 94102, no. November 2013 (2015): 1–54, http://www6.sfgov.org/index.aspx?page=4.
21 Matt Stevens and Martha Groves, "Malibu to Crack down on Short-Term Rentals via Airbnb, Other Websites," Latimes.com, accessed March 15, 2016, http://www.latimes.com/local/la-me-malibu-renting-20140528-story.html.

residential neighborhoods; advocates claim that such operations effectively reduce the supply of long-term rentals.²²

Faced with this hotly contested issue and flagrant violations of existing laws, cities and municipalities have been forced to respond legislatively. Nearly every major city in the United States (such as Portland, New York and San Francisco) has or is in the process of imposing regulations to curb the effect of short-term renting on its rental and housing stock. The majority see the benefit to some STR activity and have subsequently crafted allowances for certain types of STR activity, ranging from the rental of a shared room to vacation homes. In doing so, they seek, in part, to recover lost revenue by ensuring all STRs pay the Transient Occupancy Tax charged to all tourists who book rooms in hotels and motels. This tax generally "provides desperately needed funding for parks, local roads, fire and police services, and promotes safe neighborhoods."23

Thus, beginning in the early 2010s, cities across the nation passed regulations that would best promote and protect the public interest. In this process, legislators had to strike the delicate balance between legalizing STR activity that provided individual and societal economic benefits while minimizing STRs' potentially negative impact on housing, neighborhood character, and the hotel industry. Cities, including New York, San Francisco, Portland, Seattle, Santa Monica, and West Hollywood, ultimately crafted unique packages of regulations that reflect the degree in which STRs would be allowed and mechanisms that would enforce such regulations. In particular, the majority of cities required STR hosts to register in order to legally operate. However, these cities soon encountered the same obstacle: the inability to identify violators. To protect their business models, STR platforms have refused to hand over any data that would identify their hosts or host activity. Without host information, cities do not have the necessary evidence to pursue and prosecute STR operators who did not comply with regulations. Not surprisingly, in comparing STR registration numbers to total number of Airbnb listings after passing of regulations, we note low levels of compliance: Portland 7-8%, Austin 20%, Grand Rapids 5.7%, Chicago 2.7%, San Francisco 5.7%. 24,25,26,27,28

Political Context of STRs in Los Angeles

Short-term rentals (defined as less than 30 days) are banned in the vast majority of the City of Los Angeles.²⁹ Despite the ban, tens of thousands of units operate in Los Angeles each year and regulations flounder due to unenforceability. Currently, STRs are only allowed in commercial zones (where hotels typically function) and a few residential zones (Residential Accessory Service Zone RAS4, R4 and R5 higher density multi-family residential zones). These units are required to register as a business, acquire necessary permits, and collect and remit to the City the Transient Occupancy Tax. However, STRs are currently prohibited in

Roy Samaan, "Airbnb, Rising Rent, and the Housing Crisis in Los Angeles," 2015.

Senator Mcguire, "Thriving Communities and Sharing Economy Act" 593, no. 916 (n.d.).

Steve Law, "Airbnb Resists City Efforts to Regulate It," Oregon Local News, accessed February I, 2016, http://portlandtribune.com/pt/9-news/244479-II2102-airbnb-resists-city-efforts-to-regulate-it-.

Marielle Mondon, "Austin Pilot Program Looks at Realities of Enforcing Short-Term Rental Laws – Next City."

Josh Sidorowicz, "Airbnb Licensing to Pick up Speed in GR, City Manager Promises Enforcement," Fox17, November 14, 2014, http://fox17online.com/2014/II/13/airbnb-licensing-to-pick-up-speed-in-gr-city-manager-promises-enforcement/.

Danny Ecker, "Here's How Big Airbnb Has Gotten in Chicago," Crain's Chicago Business, n.d.

Dale Carlson, interview by Kiana Taheri and Blake Valenta, January 5, 2016.

Emily Reyes, "L.A. officials want to keep Airbnb-type rentals from being 'rogue hotels'," August 2015, Los Angeles Times. http://www.latimes.com/local/lanow/la-me-ln-airbnb-rental-regulations-20150825-story.html

the majority of residential zones (RI, R2, R3, RD, RAS3) as well as agricultural zones.³⁰ For these regions, people can neither operate STRs nor register as such a business.

Current debates in Los Angeles mirror those taking place in other cities, in part due to the large presence of STRs in the city. On one hand, proponents of STR operations such as the Los Angeles Short Term Rental Alliance (LASTRA) claim that short-term rentals "generate tax revenue and jobs" and result in fewer noise and criminal complaints than long-term occupancies. ^{31,32} Supporters assert that STRs effectively expand the tourist market in LA. ³³ They claim that, because many STRs have lower price points than traditional hotels, more tourists can visit, stay longer, and spend more money in the city, leading to higher sales taxes revenue.

Conversely, local critics of Airbnb, such as LAANE and Keep Neighborhoods First, levy the charge that owners and renters now list rooms for tourists as opposed to procuring more longterm tenants and roommates, stripping between 1,000 to 7,200 permanent rental housing units from an already scarce rental market.^{34, 35} Ultimately, opponents claim, this decrease in longterm rental supply may be partially contributing to higher aggregate rent prices for all Angelenos. In response, Airbnb published a report claiming that vacancy rates in Los Angeles have remained unchanged between 2005 and 2013.³⁶

Within the City of Los Angeles, both Mayor Garcetti and the City Council are now engaging in rule-making processes. These efforts began in the March of 2014 when a memo by Allan Bell, Deputy Director of City Planning, sought to address the general uncertainty about the status of residential STRs offered through online platforms. The memo indicated that such operations are in fact banned for the majority of units in residential zones, and that others are required to register as a business with the City and pay the TOT.³⁷

Los Angeles Councilmember Mike Bonin later requested a convening of pertinent City departments for the purpose of conducting a comprehensive study on the emergent sharing economy and developing recommendations for how the City of Los Angeles might best respond to these changes and manage the economic impacts.³⁸

By the end of 2014, conversations became much more focused on STRs and specifically, Airbnb. Mayor Garcetti's office primarily focused on acquiring the TOT and emphasized the need for a lump sum agreement with prominent market players such as Airbnb.³⁹ City Council approved a motion asking the City Administrative Officer (CAO) to research existing contracts between other cities and Airbnb or Airbnb competitors and report back with a

³⁰ Allan Bell, "Short Term Rentals FAQ - Memo," 2014.
31 LASTRA, "STRs Help LA Neighborhoods Thrive," Los Angeles Short Term Rental Alliance, accessed February I, 2016, http://www.la-stra.org/benefits-for-the-community/.
32 LASTRA, "STRs Help LA Business Thrive," Los Angeles Short Term Rental Alliance, accessed February I, 2016, http://www.la-stra.org/benefits-for-local-bizs/.
33 Vincent Trivett and Skift Staff, "What the Sharing Economy Means to the Future of Travel," 2013, http://skift.com/wp-content/uploads/2014/07/skift-what-the-sharing-economy-means-to-the-future-of-travel.pdf.
34 Airbnb, "Report: Housing & The Airbnb Community in the City of Los Angeles," 2015.
35 Roy Samaan, "Airbnb, Rising Rent, and the Housing Crisis in Los Angeles."
36 Airbnb, "Report: Housing & The Airbnb Community in the City of Los Angeles," 2015.
37 Allan Bell, "Short Term Rentals FAQ - Memo," 2014.
38 Herb Wesson and Mike Bonin, Council File 14-0593, http://clkrep.lacitv.org/onlinedocs/2014/14-0593 mot 05-07-14.pdf.
39 Josie Huang, "Los Angeles City Council panel calls for comprehensive plan to regulate short-term rental sites like Airbnb," KPCC, 2015, http://www.scpr.org/news/2015/08/04/53542/la-panel-puts-off-plan-to-tax-airbnb

proposal for consideration by Council. Then, in 2015, the City Administrative Officer (CAO) was directed by Councilmember Cedillo to examine the "feasibility of directing all or a portion of the Transient Occupancy Tax received from short-term rentals to the City's Affordable Housing Trust Fund."40

However, recognizing the complexity of the issue, Council decided to prioritize regulations over the collection of taxes. 41 A further motion by Councilmember Bonin and Council President Wesson asked that any proposed ordinance be aimed at the following three primary objectives:

Council Objectives

- I. Protecting residential neighborhoods from a high concentration of STRs;
- 2. Prohibiting the removal of affordable housing from the long-term rental market;
- 3. Collecting the TOT.

The Councilmen's motion acknowledged STRs as possibly benefiting those in the creative industry, low income individuals, or residents who wish to provide a "true" local experience to tourists, but also likely negatively impacting the character of neighborhoods and leading to a loss of TOT revenue.

In response to Council's request for an analysis of STRs in Los Angeles, CAO produced a report in the May of 2015. 42 Citing a LA Times article, the report demonstrated their concern by pointing to the almost 4,500 individual hosts that operated STRs in Los Angeles between 2013 and 2014. Each of these hosts, theoretically, could have been commercially operating more than one STR unit, effectively taking housing options off of the long-term rental market. The CAO also pointed to evidence that, in March of 2015, nearly 6-12% of all housing in Venice was listed on Airbnb. Lacking data and relying on back-of-the-envelope calculations, CAO analysts estimated at least \$5 million loss in TOT from unregistered STRs on Airbnb.

In early 2015, Councilmember Bonin and Council President Wesson met with community members on both sides of the issue, from STR hosts and disgruntled residents to advocacy groups such as the Los Angeles Short Term Rental Alliance and Keep Neighborhoods First. By June of 2015, Wesson and Bonin put forth a motion intended to protect rental stock while legalizing certain STR activity. The Councilmen accurately identified a key issue in the debates, namely that the "City's current zoning regulations do not anticipate or effectively govern short-term rentals."43

 ⁴⁰ Gilbert Cedillo, Council File 14-1635-S1, 2015.
 ⁴¹ Bianca Barragan, "LA Wants to Figure Out Rules for Airbnb Before Taxing It," *LA Curbed*, 2015, http://la.curbed.com/2015/8/4/9934024/la-wants-to-figure-out-rules-for-airbnb-before-taxing-it
 ⁴² Los Angeles City Administrative Officer, Council File 14-0600-889, http://clkrep.lacity.org/onlinedocs/2014/14-0600-S89_rpt_CAO_05-11-2015.pdf, 2015.
 ⁴³ Mike Bonin and Herb Wesson, (*Council File 14-1635-S2*), 2015.

Specifically, the most recent motion provided firm guidelines for the Department of City Planning to follow in crafting STR regulations. The motion asks that City departments prepare an ordinance which:

- i. "Authorizes a host to rent all or part of their primary residence to short-term visitors, permitting someone to rent a spare room, a back house, or even their own home while they are out of town"
- 2. "Prohibits hosts from renting units or buildings that are not their primary residence or are units covered by the Rent Stabilization Ordinance (RSO), forbidding speculators from creating a syndicate of short-term rental properties, and prohibiting the loss of valuable rental housing stock"
- 3. "Capture Transient Occupancy Tax (TOT) from all hosts."44

Primary Residence One's primary residence is the residence in which she usually lives. There is no definitive criteria for primary residence and status is often determined case-by-case.

The analysis presented in this report is based on this latest motion.

State of the STR Market in Los Angeles

Since the inception of online platforms, the STR market has grown significantly in Los Angeles. Founded in 2008, by 2012, Airbnb had surpassed Hilton Hotels, one of the largest players in the traditional STR market, in terms of the number of rooms available for bookings. As reflected in Table I, among online STR platforms, Airbnb enjoys a near 65% market share and is incomparable to the other platforms. Together, VRBO, HomeAway, and Flipkey – the major competitors of Airbnb – only comprise about 27% of the market. The large market share held by Airbnb places their company at the center of much of the debate.

The numbers in Table I and the majority of existing literature on the Los Angeles market rely on publicly available web scrapes of short-term rental websites. These web scrapes are usually snapshots of a single day in the market.

Table I. Total Unique Listings and Market Share for Los Angeles STR Operators (LAANE, August 2015)

STR Company	Unique Listings	Share of L.A.'s STR Market	
Airbnb	15,031	64.6%	
Major Competitors	6,295	27.1%	
VRBO	2,286	9.8%	
HomeAway	2,275	9.8%	
FlipKey	1,734	7.5%	
Tourist Industry Sites	449	1.9%	
Expedia	355	1.5%	
Hotels.com	94	0.4%	
Other Sites	1,492	6.4%	
Roomorama	355	1.5%	
Booking	349	1.5%	
Wimdu	190	0.8%	
9Flats	129	0.6%	
TravelMob	117	0.5%	
HomeStay	112	0.5%	
Perfect Places	95	0.4%	
Cities Reference	56	0.2%	
VacationRentalPeople	39	0.2%	
StopSleepGo	34	0.2%	
Bed Y Casa	16	0.2%	
Migoa	-	-	
Way to Stay	-	-	
Total STR Listings	23,268	100%	

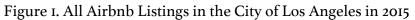
2012. ⁴⁶ Roy Samaan, "Airbnb, Rising Rent, and the Housing Crisis in Los Angeles," 2015.

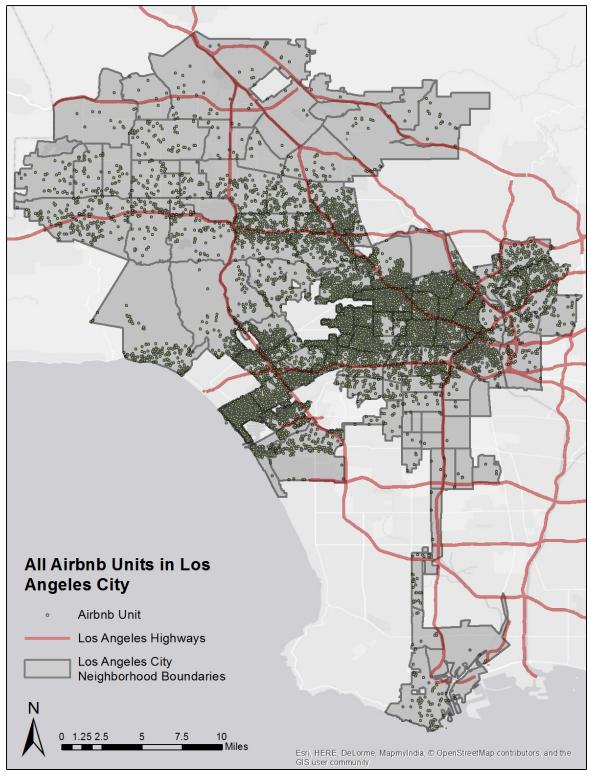
H Ibid

⁴⁵ Onsigli, Matt, Allagher, Matt, Kumar, Mukul, Mehta, Nishant, Purnell, Justin, Templeton, Ross, "EIR Final Project: Airbnb,"

To better describe the current state of the Los Angeles market, we acquired a proprietary database which provides more accurate data on listings available and encompasses an entire year's worth of data. We found that, in 2015, there were 21,675 active Airbnb listings (e.g. at least 1 day booked) across the City of Los Angeles (See Figure 1) and 31,709 across all of Los Angeles County. Of those active in the City of Los Angeles in 2015, nearly 64% (13,954) were entire homes or apartments, 31% (6,707) were private rooms and only 5% (1,014) were shared rooms.

Active Listings
Listings with at least
one night booked over
the past year. We
focused our analysis
exclusively on active
listings.





These listings were offered by 14,708 hosts in Los Angeles. 20% of all hosts had more than one listing; 119 hosts had at least 10 listings with one host having 59 listings. It is important to note

that while the majority of hosts did not have more than one listing, we are unable to discern from this data alone whether the units' are the hosts' primary residence or not. A share of these listings are likely the secondary residence of such hosts. Additionally, hosts with more than one listing may not be listing individual units but rather individual rooms in one unit. However, even with these consideration, the reported numbers point to the prominence of the Airbnb market in Los Angeles. Later in this paper we employ a methodology to identify a lower bound estimate of hosts with multiple units.

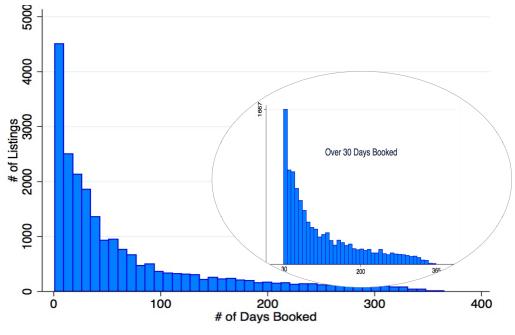
Unit vs. Listing
Unit refers to the property rented
out. A unit can be a house,
apartment, condo, etc. <u>Listing</u> is the
advertisement that appears on an
STR Platform. A single unit can
have multiple listings. For example,
one house with 3 rooms can have 3
listings for each room plus I listing
for the whole unit.

Table 2. Breakdown of Number of Days Booked by Listing (in 2015)

Days Booked	Number	Percent of
in 2015	of Units	Units
1-14 Days	6,150	28.37%
15-30 Days	3,979	18.36%
30-60 Days	4,086	18.85%
60-90 Days	2,172	10.02%
90-364	5,286	24.39%
365 days	2	1%
Total	21,675	100%

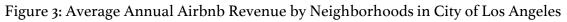
Half of all units were rented out for less than 34 days but over $I/3^{rd}$ of all units were rented out for more than two months out of the year. On average, each listing was booked for nearly 66 days (SD = 77) out of the year. This number, however, differed widely between hosts (Table 2).

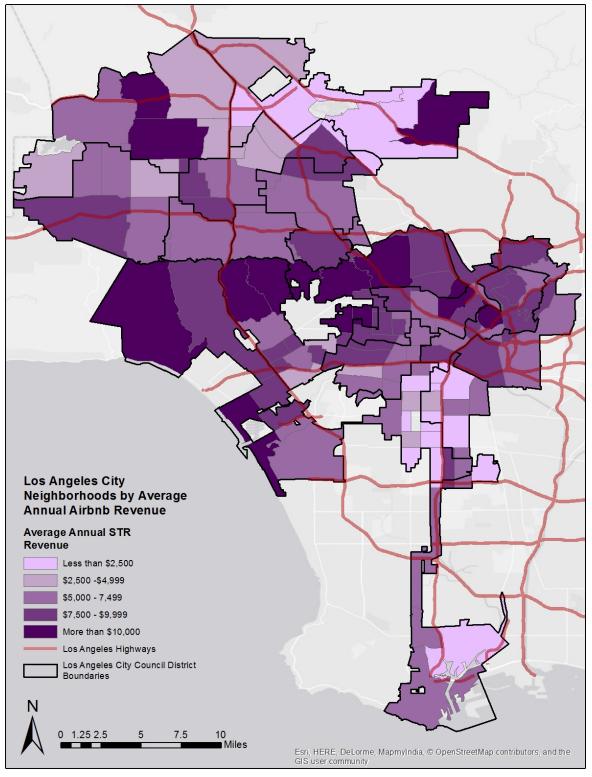
Figure 2. Distribution of Number of Days Booked in 2015



As previously mentioned, over 20% of hosts had more than one listing. These hosts, on average, had rented out all of their multiple listed units for 204 days out of the year (SD = 363, median = 92). This is in stark contrast to hosts with only one listing with 53 days booked out of the year (SD = 64, median = 29). These numbers reflect the potential effect of the Airbnb market on long-term housing.

Of course, not all neighborhoods are able to rent out their spaces at the same price. Across all units and hosts, the average daily rate was \$164.60 per night booked but, once again, the data revealed large variations across units (SD = \$215.53, median = \$111.54). Appendix II reflects the neighborhoods with the highest average daily rates. Not surprisingly, Bel Air had the highest average daily rate (\$617.19). This is further reflected in the variation in average annual Airbnb revenue of listings by neighborhood (Figure 3). Across Los Angeles, entire homes or apartments were booked for an average of \$213.41 per night (SD = \$252.33, range = \$10 - \$5,299), private rooms were rented out for \$80.84 on average (SD = \$59.28, range = \$11 - 1823.00), and shared rooms were booked for an average of \$47.12 per night (SD = \$25.66, range = \$10 - 342.5).





Airbnb's report on STRs in Los Angeles indicated that 82% of hosts conducted home-sharing of their primary residence. From data accessible by the public (and by extension to government officials), it is impossible to arrive at exact numbers since listings do not indicate whether the unit is the host's primary residence. Using various algorithms, our analysis shows that at least II% of hosts (I,676) are operating commercially or are minimally operating two unique units/properties (see Appendix V for methodology). These II% are responsible for 30% (6,240) of the Airbnb listings, a sizable portion of the market.

Commercial Hosts Hosts operating two or more unique whole units.

If all those who are able to register, do so, we calculate under the current motion, at minimum 4,625 listings would be deemed illegal which is over 20% of the current active listings (displayed in Figure 4). Full enforcement of these regulations would reduce Airbnb's market size to nearly 17,050 units in Los Angeles (see Appendix VI for methodology). These changes, however, rely on full compliance and effective enforcement.

Commercial Airbnb Units in Los Angeles City Commercial Airbnb Unit Los Angeles Highways Los Angeles City Neighborhood Boundaries 10 ■ Miles 7.5 Esri, HERE, DeLorme, MapmyIndia, $\ensuremath{\mathbb{G}}$ OpenStreetMap contributors, and the GIS user community

Figure 4. Airbnb Commercial Units in Los Angeles City in 2015

Policy Problem

Currently, the illegal proliferation of short-term rentals stems from lack of effective enforcement pathways available through the Los Angeles Municipal Code (LAMC). Any motion passed by City Council will be futile without effective enforcement. Current conversations in Los Angeles City Hall have centered on ensuring enforceability of the proposed motion.^{47, 48} Based on our analysis, enforcement difficulties can be attributed to the large pool of violators, difficulty in identifying violating units, and legal hurdles once a violator has been identified.

Beyond blatant disregard for the laws, the large pool of violations stems from lack of awareness of STR laws. In residential zones that do allow for STRs, many STR operators often do not understand their status as a small business and the consequential requirement of registration, acquisition of permits or tax payments. 49 Stated in section 21 of the Los Angeles Municipal Code (LAMC), business is defined as "any activity, enterprise, profession, trade or undertaking of any nature conducted or engaged in, or ordinarily conducted or engaged in, with the object of gain, benefit or advantage, whether direct or indirect, to the taxpayer or to another or others."50 As such, STR activity falls under the definition of a business. In addition to registering, those operating transient occupancy units must also post their "Transient Occupancy Registration Certificate" conspicuously on the premises.⁵¹ However, even if aware of the requirements, under the current ban of residential STRs, hosts would be unable to comply through business registration.

The City currently has no effective means of identifying those in residential units who are violating their respective zoning by conducting STRs or enforcing the ban.⁵² These are left up to the integrity of each resident. STR platforms such as Airbnb post ads showing pictures of the property and coordinates on a map. However, the map coordinates are often rough estimates and can be off by several blocks. Pictures are often of the interior of the unit which hinders external identification if one was to physically arrive at the rough map coordinates. Furthermore, many listed units are in apartment buildings which complicates identifying the exact violating unit.

The City also currently has no effective means of censuring violators it can identify. The primary mechanism for identifying violators has been through complaints submitted to the City by neighbors. The City then submits a cease and desist notice. Our interview with Los Angeles City staff in charge of processing complaints indicated that if a violator does not respond properly to the cease or desist notice, then the case is commonly forwarded to the

⁴⁷ Tricia Keane, interview by Kiana Taheri and Blake Valenta, December 21, 2015.
 ⁴⁸ Matt Glesne, interview by Brian Nguyen, Kiana Taheri and Blake Valenta, November 24, 2015.
 ⁴⁹ Lauren Herstik, "Did You Just Get a \$500 Freelance Assignment? The City Might Bill You \$30,000," L.A. Weekly, September

^{2015.}Namerican Legal Publishing - Online Library, "Article I Business Taxes," accessed February I, 2016, http://library.amlegal.com/nxt/gateway.dll/California/lamc/municipalcode/chapterii*licensespermitsbusinessregulat?f=templ ates\$fn=default.htm\$3.0\$vid=amlegal

American Legal Publishing - Online Library, "Chapter II* Licenses, Permits, Business Regulation," accessed February I,

http://library.amlegal.com/nxt/gateway.dll/California/lamc/municipalcode/chapterii*licensespermitsbusinessregulat?f=templ ates\$f 52 Tricia Keane, interview by Kiana Taheri and Blake Valenta, December 21, 2015.

Office of the City Attorney. 53 However, at this time, no follow up has been made on any of these cases as the City lacks sufficient evidence to prosecute violators. Online advertisements of STR platforms or even accounts by neighbors of STRS do not suffice. Instead, the City Attorney requires evidence of a transaction *and* actual short-term occupancy by a renter in order to process these cases. To have this evidence, then, the monitoring department would have to book a room and spend the night to acquire sufficient evidence. Since penalties are unlikely, many individual hosts have no incentive to register.

Current Pathways of Enforcement

- I. Business Registration 2. Neighborhood Complaints
- 3. In-Person or Online Monitoring

Based on current City processes, there are three current pathways of enforcement available to City staff: business registration, neighborhood complaints, and monitoring. Monitoring may be done by City staff either through online monitoring of the STR platform's website, monitoring via inperson inspections, or as a combination of the two. Online monitoring entails perusing online advertisements of STRs with the goal of encountering information that would

geographically pinpoint the location of the residence. Additionally, in-person monitoring can take place in the form of City code enforcement officers driving by units in the general area where the unit is displayed on the STR platform map and looking to match the pictures on the STR platform with the appearance of the unit. We identified at least three cities where active monitoring was taken up as enforcement mechanisms: Austin, 54&55 Santa Monica, 56&57 and Paris.⁵⁸

As previously described, the City of Los Angeles will soon be passing regulations to ensure the equitable growth of Airbnb and other STR platforms without adverse effects on housing. A leading voice in this process is our client, the Los Angeles Alliance for a New Economy (LAANE). As a primarily labor rights advocacy and research organization, LAANE has been critical of Airbnb; it released a nationally renowned report that condemns Airbnb as a means for rental companies to effectively transform residential properties into short-term hotels which deprives the long-term rental market of housing. LAANE's 2015 report states that Airbnb dramatically warps the rental market locally in Los Angeles, eliminating II rental units from the market daily.⁵⁹ The current proposed Council motion covers many of the issues with which LAANE is concerned. However, it is unclear whether the motion is in fact enforceable. Without effective enforcement, the motion would be symbolic but meaningless. In response to LAANE's concern, we were tasked with examining this issue.

 ⁵³ Jeff Paxton, interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 23, 2015.
 54 Sam Roudman, "The Age of Airbnb.
 55 Farzad Mashhood, "As Austin Short-Term Rental Rules Take Effect, Hundreds..."
 56 Planning & Community Development - City of Santa Monica, "Short-Term Rental Home-Share Ordinance."
 57 Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015.
 58 Helene Fouquet Ania Nussbaum, "Paris Cracks down on Airbnb Rentals, Raids Apartments."
 59 Roy Samaan, "Airbnb, Rising Rent, and the Housing Crisis in Los Angeles."

This report seeks to answer the question of whether the current proposed motion is enforceable with present enforcement pathways available in the City. We then analyze policy alternatives that may support enforcement efforts. These analyses were conducted in consultation with the Los Angeles City Charter, policymakers, field experts, academics, and the current literature on STRs.

Policy Question

- I. Are the current proposed regulations by Los Angeles City Council enforceable under the present systems?
- 2. What additional regulations must be included to enable successful enforcement?

Methodology

We grounded our analysis on the following assumptions based upon the most recently proposed motion:

Assumptions

- City of Los Angeles will permit short-term rentals that are considered homesharing but will ban commercial short-term rentals;
- A host will only be permitted to rent out his/her primary residence under the short-term rental model;
- 3. Hosts will be banned from conducting short-term rentals on the site of units that are protected under the Rent Stabilization Ordinance (RSO).

Any changes to the above assumptions may require a modification to the analysis reported herein.

Based on these assumptions, we then conducted research between September of 2015 and January of 2016 by: reviewing over 200 academic journal articles, web pages, reports, government memos, newspaper articles and legislative documents; conducting 16 expert interviews with academics, regulatory agents, policy analysts, and advocates; 60 compiling information on STR regulations in 25 cities in addition to Los Angeles; examining the Los Angeles Municipal Code and City Charter as it pertains to small businesses, zoning, STRs and TOT; and analyzing web-scraped Airbnb data on all STR listings, hosts, and bookings in Los Angeles.

Through our research, in addition to the current motion, we identified six possible policy alternatives which may facilitate enforcement if incorporated in the regulations. These options were analyzed using the Strengths, Weaknesses, Opportunities, and Threats methodology (SWOT). SWOT analysis facilitates the structured identification of factors which are favorable and unfavorable to the objectives. While *Strengths* points out the advantages of the policy option compared to others, Opportunities identifies ways in which these advantages can be utilized for increased success. Similarly, Weaknesses pinpoints the disadvantages of the policy option, and *Threats* describes the external and internal factors which could hinder success.

⁶⁰ See Appendix I

The SWOT analysis was conducted with four criteria in mind (also see Appendix I):

Criteria

- Political Feasibility The policy option must be politically feasible;
 Legal Feasibility The policy option must be legally feasible;
 Implementation Cost The implementation costs of the policy option are
- 4. **Council Objectives** The policy option must accomplish Council Objectives, namely:
 - Protecting residential neighborhoods from a high concentration of STRs:
 - Prohibiting the removal of affordable housing from the long-term rental market;
 - Collecting the TOT.

To facilitate our analysis and understanding of the STR market in Los Angeles, we also acquired data on the Airbnb market. This data was acquired through web scrapes conducted daily over the course of 2015 by Airdna, a consulting and data analytics company based in Santa Monica, CA. 61 Airdna is the only company that has been able to collect data on occupancy rates and booking information. The results of this data was primarily included in the previous section to describe the STR market in Los Angeles.

Our analysis concludes with recommendations for the necessary regulations that must be included to ensure enforceability. We then provide strategies for implementation and present several informative maps which we produced based on the data we acquired from Airdna.

⁶¹ Airdna, "Airdna - Airbnb Data and Analytics."

Analysis of the Policy Alternatives

This chapter identifies and analyzes the possible policy alternatives that could be implemented in the City of Los Angeles. As evidenced in cities such as Portland, San Francisco, and Austin, legislation intended to curtail the negative externalities of STRs nearly always fails due to lack of enforceability. 62,63,64 Cities have implemented policies that define the

Components of Effective Enforcement

- I. Facilitation of host compliance; 2. Enable identification of violators;
- 3. Enable prosecution of violators.

legal extent of STR operations without the necessary components for effective enforcement. These components are policy mechanisms that: facilitate host compliance, enable the City to identify violators, and enable the City to prosecute violators.

Lacking these central pieces, cities across the country have witnessed continued unfettered STR operations despite passage of restrictive legislation. Through a literature review of legislation to date and expert interviews, we identified seven possible policy options for the city of Los Angeles:

Table 3. Policy Options for City of Los Angeles

I	Current Motion	
2		Requirement to Display of Permit Number in STR Advertisement
3		Free and Streamlined STR Permitting Process
4	Current Motion	Cap on Number of Permits
5	+	Private Right of Action with Special Damages
6		Requirement for Data Disclosure by STR Platforms
7		Fining Users for Booking Unregistered STRs

 ⁶² Tim Redmond, "Almost Nobody Has Registered under the Airbnb Law," 48 Hills, February 17, 2015, http://www.48hills.org/2015/02/17/almost-nobody-registered-airbnb-law/.
 63 Matier and Ross, "No Way of Enforcing' Airbnb Law, S.F. Planning Memo Says."
 64 Audrey McGlinchy, "Short-Term Rental Regulations Prove Difficult to Enforce," accessed February 29, 2016, http://kut.org/post/short-term-rental-regulations-prove-difficult-enforce.

Anticipating potential shortcomings, we comprehensively evaluate the possible policy options for the City, including the current motion proposed by City Council, along four aforementioned criteria. We utilize the SWOT methodology to determine if the relative strengths and weaknesses of the policy option along the four criteria justifies it being recommended or not recommended. As these alternatives are not mutually exclusive, we conclude with a recommendation of the most feasible and enforceable policy bundle that best fulfills City Council objectives.

Policy Option #1: Current City Council Motion

As previously mentioned, Council President Wesson and Councilmember Bonin submitted a motion in June 2015. This motion asked the City to create an ordinance that:

- "Authorizes a host to rent all or part of their primary residence to short-term visitors, permitting someone to rent a spare room, a back house, or even their own home while they are out of town."
- "Prohibits hosts from renting units or buildings that are not their primary residence or are units covered by the Rent Stabilization Ordinance (RSO), forbidding speculators from creating a syndicate of short-term rental properties, and prohibiting the loss of valuable rental housing stock."
- "Capture Transient Occupancy Tax (TOT) from all hosts." 65

There are three existing possible processes within the City through which this motion could be enforced:

- I. Business Registration through the Office of Finance;
- 2. Complaints submitted by neighbors about egregious STR activity to the Housing and Community, Investment Department (HCID), and the Department of Building and Safety (DBS);
- 3. Online and in-person monitoring by Enforcement Officers either in HCID, DBS or in the Department of City Planning (DCP) or a Special Enforcement Unit (SEU).

Egregious Violator is a host who does not have a valid STR permit number posted and meets at least one of the following

- Operates multiple STR units in violation of the ordinance;
- Operates an STR unit in a rent stabilized unit;
- Operates an STR that is not their primary residence;
- Has a track record of neighborhood complaints

Strengths

This policy option has multiple clear strengths. First, this motion has encountered no opposition from the City, including from any City Council members or Mayor's Office. Additionally, with no proposition of new processes, this motion is completely legally feasible. Business registration also requires a registration fee which will cover the any additional labor required to process the influx of applications from STR operators.

Weaknesses

The current enforcement mechanisms lack the resources to identify and censure violators and does not effectively promote host compliance. 66 This enforcement mechanism relies mainly on complaints as the means to identify illegal STR activity. An effective complaint system depends on two key factors: an STR must first inconvenience nearby residents enough to incite complaints, and these residents must know of complaints as an avenue to address their grievances.

⁶⁵ Mike Bonin and Herb Wesson, (Council File 14-1635-S2), 2015.
⁶⁶ Emily Reyes, "L.A. officials want to keep Airbnb-type rentals from being 'rogue hotels'," August 2015, Los Angeles Times. http://www.latimes.com/local/lanow/la-me-ln-airbnb-rental-regulations-20150825-story.html

This mechanism would then identify only the most disruptive STR violators in neighborhoods that have informed and vocal citizens. As long as hosts discretely rent their properties, the City would have no means to identify any illegal operations.

The City also has the option of actively identifying violators online through STR rental platforms or in-person. Since online platforms such as Airbnb commonly do not list addresses or names of individuals, monitoring online is only meaningful in combination with in-person drive-by monitoring of units, or if the City requires companies to release relevant data or requires that units display their registration codes on the ads. ^{67,68} However this is less effective for apartment buildings than for houses as it would be nearly impossible to identify a specific unit in an apartment building. Our analysis shows that there are over 21,675 active listings in 2015 – spread across 500 square miles – on Airbnb alone. Thus, the sheer scale of short-term rentals in Los Angeles makes random monitoring both costly and time-consuming.

Additionally, the City lacks the resources to prosecute violating hosts identified through complaints and City monitoring.⁶⁹ Our interview with Los Angeles City staff in charge of processing complaints indicated that if a violator does not respond properly to the cease or desist notice, the case is commonly forwarded to the Office of City Attorney.⁷⁰ However, at this time, no follow up has been made on any of these cases since, as the City Attorney asserts, there is not sufficient evidence to prosecute violators. Circumstantial evidence such as advertisements, lockboxes, and even pictures would not be substantial enough to empower the City Attorney. The City would need undercover officers to find, pay, and occupy an illegal STR in order to provide the necessary evidence. Similar to monitoring, effective enforcement also requires inordinate time and resources from the City.

Lastly, while this motion expands the eligibility of legal STR operations by circumventing the prohibitions of existing city zoning laws, the current small business registration process remains difficult to navigate as well as cost prohibitive. To register their businesses, STR operators would need to navigate the Office of Finance's dense and confusing webpage. Additionally, a registration fee may further compel illegal STR operations, either because hosts cannot afford to pay or out of willful defiance to such a high cost.⁷¹ For example, an STR operator may want to rent out their couch for one night for \$25. A fee may deter this operator from registering. The City's inability to sanction violators compounds this situation as STR operators will lack the incentives to register regardless of the legality of their rental.

Opportunities

As the following policy alternatives will detail, ample opportunities exist to improve the City Council's motion, both in reducing potential costs of enforcement as well as increasing the efficacy of enforcement.

⁶⁷ Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015. ⁶⁸ Judith Goldman, interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 12, 2015. ⁶⁹ Ibid.

 ⁷⁰ Jeff Paxton, interview by Brian Nguyen, Kiana Taheri, Blake Valenta, December 23, 2015.
 71 Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015.

Threats

Ultimately, the success of the City Council's motions depends on the City's decision to include additional but necessary policy alternatives into the final legislation. Without the City's commitment to effective enforcement, this policy option will flounder.

Conclusion

While the current motion is both politically and legally feasible, it is unenforceable with the current mechanisms available to the city. The city lacks any efficient way to identify violators, and prosecution via the City Attorney's office under the current motion requires actual occupation of the STR unit for proof of violation. Additionally, the costly and confusing business registration process discourages voluntary enrollment which increases the enforcement burden. This mismatch between regulations and enforcement generates an unfeasibly high implementation cost and results in a failure of the regulations to meet the council objectives. Ultimately, the current motion lacks any real "teeth"; it may enable more STR operators to register and operate, but it lacks the mechanisms to actually increase host compliance and prosecute hosts. As is, this motion may merely be a symbolic ordinance without real enforcement. Without this ability, the motion fails at its primary objective: protecting the long-term rental market from abuses by STR commercial enterprises.

SWOT Analysis				
Politically Feasible	Legally Feasible	Implementation Cost	Council Objectives	Recommended
Yes	Yes	High	No	No

Policy Option #2: Current City Council Motion + Requirement to Display Permit Number in STR Advertisements

Overview

Requiring STR operators to display a permit number in their advertisements (which can include print, like flyers, and digital, such as listings on Airbnb) allows cities to distinguish between legal and illegal STRs. In order to obtain and display a permit number, STR operators must first register with the City and meet legal requirements (e.g. renting only their primary residence). A display of permit number acts as a signaling mechanism for the city. It is an enforcement agent that can easily identify legal STR listings that have registered and those that require further investigation.

Strengths

One of the most important questions facing Los Angeles officials is how to distinguish "good" and "bad" rentals. 72 This regulation would directly address that hurdle. Already passed in municipalities including Santa Monica and West Hollywood, this requirement for ads addresses a key gap in the current Council motion: the inability to identify and prosecute hosts. First, the presence of ads without registration number provides now enough evidence for the City Attorney to prosecute. 73, 74 No longer will sanctions depend on lengthy and expensive evidence gathering processes that entail completed financial transactions and occupancies of illegal STRs. Because of this lower threshold for evidence, the cost of enforcement of the current City Council motion will be greatly reduced. In Los Angeles, this policy option seems to have political support. 75, 76

Secondly, upon finding illegal STR activity, the City can now simply directly book the STR online, giving the City access to the name of the operator and address of the STR unit. Upon receipt of identifiable STR operator information, the City may even have the opportunity to simply cancel its reservation free of charge.

Weaknesses

This mechanism requires both active monitoring from the City and cooperation from STR platforms in order to maximize efficacy. The City of Los Angeles has over 21,675 STR listings on Airbnb alone. Without a strong monitoring system to identify illegal advertisements, this mechanism would be ineffective.

Cities also need support from STR platforms for optimal enforcement. First, STR platforms must require a permit number in order to create a listing. Currently, the monitoring of listings is reactive; even in jurisdictions requiring an ID number, units can still be listed. STR platforms generally respond once an illegal listing is reported. Secondly, cities can coordinate with STR platforms so registration can quickly be cross-checked and verified. However, STR platforms may resist such agreements as this verification process may result in the loss of too

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Emily Reyes, "L.A. officials want to keep Airbnb-type rentals from being 'rogue hotels'," August 2015, Los Angeles Times. http://www.latimes.com/local/lanow/la-me-ln-airbnb-rental-regulations-20150825-story.html
 Jeff Paxton, interview by Brian Nguyen, Kiana Taheri, Blake Valenta, December 23, 2015.
 Tricia Keane, interview by Kiana Taheri and Blake Valenta, December 21, 2015.
 Matt Glesne, interview by Brian Nguyen, Kiana Taheri and Blake Valenta, November 24, 2015.
 Ashley Atkinson, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 14, 2015.
 Roy Samaan, "Airbnb, Rising Rent, and the Housing Crisis in Los Angeles."

many STR listings. Unless the City can determine a mutual benefit for this process, the City will need to increase funding for staffing to monitor and verify the legality of listings.

Opportunities

Other municipalities have strengthened this option by more directly incorporating the platforms. Unlike this proposed policy option, cities such as Portland have put the onus of the display of STR registration numbers in ads on STR platforms in addition to STR operators. In early 2015, Portland passed an ordinance that prohibited STR platforms from displaying advertisements without permit numbers."78 In late 2015, Portland proceeded with a lawsuit against HomeAway for its failure to comply. STR platforms, such as Airbnb, claim that governments cannot hold online STR platforms accountable for the behavior of their users – that is, Portland cannot force STR platforms to demand that their users display permit numbers in their advertisements.⁷⁹³

If Portland wins this lawsuit, this would enable cities to circumvent the identification of individual violators entirely. By levying large fines against STR platforms for illegal listings, the incentive to only have registered STR advertisements shifts from hosts to STR platforms. STR platforms would then need to police their own listings, therefore pressuring hosts to register as a business and remove unregistered listings or face legal and financial repercussions. 80 This would sever the unregistered STR hosts from easy access to customers, strangling their business until they comply with the law. Thus, the City can include STR platforms as an accountable party, and then wait for the outcome of the Portland lawsuit for proceeding with any enforcement.

This option also can be strengthened by informal cooperation from STR platforms. Airbnb in particular has been willing to work behind the scenes with cities to remove individual ads without registration numbers. After passing legislation that requires display of permit numbers, the city of Santa Monica currently notifies Airbnb of illegal STR ads, and Airbnb willingly complies and removes these ads. In addition, Airbnb has also expressed interest in formalizing processes with cities in which Airbnb will remove egregious STR violators identified by cities. By removing illegal ads, cities and STR platforms can strip illegal STR operators of their clientele base thus eliminating demand and profitability of the units almost entirely.82

Threats

Listings with business registration ID numbers will need to be verified. Without establishing a verification process, hosts can easily supply any registration number in their listing without any evidence of authenticity. Cities will either need to create a system or individually verify each identification number which is another costly and time-consuming process.

 ⁷⁸ Steve Law, "City, Short-Term Rental Hosts Face off," *Oregon Local News*, accessed February 29, 2016, http://portlandtribune.com/pt/9-news/248329-II6358-city-short-term-rental-hosts-face-off.
 ⁷⁹ David Owen, interview by Brian Nguyen, Kiana Taheri, Blake Valenta, January 29, 2016.
 ⁸⁰ Jon Bell, "Portland Seeks \$2.5M in Lawsuit over Short-Term Rentals," *Portland Business Journal*, accessed February 2, 2016, http://www.bizjournals.com/portland/blog/real-estate-daily/2015/10/portland-seeks-2-5m-as-city-clamps-down-on-short.html.
 ⁸¹ Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015.
 ⁸² David Owen, interview by Brian Nguyen, Kiana Taheri, Blake Valenta, January 29, 2016.

Conclusion

This policy option is both politically and legally feasible having successfully passed and been implemented in other municipalities. Furthermore, the addition to the motion of requiring hosts to display a permit number in their STR ads lowers the cost of enforcement for the city. The City Attorney no longer needs an enforcement agent to physically rent an STR unit in order to prosecute. City enforcement officers are better able to identify violators online. In both instances, staff time is saved. This results in a lower overall implementation cost of this policy option. In combination with the current motion, it greatly reduces the costs of acquiring evidence while dramatically improving enforceability. This allows for council objectives to be met and is therefore recommended.

SWOT Analysis				
Politically Feasible	Legally Feasible	Implementation Cost	Council Objectives	Recommended
Yes	Yes	Low	Yes	Yes

Policy Option #3: Current City Council Motion + Free and Streamlined STR **Permitting Process**

Overview

This policy option would replace the current small business registration process as currently required by the current City Council Motion. As previously mentioned, STR operators need to register with the Office of Finance. However, this registration process is currently both difficult to navigate as well as costly. Similar to other ordinances from cities such as Santa Monica, this policy option aims to maximize STR registration by creating a streamlined and free permitting processes for specifically for STRs.⁸³

Strengths

From our interviews, it seems this proposed regulation would have political support.⁸⁴ Primarily, this regulation streamlines the permitting process for both the City and for STR operators. First, this option would move the STR application from the Office of Finance (which handles business registration) to the Department of City Planning (which handles some permit processing). Such a shift would allow the City to utilize the process as a means of screening and verifying eligibility for operating STRs. 85 The Office of Finance would not have the capacity or expertise to determine whether a unit is the primary residence of the host nor if it is rent stabilized. The Department of City Planning is better equipped to handle these determinations.

Additionally, this regulation provides two important benefits: First, it will centralize and expedite the permitting process for STRs. At the moment, information regarding small business registration is undoubtedly difficult to find and decipher, a barrier that will prevent many well-intentioned STR operators from registering. Secondly, mandatory fees provide an additional barrier to registration, especially for operators who earn little income from STRs. For the STR operators that only rent out a couch for a few days a year, even a small permitting fee would impede on their ability and/or willingness to register. By removing these barriers, STR operators have no excuse to not acquire a permit. After establishing a free and simple registration process, the City of Santa Monica now has about a 50% STR registration compliance rate – a rate much higher than all reported compliance rates from other cities.⁸⁶ By maximizing permit applications of legal STR operations, the City can more effectively identify and prosecute illegal operations.

Weaknesses

This process would increase the staff time required to process the upsurge in permit applications and eliminate fees that would have formerly paid for this processing. As such, the City will lose money and must expend additional funds in order to maximize STR permitting.

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 ⁸³ Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015
 ⁸⁴ Tricia Keane, interview by Kiana Taheri and Blake Valenta, December 21, 2015.
 ⁸⁵ Matt Glesne, interview by Brian Nguyen, Kiana Taheri and Blake Valenta, November 24, 2015.
 ⁸⁶ Ibid.

Opportunities

This policy option can boost the efficacy of other strategies to decrease illegal STR operations. First, this policy option can complement a public education campaign that emphasizes the requirement for STR permitting. By removing barriers to the permitting process, this campaign can more effectively increase host compliance. Either in partnership with STR platforms, community organizations, or self-led, cities may choose to inform STR operators of their obligation to acquire a permit, ease of permit acquisition, deadline to comply, and penalties for failures to comply.

In terms of enforcements, this policy option supplements the requirement to display permit numbers in ads. Simplifying the permitting process would maximize the number of legal STRs with permit numbers on STR platforms. Therefore, enforcement officers can quickly identify and prosecute illegal STRs.

Lastly, by maximizing STR registration, the City will also have access to more identifiable STR host data. With this data, the City can ensure that these STRs hosts are complying to all regulations, such as noise ordinances. For STR hosts that receive consistent or multiple complaints, the city can then identify and punitively revoke these hosts' permits.

Threats

STR platforms have refused to share data, either because they see such provisions as government overreach or because such provisions would allow cities to prosecute too many illegal STRs and imperil their business model. This impedes the ability of the City to identify and censure all noncompliant hosts. However, multiple cities, including Portland and New York, require data from STR platforms (e.g. address and name of operators) through ordinances and lawsuits.^{87,88} However, none have yet to be successful as the result of legal pushback to government access of private data. This lack of cooperation from STR platforms hampers the ability for cities to achieve 100% permitting of all legal STRs.

Conclusion

This policy option has clear weaknesses in terms of implementation cost. Relocation of the permitting process to Planning Department creates additional costs in terms of staff time and by making the permit free the city loses its traditional means of offsetting the administrative cost. However, the strengths of the plan clearly outweigh any implementation cost to the city. A free and streamlined process is an essential key to more effective enforcement. By removing disincentives to registering, this process enables the City to identify the largest number of legal operators and, conversely, reduce the amount of unpermitted operators that must be identified and sanctioned – central to the City Council objectives.

SWOT Analysis				
Politically Feasible	Legally Feasible	Implementation Cost	Council Objectives	Recommended
Yes	Yes	High	Yes	Yes

 ⁸⁷ Eric T Schneiderman, "Airbnb in the City," *Igarss 2014*, no. 1 (2014): 1–5.
 Steve Law, "Airbnb Resists City Efforts to Regulate It," Oregon Local News, accessed February 2, 2016, http://portlandtribune.com/pt/9-news/244479-112102-airbnb-resists-ci.

Policy Option #4: Current City Council Motion + Cap on Number of Permits

Overview

A cap is a limit on the number of STR units allowed to register in a particular geographical area. The particular geographic area, the type of short-term unit covered, and the cap amount can vary city to city. This mechanism is primarily viewed by officials as a means of keeping control on the overall number of STR units in a particular area. However, some city officials consider it a potential means to incentivize registration. ⁸⁹ The assumption is that hosts not wanting to be excluded from the market would rush to register before the cap is reached.

Strengths

Aside from making sure the regulation is promoted, little cost is associated with increasing STR registration via a cap. Proponents believe that knowledge that the cap exists is all that is needed to nudge hosts reluctant to register. Therefore, placing an annual cap on the number of permitted STRs will incentivize a modest amount of self-registration of hosts.

Weaknesses

It is feasible that in an environment with low levels of STR registration, a cap may incentivize a certain number of hosts to register. However, without a strong enforcement regime to enforce the cap and censure illegal STR activity, hosts will have no real incentive to register. With the current council motion this is likely to be the case, and the addition of this regulation does nothing to remedy this issue.

Furthermore, the conceptual complexity of geographic caps would hinder any educational campaign. They often rely on an understanding of concepts like 'census tract' that, while clear to an urban planner or policy analyst, are not readily known to the wider public.⁹⁰ Hosts must be able to easily understand whether or not a particular cap applies to them for this mechanism to have any incentivizing effect. As such, their confusing nature is a cause for concern. Staff within Los Angeles City Hall have stressed that, while caps have been discussed, there is much concern about their ability enforce a complicated ordinance with little compliance gained in return.⁹¹

Opportunities

Some researchers have proposed using a cap system to create a secondary market for permits from which the City could additionally profit. ⁹² A city would create 'transferable sharing rights' that it would manage through an online marketplace. By allowing market forces to set the price for short-term rental permits, greater revenue would be generated than by regular flat rate permit fees. These higher revenues would then be better able to offset the negative externalities of STRs. 93 This is similar to the cap and trade system used to offset the negative effects of pollution.

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doi:10.2139/ssrn.2568016.

Threats

The primary threat is the significant increase in the STR black market. If given a clear and simple way to become compliant, a sizable percentage of STR hosts will attempt to do so. A cap would impose a hard limit that would inevitably exclude hosts who, in the cap's absence, would be inclined to register and operate legally. The path to legal operation blocked, a portion of the hosts will choose to continue to operate illegally. In the weak enforcement environment of the current motion, this number is likely to be high as the perceived probability of getting caught by the city will be low. As a result, according to most economists, a cap will foster the growth of a black market that would then require enforcement.⁹⁴

Additionally, the geographies used to define a cap, such as census tracts and neighborhood boundaries, change over time and further complicate definitions of which rental units fit under which cap. ⁹⁵ This leads to more confusion among hosts as to whether they fit under a particular cap or not. Therefore, this mechanism may become quite complicated and ineffective in the long-run.

Conclusion

Adding a geographic cap on STRs to the current motion has too few substantive strengths to recommend it. Having been successfully passed in Austin, the cap is politically and legally feasible. However, while the cap itself costs little to implement, it does little to offset the large increase in overall implementation cost. Economic scholars are in consensus that such barriers to registration often only lead to a larger black market. As such, a cap would only increase the already high enforcement costs of the current motion. It is ultimately counterproductive to the objectives of the City Council and is not recommended.

Politically Feasible	/ LEgativ reasitive			
Yes	es Yes High No			

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 ⁹⁴ J.R. De Shazo, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 16, 2015.
 95 Edward Walker, Interview by Kiana Taheri and Blake Valenta, December 18, 2015.

Policy Option #5: Current City Council Motion + Establishing the Private Right of Action with Collection of Special Damages

Overview

A private right of action extends to an interested party the legal rights to bring a suit on behalf of themselves in order to enforce a particular ordinance. Agencies and offices are often tasked with enforcing regulations beyond their capacity. This often leads to prioritization of enforcement efforts that can leave some regulations unenforced or under enforced. Some have argued that extending private right of action to citizens affected by issues deemed a lower-priority by regulatory agencies is a way to circumvent this lack of enforcement.⁹⁶

Usually, the person bringing a private right of action suit can only claim court costs. By allowing for special damages these interested parties can also seek additional monetary recompense. This introduces a much stronger incentive to bring suit. Without special damages, few if any private interests would have incentives to spend their time and money to sue. In regards to STRs, this was included in the failed San Francisco ballot initiative Proposition F. Currently, San Francisco residents have the private right to sue which only provides a successful plaintiff court fees and cost. As a result, few if any lawsuits have been filed. Proposition F provided special damages of \$500-\$1000 per day the STR was in violation and would have further incentivized interested parties.⁹⁸

Strength

Such provisions have existing and successful legal precedents in government whistleblower statutes. If one has evidence that a person or party is stealing from the government, one can sue and is eligible to keep a portion of the recovered money. 99 In San Francisco, current rent control ordinances have private right of action provisions that allow for the collection of damages. Consequently, though certain forms of private right of action are labeled as 'extreme' by pro-STR advocates, they in fact fall within enforcement traditions. 100

With a strong monetary incentive structure this policy option would have a strong chilling effect on illegal STR. The special damages provision included in Proposition F was seen by both its drafters and opponents as a way to 'scare' hosts into complying with the laws. ¹⁰¹ Both sides of the issue agreed on the potential efficacy of Proposition F but differed on its 'justness'.

Weakness

Private right of action with special damages incentivizes frivolous lawsuits. 102 Large special damages make filing a lawsuit with only weak evidence worth the risk due to the potential financial windfall. In the case of Proposition F, this was seen by San Francisco City officials and ultimately the San Francisco public at large as inefficient, invasive, and unnecessarily

of Dale Carlson, interview by Kiana Taheri and Blake Valenta, January 5, 2016.

Occupantial Carlson, interview by Kiana Taheri and Blake Valenta, January 5, 2016.

Carolyn Said, "Would SF Prop. F Spur Airbnb Suits, with Neighbor Suing Neighbor?," SFGate, n.d.

David Reiss, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 20, 2015.

Meyerson Emey, "I Have Read Prop F, and It Is Worse Than You Think: Or Why You Shouldn't Be Afraid Of Proposition

The Market Space of the Proposition of Meyerson Emey, 1 Have Read Flop F, and R15 Wolse Than Fod Thinks 52 Way, F," Medium, September 2015.

Told Dale Carlson, interview by Kiana Taheri and Blake Valenta, January 5, 2016.

Carolyn Said, "Would SF Prop. F Spur Airbnb Suits, with Neighbor Suing Neighbor?"

costly. Giving weight to this position, the City of Los Angeles staff has expressed reluctance with Proposition F style private right of action. ¹⁰³

Opportunities

The ability to foster private lawsuits helps circumvent unresponsive bureaucracies. The City Council motion relies on complaints as a mean to identify violators, yet lacks the means to prosecute. As a result, even the most blatant offenders are not prosecuted, and enforcing departments do not prioritize investigations. Allowing the recovery of attorney fees and costs in additional to compensation for personal harm would incentivize private citizens to provide the missing evidence and bring suit in lieu of the City Attorney.

Threats

A private right of action with special damages provision could potentially burden the court system with frivolous lawsuits. Furthermore, considering one of the concerns surrounding STRs is its potential negative effect on neighborhood cohesion and character, such lawsuits between neighbors present the same threat and can therefore cause more harm than good.

Conclusion

The application of private right of action with special damages comes from an established legal tradition. Both opponents and proponents agree that, in the narrow sense of host compliance, such regulations would be highly effective. However, the unintended consequences of this policy option outweigh any gains from its effectiveness. Reductions in enforcement cost by reducing the number of illegal operators would be offset by the cost of processing an influx of new and potentially frivolous court cases. Furthermore, the policy is not political feasible. City staff view it as damaging to council objectives which at their heart attempt to protect neighborhood cohesion and character. Incentivizing neighbor to litigate neighbor does the opposite. Thus, while this policy alternative may actually empower citizens to halt commercial ventures and decrease enforcement costs, its political infeasibility, high overall implementation cost, and undermining of council objectives make this policy option an impossibility.

Politically Feasible	/ LEgativ reasing 1			
No	Yes	High	Yes	No

¹⁰³ Ashley Atkinson, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 14, 2015.

104 Jeff Paxton, interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 23, 2015

Policy Option #6: Current City Council Motion + Requirement for Data Disclosure by STR Platforms

Overview

This policy option requires STR platforms to regularly turnover their user and booking data to government agencies. These data include hosts' names and addresses that could then be cross-checked by City code enforcement officers with extant registration systems for the purpose of verifying compliance.

Many municipalities have attempted to obtain data from STR platforms in order to strengthen enforcement efforts. On behalf of the City of New York, New York State Attorney General Eric Schneiderman's office issued a subpoena to Airbnb for its data, including host, listing, and booking information. However, this subpoena only led to partial disclosure of data as the judge deemed the Attorney General's request too broad. 105 Such subpoenas are utilized by cities to assess compliance of particular hosts or prove systemic misconduct on the part of STR platform.

Unlike one-time subpoenas, an ordinance placing a requirement on STR platforms for reporting data would involve regular disclosures of user information outside of any subpoena process. The only city that has officially demanded STR platforms to turn over user data as part of an ordinance is Portland, OR. However, at the time of this report, STR platforms may have yet to comply. Other cities such as San Francisco and states such as Massachusetts and California have also considered or are actively considering similar bills to demand data. 106 Requiring STR platforms to remit data is perceived by some advocates as the most direct means of addressing the identification issue cities face.

Strengths

Many claim that having a database of hosts and units simplifies and eases the process of enforcement. 107 Without specific information such as host name and address, identification of listings in violation of the law is time consuming and of limited effectiveness. With identifying data, it can be a relatively straightforward procedure to match hosts' identifying data from the STR platform with the City's STR registration data.

Weaknesses

Even though the process of cross-checking would be straightforward, it would not be simple or cheap. There is substantial literature analyzing how companies have grown skilled at skirting disclosure requirements; they adhere to the letter of the law in such a way as to make the data they disclose useless for the original purpose intended. ¹⁰⁸ STR platforms would most likely provide raw data, leaving the City would no choice but to develop systems to read the data and hire staff to analyze the data – a costly venture. The City may choose to pursue the development of a software that automatically matches the business registration number on the STR platform database with the database of registered businesses. To More likely, cities

¹⁰⁵ Eric T Schneiderman, "Airbnb in the City," *Igarss 2014*, no. I (2014): I–5.

¹⁰⁶ Aaron Michlewitz et al., "HOUSE No. 2618," no. 3016 (2015): I–17.

¹⁰⁷ Steve Law, "Airbnb Resists City Efforts to Regulate It."

¹⁰⁸ Fung, Archon, Mary Graham, and David N. Weil. 2007. Full disclosure: the perils and promise of transparency. Cambridge: Cambridge University Press.

¹⁰⁹ J.R. De Shazo, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 16, 2015.

will have the equivalent of code enforcement officers in charge of manually cross-checking the databases. From there, perfunctory warning letters can be issued, followed by fines. Both of these, however, incur high operating costs.

The political feasibility of this mechanism is uncertain. Prior passage in Portland suggests political feasibility, and Los Angeles' City staff have identified some form of data sharing as an option on the table, but have expressed no clear interest in pursuing regulatory action. In addition, legislation, in the form of California Senate Bill 385, is currently moving to address this issue on the state level. Several interviewed municipalities expressed an attitude of waitand-see before moving with their own STR platform reporting data provision. III,II2

Furthermore, while access to data facilitates easier identification for issuing warning letters and fines, similar business registration procedures indicate access to data without enforcement leads to low compliance. For example, the City has access to databases of businesses that operate in the Los Angeles. Despite these data, the City estimates that business registration has a low compliance rate because of limited enforcement capacity. 113 Data on its own is not sufficient to ensure compliance.

Opportunities

With access to accurate listing records, the large and costly issue of identification is avoided. Reliable identification opens up different enforcement schemes, especially improved monitoring, that, when used in combination with STR platforms having to report data, could potentially lead to overall higher compliance rates. For example, a ban on advertisements of unregistered hosts no longer hinges on STR platform compliance. The provision of data enables cities to single out non-compliant hosts based on illegal ads.

Threats

Technology companies such as Airbnb view user data as primarily a privacy issue and are fiercely protective. 114 They are likely to contest demands to turn over the data all the way to the Supreme Court. Evidence of this reluctance is present in Portland and from our interviews with STR platforms. In January 2015, Portland revised its ordinance to require 'booking agents' to turn over name and addresses of hosts to the Revenue Bureau to ensure compliance with remittance of TOT. 116 However, despite the ordinance being in place, Airbnb, HomeAway, and other STR platforms have refused releasing user data. ¹¹⁷ In response, in June 2015, Portland's Revenue fined two STR platforms, HomeAway and VRBO (a subsidiary of HomeAway), for over \$300,000 each. In response to their refusal to pay the fine, the City of Portland sued HomeAway for \$2.5 million dollars. Airbnb has received a fine of \$930,500 and

Tricia Keane, interview by Kiana Taheri and Blake Valenta, December 21, 2015.

Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015.

Laura Munnich, interview by Brian Nguyen and Blake Valenta, December 11, 2015.

Lauren Herstik, "Did You Just Get a \$500 Freelance Assignment? The City Might Bill You \$30,000," L.A. Weekly,

September 2015.

He Paavo Monkkonen, interview by Brian Nguyen and Blake Valenta, December 1, 2015.

David Owen, interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, January 20, 2016.

¹¹⁷ Steve Law, "Portland to Crack down on Airbnb Hosts Who Fail to Get Permits."
118 Elliot Njus, "Portland Fines Vacation Rental Website VRBO over Unpaid Lodging Taxes."

also has yet to pay. The City of Portland, citing them as being "the most cooperative with the City", has, as of January 2016, chosen not to pursue a lawsuit. 119

Legal experts are skeptical of their chance for success arguing that "if you have a show down with a government, you are probably going to lose...when push comes to shove, the government will get the data it wants."120 However, much political pushback exists toward requiring STR platforms to provide data to government. A common critique is the notion of government overreach which states that governments should not have access to private individual data in order to search for and identify law-breaking. Legally, precedents may exist that disclaim such actions as unconstitutional, as evidenced by the City of Los Angeles v. Patel. 121 The Supreme Court ruled that police do not have a right to examine the registries of hotels without a search warrant. In this current Portland lawsuit, there is a chance that the court might rule that the ordinance overreaches. At a minimum, the almost certain cycle of lawsuits and appeals will result in a long period in which enforcement is encumbered by a lack of identifying data. This threat of lawsuits further complicates the political feasibility of this policy options as the City is unlikely to have an appetite for lengthy court cases stemming from any regulations passed.

Conclusion

If implemented, demanding data has the potential to aid the current motion in reaching the council objectives. The ability to identify hosts not currently registered would reduce the enforcement cost involved in the identification process. However, this seemingly simple solution masks deep complications. As a result, this policy option is of questionable legal feasibility, political feasibility, and would result in an overall higher implementation cost. STR platforms outspoken and adamant refusal to turn over data suggests that costly legal fights would have to be employed before any compliance. The outcomes of these legal battles are unknown, and the City has not suggested they are willing to engage in them. Even if the City did engage and was successful in court, the literature on corporate disclosure suggests that STR companies will provide data in a format that is technically legal but not suited to easy use by the City. Costly measures would have to be employed to make the data suitable to enforcement purposes. While this policy potentially meets council objectives, it is a costly and uncertain road to reach that point. The political will for such a journey is questionable; as such the policy option is not recommended.

Politically Feasible	/ Legativicasible 1				
No	,				

Shelby R. King, "The City Is Finally Suing a Short Term Rental Company, and It's Not Airbnb. Update: But, Wait! Airbnb Has Been Warned to the Tune of Nearly \$1 Million," Portland Mercury, n.d.
 David Reiss, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 20, 2015.
 Supreme Court of the United States, "City of Los Angeles, California v. Patel et Al," 2015.

Policy Option #7: Current City Council Motion + Fining Users for Booking **Illegal STRs**

Overview

Legislators could attempt to regulate the behavior of the demand side of the STR market in hopes of bringing suppliers into full compliance. Policy analysts in City Hall have mentioned one proposed solution of banning the act of booking illegal units or contracting with unpermitted hosts. 122, 123 Instead of attempting to sanction STR hosts for offering illegal units, the ordinance could include an item whereby renters of illegal STRs will receive a fine. 124 This proposal assumes that, to ensure continued revenue, hosts would be incentivized to register their units.

Strengths

This regulation incentivizes hosts into compliance by imposing a threat to their source of revenue (i.e. bookings). Faced with relatively similar listings, STR occupants will be inclined to book registered and legal units in order to avoid the fine. Hosts would register in order to signal to renters their legal status (e.g. posting a picture of their business registration certificate in their ads). This could effectively diminish the revenue of illegal listings. In principle, such a regulation compels the market to self-regulate through competition between compliant and non-compliant hosts.

This mechanism could also lead to a short-term increase in revenue for the City through the collection of fines. This source of revenue would not have otherwise been spent in Los Angeles as the guest would most likely not be a resident of the City. This benefit would heavily depend on the City's ability to acquire the amount of the fine.

Weaknesses

The clear weakness of this regulation is that it does not address the enforceability of the current motion, and, in fact, it actually increases the scope of potential violators the City must identify and sanction. The city has no effective mechanism for tracking down tourists and collecting the fines. Even though the threat of the fine may alter the behavior of visitors in the short-term, the lack of follow-through and sanction for violators could eventually damper the effect in the long-run. If the City wanted to maintain any deterrent effect, the enforcement cost would be very high as it would need to experiment with different methods to identify and fine STR renters. It is also unknown the extent to which the short-term effects of the threat of fines would be sufficient to bring hosts into compliance and change their behavioral patterns.

This regulation effectiveness would suffer if the users have no standardized way of distinguishing between legal and illegal listings. Full effectiveness relies on a regulatory requirement for hosts to display registration ID number on their advertisements. Without additional regulation to help facilitate the signaling process, imposing fines on tourists is meaningless and unfair. The City may also find it hard to publicize the new regulation and raise awareness among potential tourists. Even though the City could do some of this through newspapers, it may need to rely on STR platforms to inform their users of such regulations.

¹²² Ashley Atkinson, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 14, 2015.

¹²³ Matt Glesne, interview by Brian Nguyen, Kiana Taheri and Blake Valenta, November 24, 2015.

¹²⁴ J.R. De Shazo, interview by Kiana Taheri and Blake Valenta, February 16, 2016.

Opportunities

If this regulation is combined with the requirement for displaying registration ID number, it can create an effective signaling mechanism for guests. The registration ID numbers would differentiate legal and illegal offerings, reward legal ones, and incentivize registration and compliance by the hosts.

This regulation may receive the most traction and publicity since it is quite different than what cities have historically chosen to implement. Therefore, it would only take a couple of publicized fines to bring higher awareness among potential tourists and discourage illegal activity.

Threats

A significant concern with this regulation is that it could discourage tourist visits by portraying a potentially negative image of Los Angeles. If fines become publicized, it has the danger of marking the City as unfriendly to tourists. In a large city such as Los Angeles, such a negative perception also presents an incentive for tourists to book rooms in neighboring cities such as Santa Monica and Culver City, effectively leading to a loss of revenue for Los Angeles. With tourism seen as a growth industry by the City, such a threat makes this regulation politically unfeasible. 125

Conclusion

Fining users is legally feasible and would, to a limited extent help achieve council objectives. To the extent that renters are deterred from staying at an unregistered property, hosts would be more incentivized to register. However, it fails to solve the inefficiencies and high costs of the City's current enforcement regime and actually exacerbates the problem by increasing the number of potential violators. As a result, its effectiveness would be temporary; enforcing a fine on renters is even more difficult to enforce than a fine on hosts. Eventually the risk of getting caught would be perceived by renters to be effectively zero, and any incentivizing effect on host to register would decline. Most importantly, there is little to no political will to pass a regulation that would be seen as threatening Los Angeles' growing tourism industry. The weaknesses and threats of this policy option far outweigh its meager strengths. As such, it is not recommended.

Politically Feasible	' Legativ reasing 1				
No	No Yes High Yes				

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¹²⁵ Hugo Martin, "L.A. Breaks Tourism Record -- Again," Latimes.com, accessed March 15, 2016, http://www.latimes.com/travel/la-fi-mo-la-breaks-tourism-recordagain-20140106-story.html.

Table 4. Summary of Analysis

Criteria Mechanism		Politically Feasible	Legally Feasible	Implementation Cost	Council Objectives	Recommended
Current Mo	tion	Yes	Yes	High	No	No
	Requirement for Display of Permit Number is STR Advertisement	Yes	Yes	Low	Yes	<u>Yes</u>
	Free and Streamlined STR Permitting Process	Yes	Yes	High	Yes	<u>Yes</u>
Current Motion	Cap on Number of Permits	Yes	Yes	High	No	No
+	Establishing the Private Right of Action with Collection of Special Damages	No	Yes	Low	Yes	No
	Requirement for Data Disclosure by STR Platforms	No	No	High	Yes	No
	Fining Users for Booking Unregistered STRs	No	Yes	High	No	No

Policy Recommendations

We have identified two feasible regulations which make the enforcement of the current motion possible for the City of Los Angeles:

- I) placing a requirement for displaying permit numbers on ads;
- 2) making the permitting process free and streamlined.

In combination, these will address the issues identified with the current motion.

Fundamentally, the City must provide a mechanism through which STR hosts can comply with the regulations. To do so, we recommend that the City of Los Angeles place a requirement for STR hosts to obtain a permit for their STR, and that the permitting process be made free and streamlined. The City can use the permitting process as a way to impose various regulations such as the ban on short-term rental of non-primary residences and rent stabilized units. The permitting process also facilitates the collection of data on STR activity across the City. The City can utilize such a database to conduct strategic implementation and enforcement of the regulations (see chapter on "Strategies for Implementation").

We further recommend that the City develop a STR portal to accelerate and simplify the permitting and TOT payment processes. The City currently lacks a highly effective means of identifying hosts and is highly reliant on their willingness to self-identify. Even if well-advertised, a process that is too costly or difficult to complete will remain underutilized. Such a process actually disincentivizes self-identification and potentially incentivizes the creation of a black market comprised of STR hosts who would rather run the risk of the fine than engage in bureaucratic red tape. Therefore, it is crucial that the City removes any bureaucratic steps that do not add enforcement value.

In addition, we recommend that the City require all hosts to display the permit number on their advertisements. Even with a streamlined system and a strong education campaign, certain STR hosts who have enough financial incentives may continue to operate without a permit. The City must devise a system through which it can identify and prosecute violators. Under a streamlined and free permitting process, the City can assume that a large portion of those without a permit number are ineligible for obtaining one. Displaying permit numbers on ads then acts as a market signal, distinguishing between legal and illegal units. Furthermore, by placing such a requirement, the presence of such ads would be sufficient grounds for prosecution and can be utilized for further enforcement by the City.

Recommendation Summary

In addition to the current Council motion:

- I. The ordinance should require STR operators to obtain a permit for their STR operations, and the permitting process should be made streamlined and free;
- 2. The ordinance should establish a requirement on hosts to display the permit number on their STR advertisements.

Strategies for Implementation

Our regulatory recommendations turn an impossible enforcement environment into a possible one. Given unlimited resources, the City could effectively enforce the council's proposed STR regulations. The reality, however, is that the City has limited capacity and resources to expend on this issue. Success of these regulations, therefore, is conditional on voluntary self-registration. This voluntary compliance in turn relies on hosts' awareness and comprehension of the new regulations, the 'painlessness' of the registration process, and the perceived probability of being sanctioned for non-compliance. In this section, we propose implementation strategies designed to increase voluntary compliance and effectively target scofflaw hosts. Our recommended strategies fall under three broad categories: public education, agreements and partnerships with major STR platforms, and strategic use of the City's existing enforcement mechanisms.

Public Education Campaign

An education campaign is needed to make residents aware of the new regulations and enforcement efforts. To maximize voluntary compliance, we recommend that the City Council, the Mayor's Office of Public Engagement, and the Department of City Planning coordinate their efforts with STR platforms and STR organizations, such as LAANE, LASTRA and Keep Neighborhoods First. In our interviews, STR platforms have expressed willingness to "take [the] initiative and notify the residents" of regulatory changes in coordination with City officials. ¹²⁶ This is more efficient than a mass media campaign since the STR platforms bear most of the transaction cost, and is more likely to reach all relevant hosts. Many STR hosts do not conceptualize themselves as business operators obligated to acquire permits from the City. An effective education campaign will prevent inadvertent violations by well-meaning STR operators. In combination with the free and streamlined permit process, many of these hosts would willingly register and post their STR permit number.

City officials should also pursue a wider public campaign through major news outlets including the Los Angeles Times.¹²⁷ The intended audience for this campaign is STR renters and neighbors, and the intended goal is to raise wider awareness on what constitutes legal home sharing and the justification for this definition. The education campaign should highlight that STR permit numbers are a way to identify 'true home sharers' as opposed to those abusing the system. The public campaign would warn that hosts that do not register will be subject to fines while also emphasizing the free and easy nature of obtaining a permit. In addition, the advertising campaign can serve to educate neighbors concerned about illegal STRs and establish awareness that a complaint system is available to them.

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Walter Gonzalez, Interviewed by Brian Nguyen, Kiana Taheri, and Blake Valenta.

Matt Glesne, interview by Brian Nguyen, Kiana Taheri and Blake Valenta, November 24, 2015.

Partnerships with STR platforms

To minimize barriers to hosts' compliance with the City's STR regulations and to facilitate enforcement, the City should seek special agreements with STR platforms. Regulations, while a crucial part of the process, are restricted to what the City can legally compel an STR platform to do. Good policy need not rely solely on legal mandates but can instead involve mutually beneficial agreements outside of the regulatory process. Independent agreements also have the advantage of demonstrating the commitment of the City to supporting innovation and technological advances. STR platforms may benefit from these agreements as these agreements legitimize their business models and can facilitate successful Initial Public Offerings (IPOs). We recommend three components to such an agreement:

- I. STRs to collect the Transient Occupancy Tax (TOT) from hosts and remit in form of a lump sum payment to the City;
- 2. Incorporating the permitting application in the STR platforms' online host signup process;
- 3. Cooperation of STR platforms through removal of illegal online ads from the most egregious violators.

Lump Sum

We recommend that the City pursue independent agreements with the largest market actors (e.g. STR platforms such as Airbnb; see table I) to acquire the TOT via lump sum agreement. Under such agreements, instead of hosts individually calculating and remitting the I4% Transit Occupancy Tax owed, the STR platform adds the TOT fee to a STR renter's transaction. ¹²⁸ The STR platform then annually remits to the City the TOT collected throughout the year. Based on our analysis, if Airbnb had remitted to the City of Los Angeles the TOT on every Airbnb booking in 2015, the lump sum payment would have been \$28,585,395. If you remove the hosts identified as commercial, the remaining listings left in the market in 2015 would have generated \$21,045,537 in TOT (See Appendix VI).

A lump sum's efficiency lies in its relocation of the administrative costs associated with TOT compliance from the hosts to the STR platform. Since it reduces the hosts' burden of having to calculate and pay TOT on their own, it incentivizes independent hosts to use the STR platforms with lump sum agreements. For this reason, under their Shared City program, Airbnb has actively pursued lump sum agreements in the cities willing to engage in the process with them. They now consider lump sum agreements a standard method of doing business with cities regardless of their regulatory scheme. David Owen, Policy Director at Airbnb, has already approached the City with the offer of a lump sum agreement and has expressed willingness to enter into such an agreement regardless of what regulations the city passes. It is important to note that, in contrast, many of the other major STR platforms, such as HomeAway, do not process transactions between host and guest. They only facilitate the connection between host and guest. As a result, STR platforms like HomeAway are logistically unable to collect lump sum amounts to remit to the City of Los Angeles.

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Airbnb, "How Does Occupancy Tax Collection and Remittance by Airbnb Work? | Airbnb Help Center," n.d.

David Owen, interview by Brian Nguyen, Kiana Taheri and Blake Valenta, December 23, 2015.

Ashley Atkinson, Interview by Brian Nguyen, Kiana Taheri, and Blake Valenta, December 14, 2015.

In delivering the payment in a lump sum, identifying information about the host and guest are removed. ¹³³ While the lack of identifying data implies an opportunity for intentional misreporting by STR platforms, experts have suggested that Airbnb has little incentive to cheat. 134 Discovered fraud would threaten the possibility of a successful IPO for the company. Therefore, the operating assumption for cities considering lump sum payments is that TOT collection from the particular STR platform would be near 100%. Similar efficacy rates for collecting TOT from hotels bolster that estimate. In 2014, the City of Santa Monica did an audit of hotels and found only one had issues with TOT compliance. ¹³⁵ Most assume that a lump sum agreement with STR platforms would function quite similarly to hotels. ¹³⁶ It would only be a matter of a City audit on Airbnb transaction records for their locality to become aware of a discrepancy. 137

A portion of the TOT acquired from the lump sum agreement could be allocated for the first few years of enforcement. Before enforcement mechanisms reach their full effectiveness, some unregistered units will continue to be listed on the STR platforms and non-compliance will be high. A lump sum TOT will in effect make violating hosts pay for the identification and enforcement of themselves and unregistered hosts on other STR platforms.

Incorporation of Permitting Process in Platforms

We recommend the City pursue agreements with large STR platforms to incorporate an option for hosts to comply with the City's permitting process. This could be in form of a checkbox by which hosts can authorize the STR platform to collect and send host information to the Department of City Planning for permit processing. The box would warn that, in the City of Los Angeles, a STR host must have a valid permit number to operate and failure to post this valid permit number could lead to sanctions. This would minimize the host's operational and mental hurdles to complying.

With a system needed to receive the permit data from the STR platform, there would be a certain backend cost to the City for such a process. This would also increase the City's administrative costs to operate the permit system as it would result in a larger number of permit applications. There may also be increased costs from a back and forth process as the City collects and verifies all the requisite information needed to confirm STR regulation compliance. However, the money is well spent as the City gains a much higher permit application rate. In addition, this option ensures that those choosing not to check the box and obtain permits have been given fair warning which increase the chance that prosecution of violators will be perceived as fair by the public.

For the STR platform, it would provide another opportunity to reduce the administrative burden of its users and position the complying STR platforms as leaders in sharing economy/city partnerships. The key factor to making the recommendation palatable to STR platforms is that those who do chose not to check the box do not have their information forwarded to the City's STR permitting department. Those whose information is sent to the

¹³³ Emily Badger, "Airbnb Is about to Start Collecting Hotel Taxes in More Major Cities, Including Washington," *The Washington Post*, January 2015.

¹³⁴ Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015.

¹³⁵ Ibid.

¹³⁶ Ibid. ¹³⁷ Ibid.

City have opted for this service. This obviates any perception of STR platforms mishandling of their user's data.

Cooperative Action Against Egregious Violators

We further recommend the City pursue informal agreements with STR platforms to remove the ads of hosts engaged in egregious violation of the STR regulations. David Owen, Policy Director of Airbnb, has stated that Airbnb is interested in "working out a voluntary agreement where one-by-one they address bad actors". 138 Indeed, other municipalities have had success with asking Airbnb to remove individual ads of hosts that they have evidence of operating clearly commercial enterprises: converting entire buildings into STRs, operating many STR units across the City, or defiant of noise ordinances. ¹³⁹ Airbnb has complied in part because these hosts are not the image Airbnb wants promoted. 140 Such voluntary agreements provide an expedited way to effect the bottom line of the egregious actors.

Strategic Use of the City's Existing Enforcement Mechanisms

Research shows that a "low-violation equilibrium"—where the majority of actors adhere to the law — occurs in situations where potential violators perceive a high probability of being sanctioned. ¹⁴¹ As indicated in the introduction, the Council and Mayor prefer to use the TOT revenue for initiatives such as affordable housing. This limits the amount of funds available for enforcement and makes untenable any plan to identify and prosecute every noncompliant host. The cost and effort involved in identifying names and addresses of offending ads is too high. However, the City can hope to create the perception of an effective enforcement regime that is capable of apprehending violators of the ordinance. This perception will create an environment that reduces incentives for STR operators to commit violations. To achieve this perception, we recommend the City focus on the most egregious violators by pursuing a data-driven strategy for online monitoring as well as dedicating code enforcement officers to respond to neighborhood complaints.

By requiring hosts to post permit numbers in ads, the City greatly lowers the administrative costs in determining which of the posted ads are complying with the law. Yet, even with this reduction in the number of potential violators, the scope of the enforcement task is daunting. Figure 5 shows a lower bound estimate of the number of active Airbnb listings in 2015 that did not meet the cities' definition of primary residence (See Appendix V for methodology). The number of listings total 4,638. The below map is a lower bound as our methodology is not able to capture all possible violators of the primary residence regulation. For example, from our data, we are unable to identify hosts who only list their secondary home on the STR platform.

 ¹³⁸David Owen, "The Airbnb Community Compact," airbnb.com, November II, 2015
 Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015.
 ¹⁴⁰ David Owen, "The Airbnb Community Compact," airbnb.com, November II, 2015
 ¹⁴¹ Mark Kleiman and Beau Kilmer. "The Dynamics of Deterrence." Proceedings of the National Academy of Sciences of the United States of America 106, no. 23 (2009): 14230–35. doi:10.1073/pnas.0905513106.

Commercial Airbnb Units in Los Angeles City Commercial Airbnb Unit Los Angeles Highways Los Angeles City Neighborhood Boundaries 10 ■ Miles 7.5 Esri, HERE, DeLorme, MapmyIndia, \circledcirc OpenStreetMap contributors, and the GIS user community

Figure 5. Airbnb Commercial Units in Los Angeles City in 2015

An effective data-driven online monitoring strategy should achieve two goals:

- I. Focus enforcement efforts in neighborhoods known as areas with an active STR presence;
- 2. Increase the probability that identification efforts will reveal an "egregious violator."

Goal one is important as it shows the City is focusing on areas where the problem is seen by the public as most acute. Goal two is important because the procurement of name and address information for violating ads is costly. If City resources are to be spent in identifying these host for purposes of fines and possible prosecution, the best use of the City's time would maximize the chance of encountering an egregious violator.

Harnessing Airbnb listing data from 2015, we have constructed a heat map (Figure 6) that assesses LA regions by enforcement priority. The heat map highlights regions with high concentrations of commercial Airbnb listings and rent stabilized units. See Appendix VII for a more thorough methodology. In this way a code enforcement officer can initially prioritize their online monitoring on select areas of the City rather than all active Airbnb listings (See Figure 7).

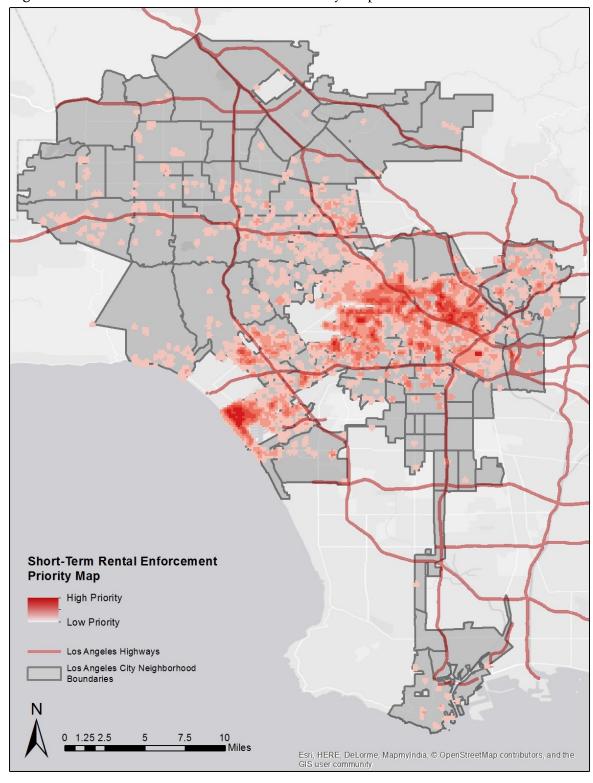
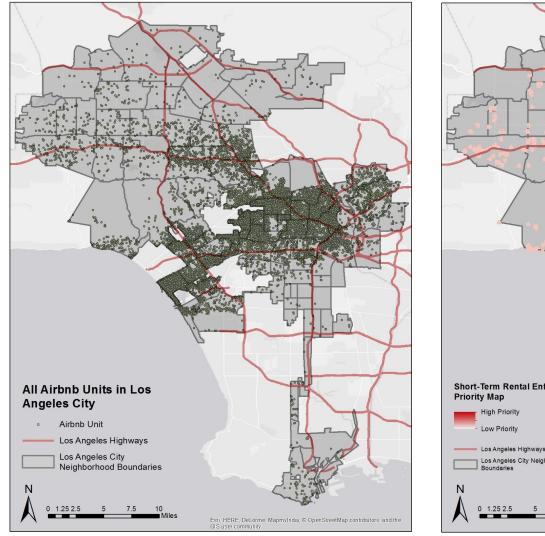
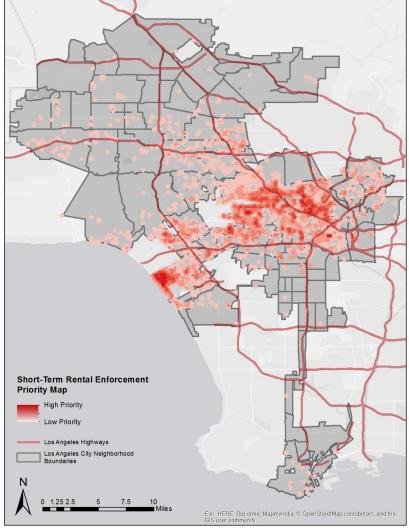


Figure 6. Short-Term Rental Enforcement Priority Map

Figure 7. Comparison of All Airbnb Units in Los Angeles versus Enforcement Priority Map





We recommend that the City also utilize neighborhood complaints as another mechanism for identifying violators. There are three advantages to the complaint process. First, it helps identify the most egregious violators who have not registered their STR operations. Per our interviews, complainants are commonly very willing to provide addresses of violators and help the City match online advertisements with actual units. ¹⁴² An online complaint form could ask for both a link to the offending ad as well as the actual street address of the listing. This reduces the identification cost for the City enforcement officers. Neighborhood groups such as Keep Neighborhoods First can also make use of the complaint system by identifying unpermitted Airbnbs. Second, complaints provide a mechanism for identifying STR operators who, even though they are permitted, are causing harm to the neighborhood via disruptive behavior. We recommend that the City revoke the permit of STR operators who have received complaints for 3 or more unique incidents. This will help protect neighborhood cohesion and character. Third, a functioning complaint system is necessary to create an aura of surveillance from one's neighbors. This in turn increases the perceived probability of being sanctioned for not obtaining a permit.

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¹⁴² Salvador Valles, interview by Kiana Taheri and Blake Valenta, December 23, 2015.

Appendices

Appendix I. Detailed Description of Evaluation Criteria

Criteria	Animating Question	Analysis Method
Politically Feasible	How politically feasible is the passage of an ordinance supporting such regulations in Los Angeles? Are there stakeholders that would object this regulation?	Political feasibility was evaluated dichotomously (i.e. politically feasible or not). Evidence for political feasibility comes from the regulation passage rate in other cities and level of support with current City of Los Angeles decision makers.
Legally Feasible	Is the regulation legally feasible based on the Los Angeles City Charter or State and Federal legal codes? Would passage incur legal challenges from the STR platforms?	Legal feasibility was evaluated dichotomously (i.e. legally feasible or not). Evidence for legal feasibility consists of existing court challenges for a mechanism or via analysis from legal experts.
Implementation Cost	What is the cost associated with implementing such an enforcement mechanism? Is the pure operating cost within a reasonable range?	Operating cost was estimated as either high or low. Estimates were made via standard calculations of staff cost used by the City. A new full time hire is estimated by the City to cost \$100,000 a year once salary and benefits are accounted for. With this base we estimated by ascertaining the number of full time staff needed to operationalize each mechanism. Information was primarily collected via expert interviews or published budgets for similar mechanisms in other cities.
Council Objectives	Does the regulation help achieve the Council's objectives?	Council Objectives was evaluated dichotomously. A 'Yes' indicates that the regulation allowed for successful realization of council objectives. A 'No' indicates one or more of the council objectives were not met, by this regulations implementation. Information was collected primarily from expert interviews or review of the regulations effects in other cities.

Appendix II. Top 20 Neighborhoods with Highest Average Daily Rates (2015)

Rank	Neighborhood	Average Daily Rate	Number of Listings
I.	Bel-Air	\$617.19	52
2.	Beverly Crest	\$585.98	144
3.	Hollywood Hills	\$541.58	895
4.	Pacific Palisade	\$379.21	186
5.	Encino	\$262.II	89
6.	Windsor Square	\$235.23	38
7.	Playa del Rey	\$222.67	140
8.	Venice	\$220.35	2,705
9.	Cheviot Hills	\$213.06	43
IO.	Studio City	\$206.56	330
II.	Hollywood Hills	\$203.54	530
12.	Century City	\$184.55	48
13.	Tujunga	\$183.51	15
14.	Beverly Grove	\$178.39	600
15.	Porter Ranch	\$177.69	7
16.	Hancock Park	\$176.93	I52
17.	Fairfax	\$175.47	409
18.	Brentwood	\$172.75	232
19.	Downtown	\$170.24	1,259
20.	Northridge	\$162.92	58

Appendix III. Top 25 Neighborhoods with Highest Number of Listings (2015)

Rank	Neighborhood	Number of Listings
I.	Venice	2,705
2.	Hollywood	2,544
3.	Santa Monica	1,939
4.	West Hollywood	1,260
5.	Downtown	I,259
6.	Hollywood Hills	895
7.	Long Beach	791
8.	Mid-Wilshire	776
9.	Silver Lake	760
IO.	Echo Park	674
II.	Los Feliz	641
12.	Beverly Grove	600
13.	Koreatown	569
14.	Pasadena	559
15.	Hollywood Hills West	530
16.	Westlake	516
17.	Beverly Hills	501
18.	Sawtelle	456
19.	Westwood	436
20.	East Hollywood	415
21.	North Hollywood	4 ¹⁵
22.	Fairfax	409
23.	Mar Vista	374
24.	Sherman Oaks	374
25.	Del Rey	34I

Appendix IV. List of Interviewees

Name	Title	Affiliation
Ashley Atkinson	Housing Policy Liaison	Los Angeles Mayor's Office of Economic Development
Dale Carlson	Co-Founder	Share Better SF
David Owen	Head of Policy Strategy	Airbnb
David Riesse	Professor of Law	Brooklyn Law School
Ed Cabrera	Assistant General Manager	Los Angeles Office of Finance
Edward Walker	Associate Professor of Sociology	UCLA Department of Sociology
Jeff Paxton	Director of Code Enforcement	Los Angeles Department of Housing and Community Investment
J.R. Deshazo	Professor of Public Policy	UCLA Luskin School of Public Affairs
Judith Goldman	Co-Founder	Keep Neighborhoods First
Laura Munnich	Economic Development Analyst	Shared Economy Task Force, City of West Hollywood
Matt Glesne	City Planner	Los Angeles Department of City Planning
Paavo Monkkonen	Assistant Professor of Urban Planning	UCLA Luskin School of Public Affairs
Robert St. Genis	Director of Operations	Los Angeles Short Term Rental Alliance
Salvador Valles	Assistant Director	Planning and Community Development, City of Santa Monica
Tricia Keane	Planning Director	Office of Councilmember Mike Bonin
Walter Gonzales	Government Relations	HomeAway

Appendix V. Methodology for Identifying Commercial Hosts

For the purposes of this paper we have classified "Commercial Hosts" as hosts who are in violation of the City's proposed ordinance regarding the rental of the non-primary residence. These are hosts who operate more than one property as a short-term rental in the city of Los Angeles.

It is impossible to accurately identify non-primary residence in the Airdna dataset. When registering with Airbnb, hosts do not indicate whether or not their listing is a primary residence. As such, the Airdna database lacks a specific indicator for this. This limits our ability to identify commercial hosts. For example, we are unable to identify if hosts with only one listing are renting out their primary home or a secondary home. If the host is living in one house but only renting out on Airbnb in their second home, this would only show up in the Airdna dataset as a single listing. Instead, we created a methodology that identifies the lower bound estimate for hosts that are renting out two or more distinct units on Airbnb.

Key variables used:

- Host Id A unique ID number given to a host.
- Property Id This is a unique number given to any listing on AirBnb's website. For example, a host listing his entire home would be assigned one property id. Another host who is listing out three bedrooms in a single home would be given three property ids. A host who lists out his entire house and also offers to rent out two bedrooms in that same house would be given three property ids.
- Room Type This variable contains the three types of rental options: whole apartment/home, room, or share.
- Property Type This variable indicates what type of unit the host is renting. Ex. Apartment, Home, Hut, Townhouse, Boat.
- Annual Reservation Count This is count of the number of days the unit was reserved in 2015.
- City of Los Angeles This variable indicates whether the property falls within the city of Los Angeles

We utilized two ways of identifying hosts with multiple units.

The first method flagged hosts who had multiple property ids in which two or more of the listings identified the room type as "whole apartment/home". In the example below we see that Host II2I is flagged as commercial as it is impossible to have two listings tagged as whole apartments for rent without them being different apartments.

Property id	Host id	Room Type	Property Type	Annual Reservation Count	City of Los Angeles
2324234	II2I	whole apartment/home	Home	21	I
2322342	II2I	whole apartment/home	Home	4	I
44323424	5434	Room	Townhouse	32	I
5323432	5434	whole apartment/home	Apartment	54	0

The second method flagged hosts who had multiple property ids and listed different property types. This indicated the listings which were actually for different units. For example, while our first methodology would not have been to identify Host 5434, our second methodology is able to detect that they are listing two distinct property types.

Property id	Host id	Room Type	Property Type	Annual Reservation Count	City of Los Angeles
2324234	II2I	whole apartment/home	Home	2I	I
2322342	II2I	whole apartment/home	Home	4	I
44323424	5434	Room	Townhouse	32	I
5323432	5434	whole apartment/home	Apartment	54	О

In each method, we restrict our analysis to only units that have at least one day reserved in 2015. This is done to remove the risk of identifying an abandoned listing.

We also restrict to units within the City of Los Angeles as the proposed ordinance will only have jurisdiction over units that fall within city bounds. This, in turn, results in an undercount of hosts with multiple units. A host with an apartment in Santa Monica and a home in Los Angeles would not be detected as a commercial host.

Appendix VI. Methodology for Market Drop out in 100% Enforcement

As with identifying commercial host (see Appendix V) it is impossible to accurately determine all the listings that will or might drop out. For example, some people would drop out because their rental agreement forbids subleasing. However, this information is not captured in the Airdna data.

We attempt to capture a lower bound estimate for market drop out in 100% enforcement. To do so, we analyzed the hosts classified as commercial hosts (See Appendix IV). Among those we assumed they would keep one unit on the market. To pick one among the various listings the host would keep, we chose to select the listing which earned the host the highest revenue in 2015. Our assumption is that a commercial host is interested in preserving the unit which is drawing in the highest revenue.

A limitation to this methodology is that, due to the limitations of the Airdna dataset, it may improperly drop additional listings for the same rental unit. For example, in the case of host II2I, property 232 would be retained. Yet if the room (property 443) is part of the property 232, it should be left in the market. However, our methodology is unable to detect if room 443 belongs to property 232 or property 532. Furthermore, if room 443 is actually part of property 532, its total annual revenue is greater than property 232 and it should be retained and not property 232.

Property id	Host id	Room Type	Property Type	Annual Revenue	City of Los Angeles
212	II2I	whole apartment/home	Home	13000	I
232	1121	whole apartment/home	Home	15000	I
443	II2I	Room	Home	3500	I
532	1121	whole apartment/home	Home	12000	0

Even with these limitations, we believe our methodology gives a workable estimate of market change in 100% enforcement.

Appendix VII. Methodology for Heat Map of Enforcement Prioritization

To determine which regions of Los Angeles to prioritize for enforcement, we focused on two regulations from the City Council Motion: The prohibition to rent non-primary residences and units covered under the Rent Stabilization Ordinance (RSO). Based on these regulations, we endeavored to create a heat map that highlighted regions with high concentrations of commercial Airbnb listings (see Appendix IV) and rent stabilized units (using data provided by the Mayor's Office). In that same vein, we wanted to de-emphasize regions that had no commercial Airbnb listings (regardless of the density of rent stabilized units).

Using the geospatial analysis program Geographical Information System (GIS), we first created two density maps, one for commercial Airbnb listings and one for rent-stabilized units. A density map calculates a particular value per geographic unit in the map, with larger values indicating a higher concentration of either commercial Airbnb listings or rent-stabilized units. These values are then color-coded, with darker shades indicating higher density and lighter shades indicating lower density. For example, regions in Los Angeles with no commercial Airbnb lists or rent stabilized units will have no color. Areas with the highest concentrations will be the darkest -- as shown by the black (for commercial Airbnb listings) and dark blue (for rent-stabilized units). We layered these density maps in order to determine areas with highest densities of both rental housing types.

By layering these maps, each geographic unit the map will have an aggregate value from both density maps, with highest scores indicating highest concentrations of both rental types. To ensure that that each rental type is comparable, we first had to "reclassify" each map -- that is, we assigned an integer to each range of values. For Airbnb, the values ranged from 0 - 8, with 0 for geographic units with no Airbnb listings, and 8 for geographic units with the highest concentrations. For rent stabilized units, the values ranged from 1 - 8, with 1 for geographic units with no rent stabilized units, and 8 for geographic units with the highest concentrations.

We then aggregated the values for each geographic unit using the formula: 2*X + X*Y, where X = 1 the density of commercial Airbnb units and Y = 1 the density of rent stabilized units. We wanted to (A) weigh the concentration of commercial Airbnb listings higher than rent stabilized units, thus multiplying the value by 2; (B) deprioritize regions with no commercial Airbnb listings by multiplication of X*Y, where this formula will equal zero in geographic units with no commercials Airbnb listings. Using this formula, the maximum value a geographic unit could receive was 80 while the minimum was 0. We then color coded ranges of these units, with 0 as colorless and 80 as dark red.

Glossary

Active Listing	Listings with at least one day booked in the past year.
Commercial Hosts	Hosts operating two or more unique whole units.
Council Motion	A proposal formally submitted by a member of City Council to the
	body of Council for the purpose of a vote, further discussion,
	approval, or adoption.
Egregious Violator	A host who does not have a valid STR permit number posted and
	meets at least one of the following criteria:
	I. Operates multiple STR units in violation of the ordinance;
	2. Operates an STR unit in a rent stabilized unit;
	3. Operates an STR that is not their primary residence;
	4. Has a track record of neighborhood complaints.
Primary Residence	One's primary residence is the residence in which she usually
	lives. There is no definitive criteria for primary residence and
	status is often determined case-by-case.
Private Right of Action	The right of a private entity to bring a lawsuit against another
	entity based on a civil wrong.
Private Room	Rooms that are to be occupied by the transient privately without
Shared Room	any other individual in the room.
Snared Room	Rooms that are listed as spaces to be shared either between
	multiple transient occupants or the operator and one or more transient occupants.
Sharing Economy	A recent business model based on individual's ability or need to
Sharing Economy	rent or borrow rather than buy goods. It emphasizes access over
	ownership.
Short-Term Rental	Websites that host STR listings and allow users to post
(STR) Platform	advertisements for the unit they wish to rent out. Prominent
(STR) Tractoriii	examples include Airbnb, HomeAway, VRBO and FlipKey.
STR	Short-Term Rental
Transient Occupancy	Based on Article 1.7, Chapter 2, of the Los Angeles Municipal Code,
Tax (TOT)	the TOT is a tax imposed on each transient for the privilege of
,	occupancy a unit or a hotel. It is to be paid by the transient but
	collected and remitted by the operator.
Web Scraping	An automated means of extracting information from a website via
- -	specially designed computer software or code
Whole House or	Units that are listed for rental of the whole apartment or the whole
Apartment	house without any internally shared spaces.

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