OPEN FOR FEEDBACK

Exploring interventions to support the peer-to-peer accommodation sector and the role of data

Open Data Institute

Contents

About

This report has been researched and produced by the Open Data Institute, and published in March 2018. Its authors were Leonard Mack, Gillian Whitworth, Lucia Chauvet, Tom Sasse, Jack Hardinges and Peter Wells. If you want to share feedback by email or would like to get in touch, contact the peer-to-peer accommodation project lead Isabelle Champion at isabelle@theodi.org.

To share feedback in the comments, highlight the relevant piece of text and click the 'Add a comment' icon on the right-hand side of the page.

How can it be improved? We welcome suggestions from the community in the comments.

Executive summary

Many people use peer-to-peer accommodation services to decide where to stay, whether to let a room or how to build a business. To make those decisions, people need data.

Peer-to-peer accommodation services and marketplaces are emerging across a wide range of sectors and geographical areas. Each day, many consumers, businesses and communities use them to make decisions such as where to stay when on holiday, whether to use a service to let a spare room or how to build a business in popular areas. To make those decisions, people need data.

The Open Data Institute is investigating how data can improve the peer-to-peer accommodation market to support businesses and communities, and improve the experience of consumers and users.

Our starting point was to research and understand how national and local governments have sought to manage the impact of peer-to-peer letting; the issues they have sought to address; and the tools they have chosen to use. This report summarises the outputs and conclusions from that preparatory research.

Data must be an inspiration and a resource for innovation. It can enable businesses, startups, governments, individuals and communities to create more efficient and effective services and products, fuelling economic growth and productivity. Interventions by local and national governments can help make this happen.

We assessed 35 different approaches to intervention in the peer-to-peer accommodation sector from around the world and considered the following questions:

1. Which approaches are implemented or discussed?
2. What aspects of peer-to-peer accommodation are addressed and how?
3. What role does data play in supporting the different approaches?

We learnt that most interventions by local or national governments used traditional top-down models.

The interventions had four main goals:

- Prioritising long-term housing (23 cases)
- Tax collection (14 cases, mostly concerned with tourist/city taxes)
- Improving service quality (seven cases)
- Improving health and safety (five cases)

We identified three key areas of regulation:

- host behaviour
- asset/property
- peer-to-peer accommodation platform operators

We found that platform operators, hosts and public authorities were carrying out data collection. We found that data was being passed from hosts to platform operators and then shared with public authorities; this occurred for both personal and non-personal data. We also found that data was being passed directly from hosts to public authorities as a result of the interventions.

We also explored a number of ways in which city authorities sought to manage the impacts of the peer-to-peer accommodation sector in new ways, separate from these traditional models.

While some organisations published data[1] we found no data matching the open definition.[2] Some of the data was non-personal and could have been made open. We found that public authorities did not pass data to platform operators and data was not shared between platform operators.

There are various parts of the broader data policy debate that were not considered in the local debates and interventions. For example:

- open-by-default data policies
- measures to improve free flow of data to increase competition and innovation
- individual control over personal data
- registers of authoritative data, such as contact information for public authorities responsible for particular services or lists of peer-to-peer accommodation operators
- common policy patterns, such as crowdsourcing data
- policy trials to test assumptions and demonstrate value before full implementation

As well as supporting immediate needs these areas should also be considered as part of the prototype development. They may help meet other needs or improve the effectiveness of current interventions.

The preparatory research summarised in this report sits alongside a broader set of activities, including: interviews from across the sector – with consumers, local communities, platform operators, local authorities and central government; three stakeholder workshops; and prototype development to test if some of the challenges we uncover can be improved by better data use.

[1] Airbnb Citizen (2015), 'Overview of the Airbnb Community', https://www.airbnbcitizen.com/data.
[2] Open Knowledge Foundation (2018), 'The Open Definition', http://opendefinition.org.

Introduction

There is ongoing debate surrounding the impacts of peer-to-peer accommodation platforms and the growth of the sharing economy more broadly.

Peer-to-peer accommodation can be broadly defined as accommodation – such as a spare room or an entire home – made available by an existing homeowner for others to rent, normally for a short period of time.

Peer-to-peer accommodation platform operators – such as Airbnb, LoveHomeSwap, or Wimdu – have grown rapidly in recent years. Platforms such as these connect homeowners with people looking for short-term accommodation, providing a secure environment for transactions. Peer-to-peer accommodation platforms compete with others in the provision of short-term accommodation, such as hotels and more traditional forms of short-term letting.

There is ongoing debate surrounding the impacts of peer-to-peer accommodation platforms and the growth of the sharing economy more broadly. There are clear opportunities driven by the trend: additional (occasional) income for hosts, cheaper accommodation for tourists, and more choice. These opportunities are balanced against fears of rising rents, new challenges for health and safety, effects on competition, and displacement of local people. In response to these issues, policymakers have started to respond with a number of interventions.

This report summarises the findings of desk research completed by the Open Data Institute (ODI) into the range of interventions by national and local governments to manage the impacts of peer-to-peer accommodation sector. This research focused on addressing three research questions:

1. Which approaches are implemented or discussed in the context of peer-to-peer accommodation?
2. What aspects of peer-to-peer accommodation are addressed and how?
3. What role does data play in supporting the different approaches?

This research forms part of the discovery phase of a project designed to understand how data can help improve the sector. We will use these findings in combination with the outcomes of interviews and workshops with a broad range of stakeholders – including consumers, local communities, platform operators, local authorities and central government – to inform the design of a set of prototypes.

What are the purposes of interventions in the peer-to-peer accommodation sector?

Our research identified 35 different cases of national and local governments' intervention in the global peer-to-peer accommodation sector, listed here in a public spreadsheet.[3] These interventions were analysed to determine their underlying motivations.[4] We found that most interventions (or proposed interventions) from this sample were based on four motivations:

1. to prioritise the affordability of long-term housing (23 cases)
2. to facilitate tax collection (14 cases, mostly concerned with tourist/city taxes)
3. to ensure service quality (seven cases)
4. to support health and safety considerations (five cases)

As interventions generally include multiple objectives, there are often overlapping motivations (eg in eight cases regulators sought to both facilitate tax collection and ensure the affordability of long-term housing).

[3] The Open Data Institute, (March 2018), #OPEN UKgovRD, Project 4 (p2pa): Policy desk research sheet

[4] The research methodology is described in detail later in this report.

Interventions: areas of focus

As well as analysing the cases to understand motivation, we also sought to establish the focus of the interventions. We identified three main areas:

- host behaviour
- asset/property
- peer-to-peer accommodation platform operators

Host behaviour

We found that 'host behaviour' was the most common focus of interventions – specifying what a property owner or host can, must, or must not do when letting a property on a short-term basis[5].

Restricting the time period of short-term lets was the most frequently used approach in this scenario. Fifteen cases limited the number of nights per year for letting a property on a short-term basis (eg a maximum of 120 days in Paris, and Airbnb's automatic limiting of entire home listings in Greater London to 90 nights per calendar year) or prohibited rentals below a certain threshold (eg minimum 31 days in New York City). In some cases, such as in Geneva, no specific cap was defined, but applicable laws required that short-term letting remains temporarily limited.

The second most frequent pattern requires that hosts and their properties are registered with public authorities; alternatively, they may have to acquire a business licence.[6] This established approach to regulate and monitor market access was part of the intervention process in 13 cases, nine of which also applied a cap on the maximum number of nights per year for short-term letting.

Another pattern is to impose a limit which regulates how many properties an owner or host can rent via peer-to-peer accommodation platforms. We found this approach in seven cases, but in different forms: Geneva, Berlin and Lazio only allow hosts to short-term let parts of their primary residence; Vancouver allows short-term lets of the host's entire primary residence; San Francisco allows short-term letting of one property per registered property owner; and Toronto and Seattle allow hosts to let their primary residence as well as one further unit.

Other forms of intervention on the behaviour of hosts occur less frequently, including:

- requirements for hosts to comply with minimum service standards, in five cases (eg welcoming guests on arrival, offering a dedicated phone number for calls 24/7, or providing bed linens)

[5] Given how we created data categories, we cannot calculate a simple count in order to assess what is regulated most frequently. However, the two most frequently regulated objects fall both under the case of owner/host behaviour.

[6] The specific registration or licensing requirements can however vary; eg a registration or licence might require regular renewal. In some cases, such as in Barcelona, Vancouver or the Lazio Region, registrants or licensees must also comply with certain service, safety, or property quality standards (eg minimum size of rooms, functioning air conditioning/heating, personal contact numbers).

- collection of guests' identity information which is registered in official databases, observed in three implemented cases and one proposal
- payment of tourist taxes, explicitly regulated in Bern and Seattle
- a cap on a maximum gross income from short-term letting in Iceland of 1 million Krona (ca. £7,200)

Assets/property

In addition to the focus on owner or host behaviour, interventions also set requirements for the shared asset itself – in this case, the property.

Authorities may require that properties that are let short-term meet certain general equipment standards. We observed this in eight cases. In the case of Lazio's regional law, a property used for short-term letting must not have more than three bedrooms. In Brussels, the approach included a requirement for a detailed list on how rooms used for short-term letting must be furnished.

A second, more stringent requirement is that properties used for short-term let meet minimum health and safety standards. As we observed in six cases, this mainly includes compliance with fire safety regulations. Vancouver, for instance, requires that all short-term let properties in buildings with three or more flats are equipped with interconnected smoke detectors on all floors. These requirements were paired in all cases with a registration or licensing process, during which hosts had to demonstrate compliance.

Platforms

Some interventions and proposals also include measures to directly regulate platform operators. This was the least common approach observed.

The UK Deregulation Act in 2015[7] and the announcement of a sharing economy tax allowance[8] in the 2016 UK budget aim to foster the growth of the sharing economy and peer-to-peer accommodation.

We identified nine cases whereby Airbnb agreed with city authorities to automatically collect and remit tourist or city taxes.

In some cases, platform operators are required to provide data to public authorities (the second most frequent requirement). In Lisbon and Lazio, platform operators agreed to regularly provide city authorities with summary statistics and aggregate data to help them monitor the development of tourism and short-term let activities. In Tokyo, Seattle, and Toronto, short-term letting companies must acquire a business licence to operate in the city. Through the licensing terms, companies are required to provide public authorities with certain data, such as summary statistics on lettings and details on individual listings on a case-by-case basis. In Brussels and Vienna,

---

[7] Ministry of Housing, Communities and Local Government (2015), 'Press Release: Boost for Londoners as red tape slashed on short term lets', https://www.gov.uk/government/news/boost-for-londoners-as-red-tape-slashed-on-short-term-lets.

[8] HMRC (2016), 'Policy Paper: Income Tax: a new allowance for property and trading income', https://www.gov.uk/government/publications/income-tax-new-tax-allowance-for-property-and-trading-income/income-tax-new-tax-allowance-for-property-and-trading-income.

authorities have been equipped with legal powers to acquire data from platform operators.

In a few cases, interventions focused on platform operators by:

- requiring platform operators to register their business with public authorities, subject to further obligations and conditions (three cases: Tokyo, Seattle, Toronto)
- making platform operators liable for illegal listings (two cases: Brussels, Toronto)

Tools used to manage the impact of peer-to-peer accommodation

Traditional instruments

The overwhelming number of cases we investigated applied traditional instruments to the peer-to-peer accommodation sector.

In 28 of the 35 observed cases, governments used traditional top-down regulatory interventions in order to achieve a number of different outcomes. Top-down interventions impose rules on businesses or individuals, often to restrict unwanted behaviour, set quality standards, or distribute financial or other resources.

The contents of such interventions can vary widely: in the case of the peer-to-peer accommodation sector, they may include strict rules which widely prohibit private short-term letting (such as in Berlin or Geneva[9]), and also rules which allow short-term letting under certain provisions. In London, Paris, and Zurich this means that short-term letting is permitted for a specified number of days per year and applicable taxes are paid. While the formulation process of top-down intervention might be somewhat collaborative (eg through public consultations) they are nonetheless unilateral in their execution: public institutions create, monitor, and enforce interventions while businesses or individuals must ensure compliance (or face penalties).

Self-regulation and shared data

In seven cases, we found that traditional regulatory interventions were supplemented by self-regulation agreements (ie voluntary schemes led by the sector). In practice, this means that to enforce existing interventions, platform operators agreed Memorandums of Understanding (MOUs) with city authorities, obligating operators to limit listings to a certain number of nights per year (Amsterdam) or to collect and remit tourist/city taxes (Genoa, Lisbon, Canton Zug).

In the UK the industry has developed a Sharing Economy UK TrustSeal as a form of self regulation. The TrustSeal is a set of good practice principles setting out minimum standards for sharing-economy businesses to ensure that they act with integrity and maintain professional standards, such as customer help and support.

[9] In Geneva, the conversion of private property into commercial property is prohibited. However, home sharing is not forbidden as it is not considered a misuse of housing space when the tenant or owner still lives in the apartment, even after temporary absence.

As part of revised legislation by the Italian Lazio region, which includes Rome, platform operators will collect information on guests and share this data with the regional authorities.

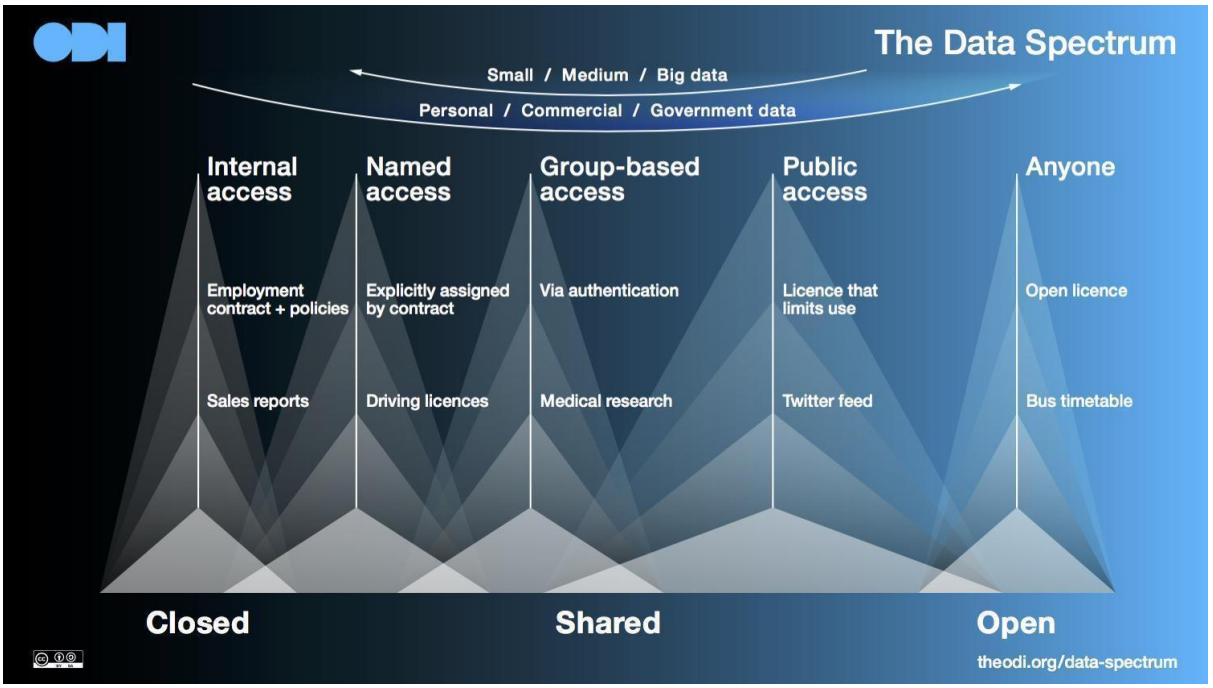
However, it does not automatically follow that cooperation between platform operators and authorities leads to data being published openly or shared with the local authority. A point of conflict for those city authorities requesting that platform operators collect tourist taxes is whether they only provide authorities with summary statistics or with access to detailed accounts. City authorities which are demanding the latter, such as Vienna, are currently at a gridlock.

From our desk research Airbnb appears to be the only peer-to-peer accommodation platform which collaborates with authorities in this way.

The role of data

We also focused on better understanding the role data plays in the interventions we examined.

Data exists on a spectrum of access, based on who can access it and how they are permitted to use it, as shown below in The Data Spectrum.



The operations of the platform providers, along with associated interventions, create data, but it is difficult to determine how this data is made available and used. This is the case even for interventions in cases where platform operators provide support, for example by collecting and providing the identity of hosts. Our overall impression is that the data generating aspect of interventions is often overlooked.

We found that platform operators, hosts and public authorities all collect data. We found data being passed from hosts to plathotel forms and then shared to public authorities; this occurred for both personal and non-personal data. We also found data being passed directly from hosts to public authorities as a result of the intervention.

Thirty-two cases involved the collection of personal data related to the identity of property owners or hosts. This collection occurred in multiple ways. For example, through a registration or licensing process with public authorities, or directly through the platform operators who then pass the data to the local authorities. This data flow is in the shared part of The Data Spectrum.

In 28 cases, the intervention required property location and host identity data to be provided to local authorities. This was mostly as part of a registration process with authorities, rather than through the platform. This data flow also exists in the shared part of The Data Spectrum. Property location data is also publicly available on the platforms – guests need to know where properties are to make decisions about where to stay.

There were no cases where fire safety information is collected by the platform and passed to the local authority. Information on fire safety equipment within the property is collected through a registration or licensing process by the local authority in 13 cases. It is not clear if or how this data is presented to renters, who may need it to help them make a decision on where to stay, or to platform operators, who may need it to make decisions about which properties should be available to let on the platform.

In 20 cases, data on the duration of short-term rentals is collected. In most cases, this is the result of the requirement to pay tourist or city taxes for tourist rentals. Where agreements with platform operators exist, we believe that these will be collected as part of the automatic tax collection process. In other cases, such as Vienna, Bern, or Toronto, hosts are required to handle the tax collection and processing themselves, eg through quarterly paper forms that they pass back directly to the local authorities. This data is likely to be less accurate. In all cases the data is in the shared part of The Data Spectrum.

Eight cases include data collection by platforms to support the collection of appropriate levels of income taxes. This data is passed from the platform to the relevant public authority. Two of the eight cases are currently policy proposals. Only Iceland applies a direct cap on the maximum income generation allowed through short-term letting. In all other cases, the data on rental income must be reported by hosts as part of their income tax declaration to the relevant public authority.

Six cases enforce the collection of guest identity data, including two policy proposals. In the remaining cases, hosts are obliged to register guests from foreign countries and share data with local authorities. More general guest statistics are collected in five cases. These include the collection of summary information to help develop macro-trends on tourism, eg how many guests stayed in a city or in specific quarters. This data is collected by platform operators, aggregated and then provided to the relevant local authority. We could not find examples of this data being published openly.

Fourteen cases included the collection of a variety of other data, frequently on compliance with accommodation quality standards. For example, in Barcelona, a functioning air-conditioning system is a requirement for any property wishing to be registered with the tourism authorities. As with the data flows for fire safety equipment we could not determine if this data was also provided to platform operators or renters to help them make decisions.

Plans for future interventions

To explore emerging models for interventions, we also reviewed proposals for future policies related to peer-to-peer accommodation.

Our initial expectation was to find proposals for new instruments, possibly with a stronger angle on using data and technology. However, identifying such examples proved to be challenging. Despite this – and supplemented with broader research into other sectors – we have identified some potential approaches that may inform the peer-to-peer accommodation sector.

Broader data policy landscape

As governments increasingly realise the importance of data in our economies, there is growing debate around its role in supporting interventions, or alternative approaches to managing the impact on markets and sectors.

Countries such as the UK are researching the sharing economy[10] [11] and publishing data to help make better decisions about whether or how to intervene. This includes developing methodologies for identifying sharing economy businesses and activity, and producing economic and other data on activity in the sector.

Many countries and cities have joined the Open Government Partnership and adopted the Open Data Charter. This commits them to data policies such as open-by-default[12] to unlock innovation, and improve transparency and public debate. Data should be used to inform the decisions we make as individuals, organisations and societies. An open-by-default approach could assist by encouraging more data to be published openly leading to better public debate about the impact of peer-to-peer accommodation on housing, tourism and local communities.

Geopolitical trading blocks, such as the EU, are recognising that there is undue friction in the use of data due to the lack of open or shared data. Many are working to increase the free flow of data[13] while respecting privacy and creating trust. Open-by-default is a mechanism that supports this direction of travel and so are the new and strengthened rights being seen in data protection legislation, such as the EU General Data Protection Regulation, that provide people with more control over personal data about them. Those rights might provide ways to tackle fears over the emergence of new short-term let monopolies by making it easier for renters and

---

[10] Office for National Statistics, 'The feasibility of measuring the sharing economy: November 2017 progress update' https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/thefeasibilityofmeasuringthesharingeconomy/november2017progressupdate

[11] UK Government, 'Sharing Economy: User characteristics and tax reporting behaviour'. https://www.gov.uk/government/publications/sharing-economy-user-characteristics-and-tax-reporting-behaviour

[12] Open Data Charter (2015), 'Principles', https://opendatacharter.net/principles.

[13] European Commission (2017), 'Building a European data economy', https://ec.europa.eu/digital-single-market/en/policies/building-european-data-economy.

hosts to move between platforms, or support new mechanisms for dispute resolution by allowing renters or hosts to pass data to relevant public authorities.

Whilst some government responses are of a traditional regulatory nature, for example the French Digital Republic Bill which gives government the power to compel some data to be made openly available, others as using alternative approaches (such as the UK government's work on registers).

Registers of authoritative data, such as contact information for public authorities responsible for particular public services (eg fire prevention or trading standards), or a list of peer-to-peer accommodation operators, or a list of addresses may be immediately relevant to the issues presented by peer-to-peer accommodation. Such registers may provide ways to improve the experience for letters and renters, reduce the costs of compliance and meet the needs of regulators.

The ODI's own work on policy design patterns that use data[14] may be applicable to the peer-to-peer accommodation sector. For example, crowdsourcing reports of fire safety issues, and subsequent use of data analytics to target inspection or understand risk profiles may improve the planning of the location of public resources.

Using peer-to-peer accommodation data in the wider data policy landscape: building disaster preparedness in San Francisco

By sharing data with city authorities in San Francisco[15] Airbnb says that it can help to build the city's capacity to respond to natural disasters.

Following the platform's response to Hurricane Sandy in New York City, where Airbnb hosts opened their homes to those affected by the storm, the platform began discussions with the Department of Emergency Management in San Francisco to examine how the bodies might work together to build resilience.

Among other commitments, the government has shared their 'hazard layer' data with the platform that identifies areas near potential fires, flood plains and other risks. Airbnb integrates this information with data about their hosts and units on the platform, such as location, amount of space and contact information. Together, this data will help Airbnb employees to pinpoint appropriate hosts in an emergency.

Airbnb's cooperation with the city authorities demonstrates how a flexible approach to intervention might help governments meet their long-term policy goals. The city government should also consider how to open up hazard layer data more widely, so that it can be used by others to build resilience in the city and further afield.

---

[14] ODI (2017), 'Policy design patterns that help you use data to create impact', https://theodi.org/blog/policy-design-patterns-that-help-you-use-data-to-create-impact.

[15] Emergency Management (2014), 'Airbnb Partners with San Francisco, Portland on Disaster Relief', http://www.govtech.com/em/disaster/Airbnb-Partners-San-Francisco-Portland-Disaster-Relief.html.

Non-traditional approaches

In addition to the interventions examined earlier and the role of data in it, there are a number of schools of thought emerging around new approaches to the peer-to-peer accommodation sector.

These schools of thought diverge from the traditional Command and Control (CAC) style of regulation[16] of the style examined earlier in this report. CAC regulation seeks to regulate an object or action (permitted or forbidden), to produce a particular output (by which the regulation's success is measured). In this sector, it may include requirements like host registration or a cap on the number of nights a unit can be rented. A non-traditional approach, such as the UK's 'Smart Regulation' approach[17] to shaping policy, moves away from CAC to viewing regulations as part of a broad policy cycle (from design to implementation to revision), and promotes a risk-based approach consulting with sectors affected.

Non-traditional approaches can be separated into two sub-sections:

- Non-traditional **approaches** and **processes** to developing interventions
- Non-traditional or alternative **interventions into** the peer-to-peer accommodation sector

These two areas will often overlap, with non-traditional approaches being used to form new alternative forms of intervention.

Advantages of non-traditional approaches and processes to developing interventions

Those who favour non-traditional approaches, such as academic Kellen Zale,[18] argue that the sharing economy has revolutionised the importance of scale in interventions, meaning the peer-to-peer accommodation sector may not be able to adopt current models. Zale argues that 'small-scale activities that once fit the criteria for light or no intervention are occurring at scales at which non-intervention makes little sense'. Writer Stephen Miller[19] suggests that transactions in the sharing economy are different, producing different risks and therefore requiring a different response. In the UK, innovation foundation Nesta has argued[20] that the rapid growth of these platforms defy the traditional pattern of waiting for sufficient growth before intervention.

---

[16] Bussu, S. (2015), 'The Public's Voice on Regulation', http://webarchive.nationalarchives.gov.uk/20170110135609/http://www.sciencewise-erc.org.uk/cms/assets/Uploads/Public-engagement-on-regulationFebruary2015FINAL.pdf.

[17] Cabinet Office (2013), 'Open Government Partnership UK National Action Plan 2013 to 2015', https://www.gov.uk/government/consultations/open-government-partnership-uk-national-action-plan-2013/open-government-partnership-uk-national-action-plan-2013-to-2015.

[18] Zale, K. (2016), 'When Everything is Small: The Regulatory Challenge of Scale in the Sharing Economy', https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2866044.

[19] Miller, S. (2015), 'First Principles for Regulating the Sharing Economy', http://harvardjol.com/wp-content/uploads/2016/02/HLL107_crop.pdf.

[20] Nesta (2017), 'Anticipatory Regulation: 10 ways governments can better keep up with fast-changing industries', https://www.nesta.org.uk/blog/anticipatory-regulation-10-ways-governments-can-better-keep-fast-changing-industries.

Non-traditional approaches and processes to developing interventions

Anticipatory

Promoted by innovation foundation Nesta, an anticipatory[21] approach aims to assist in the development of new technologies whilst addressing the risks and dangers. The approach is designed to work in economies where there is rapid change, emerging ethical issues, and market actors who are dependent on data and algorithms rather than physical resources. These are all present in the peer-to-peer accommodation sector.

Anticipatory intervention promotes open dialogue between all parties, especially between innovators and regulators, to ensure that there are no unnecessary blockers to technological development. These rules are iterative and continuously adapted to fit the needs of actors, and encourage the use of testbeds and sandboxes for testing innovative ideas and identifying likely risks. Furthermore, Nesta has suggested that public engagement and skills-based training for regulators could produce more dynamic, effective intervention.

Actors, inside or outside government, have not explicitly adopted this approach in relation to peer-to-peer accommodation in the UK. However, Nesta has implemented this approach in drone regulation, where huge potential gains with speed and cost could be offset by significant challenges regarding data and pricing models. The foundation has been working in partnership with cities, businesses and governments in testbeds to explore how authorities and providers could best pursue opportunities.

Cooperative

Cooperative intervention, put forward in one version by academic Kellen Zale[22], is a market-based approach to regulating peer-to-peer activity. Cooperatives are businesses where members (consumers, workers and producers) 'own and manage the enterprise', limiting profits and reinvesting them back into the business.

Zale suggests that cooperatives could be a market alternative to sharing economy services by replacing third-party providers such as Airbnb and Uber. Instead of these services orchestrating a network of small-scale interactions and actors, a cooperative model would delegate this responsibility to the members themselves, making them responsible for organising and managing the network in line with local laws. Organisations who support this model, such as Platform Cooperativism, have suggested that municipalities could also be involved in setting up and running these cooperatives.

---

[21] Ibid.

[22] Zale, K. (2016), 'When Everything is Small: The Regulatory Challenge of Scale in the Sharing Economy', https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2866044.

Data-driven

Academic commentator Arun Sundararajan has been an active proponent[23] of 'data-driven delegation', an approach encouraging platform operators and marketplaces to engage in more self-regulatory activity.

Sundararajan proposes a model that would encourage peer-to-peer accommodation platform operators to self-regulate in some areas, such as the verification of hosts, with city authorities supporting as required, such as for disaster preparedness. Sundararajan opposes 'mandated transparency'[24] which would require platforms to share data with relevant authorities, instead suggesting that data should be retained within companies and selective access granted through an API. He argues retaining data within companies is more secure and more closely mirrors the interventions related to companies outside the sharing economy (such as financial audits).

Sundararajan proposes that this approach will encourage platform operators and marketplaces to become 'partners in transparency', making them more likely to help in inventing self-regulatory solutions that government find difficult to address.

Co-regulation and co-designing policies with users

Co-regulation aims to 'utilise industry to implement regulatory standards',[25] using industry expertise about the sector and delegating responsibilities to companies themselves. This approach allows government to focus resources where outside oversight is most necessary. The process of designing this approach in collaboration with users is called 'co-design'.

In 2016 innovation company MaRS Solution Lab implemented a co-design approach [26] to regulating peer-to-peer accommodation in Canada, working with the Province of Ontario, the City of Toronto and local government to 'redesign regulation for the sharing economy'. Bringing together regulators from three levels of government, industry representatives, insurers, agencies and experts, the company implemented a five-step strategy to collaboratively design policy through a series of workshops with the relevant parties.

The strategy included the following five steps:

- creating a vision matching the city's identity and strengths that unites partners across the city
- mapping the underutilised assets of the city, particularly skills, stuff and space

---

[23] European Parliament - Economic and Scientific Policy Department (2017), 'The Collaborative Economy: Socioeconomic, Regulatory and Policy Issues', http://www.europarl.europa.eu/RegData/etudes/IDAN/2017/595360/IPOL_IDA(2017)595360_EN.pdf.

[24] Sundararajan, A. (2016), 'What Governments Can Learn From Airbnb And the Sharing Economy', http://fortune.com/2016/07/12/airbnb-discrimination/.

[25] Zale, K. (2016), 'When Everything is Small: The Regulatory Challenge of Scale in the Sharing Economy', https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2866044.

[26] MaRS Solution Labs (2016), 'Shifting Perspectives: Redesigning Regulation for the Sharing Economy', https://www.marsdd.com/wp-content/uploads/2016/04/MSL-Sharing-Economy-Public-Design-Report.pdf.

- identifying opportunities by matching these assets with key issues the city faces
- defining actions related to each opportunity
- supporting the strategy with the right resources and structure to ensure implementation

The workshops produced a number of pilots that may be implemented, including a Pilot for Burden Reduction for Existing Operators, addressing the implementation and enforcement of safety regulation, and Piloting Condominium Regulation Models, which encourages ongoing and open dialogue among those sharing condos, which make up almost half of the city's housing. The workshops also reinforced the importance of data sharing with city authorities to help with city planning, space asset management and strengthening understanding of each neighbourhood.

Airbnb is also working with Canadian authorities on a pilot project to raise awareness about rights and responsibilities when offering or booking accommodation in Toronto. This includes information about tax laws and regulatory obligations like smoke alarms, dispensed through a joint website between the Ontario Province and Airbnb.

Aggregate regulations

Recognising the difficulty of focusing on a large number of small-scale interactions, aggregate regulations address the large-scale impact of a sector. In the sharing economy space, aggregate regulations have been introduced in Sao Paulo[27] (Brazil) and Washington DC (USA) to regulate ride-hailing companies. In Brazil, ride-hailing companies are charged bi-monthly upfront fees based on mileage traveled by drivers in their network, to compensate the city for use of its public infrastructure; in DC, ridesharing fares include a surcharge that is remitted to the city.

Scaled regulations

Scaled regulations focus on individual actors based on the extent of their activity. For instance, a scaled fee-based approach may require more active individuals to pay more to account for the externalities that result from their activity and the increased oversight required. For instance, the US city of Portland, Oregon charges a minimum permit fee for home sharing, with those who engage in more frequent rentals required to pay a higher fee.

Transferable sharing rights

Academic Stephen Miller has suggested a transferable sharing rights framework[28] to provide an alternative method of intervention in the peer-to-peer sector.

This framework builds upon the common process of transferring development rights, where landowners who are 'required to maintain a less intense use' than codes or regulations allows can sell their unused development rights, allowing a 'receiving site' to develop more intensely than is permitted.

Miller has suggested that such rights could be transposed onto the peer-to-peer sector, allocating transferable sharing rights (TSRs) that allow people to engage

---

[27] Zale, K. (2016), 'When Everything is Small: The Regulatory Challenge of Scale in the Sharing Economy', https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2866044.

[28] Miller, S. (2015), 'First Principles for Regulating the Sharing Economy', http://harvardjol.com/wp-content/uploads/2016/02/HLL107_crop.pdf.

in a short-term rental for a given amount of time[29]. Rights could be redeemed on an online platform for a fee payable to the city, with the fee contributing to activities that neutralise the impact peer-to-peer accommodation activities have on a neighbourhood. Those who do not want to redeem their rights could sell them to others through a market brokered by the city, with profits split between the seller and the city.

Non-traditional or alternative interventions into the peer-to-peer accommodation sector

Shared Cities and the Policy Tool Chest

In 2016, Airbnb unveiled its new plans[30] for a 'Shared City' concept. This concept aims to 'help civic leaders and [the Airbnb] community create more shareable, more livable cities through relevant, concrete actions and partnerships' (CEO Brian Chesky). The concept represents the company's broad commitment to working collaboratively with city authorities as they update and create legislation to regulate home sharing, particularly in the United States.

A 'Shared City': Portland, Oregon

The first 'Shared City' partnership[31] is with the American city of Portland, Oregon, and binds Airbnb and the city to the following commitments:

- enabling Airbnb hosts to contribute to city improvements by donating money they earn on the platform to local causes, and the company will match these donations
- making free smoke and carbon monoxide detectors available to every host who requests one, helping hosts meet updated safety requirements of the city
- working with the tourism bureau, Visit Portland, on joint campaigns to promote the city and its small businesses
- collecting and remitting taxes on behalf of the City Council, collected out of guest payments and sent quarterly to the City of Portland

The 'Shared City' concept represents a new model for Airbnb's engagement with city authorities, which they aim to scale up over the next years. The partnership is accompanied by the company's Policy Tool Chest,[32] which presents four policy options as a 'resource for governments to consider as they draft or amend rules for home-sharing'. The options are:

Tax collection: collecting hotel or tourist tax revenue directly from guests on behalf of the authorities, assuming costs for this collection from hosts or city authorities

---

[29] Ibid.
[30] Chesky, B. (2014), 'Shared City', https://medium.com/@bchesky/shared-city-db9746750a3a.
[31] Gallagher, L. (2014), 'Airbnb cozies up to cities', http://fortune.com/2014/03/26/airbnb-cozies-up-to-cities/.
[32] Airbnb Citizen (2017), 'Home sharing policy approaches that are working around the world', https://www.airbnbcitizen.com/home-sharing-policy-approaches-that-are-working-around-the-world/.

who otherwise may have to pay these costs. The company has established partnerships of this nature, which they call Voluntary Collection Agreements, in over 200 jurisdictions.

Good neighbours: helping hosts and guests be respectful of the communities they stay in, and helping to update zoning laws that may be inappropriate for commercial activities that now take place across neighbourhoods. An example of this is the Friendly Buildings program, which encourages building owners, landlords, tenants and platform operators to get together to enable home sharing under agreed rules. This has been used in Nashville, Philadelphia and San Jose in the United States.

Accountability: collaborating with city authorities to design and implement practical, enforceable rules for home sharing. The company advertises that its analysts "are able to assist policymakers with identifying the point at which short-term rentals […] generate more income than long-term rentals per year", helping identify a reasonable cap. The company has also worked with city authorities in San Francisco and New York City to implement 'One Host, One Home' policies, and a 'three strikes' policy that bars hosts who have been cited by law enforcement 'for violating home sharing rules or other restrictions intended to preserve neighbors' quality of life'.

Transparency and privacy: Airbnb is willing to share data with authorities 'to enable smarter-decision making about home-sharing rules', whilst respecting privacy. Its Community Compact, released in November 2015, commits the company to share the following data openly:

- total economic activity generated by Airbnb in the city
- amount of income earned by typical host
- geographic distribution of Airbnb listings
- number of hosts who avoided eviction by renting on Airbnb
- percentage of Airbnb hosts sharing their permanent home
- number of days typical listing rented
- total number of guests visiting city, average number of guests per listing
- their average stay length
- safety record of Airbnb listings

Beyond this, the company has entered into several data sharing agreements with city authorities to share data for policy, usually aggregated at the neighbourhood level. Agreements of this type have been agreed in New Orleans[33] and Chicago. Notably, open data was published concerning Airbnb activities in each of New York City's Neighbourhood Tabulation Areas.

[33] Benner, K. (2016), 'New Orleans Becomes New Model for Airbnb to Work With Cities', https://www.nytimes.com/2016/12/07/technology/new-orleans-airbnb-model.html.

Methodology and limitations

Research design

Managing the impacts of peer-to-peer accommodation has become an important topic for policy-makers in areas where it has started to affect the housing and tourism sectors. But while intervention in the peer-to-peer accommodation market is not a universal phenomenon, the limited number of interventions already implemented or discussed makes a comprehensive review very challenging. Furthermore, in individual countries, many city or regional interventions often follow a nationally homogeneous approach. This makes them very similar, which limits the marginal utility of analysing every single case.[34]

To maximise the variety of cases analysed, we applied a systems-design approach. With a limited number of cases, this approach seeks to maximise the variety of cases analysed, allowing us to gain insights across a broad spectrum of current policy approaches. We focused our research on 17 developed countries in Europe, North America, and Asia. All cases were identified through anonymous browsing using search engines Google and Bing. Ultimately we assessed 35 different interventions.

In the five largest cities of each country, we reviewed news reports, policy discussions, and legal and policy documents from city councils to identify any relevant activity in the city or whether the topic was discussed at all. Cases were added to our research depending on whether they added to the variety of the overall sample.[35]

In a second step, a detailed content analysis was conducted. This mapped all cases along a number of qualitative indicators to understand the type of intervention, the focus of the intervention (ie its objective), and what data is being collected. Following an inductive process, we created and coded categories for the different characteristics we identified through the qualitative desk research. The results of this coding are discussed in this report.

Non-traditional approaches were researched by using search engine tools to surface media articles and academic reports into this issue. These were then analysed for interest and summarised.

Limitations

The observations presented are subject to limitations, resulting from the research design and the phenomenon we investigated. First, the selective sampling of our research implies that the results cannot be generalised. In particular, they do not allow us to draw inferences on specific cases not included in the sample. However, the patterns we observed can be helpful in understanding the policy and regulatory

[34] Even though resulting from national legislation, French cities apply a relatively uniform model, which limits short-term letting to 120 days per year; in a number of French cities, AirBnB also collects and remits tourist and district taxes.
[35] This implies that cases which largely replicated previously identified patterns were not added to the database. For example because approaches in different German cities are very similar, only Berlin has been added to the database as an exemplary and well documented case.

discussions, public concerns, the role of data and technology. Hence, they can be seen, a) as an assessment of high-level needs (where they have been articulated by and included in policy designs); and b), as an assessment of the the interventions made in the peer-to-peer accommodation sector.

Second, intervention in the peer-to-peer accommodation sector is an emerging phenomenon. Researching it requires an inductive approach, which is grounded in real-world data. By collecting comprehensive information on a number of issues and then grouping observations into frequent categories, our research design follows this grounded theory logic. An important limitation to this exploratory design is that the resulting categories should not be seen as exhaustive or authoritative. Rather, they are meant to be informing, based on the characteristics of cases observed. Particularly the categories we used to structure 'primary motivations for intervention', and what they focus on ('object') depend on the specific sample and the motivations for research.

Another limitation is that the collection of data on interventions is a process of interpreting the main topics of policy discourses and then encoding the findings into common groups. Very few interventions clearly state why they were proposed. To answer our question on the primary motivations for their introduction, we had to make assumptions based on our readings of policy papers, texts, news reports, and other online resources. Already this first step is selective, eg because not all relevant discussions are discoverable online. Deciding which topics were the most important and then coding them into summary tables introduces two more layers of assumption. For possible future interventions this is made even more difficult, as many plans and discussions are unlikely to be made publicly available.

When reading the results, we should thus keep in mind that to condense our real world observations into neat summary tables, we had to make several consecutive assumptions. This means that the data presented is "cleaner" than the real world phenomenon: for example, not recording "managing tourism" as a primary motivation for interventions in London does not imply that the issue was not a concern at all in the public discourse. Instead, we just do not think it is important and decisive enough for the final approach.

Finally, our findings on the role of data in interventions (or proposals) require particularly careful interpretation. The fact that data is almost never considered in interventions – and the policy discussions which precede them – is a finding in its own right.

Few interventions explicitly mention which types of data will be required, eg when hosts must acquire a newly created business licence to offer a home on a peer-to-peer accommodation platform. How data is collected, managed, or processed is extremely difficult to understand without talking directly to specialist staff at authorities or businesses.

Our findings on the type of data involved in interventions only provide a macroview, which is heavily based on assumptions about which data *could* be involved. In making these assumptions, we have been deliberately conservative: for example, where properties listed on peer-to-peer accommodation platforms are required to be officially registered, we can safely assume that at least the name of the proprietor and the property location will be collected. More data may well be collected, eg on fire safety installations; but we did not include these sources, unless they were explicitly mentioned in official documents.

Next steps

This piece of research is part of the overall work that the ODI is currently undertaking to understand how data can improve the peer-to-peer accommodation market to support businesses and communities, and improve the experience of consumers and users.

During a discovery phase (starting in summer 2017), the ODI also completed interviews with key stakeholders in the sector including platform users, platform operators, estate agents, renters' associations, local authorities, fire services, etc. Based on a combination of this research and the research described in this report, the ODI established a set of topics, or areas, of opportunity to focus on in the alpha phase of the project.

Several were tested during workshops with various stakeholders in October 2017. Based on the feedback received, the ODI will focus on the portability of data related to peer-to-peer accommodation, establishing whether a data observatory could be used to understand the impact of the sector, and finding ways for local data to be shared in a standardised way with hosts and guests.