

Minnesota's Shared Lodging Economy: Supply of Short-term Rental by Owner

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Introduction & Purpose

The purpose of this research was to understand the current supply of short-term lodging rental market in Minnesota. Also referred to as "vacation rental by owner," "peer to peer property rental," or "shared lodging," websites such as airbnb.com and vrbo.com have allowed this relatively new market to emerge. This development threatens existing lodging establishments and creates new policy challenges for local units of government. Airbnb.com and vrbo.com are the largest websites in Minnesota for listing short-term lodging rentals.

Our objectives with this research are to:

- Catalog the number of short term lodging rentals in Minnesota
- Categorize short-term lodging rentals by geography, type, and price
- Explore methods for quickly gathering information from key websites

Methods

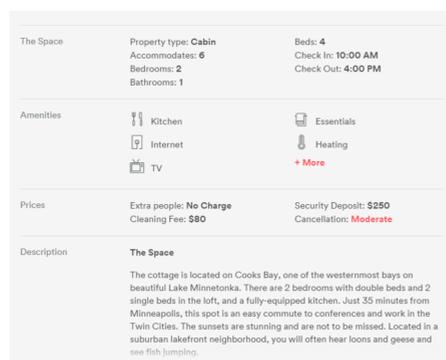
The authors gathered all Minnesota property listing data from airbnb.com and vrbo.com on May 1, 2015 using import.io (a data extraction tool). The data was geocoded and analyzed using ESRI's Business Analyst software. The data we extracted included: property city, price per night, headline (or tagline), description of the property, property type (house, private room, shared room), number of rooms available, number of guests.

Property Listings

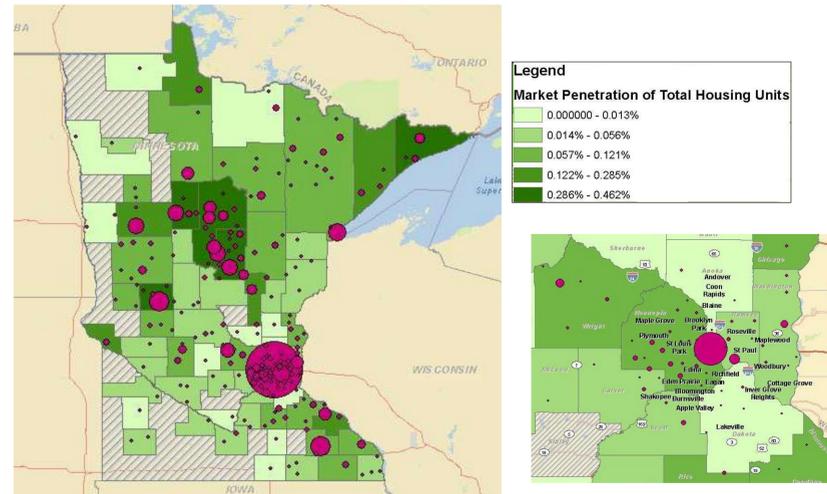
Short-term lodging rental properties can be found on airbnb.com or vrbo.com (or by using their corresponding IOS or Android apps). The websites display information either by proximity to the user (using location information obtained via phone or computer GPS devices) or by the results of a user-generated search. A user can browse a collection of listings and selects a property to view property listing details. Each listing has the following features: cover photo, additional property photo's, headline or tagline, price per night, amenity information, description, rules, and reviews. We gathered information for each of these features for all Minnesota listings.



Cover photo
Headline / tagline
price



Geographic Distribution of Properties



Property Distribution by County			
VRBO Properties		Airbnb Properties	
Name	Count	Name	Percent
Crow Wing County, MN (27035)	117	Hennepin County, MN (27053)	510
Hennepin County, MN (27053)	111	St. Louis County, MN (27137)	58
Cass County, MN (27021)	87	Olmsted County, MN (27109)	49
Douglas County, MN (27043)	64	Ramsey County, MN (27123)	39
Hubbard County, MN (27057)	48	Cass County, MN (27021)	18
Wright County, MN (27171)	46	Rice County, MN (27131)	16
St. Louis County, MN (27137)	44	Washington County, MN (27163)	15
Becker County, MN (27005)	36	Crow Wing County, MN (27035)	11
Ramsey County, MN (27123)	35	Itasca County, MN (27061)	11
Washington County, MN (27163)	31	Dakota County, MN (27037)	9
Otter Tail County, MN (27111)	26	Hubbard County, MN (27057)	8
Olmsted County, MN (27109)	25	Stearns County, MN (27145)	8
Beltrami County, MN (27007)	24	Goodhue County, MN (27049)	7
Millie Lacs County, MN (27095)	24	Douglas County, MN (27041)	7
Wabasha County, MN (27157)	23	Scott County, MN (27139)	6
Isak County, MN (27091)	22	Winnon County, MN (27169)	6
Kandiyohi County, MN (27067)	17	Anoka County, MN (27003)	6
Itasca County, MN (27061)	16	Wright County, MN (27171)	6
Chisago County, MN (27025)	10	Cook County, MN (27031)	6
Goodhue County, MN (27049)	10	Carver County, MN (27019)	5
Other Counties	106	Other Counties	74

The low rates of using properties for rental income are consistent with recent second homeowner survey research. One percent of participants reported renting out their second home in Central and West Central MN (Pesch and Bussiere, 2014).

Property Types

VRBO.com	
Property Type	Count
Apartment	2
Cabin	15
Chalet	1
Cottage	4
House	18
Lodge	1
Townhome	1
Vacation Rental	955
Listed by Sq. ft.	15
Total	1012

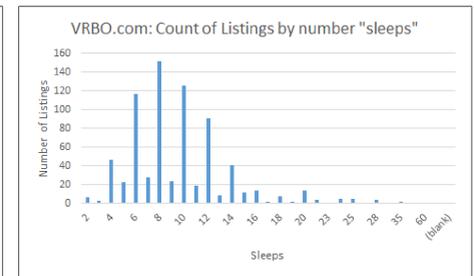
Airbnb.com	
Property Type	Count
Entire Home / Apartment	549
Private Room	410
Shared Room	21
Total	980

Price

Price				
Site	Median Price/night	Mean price/night	Range	Count
Airbnb.com	\$95	\$136	\$10 - \$1,300	980
Vrbo.com	\$297	\$685	\$30 - \$9,000	957

Rooms available

The websites we surveyed list properties differently. Our best way to categorize the data similar to rooms was to count the number of guests or number the property could sleep.



Application of Results

This information provides an initial glimpse into a new and evolving business model which can inform state and local policy. The methods we describe can be replicated and enhanced to provide a nearly real-time summary of short-term lodging listings at any geographic scale. For local policy makers, this information can be used to initiate contact with property owners and inform them of local or state regulations related to taxation, health, and safety.

Local lodging and resort owners can use this method to better understand the location and nature of the competition. Future research might create more refined ways to distribute this market information to assist their business planning.

Potential shared lodging property owners can use this information to competitively price their listing.

Related Research

- Tussyadiah, Iis P and Zach, Florian J, Hotels vs. Peer-to-Peer Accommodation Rentals: Text Analytics of Consumer Reviews in Portland, Oregon (April 10, 2015). Available at SSRN: <http://ssrn.com/abstract=2594985>

Description: Online reviews are a rich source of information about online accommodation listings. This information can be gathered and analyzed using text analytics tools which have allowed researchers to examine the differences between peer to peer accommodations and hotels (Tussyadiah and Zach, 2015).

Use: Additional research can be done with the data we gathered in the methods described here. This research could follow the text analytic process described by (Tussyadiah and Zach, 2015). This process could be used to analyze the patterns found in the property description data extracted from Airbnb.com and Vrbo.com.

- Nelson, J. P. (2010). Valuing rural recreation amenities: hedonic prices for vacation rental houses at Deep Creek Lake, Maryland. *Agricultural & Resource Economics Review*, 39(3), 485.

Description: Lakefront and ski-slope properties were shown to command a premium in a sample Maryland vacation rental house market using data gathered by manually from vacation home guide books, maps, and websites.

Use: Our approach innovates on the data gathering methods by using data scraping tools to gather a state-level dataset of vacation rental property descriptions, price information, and in less than 10 minutes per site.

- Pesch, R. and Bussiere, M. (2014). Profile of Second Homeowners in Central and West Central Minnesota. Available at <http://z.umn.edu/2ndhomeowners>