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Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector

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This article explores the emergence of Airbnb, a company whose website permits ordinary people to rent out their residences as tourist accommodation. The company was just recently established, but it has grown extremely rapidly and is now selling many millions of room nights annually. This rise is examined through the lens of disruptive innovation theory, which describes how products that lack in traditionally favoured attributes but offer alternative benefits can, over time, transform a market and capture mainstream consumers. The concepts of disruptive innovation are used to consider Airbnb's novel business model, which is built around modern internet technologies, and Airbnb's distinct appeal, which centres on cost-savings, household amenities, and the potential for more authentic local experiences. Despite Airbnb's growing popularity, many Airbnb rentals are actually illegal due to short-term rental regulations. These legality issues and their corresponding tax concerns are discussed, with an overview of the current state of regulatory flux and a possible path for resolution. Thereafter, the article considers Airbnb's potential to significantly disrupt the traditional accommodation sector, and the positive and negative impacts Airbnb may have on destinations. Finally, numerous questions for future research are proposed.

Keywords: Airbnb; short-term rentals; peer-to-peer accommodation; disruptive innovation; informal economy

Introduction

The seeds for a significant transformation within the tourism accommodation sector were laid in 2007 in the form of three air mattresses on the floor of a San Francisco apartment. A major conference was in town, and two recent university graduates had used a simple website to successfully advertise their apartment as an 'AirBed & Breakfast' for conference delegates looking to avoid the city's high hotel prices. Feeling they had a business idea, the roommates recruited another friend and turned the website into a service for other people to similarly advertise their spaces as shared accommodation for tourists, initially focusing on major events. After enjoying some moderate success, particularly at the 2008 Democratic National Convention, the website was re-launched in 2009 as Airbnb.com, and the service was expanded beyond shared accommodations to also include the rental of full residences. Since then, Airbnb has grown extraordinarily rapidly and now books millions of room

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nights for tourists around the globe (Botsman & Rogers, 2010; Hempel, 2012; Rao, 2009; Salter, 2012).

Airbnb can best be thought of as a 'disruptive innovation' (Christensen & Raynor, 2003), due to the company's innovative internet-based business model and its unique appeal to tourists. Given its disruptive potential, Airbnb's rise is of great significance for the traditional tourism accommodation sector. Airbnb's rise also is of great consequence for destinations, because many Airbnb rentals are technically illegal, so destinations must decide how they should respond to an increasingly popular illegal activity that exhibits both benefits and costs. This article provides an analysis of Airbnb as a disruptive innovation, an examination of the legal issues surrounding the company, a discussion of its potential future impacts, and an agenda for future research. Airbnb has yet to receive attention from tourism scholars, so it is hoped that this article will encourage greater recognition of and future research into this increasingly significant service. Owing to the lack of tourism scholarship on Airbnb, this article draws on media articles for information about the company, while referring to academic literature in tourism, business, and other fields for context and insight.

An overview of Airbnb

Airbnb describes itself as 'a trusted community marketplace for people to list, discover, and book unique accommodations around the world' (Airbnb, 2013b). It is essentially an online platform through which ordinary people rent out their spaces as accommodation for tourists. These spaces vary widely, ranging from a living room futon to an entire island (Wortham, 2011), but typically involve a private room or an entire apartment or house (Airbnb, 2012a). The 'host' of a space may be living there at the time of the rental, as with a typical bed and breakfast (B&B), or may be absent, possibly away on vacation or even operating the space as a permanent rental. Airbnb claims that 57% of its listed spaces are entire apartments and homes, 41% are private rooms, and 2% are shared rooms (Airbnb, 2012a). Also, the majority of its spaces are in hosts' primary residences that have never been let out before (The Economist, 2012). Traditional B&Bs are permitted to list themselves on Airbnb, but blocks of identical rooms are prohibited (The Economist, 2012). Limited information is available regarding user demographics, but Airbnb reports that approximately 40% of its guests are American, with Europeans comprising the majority of the rest (Airbnb, 2012c), and the average customer age is 35 and has risen since the company's inception (Yu, 2012).

The Airbnb website (www.airbnb.com) is straightforward and resembles traditional accommodation booking websites (e.g. Expedia): one searches based on destination, travel dates, and party size; the website then returns a list of available spaces that can be refined by attributes like price, neighbourhood, and amenities; and then individual listings can be selected for greater detail, which generally consists of a description, photographs, and reviews from previous guests. To book or rent out a space, one must have an Airbnb profile. When interested in a space, the tourist will send the host a reservation request and/or message in order to express interest, possibly ask questions, and possibly provide information about the travel party. The host then may respond and ask any questions of the tourist, or if a reservation request has been made then the host can accept the reservation. Payments are made through the website and Airbnb earns its revenue by charging guests a 6–12% fee and hosts a 3% fee (Airbnb, 2013g, 2013h).

Airbnb is the most prominent company in its particular domain, but it also represents part of a more general emergence of internet-based companies that permit ordinary people to offer tourism accommodation. Airbnb has several competitors offering essentially identical services, including Wimdu, 9flats, and Roomorama, plus niche competitors like Onefinestay, which solely offers upscale listings. Also, there are several major companies, including HomeAway (and its subsidiary VRBO), HouseTrip, and FlipKey (a subsidiary of TripAdvisor), which function similarly to Airbnb but focus chiefly on vacation homes instead of primary residences. Finally, there are various 'hospitality networks' in which hosts offer tourists accommodation free of charge. CouchSurfing is the largest of these networks and, unlike Airbnb, has already received somewhat considerable research attention (e.g. Bialski, 2011; Germann Molz, 2007, 2011; Lauterbach, Truong, Shah, & Adamic, 2009; Rosen, Lafontaine, & Hendrickson, 2011; Steylaerts & O'Dubhghaill, 2011; Tan, 2010).

Airbnb as a disruptive innovation

The innovative approach to tourism accommodation espoused by Airbnb and other similar companies can best be viewed through the lens of disruptive innovation theory, which was proposed and popularised by Clayton Christensen in several seminal works (Bower & Christensen, 1995; Christensen, 1997; Christensen & Raynor, 2003). This theory outlines a process through which a disruptive product transforms a market, sometimes to the point of upending previously dominant companies. A disruptive product will generally underperform with regards to the prevailing products' key performance attribute(s), but will offer a distinct set of benefits, typically focused around being cheaper, more convenient, or simpler. Consequently, the disruptive product appeals to the low-end of the market or creates a completely new market. This initial market is limited in size and profit margins, so it is unappealing to leading companies that are content to focus on their more profitable markets and continue marginally improving their products through 'sustaining innovations'. Nonetheless, over time the disruptive product improves, thereby making it appealing to greater numbers of customers and attracting increasing levels of the mainstream market. This shift may eventually attract attention from the leading companies, but by then the disruptive product may be so entrenched that the previously leading companies struggle to compete. In other words, disruptive innovation theory describes how companies may falter not by falling behind the pace of advancement or ignoring their core consumers, but rather by disregarding the upward encroachment of a disruptive product that lacks in traditionally favoured attributes but offers alternative benefits (Bower & Christensen, 1995; Christensen, 1997, 2006; Christensen & Raynor, 2003; Schmidt & Druehl, 2008).

This process of disruptive innovation can occur in any economic sector, and tourism is no exception. A recent example of this process within tourism can be found in the rise of online travel agencies (OTAs), like Expedia, Travelocity, and Orbitz (Christensen & Raynor, 2003). These websites cannot match the personalised service of a traditional brick-and-mortar travel agency, but in exchange they can offer potential convenience and cost-savings (Law, 2009; Law, Leung, & Wong, 2004; Lawton & Weaver, 2009; Mayr & Zins, 2009). Initial concerns with OTAs, such as the security of booking a travel reservation online (Kim, Kim, & Leong, 2005; Lang, 2000), have been mitigated, and over time OTAs have captured an increasing share of the mainstream market. Accordingly, OTAs have contributed to a significant decline in the number of traditional travel agencies, which also have been forced to focus more specifically on complex and higher-end purchases (Bachman, 2013; Candela & Figini, 2012; Grossman, 2007; Juman & Quinby, 2013; Kracht & Wang, 2010; Suri & Dhiman, 2010).

An internet-based marketplace for peer-to-peer accommodation

The traditional market for tourism accommodation involves tourists renting rooms from formal businesses, such as hotels. Airbnb has shaken up this model by providing an online marketplace that permits the large-scale rental of spaces from one ordinary person to another ('peer-to-peer accommodation'). As such, Airbnb is part of a larger rise in the 'sharing economy' (often also called 'collaborative consumption'), one aspect of which involves individuals renting access to their underused assets, ranging from living spaces to cars to power tools (see, for example, Botsman & Rogers, 2010; Geron, 2013; Sacks, 2011; The Economist, 2013a). Peer-to-peer accommodation is the basic model underpinning traditional B&Bs, and the practice of renting one's residence to tourists undoubtedly dates back to centuries. For example, Black (1985) describes eighteenth-century tourists on their Grand Tours through Europe sometimes finding lodging in private homes. However, peer-to-peer accommodation has previously been limited by the difficulty hosts faced in making their accommodations known to potential guests, and the challenge of establishing the needed trust between hosts and guests. Airbnb has been able to overcome these obstacles by exploiting newly available Web 2.0 internet technologies, which allow users to generate the content published on websites (e.g. Facebook users creating their own dynamic pages) (O'Reilly, 2007; Shelly & Frydenberg, 2011).

Hosts' difficulty in reaching potential guests was somewhat mitigated by basic internet technologies, but even small hotels often lack the expertise needed to take full advantage of the internet and, therefore, remain overshadowed by larger companies (Brown & Kaewkitipong, 2009; Murphy & Kielgast, 2008). Nevertheless, Airbnb's Web 2.0 features have essentially eliminated this issue by providing the technological infrastructure through which hosts can effortlessly promote their accommodations to potential guests. Airbnb has made it simple for hosts to post descriptions and photographs of their spaces, communicate with guests, and take reservations and payments. Moreover, Airbnb tackles the broader marketing challenge of attracting users to the website. In other words, Airbnb hosts have free access to a service that allows them to effortlessly enter the tourism accommodation sector and compete with traditional accommodation enterprises for guests from around the world.

Likewise, Airbnb's Web 2.0 features allow trust to be established between hosts and guests. This trust is necessary for the widespread acceptance of peer-to-peer accommodation, as many people will understandably be wary of hosting a stranger or sleeping in a stranger's home. Airbnb's key trust mechanism is its review feature, which allows hosts and guests to post public reviews about one another. As Lauterbach et al. (2009) state with regards to CouchSurfing, which has similar reviews, 'Reputation mechanisms are essential for online transactions, where the parties have little prior experience with one another. This is especially true when transactions result in offline interactions' (p. 346). Reputation systems serve the dual purpose of allowing the two parties to learn more about one another before agreeing to a transaction, and creating an incentive for both parties to conduct themselves in an acceptable manner (Jøsang, Ismail, & Boyd, 2007; Resnick, Kuwabara, Zeckhauser, & Friedman, 2000). Such reviews are particularly vital for a service like Airbnb, but their impacts have also been recognised in the traditional hotel sector. Online reviews have been found to influence hotel booking intentions (Noone & McGuire, 2013; Sparks & Browning, 2011), particularly in lesser-known properties (Vermeulen & Seegers, 2009), plus online reviews may spur accommodations to improve their services (Cunningham, Smyth, Wu, & Greene, 2010). In addition to Airbnb's review system, trust is also fostered through the direct messaging communication between hosts and guests, and through users' profiles, which can display a photograph and descriptive personal information. Liu (2012) found that such profiles play a major role in CouchSurfing hosts' decisions about accepting potential guests. Also, Airbnb has introduced various means of identity verification, which include providing a photo identification, authenticating one's phone number, and linking one's Airbnb profile with one's Facebook and LinkedIn accounts (Airbnb 2013f, 2013i; Lawler, 2013c).

Airbnb's appeal to tourists

Web 2.0 technologies have permitted Airbnb's innovative business model, but to actually be disruptive there must eventually be demand for a product. Demand for a service like Airbnb is not a given, as Airbnb is considerably lacking in many of the areas that are most important to tourists when selecting hotel accommodation, such as service quality, staff friendliness, brand reputation, and security (Chu & Choi, 2000; Dolnicar & Otter, 2003). As was discussed, however, disruptive products generally underperform with regards the prevailing products' key attributes, but disruptive products are also often cheaper and offer new benefits. Quite the case, Airbnb accommodation is typically cheaper than traditional accommodation, and Airbnb accommodation introduces additional benefits associated with staying in a residence.

Cost is predictably a major factor in hotel decisions (Chu & Choi, 2000; Dolnicar & Otter, 2003; Lockyer, 2005a, 2005b), so it is unsurprising that Airbnb's relatively low costs appear to be a major draw. Airbnb hosts are able to price their spaces very competitively because the hosts' primary fixed costs (e.g. rent and electricity) are already covered, the hosts generally have minimal or no labour costs, the hosts are generally not fully dependent on their Airbnb revenue, and the hosts generally do not charge taxes. As an example of Airbnb's low costs, Lieber (2011) tested the service for the *New York Times* by spending five nights in five different Airbnb spaces around New York City (three entire apartments, one private room, and one shared room) and he spent just over $900, which he estimated (with Expedia) was at least $700 less than he would have spent staying in nearby hotels.

The relatively low costs of Airbnb accommodation are further reflected in Table 1, which offers various comparisons of Airbnb costs with hotel and hostel costs in six destinations. Airbnb's mean rates are reasonably competitive, and the median rates slightly more so, due to a clear positive skew in Airbnb prices. For example, the median Airbnb rates for an entire home/apartment are generally less than those of four and five-star hotels, and the median Airbnb rates for a private room are roughly comparable to those of one and two-star hotels. Nonetheless, Airbnb's cost savings are best illustrated by considering the means of the 10 cheapest rates for each type of accommodation, which highlights the significant cost savings available through Airbnb. The means of the 10 cheapest Airbnb rates for an entire home/apartment are roughly comparable to those of one and two-star hotels, and the means of the 10 cheapest Airbnb rates for a private room are generally almost as low as those of hostels.

In addition to the economical prices, Airbnb accommodations also provide various benefits that come from staying in a residence. For example, some tourists may prefer the feeling of being in a home over a hotel, and Airbnb hosts may be able to provide useful local advice. Airbnb guests also will often have access to practical residential amenities, such as a full kitchen, a washing machine, and a dryer. Yglesias (2012a), writing in *Slate*, summarises many of these benefits in describing his experience using Airbnb in Buenos Aires:

> [The owner] was able to offer a local mobile phone and helpful restaurant recommendations, arrange a reasonably priced taxi to the airport for us, and even participate in a little mutually advantageous black-market currency exchange. It was cheaper than a hotel, and in exchange we gave up services we didn't really need. We're perfectly capable of making our own bed

Table 1. Rates for different forms of accommodation ($USD).

	Airbnb			Hotel			Hostel
	Shared room	Private room	Entire home/ apartment	1–2 star	3 star	4–5 star	
Mean rate							
Chicago	60	105	213	85	136	220	30
Montreal	62	74	139	84	131	196	25
Rio de Janeiro	59	136	265	101	159	256	23
San Francisco	79	126	270	110	168	297	29
Sydney	64	117	311	101	148	218	31
Venice	57	129	196	125	158	247	49
Median rate							
Chicago	56	78	168	77	123	199	31
Montreal	59	59	115	84	125	177	22
Rio de Janeiro	48	112	197	106	148	209	21
San Francisco	64	106	223	100	158	265	27
Sydney	60	102	242	93	141	197	30
Venice	54	90	161	113	127	206	47
Mean of 10 cheapest rates							
Chicago	25	31	56	48	77	114	-
Montreal	28	23	40	51	73	139	21
Rio de Janeiro	21	29	46	77	78	150	17
San Francisco	27	36	69	54	89	197	27
Sydney	46	42	105	87	101	115	23
Venice	-	30	61	54	53	65	43
n							
Chicago	49	334	231	129	123	64	6
Montreal	27	468	291	72	99	29	13
Rio de Janeiro	83	533	323	19	102	41	52
San Francisco	82	804	446	171	136	45	11
Sydney	19	349	85	17	86	133	48
Venice	6	237	62	63	231	134	13

Note: All rate data were collected on 26 January 2013 and refer to one night of accommodation for one adult on Friday, 5 April 2013. Airbnb prices were obtained from www.airbnb.com, hotel prices were obtained from www.kayak.com ('hotels' and 'motels'), and hostel prices were obtained from www.hostelbookers.com. Prices include all applicable taxes and fees. A uniform 12% fee was applied to Airbnb prices, as this percentage fee was common among the reservation prices considered, with limited variance. Hotel star ratings were based on Kayak's rating system. The boundaries for each city were determined by the websites used, and these boundaries generally included the greater areas of the cities considered. Hotel and hostel rates collected were the cheapest rate for each individual property.

in the morning, and access to a normal refrigerator and kitchen is in practice more valuable than bellhop service.

The experience of living in a residence also offers guests the chance to have a more 'local' experience by living more like a local, interacting with the host or neighbours, and possibly staying in a 'non-toursity' area, as Airbnb accommodations tend to be more scattered than traditional accommodations. This experiential appeal is highlighted in *Lonely Planet's* Barcelona guidebook, which mentions Airbnb under the heading 'Meeting the Locals' and states, 'Airbnb offers a fantastic new way of finding well-priced accommodation – and living as the locals do. You can rent a room in a *barcelonin's* house, or even have an entire apartment to yourself' (St. Louis, 2012, p. 13). As an example of such local experiences, when Gross (2009) tested Airbnb for his *New York Times*-based travel blog he was invited to eat dinner with his host and then went out drinking with him in the evening.

The appeal of such experiences is directly reminiscent of MacCannell's (1973) description of tourists' common desire to access 'back regions'. MacCannell highlights tourists' 'desire to share in the real life of the places visited, or at least to see that life as it is really lived' (p. 594), noting that 'tourists try to enter back regions of the places they visit because these regions are associated with intimacy of relations and authenticity of experiences' (p. 589). Coincidentally, one of MacCannell's examples of tourists entering back regions involves a tourist couple in Yugoslavia who is unable to find a hotel room but is saved by a local woman who rents them a black market room. More recently, Week's (2012) analysis of individuals who view themselves as 'travelers' instead of 'tourists' similarly underscores the desire for more local, authentic travel experiences. As Week explains, 'Travelers express an interest in experiencing the authentic, daily reality of the local people in the places they visit' (p. 190). Likewise, this interest has received considerable attention in CouchSurfing research, as 'CouchSurfers expect to have a better understanding of the local culture since they are involved in the locals' daily life through staying in the private space of the locals for a few days' (Chen, 2011, p. 289).

In addition to offering an accommodation alternative that is inexpensive and offers various benefits associated with staying in a local residence, Airbnb has continually introduced improvements in areas where it underperforms, just as disruptive innovation theory predicts. For example, to help assuage the safety fears and general uncertainties associated with staying with a stranger, Airbnb has rolled out progressive identity verification mechanisms, established a 24-hour telephone hotline, and begun offering hosts access to free professional photographers whose pictures are verified with an Airbnb watermark (Airbnb, 2013d, 2013f, 2013i; Boyd Myers, 2011; Kincaid, 2011; Lawler, 2013c). Furthermore, to match hotels' concierge services, Airbnb introduced its own 24-hour telephone concierge service (Airbnb, 2013c; Van Grove, 2011).

Airbnb's rapid growth

Disruptive innovation theory suggests a disruptive product should enjoy limited initial popularity, but then grow in size as it increasingly enters the mainstream market. This pattern perfectly describes Airbnb's growth, as after several years of very marginal popularity, Airbnb has experienced explosive growth over the past few years. Following Airbnb's official founding in mid-2008, it took until February 2011 for the company to book its first million room nights, but by June 2011 Airbnb had booked its second million nights, by late January 2012 it had booked a total of five million nights, and by late June 2012 it had booked a total of 10 million nights (Airbnb, 2011, 2012c). In other words, Airbnb booked five million room nights in roughly the first five months of 2012. By mid-2012, an average of 38,000 people were using Airbnb accommodation every night (Airbnb, 2012c), and 141,000 people stayed in Airbnb accommodation on New Year's Eve 2012 (Geron, 2013). Also, by the end of 2012, four million people had used Airbnb accommodation, and three million of them had used it in 2012 alone (Airbnb, 2013a). In financial terms, *The Economist* estimated Airbnb would earn between \$100 million and \$200 million from fees in 2012 (The Economist, 2012). In sum, Airbnb has already reached considerable size, but the snapshot provided here will quickly become outdated, as it is the company's growth trajectory that is most noteworthy.

Expanding in parallel with the number of guests, Airbnb's listings have multiplied rapidly as well: Airbnb had 50,000 listings in late 2010 (Caulfield, 2010), 110,000 listings

Table 2. 2012 hotel figures for InterContinental Hotels Group, Marriott International, and the two companies' five largest brands.

	Rooms	Room nights sold	Properties
InterContinental Hotels Group	676,000	163,090,000	4602
Holiday Inn	219,000	54,740,000	1200
Holiday Inn Express	205,600	49,900,000	2192
Crowne Plaza	108,300	25,500,000	392
InterContinental	57,300	14,090,000	170
Candlewood Suites	28,700	7,260,000	299
Marriott International	660,400	170,660,000	3801
Marriott Hotels & Resorts	176,200	45,150,000	489
Courtyard	136,600	34,580,000	929
Residence Inn	75,900	21,370,000	625
Fairfield Inn & Suites	63,000	15,490,000	691
Renaissance Hotels	52,900	13,700,000	153

Note: All room and property volumes were taken from the companies' 2012 Annual Reports (InterContinental Hotels Group, 2013a; Marriott International, 2013). Room nights sold figures were estimated using room supply volumes and occupancy rates, obtained from Marriott International's 2012 Annual Report (Marriott International, 2013) and the Supplementary Information to InterContinental Hotels Group's 'Preliminary Results for the year to 31 December 2012' stock exchange announcement (InterContinental Hotels Group, 2013b).

by mid-2011 (Upbin, 2011), 200,000 listings by mid-2012 (The Economist, 2012), and 300,000 listings by early 2013 (Geron, 2013). These listings are located in 40,000 cities (Shankland, 2013), spanning nearly every country, with approximately half of the listings in Europe and a quarter in the USA (Airbnb, 2012c, 2013a). Despite this distribution, Airbnb is particularly well-established in major US cities like San Francisco (where the company is based) and New York City, and until 2012 the majority of its reservations were made in the USA (Dredge, 2013). The proportional increase in international bookings is indicative of the company's apparent focus on worldwide expansion, which has included establishing offices in places like Paris, São Paulo, and Moscow (Airbnb, 2012a; Tsotsis, 2012). Assisting this international expansion has been approximately $120 million in investment funding (Airbnb, 2012a).

If one views Airbnb as a company or brand that is competing against other major accommodation companies and brands, Airbnb's numbers are already quite substantial. To illustrate, Table 2 presents room supply volumes and room nights sold estimates for InterContinental Hotels Group and Marriott International (two of the world's largest hotel companies) and their top brands. As was stated, Airbnb had 300,000 listings by early 2013 (Geron, 2013), and although that volume does not yet match that of the two umbrella companies, it already exceeds that of any individual brand. Also, considering Airbnb's growth rate and room nights sold in early 2012 (Airbnb, 2012c), it seems reasonable to estimate that the company sold roughly 15 million room nights in 2012, meaning Airbnb is likely already selling as many room nights as major brands like Fairfield Inn & Suites. As Airbnb continues to grow, its room nights sold figures may eventually pass those of top brands like Holiday Inn or even start approaching those of leading companies like Marriott International.

The legal issues surrounding Airbnb

Airbnb's future growth is threatened by legal issues, however. Disruptive business models based on new technology often outpace their relevant legislation and consequently encounter issues associated with general legality (e.g. PayPal and RelayRides, a new car-sharing service) or taxes (e.g. OTAs and Amazon) (Carrns, 2013; Jones, 2010; Song, 2011; Wolverton, 2002). Airbnb faces issues on both fronts – much Airbnb rental activity is actually illegal and there are claims Airbnb is avoiding its full tax obligations. Because Airbnb rentals are often illegal, the company has helped foster a rapid expansion of the informal tourism accommodation sector. The 'informal sector' is defined in various ways, but essentially refers to the production of goods and services that are concealed from or unregulated by public authorities, and it often exhibits characteristics such as low entry requirements and small-scale operations (Becker, 2004; Frey & Schneider, 2001; Neuwirth, 2011; Schneider, Buehn, & Montenegro, 2011).

Illegal short-term rentals

The widespread illegality of Airbnb results from zoning codes and other ordinances many cities have that prohibit short-term renting without special permits. For example, San Francisco prohibits unlicensed rentals of fewer than 30 days (San Francisco Administrative Code 41, 2013; Thomas, 2012a); New York City recently enacted a basically identical law, with the provision that such rentals are permitted if the host remains present (Jaffe, 2012; New York State Assembly Bill S06873B, 2010); and Paris has an even more stringent law, which prohibits rentals of less than a full year (Huet, 2011). Other restrictions may include limiting short-term rentals to certain geographic areas, limiting the proximity of short-term rentals to one another, or limiting the number of times per year a residence can be rented out (Gottlieb, 2013).

Cities have many legitimate reasons for maintaining such laws. For example, cities may want tourist accommodations to satisfy health and safety standards, and submit to applicable inspections. Furthermore, a transient stream of tourists in a residential building or neighbourhood can be unpleasant for other tenants or neighbours, and can generally detract from the community fabric (Gottlieb, 2013). For instance, Leland (2012) and Said (2012) describe residents who live near Airbnb accommodations complaining of noise issues, voicing security concerns, and having conflicts with both Airbnb hosts and guests. Additionally, in large cities with limited housing supplies, an abundance of short-term rentals may even negatively impact local housing markets. For example, opponents of short-term rentals in San Francisco claim they are reducing the residential housing supply, and thereby raising rents (Said, 2012; Shih, 2012). Also, housing costs may increase if rental hosts raise their housing budgets with the plan of earning short-term rental income. Moreover, the promise of short-term rental profits can encourage unscrupulous behaviour within the housing market. For example, Jones (2013b) notes concerns that San Francisco landlords are evicting tenants in order to vacate units for use as short-term rentals, and Glantz (2011) describes a tenant who colluded with her landlord to vacate her rent-controlled San Francisco apartment and manage it as a short-term rental.

Nonetheless, some jurisdictions are more permissive than others with short-term rentals, as such rentals have pros as well as cons. One key potential benefit is that short-term rentals may help foster tourism (Gottlieb, 2013; Yglesias, 2012a). Secondly, short-term renting provides a way for hosts to leverage their residences and earn additional income, which may be directed towards major expenses like mortgages and help to prevent foreclosures (Gottlieb, 2013). In fact, some Airbnb hosts are reported to have earned tens of thousands of dollars (Dannen, 2012; Jaffe, 2012), and the company claims its hosts often use their Airbnb income to pay for basic living expenses (Airbnb, 2012b; Levy & Goldman, 2012). Finally, when short-term rentals are legalised, they can be taxed and thereby provide revenue to local governments (Gottlieb, 2013).

Tax obligations

Because Airbnb renting currently occurs largely in the informal sector, guests can generally avoid paying the taxes that are typically charged in the traditional accommodation sector. When staying in traditional accommodation, guests often pay special accommodation taxes, which may be earmarked for certain tourism-related uses and may be complemented by traditional sales taxes. In the USA, the total taxes on tourism accommodation are generally around 15% (McCartney, 2012). For example, in New York City guests pay a total of 14.75% in taxes (8.875% in sales taxes and a 5.875% occupancy tax) plus an additional $3.50 in nightly fees ($2.00 in occupancy fees and $1.50 for a convention centre fund) (NYC & Company, 2013b), and in San Francisco guests pay a total of between 15% and 15.5%, depending on the area of the city (a 14% occupancy tax and a 1% to 1.5% tourism development tax; San Francisco Tourism Improvement District, 2013; San Francisco Travel, 2013). Accommodation taxes are useful because they almost exclusively target tourists, and therefore have the appeal of taxing non-residents. Nevertheless, a primary rationale for accommodation taxes is often to generate funds for destination promotion, which is a 'public good' because it benefits all tourism suppliers, regardless of whether they contribute (Mak, 2006). Consequently, 'Despite the industry's general opposition to tourism taxes, it has often strongly supported legislation to levy lodging taxes to fund tourism promotion' (Mak, 2006, p. 257). Airbnb does not currently charge such accommodation taxes, which therefore makes the company and its hosts 'free riders' who benefit from destinations' tourism promotion efforts, and also gives Airbnb rentals a competitive advantage over traditional accommodation.

A state of flux: Laws, enforcement, and taxation

Airbnb has obviously long known that many of its rentals are illegal, but the company maintains it cannot police its users and therefore relies on them to follow local laws, as is stipulated in Airbnb's lengthy Terms of Service (Airbnb, 2013e; Levy & Goldman, 2012; Lieber, 2012). Clearly, the company's strategy has been to root itself as deeply as possible before confronting its legal issues (Yglesias, 2012a). Nevertheless, the time for legal wrangling has arrived, as the company has now grown to the point that it is both firmly established and attracting significant government attention. Governments around the world, from San Francisco (Jones, 2013b) to Spain (Govan, 2013), are beginning to seriously grapple with the legal issues posed by short-term rentals, and the current regulatory environment can best be characterised as being in a state of tremendous flux. New York City epitomises this situation, as in early 2013 an Airbnb host's landlord was fined $2400 by the city and the judge's ruling threw into question the legality of all Airbnb rentals, even in the ostensibly permissible case that the owner is present. The judge interpreted that exception as not pertaining to 'complete strangers' who do not have access to all areas of a residence (Jeffries, 2013a; Pepitone, 2013). The ruling was very widely publicised, but Airbnb responded by stating 'we are not going anywhere' (BBC News, 2013; Hantman, 2013a).

Illustrating Airbnb's stake in the case, the company had sent a lawyer to assist the defendant and will continue to support him throughout an appeals process (Hantman, 2013b; Jeffries, 2013b). More generally, Airbnb has been engaged in lobbying efforts around the world, with a focus on New York City, San Francisco, and Paris (Dembosky, 2013;

Edwards, 2013), and had been aiming to turn New York City into a 'model city' for regulations (Clampet, 2013; Levy & Goldman, 2012; Tam, 2013). Also, in early 2013 Airbnb, HomeAway, TripAdvisor, and FlipKey formed the Short Term Rental Advocacy Center to help promote legalisation friendly to short-term rentals (Dougherty, 2013). In sum, the legal battles are just commencing, and the regulatory environment will likely remain quite fluid for years to come.

In addition to establishing or reassessing their short-term rental laws, governments must also determine how strictly such laws should be enforced. Enforcement has often been quite negligible (e.g. Glantz, 2011; Jaffe, 2012; Tuttle, 2010), but appears to be intensifying as short-term rentals become increasingly prominent. Recent examples of increasing enforcement can be found in places ranging from Panama (Hernández, 2013) to Prince Edward Island (CBC News, 2013), and from Byron Bay, Australia (Papadakis & Harley, 2012) to Georgian Bay, Canada (Bissonette, 2012). Nevertheless, in many cases such enforcement is focused chiefly on entities running numerous permanent illegal short-term rentals, rather than on individual hosts occasionally renting out their personal residences. For example, New York's short-term rental law was enacted to target large illegal hotel operations, and individual hosts are only investigated if a complaint is filed (Karni, 2013; Krueger, 2013). Also, in Amsterdam the local government has focused new enforcement efforts on illegal businesses running full-time rentals, while simultaneously easing restrictions that had previously prohibited all unlicensed short-term rentals (Essers, 2013; Weber, 2013).

Jurisdictions that permit some measure of short-term rental activity must additionally determine how to tax the rentals. In Amsterdam, for example, Airbnb hosts are supposed to pay accommodation taxes. Following discussions with the government, Airbnb added warnings on its website to this effect, but the government is considering other measures including having Airbnb collect the taxes (Essers, 2013). Airbnb's home city of San Francisco has been at the forefront of the tax issue, as the city's treasurer ruled in April 2012 that Airbnb must begin paying the city's accommodation taxes. Airbnb opposed the measure, claiming that the accommodation tax laws, which were composed in 1961, should be updated to account for new services like Airbnb (Coté, 2012). A year later, Airbnb still had not begun paying the taxes, but was reportedly in discussions with the city in order to clarify legality issues and push for a lower tax rate than is charged by hotels (Dembosky, 2013; Jones, 2013a). It is logical that Airbnb would want to clarify the legality issue in conjunction with the tax issue, as Airbnb can use the promise of tax dollars as leverage in the legality discussions, plus it would be paradoxical for cities to tax an illegal business. Whatever agreement is ultimately reached in San Francisco likely will influence similar negotiations elsewhere.

A way forward: Laws, enforcement, and taxation

The regulatory and tax environment will undoubtedly remain punctuated by question marks for many years to come, as destinations are just beginning the difficult process of responding to the rapid rise of the informal peer-to-peer accommodation sector. Developments in key cities like San Francisco and New York City may provide blueprints for other places, but every destination has unique characteristics that will impact how it weighs the benefits and costs of short-term rentals. For example, a major metropolis with limited housing and rent-controlled apartments will obviously approach the issues differently from an oceanfront community with many second homes that the owners have long rented out to tourists.

Broadly speaking, however, more fully legalizing peer-to-peer short-term rentals seems to be the most prudent and inevitable approach, as doing so will allow for greater regulatory oversight and taxation. Such regulatory easing will likely extend only to primary residences and second homes, in order to prevent spaces from being operated as full-time rentals, which may be regulated differently. Additionally, destinations may enact regulations such as restricting short-term rentals to certain areas, limiting the number of people who can stay in a unit, limiting the number of days per year a unit can be rented, placing some responsibility on hosts for the conduct of their guests, or requiring hosts to obtain a short-term rental permit (Gottlieb, 2013). A permitting system could oblige hosts to register with the government for a small fee that could potentially cover a simple health and safety inspection. Also, a permitting system that included a tangible certificate or a listing on a city website could be promoted easily because registered hosts could advertise their legitimacy in their Airbnb profiles.

The regulations and registration requirements should not be overly burdensome, however. In fact, the process of revisiting short-term rental laws in response to Airbnb-style services should provide an impetus for easing the onerous regulations that often govern non-hotel accommodations like traditional B&Bs. In San Francisco, for example, applying for a B&B license costs thousands of dollars and requires various documents and hearings (Said, 2012). Staley (2007) provides a scathing review of B&B regulations, highlighting different destinations' costly, inconsistent, and excessive regulations, such as having a separate refrigerator for guests' food, checking and recording the refrigerator temperature every four hours, and having every electrical appliance checked by a licensed electrician every two years. As Staley summarises,

> [Some regulations] were designed for other types of accommodation such as large hotels, others lack sense, and yet others are merely revenue-raising exercises. All of them add cost and complexity to running B&Bs ... yet many could either be totally abolished or substantially reworked. (p. 34)

Once reasonable regulations have been established, enforcement will become simpler and more sensible. Enforcement can focus on the major issues, such as units being illegally operated as full-time rentals or units that are receiving repeated complaints. In contrast, ordinary Airbnb hosts would not have to remain law-breakers who risked significant fines if caught due to unlucky circumstances. Also, destinations may wish to follow the lead of Palm Springs, California, which established a non-emergency vacation rental hotline so that neighbours could register complaints without calling the police (City of Palm Springs, 2013; Gottlieb, 2013).

Once Airbnb has been integrated into the formal economy, governments will be better positioned to tax the rentals. There is little reason why Airbnb and its hosts should be permitted to act as 'free riders', diverting guests from hotels while simultaneously benefitting from hotel-funded destination promotion efforts. Airbnb unsurprisingly seems to prefer its hosts be responsible for paying any accommodation taxes (Levy & Goldman, 2012), but because Airbnb processes the financial transaction for each reservation, it is logical for Airbnb to be tasked with collecting and paying accommodation taxes. Implementing such a system would surely be complicated, as accommodation taxes are generally municipal; for example, the 15% to 15.5% tax San Francisco levies is slightly higher than the 12% collected in nearby Menlo Park or the 10% collected in nearby Mountain View (City of Mountain View, 2013; Van Susteren, 2013). Nonetheless, Airbnb could undoubtedly initiate accommodation tax collection in its major markets with virtually no effort, and existing databases and services would make even widespread tax collection very feasible (Manjoo, 2013). Also, larger jurisdictions (e.g. US states) could simplify the matter by establishing a uniform tax on short-term rentals that Airbnb could pay to the larger jurisdictions, which would in turn distribute the funds or use them for their own tourism promotion.

The future impacts of Airbnb

Given the fluidity in Airbnb's regulatory environment, it is difficult to predict the company's future. Nonetheless, it is worth exploring potential threats to Airbnb's future growth, Airbnb's potential disruption of the traditional accommodation sector, and Aribnb's potential impacts on destinations.

Potential threats to Airbnb's future growth

The widespread illegality of Airbnb rentals and the growing attention from lawmakers unquestionably pose a threat to Airbnb's long-term growth. Governments theoretically could force Airbnb to rein in illegal rentals, much like US state attorneys general pressured Craigslist into eliminating its 'adult services' section (Associated Press, 2010). Alternatively, governments could significantly intensify crackdowns against Airbnb hosts, who can easily be located through the website, which would cause a detrimental reduction in listings. However, it seems unlikely that such actions would become common, and any government crackdowns will likely continue to focus on illegal businesses and unscrupulous landlords rather than individual hosts.

In comparison, a potential crackdown by landlords and condo boards is far more threatening, as many apartment and condo buildings prohibit or strictly limit subletting (Said, 2012; The Economist, 2013b; Thomas, 2012a). In fact, there are already reports of Airbnb hosts being evicted from their units (Dannen, 2012) and sued by their condo boards (Fisher, 2013). There is no reason to believe any substantial increase in such actions is imminent, but Airbnb's growing profile certainly raises the likelihood of increasing crackdowns. Whereas Airbnb can lobby governments for legislative changes, individual building rules will prove far more challenging to amend, plus landlords and condo boards may see greater risks and fewer benefits than governments in permitting short-term rental activity. However, given many people's strong desire to earn money via Airbnb, some buildings may possibly try to attract tenants and residents by easing their subletting restrictions, possibly on certain floors or for an additional fee.

Airbnb is also vulnerable to bad press resulting from crimes involving Airbnb accommodation. Fortunately, no serious crimes against Airbnb guests have been reported, but it is an enduring possibility. For example, in 2009 a man in Britain raped a CouchSurfing guest from Hong Kong (BBC News, 2009). Moreover, there have been various well-publicised reports of crimes committed by Airbnb guests, including residences in San Francisco and Oakland being ransacked and robbed (Arrington, 2011; Bly, 2011), and an apartment in Stockholm being used as a temporary brothel (Yiannopoulos, 2012). Nonetheless, given Airbnb's apparent ability to weather these episodes and its continually expanding security mechanisms, it is doubtful that any such incidents would seriously derail Airbnb's growth.

Airbnb's potential disruption of the traditional accommodation sector

Eventually the company's nearly vertical growth curve will begin to flatten out, but by then its size will likely be exponentially larger than it is today, which should be of great concern for the traditional accommodation sector. To assess Airbnb's potential to disrupt the traditional accommodation sector, it is best to examine the primary arguments against disruption: Airbnb only appeals to a niche market, it operates in parallel with the traditional accommodation sector, and its size will never be great enough to impact traditional accommodation providers.

First, it is true that Airbnb will always have somewhat limited appeal. Some tourists will be deterred by security concerns, plus some tourists will prefer the more predictable experience of staying in traditional accommodation. Possible concerns over the quality of an Airbnb stay are legitimate; for example, when Lieber (2011) tested Airbnb in New York City he was pleased by the money he saved, but noted both cleanliness and noise issues. Furthermore, the host–guest messaging that precedes most reservations (some hosts offer an instant booking feature) means it generally requires much more time and effort to book Airbnb accommodation than traditional accommodation. Such issues, in combination with Airbnb's unique attributes, mean the service's appeal should be greater among young, technologically comfortable, adventurous, and budget-conscious tourists. Grant (2013), the Travel and Tourism Manager at the market research firm Euromonitor International, highlighted this limitation of Airbnb in a blog post entitled 'Airbnb.com poses only a small threat to hotel industry'. Grant predicted that Airbnb will create only limited competition for leisure travellers, and business travellers will remain loyal to hotels due to their corporate travel policies, loyalty programmes, and standardised service. A similar argument was presented by Mayock (2013), the Editor-in-Chief of HotelNewsNow.com, a hotel industry news website, in an article entitled 'Peer-to-peer booking sites no threat to demand'. In the article he quoted an industry analyst who claimed Airbnb will only appeal to adventurous, undemanding tourists, and business travellers would avoid it.

Second, Airbnb's potential impacts may be dismissed on the grounds that Airbnb exists in parallel with, instead of in competition with, traditional accommodation. In fact, Airbnb claims its service merely complements hotels by attracting a different type of tourist (Lawler, 2012), thereby 'making the pie bigger' rather than 'taking a slice of the pie' (Shankland, 2013), and it is certainly possible that Airbnb encourages visits by tourists who could not have otherwise afforded a destination (Yglesias, 2012a). Somewhat similarly, Grant (2013) places Airbnb squarely within the vacation rental market, which she claims will not cannibalise the hotel market. She notes, 'Both business models have co-existed for a significant amount of time without infringing on each other's growth'. Likewise, the Chief Executive of the Australian Hotels Association told an Australian newspaper that he was not especially concerned with Airbnb, remarking, 'I think homestay has its place with a certain client or customer base but as far as affecting the hotel industry it is minimal because it is a very different product, with a very different set of market standards' (Anderson, 2012).

Third, one may doubt whether Airbnb will ever be large enough to truly impact the traditional accommodation sector. For example, Mayock's (2013) article also quotes industry analysts who remarked upon Airbnb's limited size and marginal potential impact. To illustrate, Mayock notes that Airbnb's worldwide inventory of 300,000 listings is about one-fourth the number of hotels rooms in the South Atlantic region of the USA alone (Mayock, 2013). To expand upon such numbers, it can be estimated that in early 2013 Airbnb had 67,500 listings in the USA (Airbnb, 2012c; Geron, 2013), which is just a fraction of the country's nearly five million hotel rooms in 2011 (American Hotel & Lodging Association, 2012). Likewise, Airbnb sold five million room nights worldwide (with many outside of the USA) from late January to late June 2012, and this number represents just a tiny fraction of the (record) 500 million room nights that US hotels sold in the first half of 2012 (De Lollis, 2012).

There is, in other words, some validity to all three points – Airbnb will not appeal to everyone, some of its guests would not have otherwise stayed in traditional accommodation, and it will never rival the size of the entire traditional accommodation sector – but these characteristics of Airbnb are also completely consistent with disruptive innovation theory. As was described earlier, the disruptive process generally begins with a product that initially appeals to only a small group of customers, typically in the low-end of the market or in a new market entirely, and the disruptive product is therefore dismissed by leading companies that are uninterested in the initial market's limited revenue (Christensen, 1997; Christensen & Raynor, 2003). Of course, such alignment with the theory is far from a guarantee that Airbnb will actually prove to be significantly disruptive, but it still suggests the theory may prove both applicable and telling.

In fact, even though the three arguments described above are all somewhat accurate, none of the three arguments offers a compelling reason to discount Airbnb's ability to disrupt the traditional accommodation sector. With regards to the first argument, Airbnb may appeal relatively more to budget-conscious leisure travellers, but the importance of this segment should not be dismissed. In fact, the American Hotel & Lodging Association reports that in 2011 60% of hotel guests were leisure travellers and only 40% were business travellers (American Hotel & Lodging Association, 2012). Also, budget-conscious leisure travellers are particularly vital for some forms of traditional accommodation, such as hostels. Furthermore, and perhaps most importantly, Airbnb is likely already beginning the process, as predicted by disruptive innovation theory, of penetrating into the mainstream market by attracting segments such as older tourists and families. Even business travellers should not be viewed as unquestionably loyal to hotels, as Airbnb is already beginning to attract interest from this segment as well (e.g. Koentges, 2012; Schaal, 2012; Singh, 2013).

With regards to the second argument, it is certainly true that Airbnb is a catalyst for some visits that would not have otherwise been made, but it also seems inevitable that a very large portion of Airbnb's millions of room nights would have otherwise been spent in traditional accommodation. The unique attributes of Airbnb tourists probably are reflective of the service's current appeal towards a particular market segment, not evidence that Airbnb merely provides a complement to hotels. As Lieber (2011) writes, 'My hypothesis since the beginning has been that the best use for Airbnb is as a hotel replacement in cities like New York, where rates are generally absurd'. Furthermore, the notion that Airbnb operates in parallel with traditional accommodation is quite dubious. Although Airbnb may exhibit characteristics of the vacation rental and homestay sectors, it is erroneous to classify it as such (Singh, 2013).

With regards to the third argument, Airbnb is of course much smaller than the entire hotel sector, but Airbnb still should not be overlooked due to its size, as its footprint is already considerable. As was discussed, Airbnb likely already books as many room nights as some major hotel brands. Also, in New York City Airbnb reportedly had over 22,500 listings in early 2013 (BBC News, 2013), which is very sizeable in comparison with the city's roughly 90,000 hotel rooms (NYC & Company, 2013a), even recognizing that Airbnb's occupancy rates are notably lower than hotels' (Thomas, 2012b). Most importantly, though, Airbnb is growing exponentially, so even though the company may appear mostly insignificant today, it also seems poised to become quite immense in just a very short period. Such is the process of disruptive innovation.

That being said, Airbnb obviously will not continue growing until it has devoured the entire traditional accommodation sector, but that growth pattern would still be consistent with many disruptive innovations. As Schmidt and Druehl (2008) note, 'A disruptive innovation ultimately has at least some impact on an existing market but need not necessarily totally displace the market' (p. 350). Only time will tell how dramatic Airbnb's impact will be, but it seems inevitable that Airbnb will siphon off increasing numbers of guests from traditional accommodation for many years to come. Even if these guests represent only a fraction of all traditional accommodation guests, that fraction may be large enough to have very tangible impacts. Also, Airbnb may hit B&Bs and hostels particularly hard, as their markets may overlap considerably with Airbnb's. In addition to affecting the traditional accommodation sector's occupancy levels, by rapidly adding a new and extensive supply of rooms, Airbnb may also force reductions in room rates (Yglesias, 2012b). Airbnb is particularly well-suited to flexibly handle fluctuating occupancy levels, so any effect on rates may be particularly salient during major events, when hotels can typically raise their rates significantly (Baade, Baumann, & Matheson, 2008).

In response, hotels may embrace new business strategies to counter Airbnb's alternative appeal. Such strategies could involve focusing more specifically on the higher end of the market, such as business travellers and wealthy leisure travellers (Yglesias, 2012b), which is a common response to disruptive innovations (Christensen & Raynor, 2003). Alternatively, hotels may begin competing more directly with Airbnb, such as by complementing their normal properties with smaller, cheaper properties located outside of primary tourist areas and managed by highly involved locals who are granted extensive freedom over decor and management. Such accommodations could offer the economic value and local experiences that Airbnb provides, while simultaneously giving tourists the peace of mind offered by a recognizable brand.

Although there are no indications that any such business strategies are being undertaken, it does appear that the traditional accommodation sector is beginning to recognise the threat posed by Airbnb. Reports of hotel and B&B associations speaking out against and pushing for crackdowns against short-term rentals can be found in places ranging from New Orleans to Montreal to Wisconsin (Daykin, 2013; Descant, 2011; Shingler, 2013). For example, the Hotel Association of New York City has opposed Airbnb's lobbying for a short-term rental registration system because the proposal would not require the rentals to adhere to the same fire and safety standards as hotels (Levy & Goldman, 2012), which suggests a desire to hinder Airbnb through overregulation. Also, the Professional Association of Innkeepers International launched an online campaign mocking Airbnb, which showed a tourist arriving in a bare room containing a partially deflated air mattress (Clark, 2012).

Airbnb's potential impacts on destinations

If Airbnb is cannibalizing guests from the traditional accommodation sector, it would be a major concern for the sector, but it would not necessarily be detrimental to a destination. As Yglesias (2012a) somewhat acerbically remarks, 'Visitors aren't best regarded as a resource to be milked by hotels. Rather, hotels merely facilitate visiting, while the visitors bring broad-based benefits to a local economy by patronizing a range of business [sic] and institutions'. In other words, increasing the room supply with a new form of economical accommodation should foster visitation, which should have positive impacts on the broader tourism economy. Also, because Airbnb listings are more scattered than hotels, Airbnb guests may be especially likely to disperse their spending in neighbourhoods that do not typically receive much tourist expenditure (Porges, 2013). Furthermore, Airbnb's flexible room supply may create new opportunities for destinations. For instance, a destination with a short tourism season may be unable to sustain many hotel rooms, which would limit tourism's potential benefits during the high season, but Airbnb accommodation could more easily absorb a brief demand spike. Also, destinations may find a supply of Airbnb rooms can facilitate the hosting of major events, even in large cities. For example, prior to the 2012 Rio+20 United Nations Conference on Sustainable Development, Rio de Janeiro's mayor was forced to ask residents to leave town and rent out their residences to delegates in order to compensate for a hotel room shortage (Associated Press, 2012).

Nevertheless, it is also possible that Airbnb will reduce the economic benefits of tourism. For example, the service may primarily create an opportunity for existing tourists to simply spend less money when they visit a destination. Also, because Airbnb will generally provide supplemental income to hosts rather than supporting full-time jobs, if the traditional accommodation sector is hurt by Airbnb then the hospitality job market may shrink.

Although it is difficult to estimate the economic costs or benefits of Airbnb, and economic impact studies are often shaped by political goals (Crompton, 2006), it is worth considering the results of a study Airbnb commissioned to examine the economic activity generated by its guests in San Francisco between April 2011 and May 2012. The study estimated Airbnb guests spent $56 million in the city, with the majority on non-accommodation expenditures like food and beverage ($11.8 million), retail ($10.8 million), and entertainment ($5.7 million). The study also found Airbnb guests stayed an average of two days longer than the average tourist (5.5 vs. 3.5 days), and averaged greater total trip expenditures than hotel guests ($1100 vs. $840). Additionally, the study found Airbnb guests were particularly likely to visit and spend money in areas outside of the tourist core, partly because many Airbnb guests stayed in those areas (72% of the city's Airbnb listings were located outside of the six central zip codes, as compared with 26% of the hotels) (Airbnb, 2012b; Lawler, 2012). Again, one should be quite sceptical of findings from a commissioned study, but, if nothing else, the study raises many excellent questions that deserve further attention.

Future research

As Airbnb has yet to receive any attention from tourism scholars, there are myriad worthwhile research questions to consider:

(1) *Destination impacts:* How does Airbnb impact destinations' tourism economies? For example, is Airbnb attracting additional tourists who would not have otherwise visited, or does Airbnb merely allow existing tourists to spend less? When tourists spend less on accommodation by using Airbnb, are they spending their savings in the destination in other ways? Also, is there truth to Airbnb's contention that its guests create particularly substantial economic impacts by staying longer and dispersing their spending beyond cities' tourism cores? If so, is this behaviour actually brought about by Airbnb, or is it simply consistent with the type of tourist attracted to Airbnb?

(2) *Accommodation impacts:* Is Airbnb disrupting the traditional accommodation sector by siphoning guests away from traditional accommodation? More specifically, how is Airbnb impacting the occupancy levels and room rates at hotels, B&Bs, and hostels? Are these potential impacts greater in urban destinations, during major events, or during high seasons? Also, what is the level of awareness and concern with Airbnb within the traditional accommodation sector, and are any steps being taken in response to Airbnb's rise?

(3) *Appeal:* What types of tourists are attracted to Airbnb? Is it true that the service appeals primarily to younger, budget-conscious leisure travellers? How strong is its appeal among other types of tourists? More generally, what demographic and psychographic characteristics are associated with Airbnb use? Also, what is the comparative significance of price, amenities, and local experiences in Airbnb's appeal? Are there any other reasons tourists choose Airbnb accommodation, such as an attraction to its novelty, an aversion to corporate hotel chains, or an affinity for collaborative consumption? In contrast, what are the primary reasons why tourists who are aware of Airbnb and do not use it choose not to do so?

(4) *Loyalty:* Do Airbnb guests exhibit loyalty to the brand, much like some tourists exhibit loyalty towards different hotel brands (Barsky & Nash, 2002; Kandampully & Suhartanto, 2000), even though Airbnb has negligible influence over the quality of accommodation or service provided by its hosts? Likewise, how do positive or negative Airbnb experiences impact potential brand loyalty? Also, do Airbnb hosts and guests feel like they are members of a community, as has been found in CouchSurfing (Germann Molz, 2007; Rosen et al., 2011), despite the business aspect of Airbnb?

(5) *Choosing between Airbnb listings:* What is the importance of different factors in selecting a particular Airbnb accommodation (e.g. price, location, amenities, pictures, reviews, etc.)? How do these factors compare with those that are most important when selecting a hotel (e.g. Dolnicar & Otter, 2003)?

(6) *Resident attitudes:* In destinations where Airbnb has become relatively prominent, like San Francisco, what factors influence residents' positive and negative perceptions of the service? Also, how does Airbnb impact residents' positive and negative attitudes towards tourism? Do Airbnb hosts become more engaged with and supportive of their cities' tourism sectors, being that residents who personally benefit from tourism may exhibit a more positive attitude towards it (McGehee & Andereck, 2004)? If so, do Airbnb hosts support the prospect of paying accommodation taxes that contribute towards destination promotion?

Conclusion

Future research on Airbnb is of great importance because destinations are just beginning to respond to the pressing challenges and promising opportunities created by the rapid rise of an informal peer-to-peer accommodation sector. The various questions and issues surrounding Airbnb are relevant to all major tourism stakeholders, including tourists, residents, tourism bureaus, hotels, and governments. Moreover, the many issues related to Airbnb's disruptive emergence have resonance far beyond the accommodation sector, as similarly disruptive innovations will continue to impact other areas of tourism, ranging from car rentals (Chernova, 2013; Lawler, 2013b) to tour guides (Tsotsis, 2011) to guidebooks (Empson, 2012; Haq, 2013) to private flights (Lawler, 2013a). Consequently, achieving a greater understanding of Airbnb's disruptive emergence will offer tremendous practical value, and there is every reason to believe that such knowledge will only increase in importance as Airbnb continues to prominently and firmly establish itself within the worldwide tourism accommodation sector.

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