



Short-Term Rentals and the Residential Housing System: Lessons from Berlin

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Abstract: *The increasing professionalisation of Airbnb-style short-term rentals has emerged within a grey space between residential housing and hotel accommodation. Subsequently, an array of contestations have arisen, due in no small part to the intangibility of online short-term rental platforms as well as the absence of clear regulation at the municipal level. In urban settings already confronted with housing issues such as supply shortages and reduced affordability, recent studies show how the proliferation of short-term rentals can amplify housing market pressure while feeding into the broader urban processes of gentrification, touristification, and displacement. Using Berlin, Germany, as a site of analysis, this paper explores the expansion of short-term rentals in relation to various policy interventions designed to regulate the conversion of residential housing into tourist accommodation.*

Keywords: Metropolitan Housing and Urban Policy; Private Rental Markets; Legal Aspects of Housing, Land and Planning.



Introduction

Beyond conventional forms of tourist accommodation such as hotels and hostels, emerging literature shows how residential housing has become increasingly integrated into an expanding tourism market (Cocola-Gant 2016; Wachsmuth and Weisler 2018). In particular, the proliferation of Airbnb-style short-term rentals (STRs) promoted under the ‘live like a local’ ethos (Airbnb 2018) can be viewed in correlation with increased tourism growth across inner-urban neighbourhoods in recent years (Novy and Colomb 2019). Research shows how STRs—initially conceived as ‘peer-to-peer’ home-sharing—have transitioned into a new modality for property owners and investors to maximise rent yields from residential housing (Cocola-Gant 2016; Duso et al. 2020; Schaefer and Braun 2016; Wachsmuth et al. 2018). These studies show how the unchecked professionalisation of STRs across residential neighbourhoods can exacerbate uneven urban processes such as gentrification, touristification, and displacement, while contributing to a further reduction of housing availability and affordability. In this regard, the ability of STRs to penetrate residential neighbourhoods and convert housing into tourist accommodation presents a range of challenges to residents, policy-makers, and housing welfare advocates.

Correspondingly, many municipalities have responded in various ways to the tech-driven phenomenon led by companies such as Airbnb, with some attempting to implement regulatory measures on the use of STR accommodation in residential housing. Despite these efforts, challenges remain regarding how local governments can effectively monitor and regulate the activity of STRs when listings are physically indistinguishable from existing residential housing profiles and listing data remain concealed by the tech-companies of digital STR platforms.

Using Berlin as a site of analysis, this article draws on PhD research undertaken between 2017 and 2019. The following section offers a brief review of the literature on STRs in the context of residential housing and state intervention. Berlin Government statistics and legislation, as well as STR listing data are then presented at the city and district scale. The STR data examined were obtained from Airdna¹ for the period between 2014 and 2018. Additional data retrieved from Airdna’s Market Minder website are also included. Following the statistical analysis, the focus turns to the regulatory measures implemented by the Berlin Government in an effort to mitigate the adverse effects of STRs in a city already confronted with a severe undersupply of housing and corresponding affordability crisis (Aalbers 2016). Importantly, as Airdna only offered data on Airbnb listings at the time of research, the data presented in this article are limited and do not claim to represent all STR listings in Berlin.

Short-Term Rentals and Residential Housing

Despite not owning any property, Airbnb has become the world’s largest short-term rental accommodation provider (Airbnb 2020). Some of the recognised benefits of renting out living space through Airbnb-style STR platforms are discursively centred around low entry costs into the tourist accommodation market, meeting new people, as well as the ability to earn additional income. Indeed, analyses show how hosts operating ‘entire home’ listings with year-round

¹ Airdna has been recognised for providing the most accurate Airbnb data sourced by a third-party (Wachsmuth and Weisler 2018).



bookings can procure rent yields substantially greater than the conventional private rental market (Airdna 2020; Schaefer and Braun 2016). This practice can be particularly lucrative for STR hosts managing multiple listings in high-demand localities. For instance, in 2017, an Airbnb host reported £11.9 million in rental-income from 881 listings across London (Vomiero 2017). Within this context, the rental-income capacity of STRs signifies a departure from the discursive framing of the ‘sharing economy’ or ‘peer-to-peer accommodation’ (Botsman and Rogers 2010), and instead positions STR platforms within the architecture of ‘platform capitalism’ (Srnicsek 2017) or ‘residential capitalism’ (Gurran et al. 2020).

The conversion of residential housing into tourist accommodation has particular implications for local housing markets. For instance, in Cocola-Gant’s (2016) study of Barcelona’s inner districts, where 16.8 per cent of residential housing stock is permanently listed on Airbnb, rent prices escalated by 18 per cent during 2015 alone. Recent research also shows that in tight housing markets with low rental vacancies, even small changes in the rental stock for tourist accommodation can affect local house prices and rents (Duso et al. 2020; Schaefer and Braun 2016; Wachsmuth et al. 2018). Accordingly, in cities already experiencing reduced housing affordability and availability, the increase of STR accommodation can intensify displacement pressures for lower-income residents of inner-urban neighbourhoods often at the forefront of expanding tourism practices, among other urban processes of change such as gentrification and urban renewal.

In addition to housing tenure issues, the expansion of unlicensed and ungoverned STR tourist accommodation throughout residential quarters has become increasingly contentious for a multitude of factors. Issues frequently cited include: decreased public health and safety standards (Slee 2016); an absence of clear labour rights and consumer protection laws (Gurran et al. 2020); racial discrimination (Edelman et al. 2017); tax evasion (Wachsmuth and Weisler 2018); uneven competition with the conventional, regulated tourist accommodation industry (Zervas et al. 2016); as well as adverse impacts for residents routinely sharing buildings and local resources with tourists (Cocola-Gant 2016; Crowe 2020 forthcoming). In response to mounting criticism against STR platforms Airbnb, HomeAway, TripAdvisor and FlipKey have established the Short-Term Rental Advocacy Center to campaign against the regulation of STR users, hosts, and platforms (Guttentag 2015).

Regulating Short-Term Rentals

To a great extent, STR platforms have continued to operate with little regulatory intervention. One potential explanation relates to the fact that changes in technology and the use of technology by STR platforms have typically outpaced changes in housing regulation (Jefferson-Jones 2015). In recent years, however, attempts to regulate the short-term letting of residential property via digital accommodation platforms has increased at the municipal level. For instance, the City of Santa Monica, California, has implemented some of the tightest restrictions on STRs in the US. Initiated in 2015 to address escalating house prices and dwindling housing supply, the local government requires STR hosts to permanently live on the listed property, register for a business license, and pay a 14 per cent occupancy tax to the city (Bender 2015). According to city officials, STR listings in Santa Monica have decreased 80 per cent since the introduction of the law, with only 351 properties listed on Airbnb during 2019 (City of Santa Monica 2019).



Elsewhere, state intervention has been less effective. In Paris, one of the largest markets for Airbnb with upward of 60,000 listings, new policy was implemented in 2015 to restrict STR hosts from listing more than one dwelling. Despite facing fines of up to €25,000, the quantity of STR hosts with multiple listings has continued to increase (Inside Airbnb 2020). In turn, the Mayor of Paris has expressed concern, contending that the city is becoming an ‘open-air museum’ exclusively reserved for tourists (The Local 2019).

More broadly, attempts to implement local regulations on STRs have routinely been rejected, repealed, or deemed unlawful on the grounds of impinging on the property rights of owners or violating investor-backed expectations (Jefferson-Jones 2015). For instance, a proposed law to regulate the proliferation of STRs in San Francisco was voted down in 2015 (San Francisco Department of Elections 2015). Notably, Airbnb spent more than 8 million USD to lobby against the proposed law which would have required STR hosts to supply the city with quarterly reports. Similarly, in 2019 a federal judge blocked a New York City law that, if passed, would have required STR hosts to report to the city government’s task-force responsible for identifying illegal STRs (Greenberg 2018).

In the few municipalities where policy measures have been implemented,² additional challenges arise regarding how local authorities can effectively apply and enforce STR-related regulations (Gurran et al. 2020). This concern is predominantly related to the concealment of listing data by leading STR platforms such as Airbnb, who maintain they cannot police users but rely on both hosts and guests to adhere to local laws and regulations (Airbnb 2020).

Short-Term Rentals in Berlin

Since the fall of the Berlin Wall, tourism has developed into one of the city’s fastest-growing industries. Between 1991 and 2018, the number of officially recorded overnight stays in conventional forms of tourist accommodation increased from 7.7 to 32.9 million (Amt für Statistik 2019). As the third most visited city in Europe after London and Paris, tourism has become an integral economic sector for the German capital, generating an estimated 11.5 billion EUR in economic output during 2017 (Visit Berlin 2017).

In addition to government-recognised overnight visitor stays, Berlin has seen steady growth in STRs over the past decade. In contrast to hotels, hostels and other licensed forms of accommodation clustered within the city’s established tourist precincts, STR growth has also proliferated across the high-density inner-residential localities of Prenzlauer Berg, Neukölln, and Friedrichshain-Kreuzberg (Airdna 2020). In consideration of these spatial dynamics, Airdna-generated STR data presented in this article focus on the city-scale of Berlin as well as the gentrifying, lower-income district of Friedrichshain-Kreuzberg. In a densely populated district where 95 per cent of household tenure constitutes social or private rental housing (Amt für Statistik 2019), Friedrichshain-Kreuzberg today embodies an internationally recognised cultural cachet, and, in turn, represents one of the city’s most popular locations for tourists and non-conventional tourist accommodation.

² At the time of writing, policies have been implemented to regulate STRs in Paris, Barcelona, Santa Monica, Berlin, London, San Francisco, and New York City.



Table 1 demonstrates the calculated average of active Airbnb listings in Berlin and Friedrichshain-Kreuzberg during 2018. The table also shows the quantity of residential housing units across both spatial scales as well as the calculated housing deficit, which refers to the under-supply of residential housing (Amt für Statistik 2019). The data show that an estimated 22,118 STR units accommodated guests in Berlin during 2018, of which 41 per cent constituted ‘entire home’ listings. These figures suggest that of the 1.93 million housing units in Berlin, 1 in 85 was listed on an STR platform at some point during 2018. Notably, entire home listings, particularly those with high occupancy rates, indicate that residential housing has been withdrawn from the long-term rental market (Wachsmuth and Weisler 2018).

Table 1: Housing stock, housing deficit and Airbnb listings for Friedrichshain-Kreuzberg and Berlin 2018

| Spatial area | Residential housing units | Calculated housing deficit | Active Airbnb listings (total) | Entire home Airbnb listings | Airbnb listings per km ² |
|---|---------------------------|----------------------------|--------------------------------|-----------------------------|-------------------------------------|
| Friedrichshain-Kreuzberg (20.21 km ²) | 152,009 | 18,442 | 5,097 | 1,917 | 252 |
| Berlin (892 km ²) | 1,932,296 | 205,000 | 22,118 | 9,205 | 24 |

Sources: Adapted from Airdna data sets and Amt für Statistik 2019.

Of the 5,097 STR units listed in Friedrichshain-Kreuzberg, approximately 1,917 represented entire home listings. Therefore, of the district’s 152,009 residential housing units, approximately 1 in 30 was listed on Airbnb’s platform during 2018. As approximately 40–50 apartment units constitute the average housing complex in the district, it is possible that most residents regularly share their building with tourists, emphasising a shift in the balance of residential housing from utility to commercial use. Put differently, there were an estimated 252 STR listings per square kilometre within Friedrichshain-Kreuzberg during 2018 compared to 24 STRs/km² within the city-state of Berlin. As the district had a reported housing shortage of 18,443 (Amt für Statistik 2019), the absorption of residential homes into the tourist accommodation market poses significant implications for an already-constrained residential housing system.

The Housing Misuse Act

Against this snapshot of STR listing activity during 2018, the paper now turns to the Berlin government’s approach to addressing the growth of STRs across the city.

The *Zweckentfremdungsverbot-Gesetz*, referred to herein as the Housing Misuse Act (HMA) is an item of state legislation reinstated May 1, 2014 to regulate the misappropriation of residential housing across Berlin.³ According to the Berlin Senate, housing misuse is identified when housing is: 1) repeatedly used for the purpose of holiday-home rental or tourist accommodation, 2) used for commercial or professional purposes, 3) structurally modified in such a way that it

³ The Housing Misuse Act was originally enacted in 1974, yet lifted in 2002 due to budget cuts among other factors.



is no longer suitable for residential purposes, 4) vacant for more than three months, or, 5) is demolished without planning permission (Gesetze Berlin 2018 translation Crowe). Since reimplementation in 2014, the HMA remains a contested item of legislation and has subsequently undergone two key reforms (2016 and 2018) following a suite of court hearings at the state and federal level.

In 2002 the Administrative Court repealed the HMA on the premise that the oversupply of housing in Berlin at the time did not justify the prohibition of residential buildings used for non-residential purposes (Gesetze Berlin 2018). For some commentators, the removal of the legislation was viewed in response to the fiscal crisis of the early 2000s as a means to boost economic development, promoting private investment in housing while simultaneously reducing administrative costs (Aalbers and Holm 2008). However, following a decade of relaxed housing policy, ensuing rent intensification and chronic housing shortage, in May 2014 the Berlin Senate resurrected the bill to regulate non-residential usage of housing (Gesetze Berlin 2018).

The reinstated HMA required all residential housing listed on STR platforms such as Airbnb to apply for a permit with the local district office. Once obtained, the permit enabled STR hosts to continue offering residential housing as tourism accommodation during a two-year transition period where a total ban on STRs would come into effect. Despite risking fines of up to 50,000 EUR, the number of STR listings without permits continued to increase between 2014 and 2015 (Skowronnek et al. 2015). Of the estimated 12,000 STRs listed in Berlin during 2014, sources suggest that only one in three had been officially registered (Bolsinger 2014).

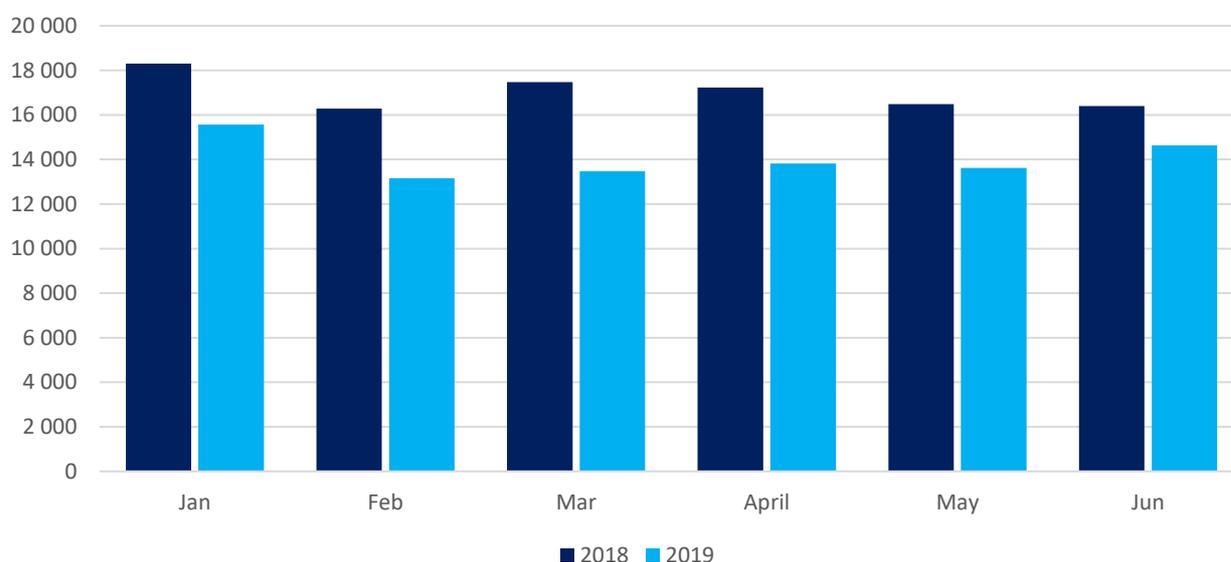
On May 1, 2016, the zero-tolerance ban on the short-term letting of entire apartments came into effect. Violators were now subject to fines of up to 100,000 EUR and the reformed HMA also enabled the Senate Administration to expand the data collection methods used to identify STRs (Gesetze Berlin 2018). The amendment was welcomed by Berlin's twelve district offices, neighbourhood initiatives, and housing welfare advocates (O'Sullivan 2016). By way of contrast, in an interview with *Quartz*, a representative from Airbnb purported 'this is bad news for Berlin and regular locals who occasionally share their homes to afford living costs in the city they love' (Cooper 2016). By mid-2017, the district governments had collectively returned almost 8,000 apartments to the city's residential housing market, while bringing in almost 3 million EUR in fines (Gabriel 2018). Notably, 4,000 dwellings were identified as STR listings, of which 1,568 (39.2%) were located in Friedrichshain-Kreuzberg.

The 2016 reform of the HMA, however, was short-lived. In April 2017, the Higher Administrative Court found the HMA to be in violation of Germany's federal constitution under the premise that the regulation challenged the fundamental rights of property ownership. Subsequently, in April 2018, a second amendment was made to the HMA, loosening restrictions and permitting the short-term letting of primary residences for an unlimited period and secondary dwellings for up to 90 days per year. For property owners seeking to let a dwelling for short-term stays, the 2018 reform required hosts to register with the district office to obtain a short-term letting permit costing 100–295 EUR. Since August 1, 2018, STR hosts must make available their registration information when offering residential living space for non-residential purpose. The revised law also increases the fine for violations up to a maximum of 500,000 EUR (Gesetze Berlin 2018).



Despite the ten-fold increase in violations, recent Inside Airbnb data revealed that as of August 2020, fewer than 3,000 STR hosts in Berlin had obtained a registration number (Inside Airbnb 2020). A recent analysis found that approximately four out of five Berlin Airbnb listings remain illegal (Wurnig and Reich 2020). Airdna data also shows that the reformed HMA has had a minimal effect on Airbnb listings. Figure 1 depicts the monthly quantity of active Airbnb listings in Berlin for the first two quarters of 2018 and 2019. The data demonstrate that the total number of listings had only marginally decreased during the first half of 2019. Correspondingly, identifying housing misuse cases and then prosecuting violators remains a crucial yet challenging task for the state government. As a Berlin property lawyer explained, ‘the operators of the large accommodation portals are less than cooperative when it comes to the publication of provider data’ (cited in Gabriel 2018). In turn, the Senate Administration must continue to rely on citizens to report suspected dwellings in violation of the HMA; a controversial strategy given Berlin’s past accounts regarding mass surveillance (Oltermann and Burgen 2018).

Figure 1: Quantity of active Airbnb listings in Berlin during Q1 and Q2 of 2018 & 2019



Source: Adapted from Airdna data sets and Airdna’s Market Minder tool.

Conclusion

The statistical data included in this article provide a snapshot of Berlin’s STR landscape. The findings on ‘entire home’ listings suggest that up to 9,000 housing units were likely unavailable for long-term tenancy during 2018. Therefore, despite government intervention, a proportion of residential housing remains entrenched within the tourism accommodation market. Given Berlin’s calculated shortage of over 200,000 housing units, any further reduction of residential housing for STR use is likely to exacerbate housing pressure and, in turn, widen socio-spatial inequality. The analysis also shows that in lower-income districts that have become firmly integrated into the city’s tourism trade the impact of STRs on the residential housing system can be increasingly severe. Similar observations have been identified elsewhere, with studies showing that the adverse effects of STRs can be more intense in culturally diverse, yet historically marginalised inner-urban localities (Wachsmuth and Weisler 2018). In this respect,



research seeking to evaluate the role and nature of STRs in cities should consider the related effects and implications at the neighbourhood as well as the city scale.

Importantly, this study has shown how regulators rarely speak with one voice when it comes to addressing Airbnb-style STRs. Although the Berlin Senate has taken issue with the way in which the STR phenomenon has affected local residential housing markets, at the federal level, the rights of property owners and large corporate landlords to use their investment within the parameters of German law clearly takes precedent. Despite an increased push by municipalities across many jurisdictions for STR regulation, contrasting approaches to housing policy between local and national governments may prove difficult. This tension is likely to be more pronounced in market-facing economies such as the US and UK where national-level governments have historically been less inclined to intervene with market trends and forces.

Given Berlin's increasingly regulated long-term private rental sector with policy measures such as the Rent Break (*Mietpreisbremse*), Rent Index (*Mietspiegel*), and the newly introduced Rent Freeze (*Mietendeckel*) (SenStadt 2020), the conversion of residential housing into tourist accommodation has become an attractive alternative for property owners and managers. In addition to increased rent yields, the less-regulated STR market enables greater flexibility for property owners to repurpose, renovate, or sell their tenant-free investment at any time compared to dwellings occupied by tenants under Berlin's unlimited-term rent contracts. This paradoxical dynamic opens up a series of broader questions concerning the relationship between jurisdictions with high levels of tenancy protection and the propensity for landlords to divert dwellings from the long-term rental market to the tourism accommodation sector.

Although the implications of Covid-19 for the tourism sector have disrupted the momentum of STR growth across many municipalities (Inside Airbnb 2020; Neate 2020), recent studies indicate that Airbnb-style rentals have not reverted *en masse* back onto Berlin's long-term housing market as some commentators had initially predicted at the onset of the pandemic (Peter 2020). Despite official tourism statistics showing a significant decrease in overnight visitor stays since March (Visit Berlin 2020), Airdna's Market Minder tool registered over 10,000 active STR listings during September 2020 with an occupancy rate of 74 per cent or higher (Airdna 2020). Whether the reversion of some STR dwellings back into the long-term rental market represents a temporary development pending the return of tourism demand in a post-Covid climate remains to be seen.

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References

- Aalbers, M., A. Holm 2008. 'Privatising Social Housing in Europe: The Cases of Amsterdam and Berlin.' Pp. 12–23 in K. Adelhof, B. Glock, J. Lossau, M. Schule (eds.) *Urban Trends in Berlin and Amsterdam*. Berlin: Berliner Geographische Arbeiten, Humboldt Universität zu Berlin.
- Aalbers, M. 2016. *The Financialization of Housing: A Political Economy Approach*. London and New York: Routledge.
- Airbnb 2018. 'Live like a local in Venice.' *Airbnb Newsroom*. Retrieved July 20, 2020, from <https://news.airbnb.com/welcome-to-venice/>.
- Airbnb 2020. 'Fast Facts.' *Airbnb Newsroom*. Retrieved April 2, 2020, from <https://press.airbnb.com/fast-facts/>.
- Airdna 2020. 'Market Minder Berlin.' *Airdna*. Retrieved September 20, 2020, from <https://www.airdna.co/vacation-rental-data/app/de/berlin/berlin/overview>.
- Amt für Statistik 2019. *Statistisches Jahrbuch 2019: Berlin*. Retrieved February 2, 2020, from Amt für Statistik Berlin-Brandenburg website https://www.statistik-berlin-brandenburg.de/produkte/Jahrbuch/jb2019/JB_2019_BE.pdf.
- Bender, A. 2015. 'Regulations To Wipe Out 80% Of Airbnb Rentals In California's Santa Monica.' *Forbes*. Retrieved July 13, 2020, from <https://www.forbes.com/sites/andrewbender/2015/06/15/new-regulations-to-wipe-out-80-of-airbnb-rentals-in-californias-santa-monica/#62dd7552169a>.
- Bolsinger, M. 2014. 'Verbot von Ferienwohnungen in Berlin: Touristen werden zu Illegalen.' *Taz*. Retrieved July 31, 2020, from <https://taz.de/Verbot-von-Ferienwohnungen-in-Berlin!/5036503/>.
- Botsman, R., R. Rogers 2010. *What's Mine is Yours: The Rise of Collaborative Consumption*. London, UK: Collins.
- City of Santa Monica 2019. *Settlement with Airbnb Guarantees Compliance with Home-Sharing Ordinance*. Retrieved June 3, 2020, from City of Santa Monica website <https://www.santamonica.gov/press/2019/12/10/settlement-with-airbnb-guarantees-compliance-with-home-sharing-ordinance>.
- Cocola-Gant, A. 2016. 'Holiday Rentals: The New Gentrification Battlefield.' *Sociological Research Online* 21 (3): 112-120. DOI: [10.5153/sro.4071](https://doi.org/10.5153/sro.4071).
- Cooper, M. 2016. 'Berlin is Cracking Down on Short-term Apartment Rentals—and Airbnb is Taking a Hit.' *Quartz*. Retrieved May 1, 2016, from <https://qz.com/673932/berlin-is-cracking-down-on-short-term-apartment-rentals-and-airbnb-is-taking-a-hit/>.
- Crowe, A. Forthcoming. *Shifting Neighbourhood Dynamics and Everyday Experiences of Displacement in Kreuzberg, Berlin*. Ph.D. Thesis, Curtin University.



Duso, T., C. Michelsen, M. Schäfer, K.D. Tran 2020. *Airbnb and Rents: Evidence from Berlin, August 2020*. Retrieved September 3, 2020, from German Institute for Economic Research (DIW) website
https://www.diw.de/documents/publikationen/73/diw_01.c.796620.de/dp1890.pdf.

Edelman B., M. Luca, D. Svirsky 2017. ‘Racial Discrimination in the Sharing Economy: Evidence from a Field Experiment.’ *American Economic Journal: Applied Economics* 9 (2): 1–22. DOI: [10.1257/app.20160213](https://doi.org/10.1257/app.20160213).

Gesetze Berlin 2018. *Gesetz über das Verbot der Zweckentfremdung von Wohnraum (Zweckentfremdungsverbot Gesetz-ZwVbG) Vom 29. November 2013*. Retrieved March 20, 2020, from Gesetze Berlin website
<http://gesetze.berlin.de/jportal/?quelle=jlink&query=WoZwEntfrG+BE&psml=bsbeprod.psml&max=true&aiz=true>.

Gabriel, T. 2018. ‘Zweckentfremdung: Rund 8.000 Berliner Wohnungen Wieder Daurhaft Vermietet.’ *Rundfunk Berlin-Brandenburg (RBB24)*. Retrieved April 18, 2020, from <https://www.rbb24.de/politik/beitrag/2018/01/zweckentfremdungsverbot-ferienwohnungen-berlin-.html>.

Greenberg, Z. 2018. ‘New York City Looks to Crack Down on Airbnb Amid Housing Crisis.’ *The New York Times*. Retrieved August 5, 2020, from <https://www.nytimes.com/2018/07/18/nyregion/new-york-city-airbnb-crackdown.html?auth=login-email&login=email>.

Gurran, N., Y. Zhang, P. Shrestha 2020. ‘“Pop-up” Tourism or “Invasion”? Airbnb in Coastal Australia.’ *Annals of Tourism Research* 81 (1): 102845. DOI: [10.1016/j.annals.2019.102845](https://doi.org/10.1016/j.annals.2019.102845).

Guttentag, D. 2015. ‘Airbnb: Disruptive Innovation and the Rise of an Informal Tourism Accommodation Sector.’ *Current Issues in Tourism* 18 (12): 1192–1217. DOI: [10.1080/13683500.2013.827159](https://doi.org/10.1080/13683500.2013.827159).

Inside Airbnb 2020. *Inside Airbnb: Adding Data to the Debate*. Retrieved November 29, 2020, from <http://insideairbnb.com/get-the-data.html>.

Jefferson-Jones. J. 2015. ‘Airbnb and the Housing Segment of the Modern “Sharing Economy”’: Are Short-Term Rental Restrictions an Unconstitutional Taking?’ *Hastings Constitutional Law Quarterly* 42 (3): 557–576. ISSN: 0094-5617.

The Local 2019. ‘Paris Mayor Declares War on Airbnb to Stop City Turning into Museum.’ *The Local*. Retrieved June 1, 2020, from <https://www.thelocal.fr/20190211/paris-mayor-declares-new-war-on-airbnb>.

Neate, R. 2020. ‘How the Covid-19 Crisis Locked Airbnb out of its Own Homes.’ *The Guardian*. Retrieved November 29, 2020, from <https://www.theguardian.com/technology/2020/apr/04/how-the-covid-19-crisis-locked-airbnb-out-of-its-own-homes>.



- Novy, J., C. Colomb 2019. 'Urban Tourism as a Source of Contention and Social Mobilisations: A Critical Review.' *Tourism, Planning and Development* 16 (4): 358–375. DOI: [10.1080/21568316.2019.1577293](https://doi.org/10.1080/21568316.2019.1577293).
- Oltermann, P., S. Burgen 2018. Berlin and Barcelona use Sleuths to Root Out Illegal Holiday lets.' *The Guardian*. Retrieved November 29, 2020, from <https://www.theguardian.com/world/2018/may/21/berlin-and-barcelona-use-sleuths-to-root-out-illegal-holiday-lets>.
- O'Sullivan, F. 2016. 'Berlin Is Banning Most Vacation Apartment Rentals.' *Bloomberg City Lab*, April 28, 2020, from <https://www.bloomberg.com/news/articles/2016-04-28/berlin-law-banning-vacation-apartments-has-already-hit-airbnb-s-offerings-in-the-city>.
- Peter, E. 2020. 'Airbnb geht in die Knie.' *Taz*. Retrieved November 29, from <https://taz.de/Coronakrise-und-Ferienwohnungen/!5670747/>.
- San Francisco Department of Elections 2015. *November 3, 2015 Official Election Results*. Retrieved August 2, 2020, from San Francisco Department of Elections website <https://www.sfelections.org/results/20151103/>.
- Schaefer, P., N. Braun 2016. 'Misuse through Short-term Rentals on the Berlin Housing Market.' *International Journal of Housing Markets and Analysis* 9 (2): 287–311. DOI: [10.1108/ijhma-05-2015-0023](https://doi.org/10.1108/ijhma-05-2015-0023).
- SenStadt (Senatsverwaltung für Stadtentwicklung und Wohnen) 2020. *Informationen zum Gesetz zur Mietenbegrenzung im Wohnungswesen in Berlin ("Mietendeckel")*. Retrieved June 2, 2020, from Senatsverwaltung für Stadtentwicklung und Wohnen website <https://stadtentwicklung.berlin.de/wohnen/wohnraum/mietendeckel/>.
- Skowronnek, A., L. Vogal, J. Parnow 2015. 'Airbnb vs. Berlin: What Data Tells Us.' *Airbnb vs. Berlin*. Retrieved July 3, 2020, from <http://airbnbvsberlin.com/>.
- Slee, T. 2016. *What's Yours is Mine: Against the Sharing Economy*. Melbourne and London: Scribe.
- Srnicek, N. 2017. *Platform Capitalism*. Cambridge: Polity Press.
- Visit Berlin 2017. *Berlin's Economy Benefits from Tourism like Never Before*. Retrieved September 20, 2020 from Berlin Tourismus and Kongress GmbH website <https://about.visitberlin.de/en/press/press-releases/berlins-economy-benefits-tourism-never>.
- Visit Berlin 2020. *Berlin hosts the world: Facts and Figures*. Retrieved September 20, 2020 from Berlin Tourismus and Kongress GmbH website <https://about.visitberlin.de/en/current-figures>.
- Vomiero, J. 2017. 'Airbnb Landlord Makes Over \$20 Million Per Year Renting 881 London Properties.' *Global News*. Retrieved June 23, 2020, from <https://globalnews.ca/news/3856084/airbnb-landlord-millions-per-year-london-properties/>.



Wachsmuth, D., A. Weisler 2018. 'Airbnb and the Rent Gap: Gentrification Through the Sharing Economy.' *Environment and Planning A: Economy and Space* 50 (6): 1147–1170. DOI: [10.1177/0308518x18778038](https://doi.org/10.1177/0308518x18778038).

Wachsmuth, D., D. Charney, D. Kerrigan, A. Shillolo, R. Basavaev-Binder 2018. *The High Cost of Short-Term Rentals in New York City*. Retrieved May 8, 2020, from McGill University, Urban Politics and Governance Research Group website <https://www.politico.com/states/f/?id=00000161-44f2-daac-a3e9-5ff3d8740001>.

Wurnig, D., M. Reich. 2020. 'Zahl der Airbnb-Vermietungen in Berlin um die Hälfte gesunken.' *RBB 24*. Retrieved November 29, 2020, from https://www.rbb24.de/wirtschaft/thema/2020/coronavirus/beitraege_neu/2020/10/airbnb-wohnungen-vermietungen-anstieg-corona-berlin.html.

Zervas G., D. Proserpio, J. W, Byers 2016. The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry. *Journal of Market Research* 54 (5): 687–705. DOI: [10.1509/jmr.15.0204](https://doi.org/10.1509/jmr.15.0204).