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MITIGATING PEER-TO-PEER HOUSING IMPACTS TOWARD A RATIONAL NEXUS P2P HOUSING IMPACT MITIGATION STRATEGY

Arthur C. Nelson*

ABSTRACT

Traveler lodging has been around since humans created tribes and certainly since they invented civilization. The internet and the rise of peer-to-peer, short-term housing has accelerated traveler and lodging opportunities. Today, Airbnb alone has nearly three million hosts offering more than seven million listings. This article explores the rise of “peer-to-peer,” or P2P housing, and offers economic, planning, and public policy perspectives.

INTRODUCTION

By some accounts, traveler lodging is the world’s oldest formal industry. Ancient Romans had inns and tour guides dating more than two thousand years ago, while China has served traveler lodging needs for more than four thousand years—and these are based only on written accounts. Traveler lodging has been around probably since humans created tribes and certainly since they invented civilization. For thousands of years, housing travelers has followed certain rules and customs with usually benign effects on neighborhoods. The Internet and the rise of peer-to-peer, short-term housing has changed all that. Today, Airbnb alone has nearly three million hosts offering more than seven million listings. By 2019, they were booking hundreds of millions of travelers in more than 100,000 cities in more than 200 countries. Airbnb is positioning itself for more than one billion bookings by the end of this decade. It is not alone among providers of “peer-to-peer” or P2P housing.

As the vast majority of P2P housing supply is comprised of owners or renters of homes and apartments in neighborhoods renting all or part of their units to travelers, conflicts between permanent residents and travelers have emerged. A growing number of communities attempt to address these conflicts through land use and management controls, but they do not truly address the economic impacts. Those impacts include:¹

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¹ Author’s synthesis of literature and personal experience as a rental property owner.

- Evicting tenants from housing that is converted into P2P units, but they have nowhere to go if local housing markets cannot replenish the supply of resident housing;
- Community-wide increases in housing costs and rents as P2P housing reduces community housing supply; and
- Increased demand for workforce housing meeting the needs of low-paid P2P housing labor who cannot afford to live near where they work.

The time has come to rethink how communities mitigate the economic impacts of P2P housing on communities. What is needed is a rational nexus P2P housing impact mitigation strategy. I advance this call through the following sections:

A brief history of traveler housing

Nomenclature

P2P housing in a nutshell

P2P housing benefits to hosts and travelers

P2P housing as economic development

Social and cultural externalities, free riders, and market externalities

Conventional approaches to mitigating P2P housing impacts

Rational nexus P2P housing impact mitigation

New studies will be needed to advance this concept, although the tools for doing so already exist.

A BRIEF HISTORY OF TRAVELER HOUSING

The Chinese offer the world's first recorded tourists with essentially forms of bed and breakfasts recorded from more than four thousand years ago.² In the western world, Roman tourists enjoyed access to a large empire kept in toe by legions of soldiers and glued together with a sharply tuned administrative apparatus.³ There is even a guide book surviving these thousands of years later describing what might be called the original Grand Tour.⁴ It guided tourists from the lost city of Troy to the Acropolis in Athens and from there to the fallen Colossus

² An exhaustive history of Chinese tourism from before 2100 BC is provided by Yong Ma, Hongxia Su, Qian Jin, Wei Feng, Jianuo Liu and Wenying Huang, *The General History of Chinese Tourism Culture*, World Scientific (2016).

³ <https://www.travelex.com/travelex-hub/travel-inspiration/history-of-the-vacation>

⁴ Id.

at Rhodes and on to the Pyramids of Egypt, finishing the journey with a cruise on the Nile.⁵ Roman currency, the Denarii, was tender from Rome to Morocco and northward to what is now England. Latin and Greek were spoken throughout Imperial Rome.⁶ And where would you stay? Cities had inns akin to hotels while roads leading to cities had a series of inns, many of which were operated by owners much like bed and breakfasts of today.⁷ Indeed, the word “hospitality” derives from the Latin *hospitium*. It is possible that hospitality is the world’s oldest formal industry.

Nothing changed much for thousands of years. Then the Internet arrived.

By some accounts, the modern Internet booking trend started with Vacation Rentals by Owner (VRBO) in 1995. Its website enabled individual vacation homeowners to book their properties online. Booking.com was launched a year later as a fare aggregator mostly for hotels that included vacation rental options. Craigslist soon followed by providing an informal platform for sublets, short-term rentals, and even longer-term leases.⁸

Though starting modestly, Airbnb took the online movement to a different level. In 2008, Brian Chesky and Joe Gebbia rented an air mattress in the living room of their apartment, turning it into a bed and breakfast.⁹ They recruited others into doing the same, offering them logistical support. Enjoying quick success and along with some venture capital, Airbnb became arguably the first company to enable hosts (either home owners or renters) to book a single room in their dwelling using a credit card over the Internet.¹⁰ The rest is history.¹¹ From about 2,500 listings in 2009¹²—the peak of the Great Recession in the United States—to 2020, it had grown to more than seven million listings in more than 100,000 cities and

⁵ Tony Perrottet, *Pagan Holiday: On the Trail of Ancient Roman Tourists*, Random House (2003). The American edition was titled *Route 66 AD*.

⁶ <https://medium.com/@nicolvalentin/gods-and-crocodiles-how-ancient-romans-took-their-vacations-72afe217ec6e>

⁷ Lionel Casson, *Travel in the Ancient World*, Johns Hopkins University Press (1994).

⁸ This discussion is adapted from <https://medium.com/keycafe/the-history-of-short-term-rentals-cfb4ef9d50c5>.

⁹ One wonders if they used Craigslist to advertise it.

¹⁰ See note 6.

¹¹ For a detailed review of Airbnb facts, procedures, booking process, fees, impacts and related, see <https://www.stratosjets.com/blog/airbnb-statistics/>

¹² <https://news.airbnb.com/airbnb-hosts-share-more-than-six-million-listings-around-the-world/>

200 countries with plans for one billion guests by 2028.¹³ Its initial public offering value in December 2020 hit \$100 billion,¹⁴ making it more valuable than Hilton, Hyatt and Marriott hotels *combined* with room left over for an airline or two.¹⁵ While this article is not per se about Airbnb,¹⁶ the firm and its activities are used as a lens to explore the promises and pitfalls of this new form of rental housing.¹⁷

NOMENCLATURE

What noun should be used to characterize this new form of rental housing? Choices are:

- Vacation housing
- Bed and breakfast
- Short-term housing
- Shared housing
- Peer-to-peer (P2P) housing

Vacation housing implies that renters are merely tourists, which is not entirely the case because much of the phenomenon is driven by business. Bed and breakfast implies that guests enjoy a breakfast with the owner or at least other tenants, which is not the case, especially with Airbnb (see below). Short-term housing is usually associated with leases of a month or a few months often through major hotel chains. Shared housing is known broadly as all forms of congregate or group care housing, including some forms of incarceration.¹⁸ Peer-to-peer or P2P housing means monetizing underused parts of dwelling units or, as will be seen, the entire unit. P2P housing is the term I use.

Also, I will use the terms “host” or “hosts” for those who rent shared housing units (whether they are owners or renters) and “travelers” instead of renters or guests.

¹³ <https://www.forbes.com/sites/garybarker/2020/02/21/the-airbnb-effect-on-housing-and-rent/?sh=1a2d198b2226>

¹⁴ <https://www.nytimes.com/2020/12/11/business/dealbook/airbnb-ipo-chesky.html>

¹⁵ Internet searches for market capitalization as of December 20, 2020.

¹⁶ From my review, Airbnb appears to receive a 9 to 12 percent service fee on top of a 3 percent service fee assessed to hosts, though variations exist based on length of stay and other factors.

¹⁷ For a review of five options including Airbnb, see <https://www.thefastpark.com/blog/post/5-home-sharing-sites-you-should-know>

¹⁸ See, for instance, the application of the term by the Centers for Disease Control related to COVID-19 protocols at <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/shared-housing/index.html>.

P2P HOUSING IN A NUTSHELL¹⁹

Becoming a host and renting P2P housing is straightforward, usually done entirely through the Internet. P2P housing options range from a room shared with another person to a private room with or without a private bath, to apartments, townhouses and condominiums, to whole homes and even castles as well as tiny homes. P2P housing is even offered through hotel and bed-and-breakfast bookings. P2P rental rates are also lower than conventional lodging because overhead is low, local business licenses are often not required, and local taxes on lodging can be avoided if P2P housing is exempt or if P2P hosts²⁰ elect not to report income for tax purposes.

There is an illusion that P2P housing is just a form of conventional bed and breakfasts where the host meets you at the door, shows you your room, and offers you breakfast, perhaps with other guests. Table 1 shows that this is not the case. This table uses data from *InsideAirbnb.com* to show the number of Airbnb listings in Los Angeles and New York City in the United States, as well in the European markets of Lisbon, London, Rome, and Paris.²¹ More than half to nearly 90 percent of all listed Airbnb units are for the whole dwelling unit. Implicitly, this means that hosts are not living in the dwelling as is customary of bed and breakfasts, and likely not serving breakfast. Indeed, close examination of the data presented by *InsideAirbnb.com* show large shares of hosts appear to be corporations, investors and the like who are essentially absentee owners. Nonetheless, of the seven million Airbnb listings globally, several million imply that hosts occupy their dwellings, leasing rooms to travelers, and may behave for all intents and purposes as traditional bed and breakfasts.

¹⁹ For a review of issues related to the P2P housing industry, see Salar Kuhzady, Siamak Seyfi and Luc Béal, Peer-to-peer (P2P) accommodation in the sharing economy: a review, *Current Issues in Tourism*, DOI: 10.1080/13683500.2020.1786505 (2020).

²⁰ Airbnb is especially aggressive in seeking exemption from local lodging taxes. See *Inside Airbnb's 'Guerrilla War' Against Local Governments*, <https://www.wired.com/story/inside-airbnbs-guerrilla-war-against-local-governments/>.

²¹ These data were acquired and adapted from <http://insideairbnb.com/index.html> December 20, 2020.

Table 1
Airbnb Listings and Share That Are for the Entire Dwelling Unit

Market	Total Listings	Share That is for Entire Dwelling Unit
<i>United States</i>		
Los Angeles	39,486	62.7%
New York City	50,378	52.1%
<i>Europe</i>		
Lisbon	22,242	74.1%
London	87,235	56.0%
Paris	59,881	86.8%
Rome	29,436	64.0%

Source: Data are from InsideAirbnb.com, December 20, 2020.

P2P HOUSING BENEFITS TO HOSTS AND TRAVELERS

The P2P housing phenomenon has created new benefits for millions across the globe. A key one is that homeowners and renters can unlock the value of underused spaces, such as spare or underused bedrooms and bathrooms. Renting out these spaces “monetizes” them by generating new income for the host.²² This additional income can elevate hosts’ standards of living.²³

Four benefits can accrue to travelers. First, their lodging options are expanded greatly, going beyond hotels, motels, and even bed-and-breakfasts to a true opportunity to be immersed in a local community, if not culture.²⁴

²² B. Fang, Q. Ye, and R. Law, Effect of sharing economy on tourism industry employment. *Annals of Tourism Research*, 57 (3): 264–267 (2016).

²³ Dimitrios P. Stergiou and Anna Farmaki, *International Journal of Hospitality Management*, <https://doi.org/10.1016/j.ijhm.2019.102411> (2019).

²⁴ Greg Richards, Sharing the new localities of tourism. In D. Dredge and S.Gyimóthy (eds) *Collaborative Economy and Tourism: Perspectives, Politics, Policies and Prospects*. Springer. pp 169-184 (2017).

Second, like bed and breakfasts, P2P housing offers travelers a chance to create relationships with hosts.²⁵ As I show above, however, this seems unlikely as more than two-thirds of all P2P housing is rented without the presence of the host during travelers' stays.

Third, there is the opportunity for travelers to acquire a "local sense of place"²⁶ which can extend to creating relationships with neighbors.²⁷

Lastly, P2P housing enables travelers to "live like a local" in being immersed in an authentic neighborhood where one may mingle with the locals.²⁸ This may be an illusion, however, as noted below.

P2P HOUSING AS ECONOMIC DEVELOPMENT

Lisbon is an interesting case study for the role of P2P housing in economic development for two reasons. The first is the sheer extent to which it lost population. Between 1981 and 2011, a span of just 30 years, the city's population fell from 808,000 to 545,000—more than 260,000, or a third, of its 1981 base.²⁹ In addition, older housing units were abandoned in favor of newer ones, mostly in the suburbs with modern features. By the early 2010s, more than 100,000 residential units had been abandoned,³⁰ mostly in older areas of the city.³¹ Figure 1 is an example.

²⁵ Amanda Belarmino, Elizabeth Whalen, Yoon Koh & John T. Bowen, Comparing guests' key attributes of peer-to-peer accommodations and hotels: mixed-methods approach, *Current Issues in Tourism*, 22:1, 1-7, DOI: 10.1080/13683500.2017.1293623 (2019).

²⁶ Lis P. Tussyadiah and Juho Pesonen, Impacts of Peer-to-Peer Accommodation Use on Travel Patterns, *Journal of Travel Research*, 55(8):1022-1040. doi:10.1177/0047287515608505 (2016).

²⁷ Richards, Sharing the new localities of tourism.

²⁸ Dominyka Paulauskaite, Raymond Powell, J. Andres Coca-Stefaniak, and Alastair M. Morrison, Living like a local: Authentic tourism experiences and the sharing economy, *International Journal of Tourism Research*, 19(6), pp.619-628 (2017).

²⁹ Data are from the World Bank.

³⁰ A related metric reports that in 2012, about 12,000 buildings were in poor condition or in ruins, being about 20 percent of the total supply. See Henrique Almeida, Europe's Hottest Property Market Is Getting Too Hot for Some, *Bloomberg*, <https://www.bloomberg.com/news/features/2019-09-19/portugal-is-europe-s-hottest-property-market-too-hot-for-some>.

³¹ Notes from Lisbon Study Space, June 24, 2019.

The second is Europe's financial crisis which impacted Portugal from the late 2000s to the middle 2010s. Portugal's banks were stressed and its unemployment rose to the highest levels since the end of the Second World War.³²

In part to address both factors, a new program was created in 2012 to attract foreign capital to the country. The Residence Permit Program, popularly known as the Golden Visa Program, is a five-year residency scheme designed to induce investments by non-European Union (EU) nationals. It gives qualifying investors and their family members the right to live, work and study in Portugal and permits free movement in Europe's Schengen Area, which includes nearly all EU nations.³³ Among several options, two related to real estate investment seem to be the most popular:³⁴

A real estate purchase with a minimum value of €350,000 for the refurbishment of properties older than 30 years or in an area of urban regeneration, including the cost of renovations or

The purchase of any other real estate for at least €500,000.³⁵

In either case, investors receive a residency visa for themselves and their immediate families. The golden visa requires visiting Portugal for at least seven days in the first year and then at least 14 days every two years thereafter.³⁶ After five years, the investor may apply for permanent residency or citizenship.³⁷ It is considered one of the most successful programs of its kind in Europe.³⁸

By 2020, the golden visa program had generated about \$5.5 billion in new real estate investment from more than 9,000 investors with a total of nearly 16,000 family members.³⁹ This has, in turn, fueled much of the P2P housing supply noted in Table 1. Indeed, it may be no accident that the country's implicit absentee owner-driven golden visa policy helps make Lisbon's share of total Airbnb units

³² For an account, see https://en.wikipedia.org/wiki/2010%E2%80%932014_Portuguese_financial_crisis

³³ <https://www.schengenvisainfo.com/schengen-visa-countries-list/>

³⁴ My interpretation of the data and other information provided in <https://www.globalcitizensolutions.com/portugal-golden-visa-statistics/>

³⁵ These are only two examples among many golden visa options. See <https://www.schengenvisainfo.com/eu-golden-visas/portugal-golden-visa/>

³⁶ <https://www.goldenvisas.com/portugal>.

³⁷ https://portugal-goldenvisa.pt/golden-visa-process-and-documents_16

³⁸ <https://www.bloomberg.com/news/features/2019-09-19/portugal-is-europe-s-hottest-property-market-too-hot-for-some>

³⁹ <https://www.globalcitizensolutions.com/portugal-golden-visa-statistics/>

available for rent the second highest on the table (behind Paris). Figure 2 is an example of a building being renovated into residential units with funds coming perhaps in part from golden visa investors. The program is seen as a key reason why investment in Portugal has increased, leading to increased tourism and lower unemployment.⁴⁰

The transition from relative prosperity in 2010 through the financial crisis of the early to middle 2010s and economic restructuring through the rest of the decade is shown in Table 2. The golden visa and the rise of P2P housing played a key role in reversing economic fortunes. This table shows:

Population fell by 3 percent between 2010 and 2019;

The proportion of the population in households earning less than 50 percent of median income fell by 24 percent from the depth of the financial crisis in 2014 to the latest available figures in 2018;

The number of people in the labor force fell by 5 percent between 2010 and 2020 although the actual number of people employed stayed about the same, which explains why the unemployment rate fell by 63 percent from peak unemployment in 2013 to 2020;

Between 2010 and 2020, the number of workers in agriculture fell by 49 percent while those in industry fell by 10 percent, but the number of workers in service, including tourism-related jobs, increased by 13 percent; and

Receipts from international tourism based on billions of 2020 U.S. dollars increased by 66 percent.

It would seem that a key effect of the golden visa program and its stimulation of P2P housing is a shift in the share of jobs away from some sectors and towards sectors serving tourist needs, especially the service sector. Notably, between 2010 and 2020, Portugal's share of jobs in the service sector increased from 61.5 percent to 70.0 percent (see Figure 3) as jobs in agriculture and industry fell (see Table 2). Indeed, tourism accounts for about 20 percent of the jobs in Portugal and 16.5 percent of its gross domestic product, according to the World Travel & Tourism Council.⁴¹

But there are pitfalls.

⁴⁰ For a related assessment, see <https://www.worldfinance.com/wealth-management/portugal-reaping-the-rewards-of-the-golden-visa-programme>

⁴¹ <https://wtcc.org/Research/Economic-Impact/Cities>



Figure 1
Abandoned building in Lisbon. This may be an attractive investment option for golden visa investors to convert it into P2P housing.
Credit: Arthur C. Nelson



Figure 2
Residential rehabilitation in Lisbon, likely financed in part from golden visa investors for P2P housing.
Credit: Arthur C. Nelson

Table 2
Portugal Unemployment Rate and Persons Living Under 50% of Median Income, 2010-2020

Year	Population	Proportion earning <50% of median income	Labor Force	Number Employed	Unemployment	Employed in Agriculture	Employed in Industry	Employed in Service	International Tourism Receipts (billions of 2020 US\$)
2010	10,573,100	12.2%	5,489,573	4,898,346	10.8%	548,615	1,335,289	3,014,932	\$14.7
2011	10,557,560	11.9%	5,430,781	4,742,321	12.7%	484,191	1,273,313	2,984,817	\$14.9
2012	10,514,844	11.7%	5,387,979	4,551,387	15.5%	492,005	1,144,674	2,914,709	\$16.8
2013	10,457,295	13.6%	5,296,733	4,439,563	16.2%	454,167	1,052,176	2,933,219	\$16.2
2014	10,401,062	14.4%	5,240,751	4,512,601	13.9%	390,340	1,076,707	3,045,554	\$17.5
2015	10,358,076	14.2%	5,216,392	4,567,264	12.4%	343,915	1,112,129	3,111,220	\$19.1
2016	10,325,452	13.2%	5,203,775	4,627,925	11.1%	319,790	1,133,842	3,174,294	\$17.3
2017	10,300,300	12.5%	5,248,650	4,783,252	8.9%	306,128	1,183,377	3,293,747	\$18.4
2018	10,283,822	11.0%	5,267,545	4,899,186	7.0%	295,911	1,217,448	3,385,827	\$22.2
2019	10,269,417		5,239,181	4,907,331	6.3%	287,079	1,214,074	3,406,179	\$24.3
2020			5,200,142	4,891,618	5.9%	278,333	1,201,381	3,411,903	
Key year change*	-2.9%	-23.6%	-5.3%	-0.1%	-63.3%	-49.3%	-10.0%	13.2%	65.6%

*See text for key years.
 Source: World Bank.

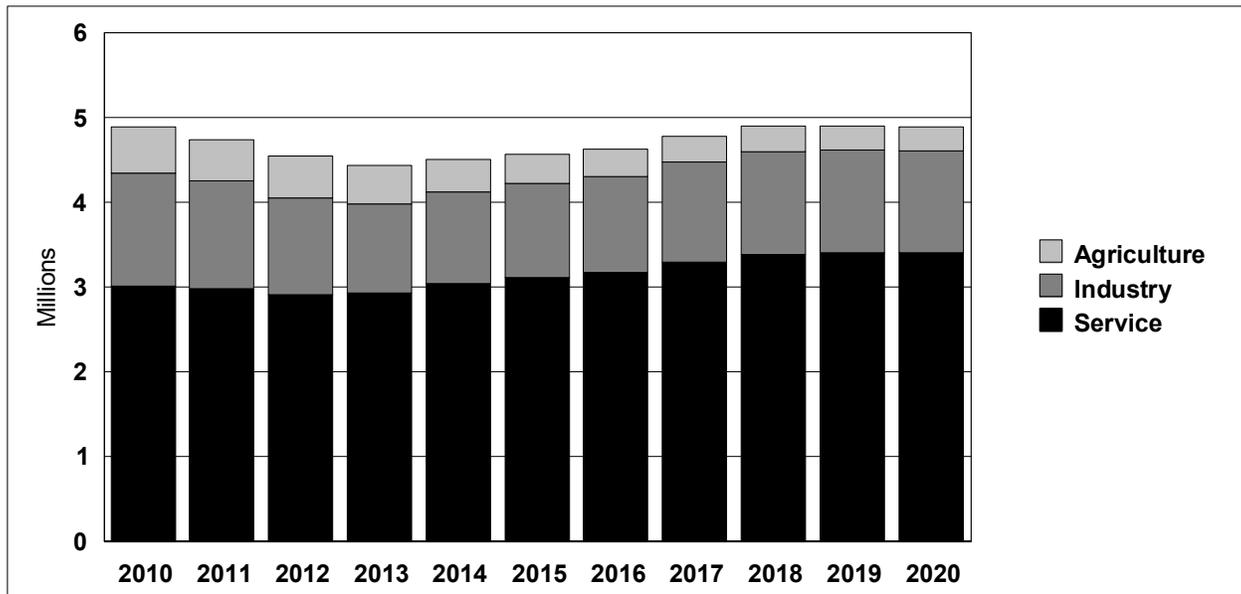


Figure 3
Distribution of jobs by agriculture, industry and service sectors, Portugal, 2010-2020.

Source: World Bank.

SOCIAL AND CULTURAL EXTERNALITIES, FREE RIDERS, AND MARKET EXTERNALITIES

The golden visa program that stimulated foreign investment into P2P housing combined with aggressive marketing helped make Lisbon Europe’s “City Break Destination of the Year” in 2019, followed by Porto in 2020.⁴² Success often has unintended consequences and P2P housing is no exception. In this section, I introduce three dimensions of unintended consequences: social and cultural externalities; free riders;⁴³ and market externalities.

Social and Cultural Externalities

There are positive externalities and negative ones. In the context of P2P housing and in the case of Portugal, P2P housing appears to generate positive externalities in the form of more jobs, lower unemployment, fewer households with incomes at less than 50 percent of the mean, and a nearly \$10 billion increase in international tourism receipts on top of nearly \$6 billion in golden visa investments. In these respects, the promises of P2P housing have been met.

P2P housing can generate negative externalities, however. A key externality occurs when tenants are evicted by landlords (often golden visa holders) when they buy and convert dwellings into P2P housing.⁴⁴ Perhaps the local market can absorb evicted tenants, but maybe not. This leads to externalities associated with how increasing P2P housing supply adversely impacts resident housing costs—these social impacts will be discussed in the context of market externalities below.

There is also the concern that P2P housing invades such areas as historic centers and local attractions,⁴⁵ not to mention established neighborhoods, as they intensify tourism that can lead to overcrowding in residential areas.⁴⁶ P2P housing can lead to tourists intruding into areas beyond those intended for them, leading to

⁴² <https://www.worldtravelawards.com/award-europes-leading-city-break-destination-2019>

⁴³ I am indebted to Dimitrios P. Stergiou and Anna Farmaki for their detailed review of issues summarized here that are presented in Resident perceptions of the impacts of P2P accommodation: Implications for neighbourhoods, *International Journal of Hospitality Management*, 91: <https://doi.org/10.1016/j.ijhm.2019.102411> (2020).

⁴⁴ <https://prospect.org/economy/evictions-conversions-dark-side-airbnb/>

⁴⁵ Javier Gutiérrez, Juan Carlos García-Palomares, Gustavo Romanillos, María Henar Salas-Olmedo, The eruption of Airbnb in tourist cities: Comparing spatial patterns of hotels and peer-to-peer accommodation in Barcelona, *Tourism Management*, 62: 278-291 (2017).

⁴⁶ For an insightful case study, see Dimitri Ioannides, Michael Röslmaier & Egbert van der Zee, Airbnb as an instigator of ‘tourism bubble’ expansion in Utrecht’s Lombok neighbourhood, *Tourism Geographies*, 21:5, 822-840, DOI: [10.1080/14616688.2018.1454505](https://doi.org/10.1080/14616688.2018.1454505) (2019).

conflicts with neighborhood residents,⁴⁷ which even affect their well-being.⁴⁸ This can lead to resentment about P2P housing's role in economic development.⁴⁹ For instance, Figures 4 and 5 show Lisbon neighborhoods in various stages of P2P incursion, with Figure 5 showing apparent hostility by neighbors against P2P housing conversions.

Free Riders

A free rider is a person who gains benefits paid by others. Taxes are a common opportunity for free riders to emerge in the guise of those who do not pay taxes or pay less than others through schemes or illegal avoidance. In the case of P2P housing, a key free rider issue is the extent to which they avoid lodging and other forms of taxes.⁵⁰

In many nations and throughout the U.S., various forms of hotel, motel, and lodging occupancy taxes are assessed. They can be as high as 17.93 percent of the base lodging charge.⁵¹ P2P housing providers attempt to avoid this charge in at least three ways. First, P2P platforms lobby state and local governments to exempt themselves from occupancy taxes.⁵² Second, if those taxes have to be paid, P2P

⁴⁷ See: Alberto Amore, Overtourism: issues, realities and solutions, *Journal of Heritage Tourism*, 15:5, 592-593, DOI: [10.1080/1743873X.2019.1701818](https://doi.org/10.1080/1743873X.2019.1701818) (2020); Ka Shing Cheung & Ling-Hin Li, Understanding visitor-resident relations in overtourism: developing resilience for sustainable tourism, *Journal of Sustainable Tourism*, 27:8, 1197-1216, DOI: [10.1080/09669582.2019.1606815](https://doi.org/10.1080/09669582.2019.1606815) (2019); and Jingjing Yang, Chris Ryan, and Lingyun Zhang, Social conflict in communities impacted by tourism, *Tourism Management*, 35(1), 82-93 (2013).

⁴⁸ Alberto Arias Sans and Alan Quaglieri, Unravelling Airbnb: Urban Perspectives from Barcelona. In *Reinventing the Local in Tourism: Producing, Consuming and Negotiating Place*: 209-228. Channel View Publications., New York (2016).

⁴⁹ Dominyka Paulauskaite, R. Powell, J. A. Coca-Stefaniak and A. Morrison, Living like a local: Authentic tourism experiences and the sharing economy, *International Journal of Tourism Research*, 19: 619-628 (2017).

⁵⁰ See Charles Gottlieb, Residential Short-Term Rentals: Should Local Governments Regulate the 'Industry'? *Planning & Environmental Law*, 65:2, 4-9, DOI: [10.1080/15480755.2013.766496](https://doi.org/10.1080/15480755.2013.766496) (2013) and Jones, S.T., Airbnb's Tax and Tenant Law Violations Headed for Hearings, *San Francisco Bay Guardian*, <http://sfbgarchive.48hills.org/sfbgarchive/2013/03/28/airbnbs-tax-and-tenant-law-violations-headed-hearings/> (2013).

⁵¹ See <https://www.suiteness.com/blog/hotel-occupancy-tax-guide>. The figure is for St. Louis, Missouri.

⁵² See <https://www.wired.com/story/inside-airbnbs-guerrilla-war-against-local-governments/> for the rationale and methods of doing so.

platforms lobby to get them shifted to the hosts themselves.⁵³ Third, even if the host is obligated to pay, there may be incentives for them to not pay or underreport so they pay less.⁵⁴ For instance, if the host pays three percent of the rental to the P2P platform, and if the traveler is charged 10 percent by the P2P platform, and if the local government charges a 12 percent occupancy tax, the host actually ends up paying 25 percent of their gross rental income to fees and taxes.

An often overlooked free rider issue is the effect of P2P housing on local lodging establishments.⁵⁵ Those establishments are more highly regulated than P2P housing, pay taxes based on commercial assessments and rates, often hire (sometimes required to hire) specially trained and unionized labor, and have other obligations that make them more expensive than P2P housing because in many, if not all these respects, P2P housing can avoid or reduce these costs.

Another kind of free rider benefit occurs when impacts of P2P housing are not confronted by P2P owners but instead shifted to the public. This could be in the form of unruly tenants or emergency calls that requires public safety intervention. House fires, flooding, and other forms of damage may result from hosts' skirting local safety regulations to gain financial advantage.

Identifying and mitigating these and related free rider issues falls onto local governments who often end up being sued by P2P platforms.⁵⁶ This is important, nonetheless, because otherwise the costs of free riders are incurred by those who subsidize free rider behavior, which are often renters of permanent housing.⁵⁷

⁵³ For an example of how this is handled, see <https://turbotax.intuit.com/tax-tips/small-business-taxes/who-pays-the-transient-occupancy-tax/L42aPjTCr>

⁵⁴ See <https://www.wired.com/story/inside-airbnbs-guerrilla-war-against-local-governments/>

⁵⁵ Homa Hajibaba and Sara Dolnicar, Substitutable by peer-to-peer accommodation networks? *Annals of Tourism Research*, 66: 185-188 (2017).

⁵⁶ Josh Bivens, Airbnb is getting a free ride, and it's hurting renters, *The Hill*, <https://thehill.com/opinion/finance/429269-airbnb-is-getting-a-free-ride-and-its-hurting-renters>

⁵⁷ For extensive assessment of the costs and benefits of P2P platforms generally and Airbnb in particular, see Josh Bivens, *The economic costs and benefits of Airbnb: No reason for local policymakers to let Airbnb bypass tax or regulatory obligations*, Economic Policy Institute (2019).



Figure 4

Homes occupied by Lisbon residents with drying laundry. Many residential buildings along this street have been renovated by golden visa investors for P2P housing.

Credit: Arthur C. Nelson

Note: Insofar as hanging out laundry, one may not expect most travelers renting P2P housing to “live like a local”.



Figure 5

The buildings with boarded windows are apparently slated for conversion into P2P housing after they were purchased and tenants evicted apparently under protest based on the placard at the bottom right

Credit: Arthur C. Nelson

Note: The overhead display is for a neighborhood celebration that may be abandoned when P2P housing units outnumber those occupied by locals.

Market Externalities

A common concern is the effect of P2P housing on the cost and supply of housing for local residents.⁵⁸ There are two supply side dynamics at work. First, as landlords shift their rental stock from long-term tenants to P2P housing options, the supply of longer-term housing falls. Second, while one might assume that declining supply of a commodity in the face of demand would stimulate more production, this does not seem to be the case.⁵⁹ This is borne out in research by Kyle Barron, Edward Kung, and Davide Proserpio, which is paraphrased here:⁶⁰

We assess the impact of home-sharing on residential house prices and rents. Using a dataset of Airbnb listings from the entire United States and an instrumental variables estimation strategy, we show that Airbnb has a positive impact on house prices and rents.

(W)e ... test whether the Airbnb effect is due to the reallocation of the housing supply. (W)e find that, while the total supply of housing is not affected by the entry of Airbnb, Airbnb listings increase the supply of short-term rental units and decrease the supply of long-term rental units.

The price effect appears to be borne out in Portugal as well, according to a case study by Sofia F. Franco, Carlos Daniel Santos and Rafael Longo:⁶¹

We estimate an overall increase in property values of 34% and 10.9% for rents due to the short-term lease regulatory reform. We also find that these effects are particularly localized to the historical centers and areas attractive to tourists in the cities of Lisbon and Porto.

⁵⁸ For a review of U.S. concerns in an already expensive housing market, see Dayne Lee, *How Airbnb Short-Term Rentals Exacerbate Los Angeles's Affordable Housing Crisis: Analysis and Policy Recommendations*, *Harvard Law and Policy Review*, 10: 229-253 (2016).

⁵⁹ Id. Bivens, *The economic costs and benefits of Airbnb*.

⁶⁰ Kyle Barron, Edward Kung, Davide Proserpio, *The Effect of Home-Sharing on House Prices and Rents: Evidence from Airbnb* (March 4, 2020), available at SSRN: <https://ssrn.com/abstract=3006832>.

⁶¹ Sofia F. Franco, Carlos Daniel Santos and Rafael Longo, *The Impact of Airbnb on Residential Property Values and Rents: Evidence from Portugal*, Nova School of Business and Economics (2019).

The regulatory approach to which the authors refer is a change in national policy in 2014 to simplify the process for converting housing units into short-term rentals.⁶² In Lisbon, for instance, this came on the heels of abandoning rent controls in 2012.⁶³

These two dynamics—the shifting of longer-term housing to P2P options but without replacement—leads, naturally, to increasing housing prices and rents borne by the local market.⁶⁴ And while one would expect that rising home prices and rents would stimulate the production of new housing for permanent residents, this does not seem to be the case. For example, Hayley Warren and Henrique Almeida in their case study of Lisbon⁶⁵ show that despite falling unemployment and rising incomes, wages have not kept pace with housing costs. They find that between 2016 and 2019, property prices rose more than 60 percent while wages increased less than 10 percent. Indeed, in parts of Lisbon, all new housing is for P2P use. This can push workers to the outer areas of the city or its suburbs.

P2P housing can also lead to gentrification in which the socioeconomic composition of a community changes from lower to higher income over time.⁶⁶ The process might begin with a small number of P2P conversions that evict some residents who leave the area. As the supply of permanent housing falls, rents and prices rise. Lower income renters are priced out of their units while homeowners may sell to high-income buyers. Over time, the neighborhood is gentrified.⁶⁷

There is another impact that does not appear in the P2P housing literature, but rather in the workforce housing literature. Service, custodial and domestic workers are needed to clean and prepare rooms for travelers, often providing hotel-like services. These workers are usually at the lower end of the pay scale and are often priced out of local housing markets. With rising rents and prices along with

⁶² *Decreto-Lei no. 128/2014*.

⁶³ Id., Henrique Almeida, *Europe's Hottest Property Market Is Getting Too Hot for Some*.

⁶⁴ For an overview, see Gary Barker, *The Airbnb Effect On Housing And Rent*, <https://www.forbes.com/sites/garybarker/2020/02/21/the-airbnb-effect-on-housing-and-rent/?sh=4e0de9ff2226>. For an interesting case study, see Mark Merante and Keren Mertens Horn, *Is Home Sharing Driving Up Rents? Evidence from Airbnb in Boston*, University of Massachusetts Boston Department of Economics Working Paper no. 2016-03 (2016).

⁶⁵ Hayley Warren and Henrique Almeida, *Airbnb Hosts Resist Lisbon's Plan to Free Up Housing*, <https://www.bloomberg.com/graphics/2020-airbnb-short-let-reforms-lisbon/>

⁶⁶ For a review of market processes leading to gentrification, see Peter Marcuse, *Gentrification, abandonment, and displacement: Connections, causes, and policy responses in New York City*, *Journal of Urban and Contemporary Law* 28: 195-240 (1985).

⁶⁷ See Agustín Cocola Gant, *Holiday Rentals: The New Gentrification Battlefront*, *Sociological Research Online*, 21(3): 10 <http://www.socresonline.org.uk/21/3/10.html>.

stagnant, if not falling, supply of housing for local workers, the need for “workforce housing”⁶⁸ increases.⁶⁹

Approaches to mitigate the impacts of P2P housing are introduced in the next section.

CONVENTIONAL APPROACHES TO MITIGATING P2P HOUSING IMPACTS

The explosion of the P2P housing industry caught planners and policymakers off guard. But this does not mean they are powerless to mitigate its adverse impacts. A common response has been to employ what I would call “conventional” approaches to mitigating P2P housing impacts. They are comprised chiefly of land use controls and facilities management.

Land Use Controls

Land use controls implement planning policies often by regulating how land is used through a permitting process. They are not so much mitigating approaches as ways to manage various forms of impact.

In the U.S., land use controls are used to advance the public health, safety and general welfare.⁷⁰ Planning tools must be based on a policy rationale that is tied to one or more of these tenets. Shirley Nieuwland and Rianne van Melik surveyed several European and U.S. cities to identify the rationale they used to justify regulating P2P housing.⁷¹ A summary of their analysis is shown in Table 3. Once the rationale are established, they can be implemented through discretionary review processes by local government such as land use plan and zone changes, conditional use permits, variances, and special use permits, among others.⁷² Permitting based

⁶⁸ Workforce housing is a subset of affordable housing needed to house members of the local workforce but who are unable to acquire market rate housing that is affordable given their income.

⁶⁹ This characterization is adapted generally from <https://ced.sog.unc.edu/what-exactly-is-workforce-housing-and-why-is-it-important/>

⁷⁰ Julian Conrad Juergensmeyer, Thomas E. Roberts, Patricia E. Salkin, and Ryan Max Rowberry, *Land Use Planning and Development Regulation Law*, West (2018).

⁷¹ Shirley Nieuwland and Rianne van Melik, Regulating Airbnb: how cities deal with perceived negative externalities of short-term rentals, *Current Issues in Tourism*, 23(7): 811-825, DOI: 10.1080/13683500.2018.1504899 (2020)

⁷² For a definitive guide to relating P2P housing controls to land use controls through planning and the planning process, see Julian Conrad Juergensmeyer, Thomas E. Roberts, Patricia E. Salkin, and Ryan Max Rowberry, *Land Use Planning and Development Regulation Law*, West (2018).

on these procedures can be used to control the location, size, and other features of P2P housing.

Going deeper into the nature of these controls is Jamilla Jefferson-Jones, who writes that P2P housing approvals fall into five categories: prohibitions; quantitative restrictions; location controls; operating restrictions; and licensing that can incorporate some or all of the first four.⁷³

In the context of P2P housing, prohibitions can be community-wide or in targeted areas such as historically or culturally significant areas. It is important to clearly identify these areas on a map with zoning restrictions implementing the policy.

Quantitative restrictions can have quite a range. They can include limitations on the number of P2P units within the structure. This can include a requirement that owners occupy the primary structure, a requirement akin to accessory dwelling unit ordinances.⁷⁴ Instead of a numerical cap, some communities establish ratios of P2P housing units to total housing units in an area. But both approaches can create a monopoly among those owners who get their P2P units approved before anyone else, and then seek to maintain their monopoly over time.

Location controls often include banning or restricting P2P housing to protect historically or culturally significant areas. This is a common rationale based on numerous studies.⁷⁵ These location controls can include restricting the distance of P2P housing from certain areas or sites, or even the seasonal use of P2P housing.

Perhaps the largest share of concerns about P2P housing is the behavior of travelers and their interaction with the neighborhood or community.⁷⁶ These may be managed by restricting the number of P2P units in a structure or even the number

⁷³ Jamilla Jefferson-Jones, *Airbnb and the housing segment of the modern sharing economy: Are short-term rental restrictions an unconstitutional taking*, *Hastings Constitutional Law Quarterly*, 42(3), 557–575 (2014). I am adapting terms and concepts used in this article for my purposes.

⁷⁴ An accessory dwelling unit (ADU) is a smaller, independent residential dwelling unit located on the same lot as a primary home or a secondary, often “tiny” home on a side or rear yard. For a comprehensive review of what accessory dwelling units are, under what conditions they are allowed, how they are regulated and the usual requirement that owners live in at least one of the units to be rented, among other conditions, see <https://www.planning.org/knowledgebase/accessorydwellings/>.

⁷⁵ See Salar Kuhzady, Siamak Seyfi and Luc Béal (2020): *Peer-to-peer (P2P) accommodation in the sharing economy*.

⁷⁶ For a reasonably thorough review of these conflicts, see to Dimitrios P. Stergiou and Anna Farmaki, *Resident perceptions of the impacts of P2P accommodation*.

of people occupying it; the length of stay; how parking is managed; and potentially even the nature of activities in the unit (such as noise).

Licensing is often used to manage many or all of the above conditions. Licensing can also generate revenue needed by local government to manage P2P programs.⁷⁷ Licensing may further allow periodic inspections to enforce safety and health regulations. Naturally, the power to license an establishment carries with it the power to revoke it and suspend operations. Licensing can include a process for neighbors to lodge complaints that may lead to revocation.

With respect to licensing and associated controls, Franco, Santos and Longo note:⁷⁸

Some cities have laws that restrict the ability to host paying guests for short periods (e.g., Amsterdam, New York, Paris, San Francisco). In many other cities, the host must register (e.g., Lisbon), get a permit (e.g., Barcelona, Berlin, Paris, and San Francisco), or obtain a license (e.g., Cape Elizabeth) before the host lists the property or accepts guests. Certain types of short-term bookings may be prohibited altogether (e.g., Berlin and New York) and in other cases the measures include paying a rental tax (e.g., Amsterdam and San Francisco). Local governments vary greatly in how they enforce these laws, but penalties may include fines or other enforcement.

A survey of land use approaches used in the U.S. to manage P2P housing shows the range of possibilities. It was conducted by Jacqueline O. Kaufman, Jason A. Klein and Dwight Merriam:⁷⁹

- Limits on the number of days a property may be rented during the year;
- Caps on the duration of stay;
- Density controls;
- Special permit requirements;
- Parking requirements;
- Neighbor notifications;
- Owner-occupancy requirements; and

⁷⁷ Some states may restrict the calculation and use of license fees for just managing P2P policies.

⁷⁸ Id. Franco, Santos and Longo, *The Impact of Airbnb on Residential Property Values and Rents*.

⁷⁹ Jacqueline O. Kaufman, Jason A. Klein and Dwight Merriam, *Proliferation of Short Term Rentals and Implications for Local Zoning Regulations*, <http://www.rc.com/upload/2017-11-29-CBA-Short-Term-Rentals.pdf> (2017).

- Distinguishing between single-family, multifamily, and mixed-use neighborhoods.⁸⁰

There are also management controls which are reviewed next.

Management Controls

Denver, Colorado provides a useful case study in the management of P2P housing, which it calls short-term rentals (STR).⁸¹ Given its context, I will use STR instead of P2P. Denver licenses STR properties, but the licensing itself is guided by zoning conditions that are useful to present here:

Section 11.12.7 DEFINITIONS OF USES ACCESSORY TO PRIMARY RESIDENTIAL USES

11.12.7.7 Short-term Rental The provision of temporary guest housing to non-residents, for compensation, by the person or persons maintaining the primary dwelling unit use as their primary residence. The length of stay per guest visit is less than 30 days. Short-term Rental does not include rental of a dwelling unit for meetings such as luncheons, banquets, parties, weddings, fund raisers, or other similar gatherings for direct or indirect compensation.

Section 11.8.10 SHORT-TERM RENTAL 11.8.10.1 All Zone Districts In all zone districts, where permitted with limitations, a Short-term Rental:

- A. Shall be clearly incidental and customary to and commonly associated with the operation of the primary residential household living use.
- B. Shall be operated by the person or persons maintaining the dwelling unit use as their primary residence. For purposes of this provision, “person or persons” shall not include any corporation, partnership, firm, association, joint venture, or other similar legal entity. ...

⁸⁰ This list was assembled by Julia Singer Bansal, *Regulating Airbnb Rentals through Zoning in Connecticut*, Connecticut General Assembly, Office of Legislative Research (2018).

⁸¹ I use information from the city’s licensing website, <https://www.denvergov.org/Government/Departments/Business-Licensing/Business-Licenses/Short-Term-Rentals>

- C. Shall not include rentals where the length of stay per guest visit is 30 or more days.
- D. Shall not be located in mobile homes, recreational vehicles, or travel trailers.

- F. Shall not have any employees or regular assistants not residing in the primary or accessory dwelling unit located on the subject zone lot.
- G. Shall not include simultaneous rental to more than one party under separate contracts.

The zoning provisions are implemented through a licensing program.

In Denver, STRs are essentially accessory dwelling units because the STR must be within the host's primary residence.⁸²

The city's website provides:⁸³

(A)n STR can include a single bedroom, entire home, or multiple bedrooms within a home. However, STR hosts may not rent simultaneously to more than one party under separate contracts. If multiple rooms are available, they must be rented together by the same party or be rented one at a time with no overlap between rentals.

It would seem that the implicit assumption is that owner-occupied STR units will reasonably guard against unruly behavior by renters.

Subject to the conditions above, STRs appear to be allowable uses in all residential zones.⁸⁴ For instance, the owner of a duplex can have an STR in the same unit as the owner's, but if the owner owns both duplex units, the STR is allowed only as part of the duplex occupied by the owner and if the owner is absentee, an STR is not allowed in either one.⁸⁵

⁸² <https://www.denvergov.org/Government/Departments/Business-Licensing/Business-Licenses/Short-Term-Rentals/Short-Term-Rentals-Laws-Rules-Regulations>

⁸³ <https://www.denvergov.org/Government/Departments/Business-Licensing/Business-Licenses/Short-Term-Rentals/Short-Term-Rental-FAQ>

⁸⁴ <https://www.denvergov.org/Government/Departments/Community-Planning-and-Development/Denver-Zoning-Code>

⁸⁵ <https://www.denvergov.org/Government/Departments/Business-Licensing/Business-Licenses/Short-Term-Rentals/Short-Term-Rental-FAQ>

The license itself requires an initial fee plus annual renewal fees. The license allows the city to collect 10.75 percent tax of the gross rental income.⁸⁶ Penalties for violating STR conditions include license revocation and zoning code enforcement proceedings, among others.

Neither land use nor management/licensing controls really address the housing impacts of P2P housing. They are, at best, management approaches to address location, numerical, and nuisance impacts but they do little to really solve the housing impacts. An economic approach to doing so is introduced next.

RATIONAL NEXUS P2P HOUSING IMPACT MITIGATION

Expanding P2P housing supply can impact housing markets adversely. Although there are a suite of conventional tools available to help offset some of the adverse impacts, on the whole they are not economic approaches. That is to say, they are not calibrated to mitigate the economic impact of P2P housing on the economy. The underlying presumption by both policymakers and the P2P housing industry is that the benefits of lower unemployment, more investment, and higher wages will more than offset the costs. This may not be the case, based on an analysis by Josh Bivens of the Economic Policy Institute. In the context of Airbnb, but applied to all P2P platforms, Bivens argues:⁸⁷

The potential benefit of increased tourism supporting city economies may be smaller than commonly advertised and indeed the economic costs likely outweigh the benefits.

- The shift from traditional hotels to P2P lodging leads to less-reliable tax payments to cities. One reason is that although P2P housing is clearly a business competing with hotel lodging, it is not subject to the same taxation regime as hotels.
- P2P housing raises local housing costs.

Some tools exist to mitigate economic impacts. For instance, tax structures can be adjusted to level the playing field between hotels and P2P housing. Housing is a different matter, however.

The focus of this section is to introduce a way in which the impacts of P2P housing may be mitigated through an economic approach. I first introduce the economic theory of mitigation and then outline an approach to mitigate P2P housing impacts.

⁸⁶ Id.

⁸⁷ This list is adapted from Bivens, *The economic costs and benefits of Airbnb*.

Table 3
Comparative Planning and Public Policy Rationale to Control P2P Housing as Applied to Selected European and U.S. Cities

Policy Dimension and Tool	Selected European Cities					Selected U.S. Cities		
	Amsterdam	Barcelona	Berlin	London	Paris	Anaheim	Denver	San Francisco
<i>Housing</i>								
Protect Affordable Housing			X				X	X
Protect Housing Supply		X		X				X
Prevent Commercial STRs			X	X				
<i>Neighborhood</i>								
Preserve Residential Living and Neighborhoods	X				X		X	X
Protect Public Health and Welfare						X		
Address Nuisances	X					X		
Ease Tourism Pressures		X				X		
Preserve Quality of Life		X				X		
Preserve Balance of Uses		X			X			

Table 3
Comparative Planning and Public Policy Rationale to Control P2P Housing as Applied to Selected European and U.S. Cities—continued

Policy Dimension and Tool	Selected European Cities					Selected U.S. Cities		
	Amsterdam	Barcelona	Berlin	London	Paris	Anaheim	Denver	San Francisco
<i>Other</i>								
Economic Development/Increased Taxation	X							
Public Safety (e.g., traffic)	X					X		
Create Level Playing Field with Hotels	X						X	
Enforcement	X							

Source: Adapted from Nieuwland and van Melik.

P2P Housing Impact Mitigation Theory

Every land use change has impacts. If the change creates more development serving more people, it will increase demand for such public facilities as water, wastewater, roads, public safety, parks, recreation and so forth. Who pays? Historically, it has been local government and their taxpayers and ratepayers. The problem is that governments are increasingly shifting the burden of paying for these impacts from taxpayers/ratepayers to the new development itself. Reasons for this include: declining federal and state aid to local governments; increasing federal and state unfunded mandates; rising service demands as the public wants more and better services; the political ease with which to narrow the funding burden to a smaller base; increasing costs infrastructure; and sustained taxpayer revolts against new taxes or increases in existing ones.⁸⁸

From an economic perspective, the challenge is to achieve efficiency so that all costs and benefits are equalized. Consider, for example, the top half of Figure 6. The vertical axis is the price of a unit of housing (**P**) while the horizontal axis is the quantity of housing produced (**Q**). The demand (**D**) for housing decreases as cost increases and increases as cost decreases. To the home builder, as price increases, more homes can be built, but as the price rises, fewer people can buy them. Given the home builder's cost of production (**Private Supply Cost**), equilibrium price is reached at **P_P** which means the quantity of homes built is at **Q_P**. Let us assume that P2P housing is the type of housing at issue.

Suppose there are costs to housing production that are not reflected in the price. Increases in P2P housing may result in tenants being evicted and if there is no place they can afford to rent, they become homeless. Assuming society cares—elected policymakers may not—this would be a negative externality. One solution is to increase the supply of housing for them, but who pays for the difference between the cost of that new supply and what they can afford? One approach would be to determine the nexus between the increases in P2P housing supply and the subsidy needed to replenish housing supply for those who were evicted. This might be in the form of a special fee charged to new P2P housing units, which has the effect of increasing P2P housing prices.

The bottom half of Figure 6 shows what happens.

⁸⁸ See Arthur C. Nelson, *Development Impact Fees: The Next Generation*, 26 *The Urban Lawyer*, 541 (1994); Alan A. Altshuler and Jose A. Gomez-Ibanez, *Regulation for Revenue: The Political Economic of Land Use Exactions* 25-26 (1993); and Alan C. Weinstein, *The Ohio Supreme Court's Perverse Stance on Development Impact Fees and What to Do About It*, 60 *Clev. St. L. Rev.* 655 (2012).

A new charge is added to the cost of P2P housing production called **Social Mitigation Cost**. This is a charge equivalent to mitigating the impact of expanded P2P housing supply that results in reduced housing supply or increased housing cost incurred to society as a whole. The charge is used to help expand the supply of housing to those who lost housing or saw their rents increased without commensurate wage increases attributable to expansion of P2P housing. In effect, free riders who do not pay the costs of their impact on society are now charged for it.

There are two outcomes. First, the production price of P2P housing increases from P_P to P_M because of the mitigation charge. The result is that the quantity of P2P housing units produced is reduced from Q_P to Q_M . Second, the supply of housing is increased for those who would otherwise be made homeless or see their rents rise because of P2P housing supply increases.⁸⁹ Thus, while private housing providers pay the mitigation fees to increase housing supply, they are also the ones who receive subsidies to do so, which arguably makes the private housing supply industry better off after mitigation and (hopefully) no worse off. Indeed, one could imagine that P2P housing suppliers can also be suppliers of new housing to meet the needs of those impacted by P2P housing adversely.

The “losers” are those P2P housing providers who do not enter the P2P market because they cannot afford to pay the mitigation charge, meaning that they cannot afford to compensate society for their impact on it. This is a socially efficient outcome. Principles guiding this economic solution to P2P housing impacts are outlined next.

⁸⁹ What I do not show is a companion figure that would look very much like Figure 6 but changed to reflect the perspective of housing that is vulnerable to P2P housing supply expansion. The key differences are that the vulnerable housing supply before mitigation would be where Q_M is on Figure 6, which increases to Q_P after mitigation as private housing suppliers increase production because of the subsidies financed from mitigation.

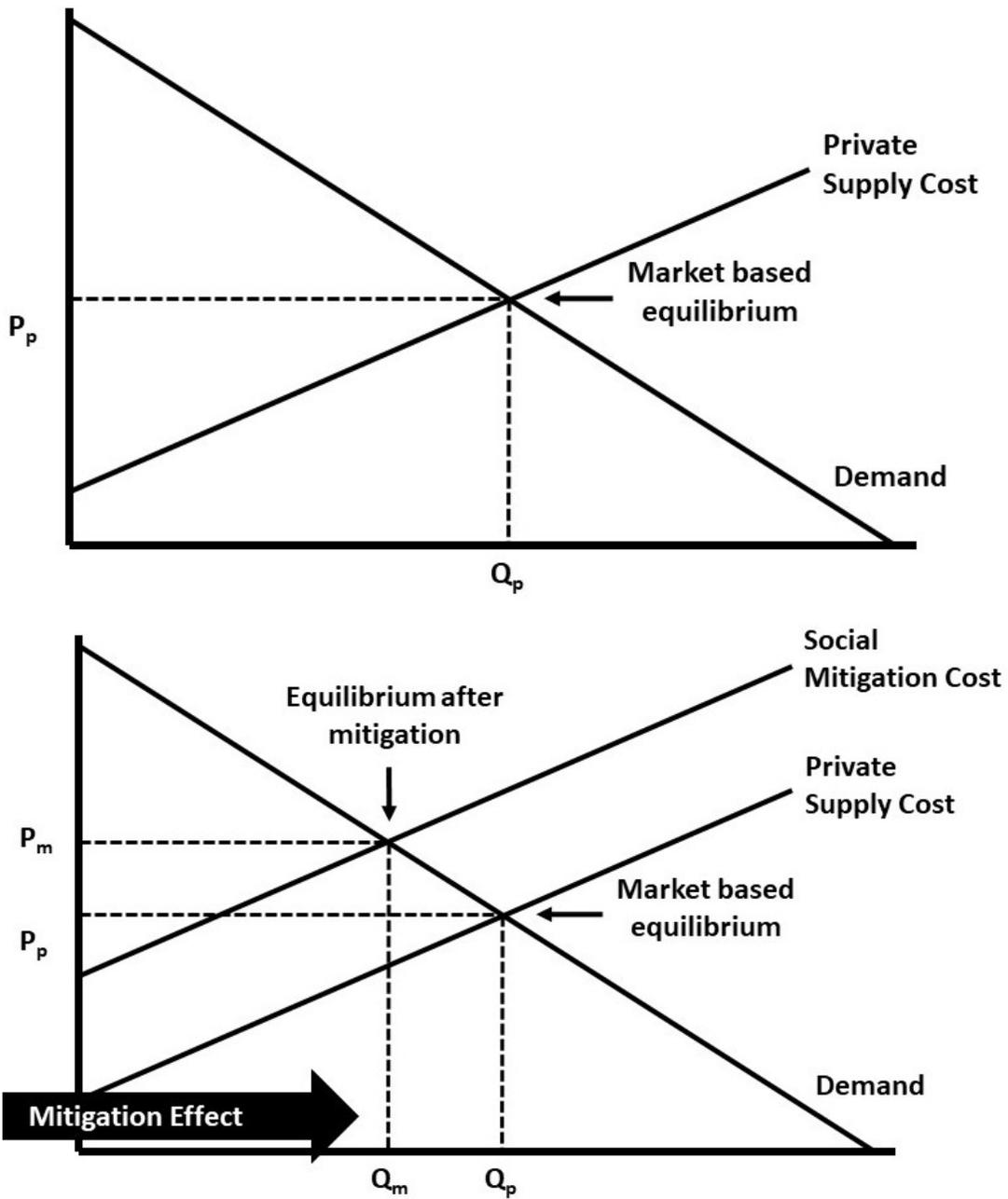


Figure 6
Mitigating social costs of P2P housing may reduce its supply to a socially efficient level.
 See text for explanation.

Outline of a Rational Nexus P2P Housing Impact Mitigation Policy

In the U.S., housing impact mitigation comes mostly in four types: (1) ad hoc conditions of approval associated with discretionary approvals; (2) voluntary and (3) mandatory inclusionary zoning/inclusionary housing; and (4) linkage fees. Based on new thinking by James C. Nicholas and Julian Conrad Juergensmeyer,⁹⁰ I will add a fifth.

Ad hoc exactions occur through a process of negotiation between a developer and a permitting authority usually triggered by a discretionary approval process. Until recent years, there was considerable discretion accorded by courts in how far local governments could go in their exactions as a condition of approval, but that has changed dramatically since *Nollan v. California Coastal Commission* in 1987.⁹¹ Although exactions remain allowed, they cannot exceed the impact of development.⁹² This is not news, however, as it is the standard fashioned by the Florida courts years earlier, leading to the “rational nexus” doctrine that supports development impact fees and linkage fees.⁹³ With my colleagues James C. Nicholas and Julian Conrad Juergensmeyer, we argue that the term “exaction” is now of little utility in the U.S. because the exaction cannot exceed that which is needed to *mitigate* adverse development impacts.⁹⁴ This perspective is seconded by Christina M. Martin of the Pacific Legal Foundation, who was the attorney of record before the Supreme Court in both *Nollan v. California Coastal Commission* and *Koontz v. St. Johns River Water Management District*.⁹⁵

⁹⁰ James Nicholas and Julian Juergensmeyer, A Rational Nexus Approach to Workforce Housing Land Development Conditions, *University of Illinois Chicago John Marshall Law Review*, 52: 647-675 (2019).

⁹¹ There is much to be said about the evolution of American land use exaction law but to economize I refer readers to James W. Ely, David Callies and the Future of Land Use Regulations (January 25, 2018). *Brigham-Kanner Property Rights Conference Journal*, Vol. 7, Vanderbilt Law Research Paper No. 18-05, Available at SSRN: <https://ssrn.com/abstract=3109942>. See also Nicholas and Juergensmeyer.

⁹² Christina M. Martin, Nollan, Dolan and Koontz – Oh My! The Exactions Trilogy Requires Developers to Cover the Full Costs of Their Projects, But No More, *Willamette Law Review* 51: 39-72 (2014)

⁹³ See James C. Nicholas, Arthur C. Nelson and Julian C. Juergensmeyer, *A Practitioner’s Guide to Development Impact Fees*, American Planning Association (1991).

⁹⁴ See Arthur C. Nelson, James C. Nicholas and Julian Conrad Juergensmeyer, *Impact Fees: Principles and Practice of Proportionate-Share Development Fees*, American Planning Association (2009).

⁹⁵ Id. Martin, Nollan, Dolan and Koontz – Oh My! at 39.

(T)he government may legitimately require landowners to carry their own weight, *mitigating* their development plans so that they do not impose costs on their community. But the government cannot use the permitting process to coerce landowners into giving up more. (Emphasis added.)

“Mitigation” is thus the technically correct term going forward.

Voluntary inclusionary housing programs are often incentives whereby a developer can increase density of a residential project if all or part of the increment is set aside for lower income households.⁹⁶ Mandatory inclusionary housing is where local zoning codes require certain kinds of development in certain locations (or jurisdiction-wide) to allocate a share of housing for lower income households.⁹⁷

Linkage fees are a variant of dual rational nexus impact fees. Impact fees are one-time payments by new development to pay for its proportionate share of the cost to provide new facilities or expand existing facilities to mitigate its impact.⁹⁸ For instance, if local plans call for five acres of parks for every 1,000 residents and each acre costs \$100,000, and further if each new home averages 2.5 persons, the average impact fee would be \$1,250 per home.⁹⁹ Impact fees are net of new revenue generated by new development for the same purpose; this prevents new development from being double charged.¹⁰⁰ “Dual” means that the fees paid by new development (to mitigate its impact) are spent for facilities reasonably benefiting it.¹⁰¹ Impact fees are usually limited to new or expanded capital investments and not operations and maintenance, repair, rehabilitation and the like.¹⁰²

Where impact fees are used for facilities, linkage fees are used to advance social outcomes such as affordable housing. They are calculated the same way. For instance, if a new office building generates 100 new low paying jobs, linkage fees

⁹⁶ See Rick Jacobus, *Inclusionary Housing: Creating and Maintaining Equitable Communities*, Lincoln Institute of Land Policy (2015).

⁹⁷ Id., Jacobus, *Inclusionary Housing*.

⁹⁸ See Nelson, Nicholas and Juergensmeyer, *Impact Fees*.

⁹⁹ The formula in this case would be \$100,000/acre divided by 1,000 persons equals \$500 per person times an average of 2.5 person per housing unit.

¹⁰⁰ Id Nelson, Nicholas and Juergensmeyer, *Impact Fees*.

¹⁰¹ Id Nelson, Nicholas and Juergensmeyer, *Impact Fees*.

¹⁰² Id Nelson, Nicholas and Juergensmeyer, *Impact Fees*. However, where a facility is beyond its useful life and essentially has no remaining capacity, impact fees may be used to rehabilitate it to create new capacity. State enabling acts may restrict this use of impact fees.

can be charged to help subsidize housing needed by these workers.¹⁰³ Linkage fees are usually used in high-cost markets where housing affordability is challenged.

Impact fees and their variant linkage fees help finance capital improvement plans that themselves help implement comprehensive plans. Those improvements are often known as “systemwide” improvements since they serve all development such as a water or wastewater treatment plant.¹⁰⁴ Impact fees are not used to finance “project” improvements that serve principally the individual development such as utility lines within a subdivision.¹⁰⁵

Nicholas and Juergensmeyer present a fifth approach that may be useful to help mitigate P2P housing impacts more broadly than impact fees or linkage fees while surviving constitutional scrutiny in the U.S. context. Their article, “A Rational Nexus Approach to Workforce Housing Land Development Conditions”,¹⁰⁶ guides this discussion. Indeed, one need only substitute “P2P housing impact mitigation” for “workforce housing” though with three applications instead of one, as will be outlined.

The method presented by Nicholas and Juergensmeyer is based on studies pioneered by Craig Richardson of Clarion Associates and James C. Nicholas for workforce housing programs in Colorado, Florida, and Wyoming. Of interest here, it determines the amount of workforce housing that new residential development must produce to provide an adequate supply of affordable workforce housing.¹⁰⁷ The application here is the extent to which P2P housing reduces the supply of existing housing for residents, either by reducing supply altogether or increasing rents above the level deemed by policy to be acceptable to displaced or rent-impacted households. Displaced households would be those evicted perhaps with no housing options in the jurisdiction though they may find housing outside it, or double up, or go homeless. Rent-impacted households would be those who are evicted and find housing within the jurisdiction, though at a higher price, or other households whose rents increase because the overall supply of housing for residents

¹⁰³ See William W. Merrill III and Robert K. Lincoln, Linkage Fees and Fair Share Regulations: Law and Method, *The Urban Lawyer*, 25(2): 223-308.

¹⁰⁴ Id Nelson, Nicholas and Juergensmeyer, *Impact Fees*.

¹⁰⁵ For example, Georgia’s Development Impact Fees Act at § 36-71-2(20) provides “System improvements” means capital improvements that are public facilities and are designed to provide service to the community at large, in contrast to “project improvements.” It goes on to provide at § 36-71-2(15) that “Project improvements” means site improvements and facilities that are planned and designed to provide service for a particular development project and that are necessary for the use and convenience of the occupants or users of the project and are not system improvements.

¹⁰⁶ Id. Nicholas and Juergensmeyer, Workforce Housing.

¹⁰⁷ Id. Nicholas and Juergensmeyer, Workforce Housing at 648.

has been reduced because of P2P housing. Rent-impacted households can include those in the workforce serving P2P housing.

From an economic perspective, the objective is for P2P housing to internalize its externalities on the housing market to correct for the following three outcomes. The first addresses removal of existing housing that the market may not replace. In this case, put bluntly, if P2P conversions reduce housing because the market will not replace the lost units for permanent residents, P2P housing must do so on its own. If it cannot afford to internalize its externality impacts on the housing market, the P2P conversion would not occur. But if the revenues from P2P conversion are sufficient to cover the cost of conversion plus generate a reasonable return to the owner, the conversion would occur. This is efficient. A direct solution would be where the P2P housing owners themselves build, own and maintain the replacement rental units. Alternatively, the P2P housing owners could pay a government agency a fee in lieu of the cost for the same purpose.¹⁰⁸

The second is where the local market has replacement housing available for displaced households but at higher rents. Conceptually, the difference between the pre-eviction and post-eviction rents would be offset through periodic local assessments perhaps through licensing or permitting fees. Alternatively, the difference between market rents paid by target households before and after P2P housing additions may be capitalized into a fee that is used to create a kind of endowment that is then used to subsidize rents paid by displaced households.

The third is where the rise of the P2P housing industry leads to more jobs, which is a good thing, but perhaps the local housing market is unable to generate housing that is affordable to them. The solution may be the very approach reported by Nicholas and Juergensmeyer in the context of workforce housing.

When adapted to mitigate the impacts of P2P housing and based on the approach advanced by Richardson and Clarion Associates, Nicholas and Juergensmeyer show implicitly how to calculate the nature of the exact need for replacement housing, housing subsidies, and workforce housing attributable to increases in the supply of P2P housing. It is consistent with the nexus/proportionality test required by *Nollan/Dolan* as well as the dual rational nexus test.¹⁰⁹

¹⁰⁸ The public agency need not build, own, and operate this housing on its own, but rather contract with private firms or organizations to do so. Habitat for Humanity would be a possibility in some U.S. communities.

¹⁰⁹ Id. Nicholas and Juergensmeyer, *Workforce Housing* at 675.

TOWARD A RATIONAL NEXUS PEER-TO-PEER HOUSING IMPACT MITIGATION STRATEGY

Traveler lodging has been around probably since humans created tribes and certainly since they invented civilization. For thousands of years, housing travelers has been an enterprise limited to specific areas of the community with benign impacts on neighborhoods. The internet and the rise of peer-to-peer, short-term housing has changed all that. P2P housing clearly impacts neighborhoods and creates market externalities. While communities attempt to address them through regulatory and management schemes, no effort of which I am aware uses economic techniques that force P2P housing to internalize its externalities. Perhaps no one has thought about doing so. In any event, as P2P housing demand is projected to grow several fold by the end of this decade, it may be time to craft a rational nexus P2P housing impact mitigation strategy.