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#### **Review of the implementation of the programmes of work 2020 and 2021**

#### **Activities of the Real Estate Market Advisory Group**

### **Sharing economy and its effects on the housing market**

#### **Note by the secretariat**

##### *Summary*

This document contains the report "Sharing economy and its effects on the housing market" which was developed under the programme of work 2020 of the Committee's Real Estate Market Advisory Group. Ms. Paloma Taltavull de La Paz, University of Alicante, is the author of the report. She was supported by Mr. Francisco Juárez Tárraga (dataset).

The Committee is invited to take note of the outcomes of the study.

The final formatting and editing of the study will be done by the end of 2021. Following that, the study will be published as a United Nations publication.

**Disclaimer**

This document summarizes a larger study containing more detailed information found in published academic and non-academic articles and from the evidence obtained from a large database established and analysed for this report. The study was undertaken by the Real Estate Market Advisory Group as mandated in ECE/HBP/2020/9.

The findings, interpretations, and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the United Nations or its officials or Member States

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## Introduction

The term "sharing economy" refers to various actions aimed at sharing the use of services, assets, property, spaces or capital between two or more people. It is also known as peer-to-peer (P2P) economy or collaborative economy. It is a recent, prevalent business model that is applied to the markets of multiple sectors.

Sharing activities in the housing sector involve sharing housing space in exchange for part of the housing costs. With the proliferation of very-short-term rentals since the beginning of the second decade of the 21st century, especially in cities, residential rental markets have undergone a shift from the usual concept of shared housing space. This reversed the inflexibility of conventional rental markets, and housing rentals became the standard, frequent and regular way to meet short-term housing needs instead of hotel rooms. This practice has spread around the globe and even to regions where rental markets were traditionally small and inflexible due to lower demand and regulatory restrictions. Other housing-share models exist, such as co-living arrangements, although they are less popular than rent-sharing.

The success of very-short-term rental activity in cities has generated strong reactions from the civil society regarding its influence on the "normal" housing market and its adverse external effects on the population.

The success of the very-short-term rental model lies with the use of technology in sharing platforms (e.g. Airbnb and HomeAway) that have facilitated coordination for sharing residential space. These platforms became a new form of business and popular in the wake of the financial crisis as they present an alternative way of generating income. This type of business exists in other sectors, but mostly occurs in services<sup>1</sup>. It was born out of the desire to share costs and for example, to satisfy existing residential needs at a lower price than the market price. Sharing activities refers to the collaboration between owners and users (the "collaborative economy"); they are accepted as non-business services and are included in the European Union (EU) regulations on service liberalization<sup>2</sup>.

The role of collaborative economy is relevant in the circular productive model outlined in the EU plans<sup>3</sup>; it is a fundamental element in a circular economy, in which all assets and goods must have the possibility of re-use when their primary life cycle ends. In the housing arena, re-using is "sharing space" between the owner and third parties to cover costs. According to a circular cities guide (UN, 2020, p. 8), the sharing of city assets and products is a circular action and circularity in cities will enhance the use of resources and lengthen their life cycle.

With the initial success of technological platforms, companies in conventional markets (such as those managing rentals for tourists) began to participate in this intermediate system. It is difficult to differentiate between a collaborative economy and a business activity, mostly due to the entry of tourism service providers into the technological platforms and the fact that market players are not conventional. Therefore, it is not easy to recognize whether the exchange of space is an act of sharing or a regular business transaction, and to what extent the housing provider is a seller, a lessee or

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<sup>1</sup> Sharing activities have appeared mainly in services but also in markets of products. Two examples are sharing food and sharing energy. In the first, the activity consists on systems that develop common cooking. In the second case consists on creating local green energy markets connecting buildings which have applied solar capture energy mechanism and accumulators, sharing the green energy with the neighbours.

<sup>2</sup> Directive 2006/123/CE of the European Parliament and Council, 12 December 2006.

<sup>3</sup> For more information on the productive model, see: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019DC0190&from=EN>

simply sharing assets. The boundary is not clear, which creates challenges for setting up regulations and for the application of tax laws, among others (Codagnone and Martens, 2016).

With the rise in affordability problems and the simultaneous growth of short-term rental transactions, many analysts have hypothesized that the latter could have worsened the issue of housing affordability. However, this has generated a big debate and a contradiction. The P2P activity of short-term rental housing is considered positive because it benefits owners, especially those who are unemployed or have no-income but, at the same time, harmful due to its impact on the city and on the affordability of longer-term rentals.

This report's first objective is to clarify the scope of sharing activities in housing markets and their principal features. It reviews literature on sharing economy to clarify what is considered a collaborative sharing activity, focusing on two primary examples of sharing residential space: co-housing and short-term rentals.

The second objective is to describe in-depth the features of house-sharing activities. This can only be achieved with statistical information. As it was possible to find data only for short-term rental activity,<sup>4</sup> this report is mostly devoted to explaining the structure of that market. Information is provided for 43 locations in the UNECE region. These locations were selected because of data availability and because their housing markets have published information on sharing economy. The UNECE locations where this market is best known and documented (mainly in the United States, see Barron et al, 2018a) served as the source from which the study hypotheses arise. Their pieces of evidence are reflected in the literature review and summary sections.

This document includes a short reference to the relevant regulation found in the literature, as a compilation of short-term rental market laws does not exist.

### **Why is it important to analyse the short-term rental market?**

There are many reasons why this analysis is relevant to an economy. First, citing the one that appears most often in the media, is the civil society's rejection of how the massive emergence of the temporary rental accommodation has changed living habits in cities, generating noise and distorting the everyday life of the population<sup>5</sup>.

Second, the short-term rental market brings wealth, connects cities and promotes population movement. It became a global phenomenon until the COVID-19 pandemic hit. To date, there are no estimates of the benefits or costs of short-term rentals in each city. Therefore, it is not possible to evaluate the economic or social impacts of the short-term rentals on cities and the population. The latest available data shows that short-term rental continued also during the pandemic despite limited population movements at that time.

Wealth, employment creation, and new work formulas would support cities' economies and contribute to the circularity of buildings and, therefore, to greater efficiency in their use. The objective of this report is to provide additional information into the discussion of the role and impact of the sharing economy on economic and social development.

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<sup>4</sup> This report used the enormous database of short-term rentals of the InsideAirBnB website.

<sup>5</sup> The increase of people moving every two or three days from a home disrupts the quiet life in buildings. It is one of the arguments from those who are against this short-term activity.

## Section I. Definition of sharing economy. A review of the literature

This section covers several aspects of the sharing economy. It focuses on its impact on the general economy and its effects on the markets.

There is no consensus on the definition of collaborative economy, nor, therefore, on establishing a distinction between collaborative and business activities. Most studies associate collaborative economy with activities that share costs but without payment. The European Commission (EC-SWD, 2016) used the notion that collaborative economy “refers to business models where activities are facilitated by online platforms that create an open marketplace for the temporary use of goods or services often provided by individuals”. Such activities do not involve a change of ownership and can be carried out for profit or not.

Codagnone and Martens (2016) published extensive and well-documented review on the different concepts of sharing economy and its components. The study agrees that there is no consensus on the definition of collaborative economy (Ibid., p. 6), and indicates that most literature refers to it as collaborative consumption. Collaborative consumption is defined as “people coordinating the acquisition and distribution of a resource for a fee or other compensation” (Belk, 2014a, p. 1,597); or the “reinvention of traditional market behaviours—renting, lending, swapping, sharing, bartering, gifting—through technology, taking place in ways and on a scale not possible before the internet” (Botsman, 2015). Belk (2014b) distinguishes between “true exchange” and “pseudo exchange” and described “true exchange” as one that involves temporary access rather than ownership; is without fees or compensation; and involves the use of digital platforms, while a “pseudo exchange” is any other exchange that involves the payment of associated surcharge or fee.

However, services are often not provided without any payment. Recognized reports classify market exchanges into three categories: free of charge, cost-sharing, or exchange for remuneration (EC, 2016; COM/2016/184). In other words, these activities can follow the traditional model of charity, exchange or business. The latter is the characteristic that fundamentally distinguishes a collaborative transaction from a collaborative consumption. A collaborative transaction in the sharing economy is where “consumers (or businesses) grant each other temporary access to their underutilised physical assets (what in economics is called “idle capacity”), possibly for money” (Fradkin and others, 2015 and Frenken and others, 2015, as cited in Codagnone and Martens, 2016, p. 6), while Hamari, Sjöklint and Ukkonen (2015) defines collaborative consumption as a “*peer-to-peer-based activity of obtaining, giving or sharing access to goods and services, coordinated through community-based online services*”. Therefore, the main difference between the two concepts exists for many authors when the transaction is done, and the exchange is considered a business.

Codagnone and Martens (2016) also added that even though collaborative economy activities are related to less formal activities because they are provided by individuals who do not act like businesses, sharing activities can compete with more formally organized economic actors. This would indicate that sharing activities create challenges to existing regulatory provisions and affects service workers in various ways, not least through the perceived existence of potential unfair competition from collaborative economy activities.

The ease of using technology on sharing platforms is the root of the emergence and growth of collaborative economy, which offers a solution to market problems when there are sharp increases in demand. Traditionally, ceilings on the production or generation of services have limited the expansion of numerous markets, mostly for services. However, driven by technological change, services have overcome barriers (maximum number of exchanges), boosting transactions while lowering costs, similar to what happened in financial and retail markets during the 1990s. The role of

technological revolution in the process has been to accelerate the relevance of a sharing economy (Görög, 2018; COM/2016/184; OECD 2015a) and act as an incentive to create new business models. Thus, digital platforms' role has been vital in defining sharing economy: "the sharing economy uses digital platforms to enable customers to access tangible and intangible assets generated by economic assets, rather than ownership" (Vaughan and Hawksworth, 2014, p. 2).

The massive and rapid growth of short-term rental activity has given rise to fundamental changes in three main areas: economic markets, consumer welfare, and the real estate sector's efficiency.

On the economy, sharing economy has brought about:

- An increase in the market size of the sectors where it has developed, boosting both bidders (protected by the freedom to provide services) and demanders (attracted by the market incentive) because the use of online platforms gives the collaborative providers the possibility to offer their services beyond their locality.
- A positive final net effect, because the total volume of transactions has grown, even though some applicants left the general services market to enter the sharing market.
- An increase in the number of transactions and a rise in income generated.
- An increase in market flexibility and responsiveness to consumer needs.
- Increased competition with conventional markets, potentially leading to a fall in prices.
- An increase in the aggregate wealth of the whole economy.
- Creation of employment in the non-conventional market such as managing the sharing exchange and maintaining the property which is normally outside of the conventional market.
- Creation of new activities related to technological platforms which represents a progress in social and economic principles.

Regarding consumer welfare, sharing activities have given rise to:

- Reduction in costs arising from transactions without intermediaries lowering prices in the activities carried out as a business.
- More availability of information allowing for product substitutability and rational decision-making.
- The removal of market entry barriers for the demand<sup>6</sup>.
- Reduced uncertainty associated with increased product information and transparency that draws on the players' ratings in the market. Information gathered from ratings helps to customize and improve the quality of services following customer reviews or other feedback mechanisms.
- Cost-sharing due to shared usage.

Regarding economic efficiency, sharing activities:

- Create markets for activities that did not exist previously or were very small in size.
- Reduce entry barriers for producers and suppliers.
- Mobilize idle resources thus increasing productivity.
- Promote wealth creation with lower levels of capitalization or investment by using existing capital goods.

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<sup>6</sup> The concept of market barriers comes from the economy domain. A market has a barrier when some conditions (other than price) impede the suppliers of goods and services or consumption demand from entering the market. Sharing activities have removed most of these barriers, for instance, the lack of information.



- Increase competition in the markets in both sharing economy activities and regular service activities.
- Reduce prices of services compared to the conventional market (especially when the market is active and competition is intense).
- Improve investment efficiency by making past investments in depreciated assets profitable<sup>7</sup>.

## Positive effects of rent-sharing activities

The positive effects of sharing economy expansion on markets where it is active can be summarized as follows:

1. Sharing economy has overcome barriers and physical limits to the number of exchanges in some markets. In sharing space (short-term rental housing), the barriers to payment uncertainty or to sufficient information have mainly disappeared, increasing market transparency (Vaughan and Hawksworth, 2014).

2. Sharing economy triggered transparency in the market through improvements in two areas:

- Information on the characteristics of goods, reducing asymmetry information<sup>8</sup>
- Reputation and feedback system on both buyers and sellers which is publicly available.

Both increase trust and credibility in transactions, and reduce risk factors (Görög, 2018).

3. Sharing economy has enhanced productivity through the broader use of production capacity (increasing production by a unit of capital) and has increased production in the collaborative markets, which is accumulated into the whole economy.

4. Collaborative economy business models and tools have contributed to an increase in quality of services by implementing rating and reputational systems; at the same time, this reduced risks for consumers by reducing information asymmetries.

5. Collaborative economy business models have changed the way services are traditionally provided and consumed. They are driven by technological, economic and societal factors, and allow new players (as individuals) to act as providers and find alternative sources of work, flexible activities and complementary income.

6. The whole collaborative economy made markets more competitive and efficient by improving the match between demand and supply.

7. In some collaborative markets, transactions have mobilized idle assets through more intensive use of resources, increasing productivity and economic efficiency.

8. The expansion of sharing activities had some effects on conventional activities in terms of easements in the provisioning mechanisms, and other effects which should be analysed.

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<sup>7</sup> For instance, rental of an old and un-renovated building in the sharing rental market only corresponds to maintenance costs. The income generated by the rent could now cover the building's maintenance costs. This makes the owner's past investment (for the purchase of the building) profitable now and thus much more efficient.

<sup>8</sup> Asymmetric information is a situation when the agent and customer have different information about the asset, which impedes correct decision-making. It is the normal situation in housing market. The new platforms of sharing rents are reducing this problem, increasing market transparency

9. The collaborative economy "turns" the consumer into a supplier and brings the business culture closer to the mainstream consumer. This shift has already been analysed in the energy sector, with the "prosumer" graph (Parag and Sovacool, 2016).

10. Peer-to-peer transactions may have been very relevant in providing economic resources to unemployed households during the financial crisis, maintaining minimum levels of welfare and avoiding extreme poverty.

Public institutions openly recognize these positive effects of sharing economy. The European Union, in its directives on the liberalization of services (Directive 2000/31/EC - E-commerce Directive and Directive 2015/1535), considers the provision of virtual services as an activity that should be liberalized, and not be prohibited or over-regulated. The European agenda for the collaborative economy (EC, 2016) states that, driven by innovation and technology, this set of collaborative activities creates new business models and has significant potential for contributing to competitiveness and economic growth by enabling individuals to offer services, with the benefits derived from the effects explained above, which can contribute to the sustainability agenda and the transition to a circular economy of the European Union. In other UNECE regions, like the United States and Canada, the regulation about services is also flexible allowing free provision of collaborative activities as a normal way to market performance, although with local rules imposing some constraints as it is summarized in the regulation section.

Codagnone and Martens (2016) provide an additional list of benefits across the collaborative economy's different dimensions, including non-economic social advantages, such as greener commerce, richer social experiences, community revival, and increased social capital. Examples of commercial and managerial advantages include transparency, openness and collaboration, and less bureaucracy or institutionalization (Ibid). Görög (2018, p. 176) agrees that sharing economic goods has positive environmental and social effects; reduces environmental impact (lower relative energy consumption leads to lower emissions); results in efficient utilization of physical assets; and facilitates new social contacts (Botsman and Rogers, 2010). Collaboration can create innovation, jobs and community (Krueger, 2012); and sharing can bring people together and stimulate social cohesion in neighbourhoods (Agyeman and McLaren, 2015) and promote circular economy.

### **Negative effects of rent-sharing activities**

The existing knowledge of rent-sharing activities also highlights some negative or uncertain effects. There is an agreement that collaborative sharing activities cause distortions that affect conventional activities, like changes in the provisioning mechanism, lack of social protection and other effects on productive factors. The European Union (EC, 2016) recognizes that collaborative economy blurs the demarcation between consumer and provider, employee and self-employed, and the professional and non-professional provision of services, which raises questions regarding the application of existing legal frameworks. Moreover, the lack of legal regulation could reduce consumer protection and working conditions (Malhotra & Van Alstyne, 2014) and undermine workers' rights (Schor, 2014, as cited in Görög, 2018).

Such distortions generate misalignments in organized and regulated markets that have led to confrontation between actors in the same sector. The lack of regulation of collaborative activities could lead to discriminatory treatment of some actors on the market.

Literature highlighted the risk that the emerging competition between collaborative platforms and conventional companies and the sharp increase in market share gained by the former could evolve

into situations of market power (monopoly), especially given the increasing use of artificial intelligence methods to identify consumers' tastes and their ability to target specific groups of goods (and recommend prices).

Further negative economic effects, according to Sheppard and Urdell (2016), are:

1. "Hotelization" of the housing market (Lee, 2016; Cocola Gant and Gago, 2019) due to the use of housing for tourist accommodations. Therefore, this competes with demand for hotels and created what has become known as the shadow hotel industry.
2. A decrease in the affordability of conventional rental housing due to two mechanisms - the effect of short-term rental prices on conventional long-term rental prices (demand-side effect) and the absorption of some long-term rental units from the market for short-term use (supply-side effect) (Wachsmuth and Weilsler, 2018; Barron and others, 2021).
3. The emergence of negative externalities, caused by the rapid growth of short-term rental activity, which have been widely contrasted.

Two main groups of externalities are highlighted by international experience:

- *Population agglomeration in city centres.* The consequences of such agglomeration can be seen in the overuse of public and health services, and transport, as well as negative externalities such as noise and change in the quality of life of neighbourhoods<sup>9</sup> (Sheppard and Urdell, 2016; Filippas and Horton, 2018).
- *Gentrification of city neighbourhoods resulting from an investment incentive to refurbish units rented on the sharing market.* This investment process attracts commercial activities and causes residents to move away to other areas of the city or to other cities. This effect is the main source of the controversy over short-term rental activity (Wachsmuth and Weilsler, 2018; Yrigoy, 2019; Amore et al., 2020).

4. Unfair competition stemming from the lack of regulation of collaborative economy activities.

The role of regulation is crucial for the future of collaborative activities, especially where there is a set of conditions that could create any type of market control. Collaborative platforms are rarely (but increasingly) regulated, although, especially under EU law, it is possible to impose rules where market power is demonstrated<sup>10</sup>.

The criteria that determine whether the collaborative platform could develop market control are the following:

- **Price** - where the collaborative platform sets the final price to be paid by the user. The price is not considered appropriate if there is a price recommendation or if the service provider is not free to decide on the price.

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<sup>9</sup> A negative externality is a much-used concept in socioeconomic analysis. It appears when an activity developed by one agent negatively affects other people who did not participate in its provision.

<sup>10</sup> That is, when the use of technology and quality management may cause the platform to have market power (by setting prices) or any other form of control over the provider or the consumer. The condition to be a "collaborative platform" is that it is underpinned by an Internet-based tool that enables transactions between the people offering and using the service generated by the asset without a transfer of ownership (definition contained in the European Agenda for the Collaborative Economy, EC,2016). Regulation to guarantee competition and reduce the negative effect of market power is implemented in most of UNECE region under the anti-monopoly or anti-trust body of rules.

- If there are key contractual terms and certain conditions, other than the price, that determine the contractual relationship between the service provider and the user (such as mandatory instructions).
- Ownership of residential assets - if the collaborative platform owns the assets used to provide the underlying service.
- The platform could incur the costs and bear all the risks related to the provision of the services.
- There is an existing employment relationship between the collaborative platform and the service provider.
- The platform manages the service providers in such a way that it provides more services than what the owner and user need and, in this case, the sharing platform could also be considered as a service provider<sup>11</sup>.

If the first three criteria are met, the platform is considered as exercising significant influence or control over the service provider. Otherwise, if one or all the other listed conditions are met, the platform is considered as a technological instrument for carrying out the transactions.

## Typology of collaborative activities

The typology of collaborative platforms is vital for classifying activities as collaborative or business, depending on how the transaction is carried out. OECD (2015b) includes the collaborative economy as a section of the digital economy, and identifies three types of platforms that link demand and supply in specific markets, most of which are in the residential market:

- Platforms that promote P2P transactions in both sales and rentals (e.g. eBay and Etsy)
- Platforms that promote P2P service/space-sharing (e.g. Airbnb, Uber, and TaskRabbit)
- Platforms that manage crowdsourcing (e.g. Mechanical Turks, Kickstarter and Angel List).

Codagnone and Martens (2016) identifies different categories of platforms according to the use of the goods and services they intermediate:

- Recirculation of goods (second-hand and surplus goods markets are used to sell services)* - examples include Airbnb, CouchSurfing, Zipcar, Uber, Lyft, BlaBlaCar, and Relay Rides. Food or meals (e.g. Leftoverswap, Soup Sharing and EatWithMe) can be considered as non-commercial recirculation of goods; other building space sharing can be classified as "building social connections".
- Assets* - includes platforms that utilize existing assets that are idle or underused and could be considered a market for production factors. Examples include Getaround, and all crowdfunding initiatives where capital is considered an idle asset. The sharing of real estate space for productive and collaborative activities, such as Weworko or Sharedesk, also falls into this group.
- Services and labour (labour market)* - also includes non-commercial, temporary banking activities, and generic and professional labour marketplaces, such as TaskRabbit, Mytaskangel, Freelancers, and oDesk.

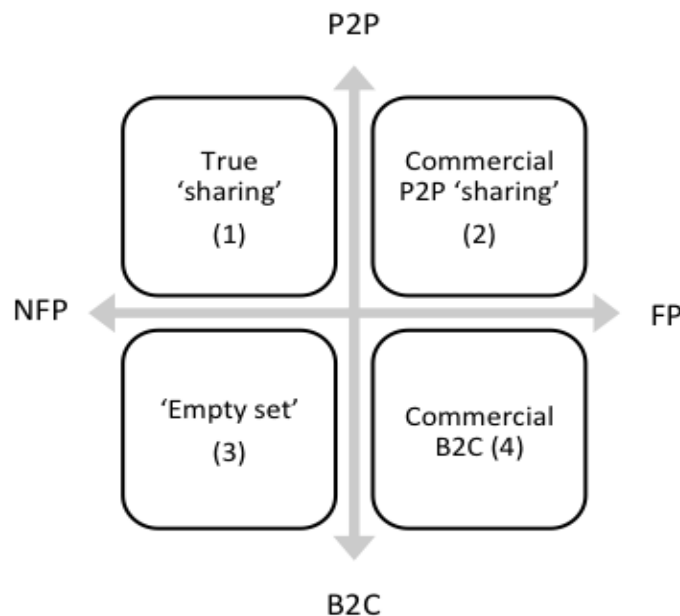
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<sup>11</sup> For instance, when the platform suggests the price of the service, suggests when the owners could supply the accommodation, or imposes some conditions, then the platform is a provider. The differences are key to be considered a business agent. It is currently a hot topic of debate.

(d) *Others* - such as those involving specialized professional collaborations, platforms for some intangible goods, such as solar energy (where the solar energy produced by one of the participants is exchanged, such as Yeloha), and other cases.

The most popular classification system divides platforms according to the purpose of the exchange, that is, whether it is for profit or not (see Diagram I.1.).

**Diagram I.1. Map of conceptual exchange platforms**



*Source:* Codagnone and Martens (2016), p. 12.

Platforms could be i) Business to Business (B2B) (which would not fall under the classification system in Diagram I.1.), ii) Business to Consumers (B2C), or iii) Peer to Peer (P2P), which includes Government to Government (G2G). They also operate for-profit (FP) or not-for-profit (NFP). “True sharing” in quadrant (1) is classified as NFP and P2P, while quadrant (2) refers to commercial P2P platform that seeks profit in transactions. A platform that is business benefit-oriented for the consumer falls under quadrant (4), while (3) is defined as an empty quadrant. G2G is a new phenomenon with unclear classification (it would be a public-sector innovation platform), and B2B could be included in quadrant (4). Most collaborative economy activities fall under quadrant (1).

The rise of the short-term rental market coincides with the emergence of technological platforms with global coverage specializing in the intermediation of living space for residential purposes. Airbnb is the leading platform currently in existence; it has spread worldwide and has arguably initiated the debate on short-term rental effects. Most of the debates and problems with the hospitality industry stem from the collaborative activity not complying with the regulations applied to that industry; sharing house space in the short-term rental market is therefore accused of by the hospitality industry to exercise unfair competition, as discussed above. Institutional support for the development of these platforms as a P2P formula (and a successful example of circular activity) and the difficulty of measuring their effects fuel the debate because it is difficult to separate which part of the activity is B2C and which is P2P.

## Section II. Housing in the sharing economy. Principles and empirical evidence

This report aims to quantify the housing sector's collaborative activity and its key characteristics discussed in section I to enable an understanding of the real nature of sharing housing. It focuses on the housing market and the related sharing activities.

There are two types of activity that involve residential sharing: co-living and sharing space. Co-living is sharing common residential spaces between households while preserving a specific private space for exclusive use. These arrangements are attracting increasing interest for some cohabitation cases between households of different generations and, in recent years, groups of elderly households. Unfortunately, no statistical information is available to analyse this formula of sharing residential space. The statistics for this specific housing use are not collected and, as it does not involve renting, no contracts are recorded either, so it is not possible to know its general relevance or evolution.

Regarding short-term rentals, statistics are available through platforms, mainly Airbnb, which publishes raw data for some of the cities it intermediates. Sharing rent can be analysed from these data and, combined with aggregate variables for each location, it is possible to approximate each market's situation according to the most relevant issues assessed in the literature.

Thus, the statistical information answers the following questions:

1. Is there a competition in this market? The evaluation of prices and their evolution are an indicator of how prices can fluctuate according to demand.
2. Is there a monopoly in this market? The answer requires an assessment of the ownership and management structure.
3. Is it true that temporary rental activity absorbs a significant and growing share of the housing stock? It is necessary to know the number of properties used for temporary rental and the percentage of the total housing stock.
4. How much transient population arrives in each city, and does it produce enough agglomeration to justify civil society's complaints? To answer these questions, an approximation of the population flow that could potentially use temporary rental housing is required.
5. How much wealth does it generate for the local economy? The contribution to gross wealth would be calculated using the amount paid in rent as an initial base.
6. Are there diffusion effects on prices? This question refers to whether the accumulation of temporary renting determines the rental prices in the area. Geo- and spatial econometric techniques help to answer these questions.
7. Is temporary renting concentrated in the centre or in a particular neighbourhood straining their markets? The concentration of properties in the same location would answer this question.
8. Is the temporary rental activity a P2P or is it an economic activity using technological platforms? It is necessary to establish a boundary separating the P2P part of this market from the B2C part, that is, the part that shares costs and the part that seeks profit.

None of these hypotheses are currently answered or quantified. A large number of the effects and consequences analysed in the literature do not have a quantitative basis that would allow for the

evaluation of the scope of short-term rentals and its final effects, weighing up the positive and negative consequences. In this document, these measurements are provided.

The literature provides examples of activities which would be considered sharing activities in housing markets. One is P2P housing sharing, that is, sharing housing to share costs. This is one solution for homeowners that have unused space at home (rooms, or other empty space) to generate income covering their costs. It gained considerable popularity when the technological platforms stormed into the economy, especially in cities with cultural or tourist attractiveness.

Another activity related to housing costs is promoting collaborative initiatives that support housing affordability through community housing (Jarvis and others, 2016; Czischke, 2018) in the form of cooperatives, mutual forms of housing, and co-housing solutions. Co-housing is understood to be a collaborative, communal or collective solution (Vestbro, 2010) that aims to allow affordable housing and "other way to live" sharing activities, space and services and creating a social network by using the house. A brief reference to co-housing is made in the following discussion. A full analysis cannot be done due to the lack of statistical information.

## Co-housing

The conventional concept of co-housing is that of a housing group that involves several independent homes for individual use but with standard facilities such as common spaces and shared kitchens, dining rooms, child-care facilities, libraries, laundries, gymnasiums, cafeterias, offices, gardens, and guest rooms, among others (Beck, 2020:43; Ruiu, 2014:321). The component of sharing space and services is the reason why co-housing is seen as part of the sharing economy.

Co-housing entails using space privately and communally. The co-housing concept is based on three pillars (Tummers, 2016):

1. Social - promoting a sense of community and socializing members;
2. Environmental - sharing common spaces like gardens or saving space by having shared dining-rooms increases the role of sustainable homes;
3. Economic - sharing space and services can diminish individual costs and make houses more affordable.

The current concept of co-housing is adapted to prevailing social needs. As described in the following, co-housing embraces the concepts of an ageing society, lack of housing affordability, sustainability and green houses. The existing evidence supports that:

- Co-housing for seniors is a solution to implement the increasingly popular philosophy of "ageing in place" (Rowles, 1993). This philosophy demonstrates an improvement in the welfare and health of the elderly population.
- Co-housing is seen as a way to implement green solutions in sharing areas and services, creating "ecovillages" in co-housing communities (Daly, 2017).
- Affordability associated with co-housing is highly debatable, with some analysts defending the idea that sharing costs makes co-housing more affordable (McGee and Benn, 2015) and others supporting the theory that shared facilities increase housing costs (Ruiu, 2014).

## Short-term rental market

Short-term rental involves renting out the home (or available space in the occupied or non-occupied house) for very short time periods to visitors. It was traditionally used in the tourism sector, and its use has increased since 2009.

As explained above, the rise in the short-term rental market coincides with the emergence of technological platforms with global coverage specializing in housing space intermediation. This section is devoted to empirically identify the main features that define the market. The analysis quantifies different variables, which help study the structure and evolution of this market.

➤ *Main indicators required for the study of short-term rental activity*

There are several short-term rental market features which are unknown and can be highlighted through data acquisition. This document has organized the data analysis needed to identify the specific features of short-term rental market associated to four points:

1. To identify the market characteristics and dynamics from the supply side, the required variables are the number of units used for short-term rental, the characteristics, the location (allowing for spatial analysis) and the number of offered days.
2. To identify the economic activity and market structure, the variables are the number of hosts, the type of the short-term rental activity (differentiating between P2P and business-oriented), the number of people using the houses, and the transient population in the city.
3. Rental prices and wealth generated for the city's economy.
4. Market transparency indicators required to check competence in the market - these include indicators of information (the speed of hosts responses to a requirement of information or contract, and information verification, both in hosts and properties), quality (how many super-hosts are in the market), and market power (the number of hosts and their share in the relevant market).

➤ *Details of data source*

The database used for this analysis was created from the data downloaded from the InsideAirbnb.com website<sup>12</sup> based on two types of files: listings of properties and calendar. It contains full information about listings and bookings (potential contracts). As of February 2020, data was available for 43 locations (consist of regions, cities, islands and other areas) in Europe covering the period 2015 to 2020. The information used includes that on rented dwellings, both in terms of their characteristics and the daily rental of the properties, and daily transactions and information on the managers or hosts but excluding customer reviews.

The final database was obtained by merging the different files downloaded and eliminating duplicates. The database consists of individual information per listing (house level), with daily observations since 2015 in some of the locations but with most of the information available between 2017 and 2020<sup>13</sup>. The vast amount of data from daily observations is challenging to manage and has high costs in terms of computation time.

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<sup>12</sup> The statistics give all rentals supplied, including every property registered on the platform available to rent by each owner and with the possibility to be rented. Houses can be "non-rented"; these are also included in the register.

<sup>13</sup> Details of the database are available upon request.



## Section III. Housing and sharing economy. Evidence from 43 European locations

For purposes of analysing the short-term rental market, the report used the database containing extrapolated data from the InsideAirBnB website as previously discussed. The 43 European locations analysed is given in table III.1.

**Table III.1. European locations analysed**

Number	City	Country	Number	City	Country	Number	City	Country
1	Amsterdam	Netherlands	15	Euskadi-Bilbao	Spain	30	Naples	Italy
2	Antwerp	Belgium	16	Florence	Italy	31	Oslo	Norway
3	Athens	Greece	17	Geneva	Switzerland	32	Paris	France
4	Barcelona	Spain	18	Ghent	Belgium	33	Porto	Portugal
5	Bergamo (province)	Italy	19	Girona (province)	Spain	34	Prague	Czech Republic
6	Berlin	Germany	20	Manchester	UK	35	Puglia-Bari (province)	Italy
7	Bologna	Italy	21	Istanbul	Turkey	36	Rome	Italy
8	Bordeaux	France	22	Lisbon	Portugal	37	Seville	Spain
9	Brussels	Belgium	23	London	UK	38	Sicily (island)	Italy
10	Bristol	UK	24	Lyon	France	39	Stockholm	Sweden
11	Copenhagen	Denmark	25	Madrid	Spain	40	Trentino	Italy
12	Dublin	Ireland	26	Malaga	Spain	41	Venice	Italy
13	Edinburgh	UK-Scotland	27	Majorca (island)	Spain	42	Vienna	Austria
14	Euskadi-San Sebastian	Spain	28	Menorca (island)	Spain	43	Valencia	Spain
			29	Milan	Italy			

From the database information, indicators were created and are explained below.

The extracted information came from only one platform (AirBnB<sup>14</sup>) so data representativeness would have been an issue in this case. However, no data is available from other platforms; otherwise the true number of short-term rentals presented in this report would have been larger. Since Airbnb carries out the majority of short-term rental transactions, the volume of information they have is large enough to be considered a significant sample of the whole population and the results of the analysis based on this data could be generalizable.

This report gives a quantitative estimation of the minimum (observed) amount of activity in the sharing rental market, both in terms of price, volume of activity or any other of the derived variables calculated (for example, the total transient population or the wealth generated). The conventional tourist activity is not covered.

The database used distinguishes between available and unavailable units. A unit or property becomes unavailable when it is rented out already or because the host decided not to rent it out (to keep it for their own use, or it is rented out on other platforms or networks, or because of regulation<sup>15</sup>). The

<sup>14</sup> The address of data is [www.insideairbnb.com](http://www.insideairbnb.com)

<sup>15</sup> Regulations could limit the number of days of rental on the short-term rental market. Such rules exist in several cities.

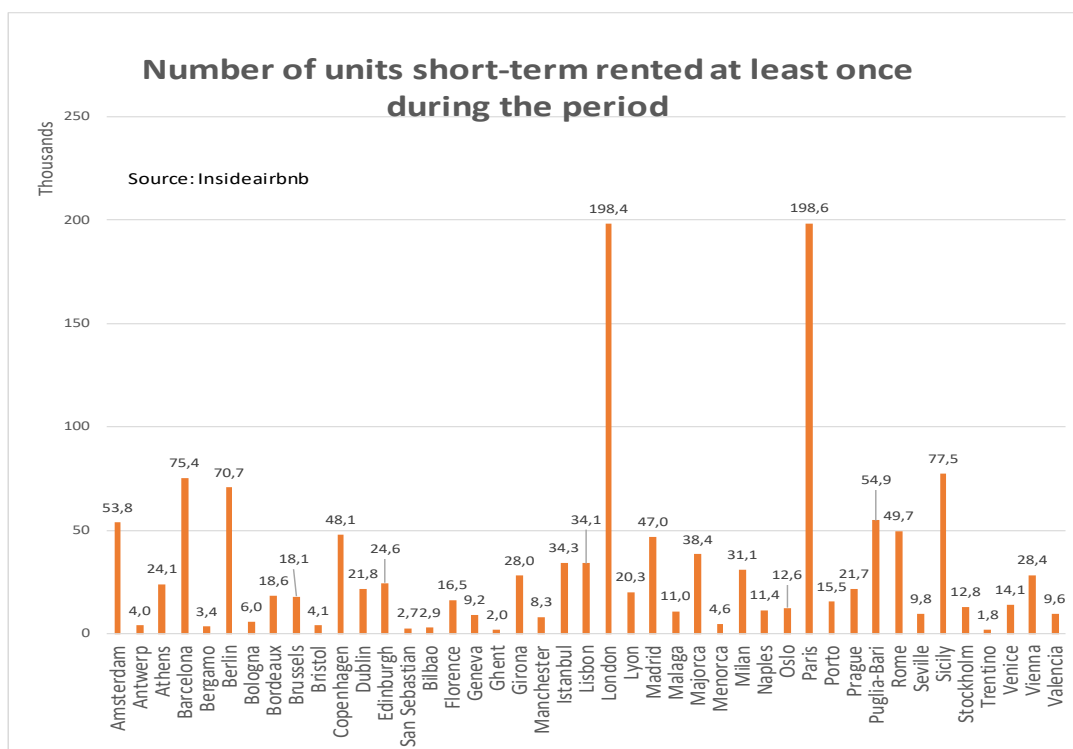
database of this report does not have information about regulations limiting the number of rental days, or on unavailability of a house due to self-use. For example, data in the city of Valencia<sup>16</sup> suggests that around 35 per cent of the unavailable properties in the listings are reserved for owner's use or have been rented out via other networks. As this figure is stable, this report's estimates are thought to be a good proxy of the real contribution of short-term rental activity to the economy.

### III.1 Market characteristics and dynamics analysis

#### Related to the number of housing units used and hosts

The average number of units on the short-term rental market is approximately 35,000 per city, location or province, and there are around 20,490 hosts on average in every city or region observed (Figure III.1A). London and Paris are the largest markets, with around 200,000 units listed. The second tier of locations comprises Amsterdam, Barcelona, Berlin, Puglia, Rome and Sicily. Data for Puglia, Sicily, Majorca, Menorca, Girona and Bergamo refer to the whole location or the province; all are conventional tourist areas.

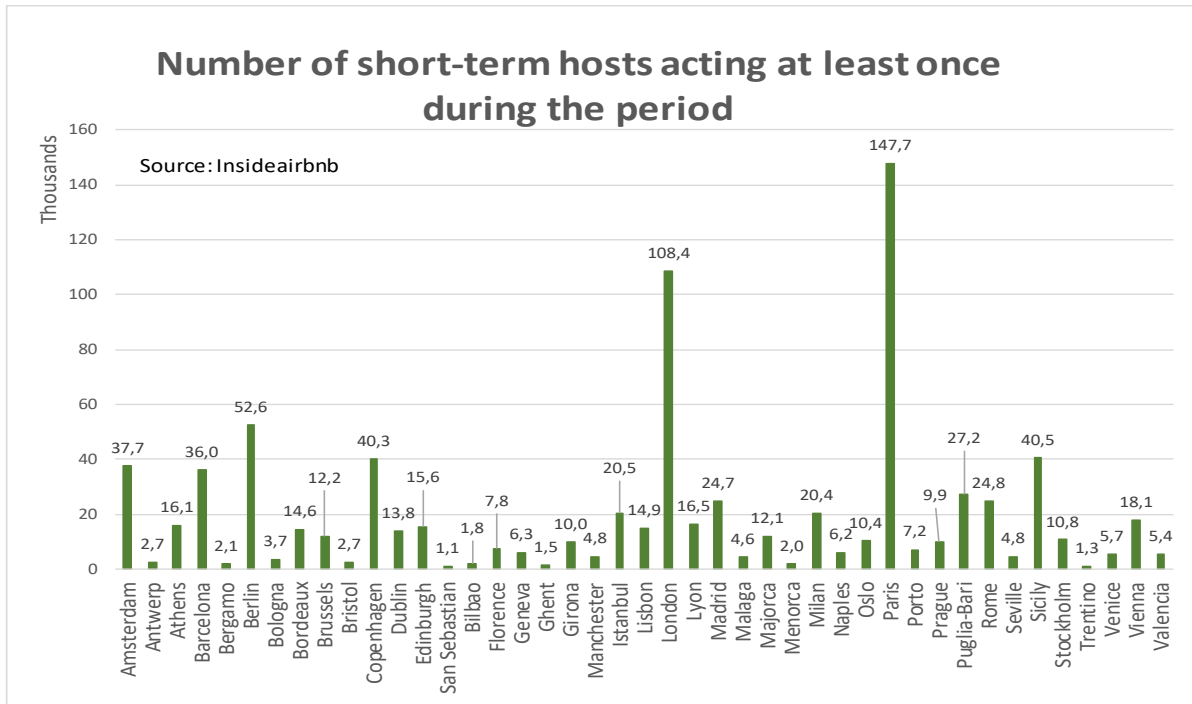
Figure III.1A



The number of hosts (Figure III.1B) follows a similar structure, with the first tier consisting of Paris and London, and the second tier having Amsterdam, Barcelona, Berlin, Copenhagen, Sicily, Puglia and Rome.

<sup>16</sup> The team obtained data for Valencia from another source, [www.airdna.com](http://www.airdna.com). That data had the same source (Airbnb platform) but with more detailed information about the reasons why properties were unavailable.

**Figure III.1B**



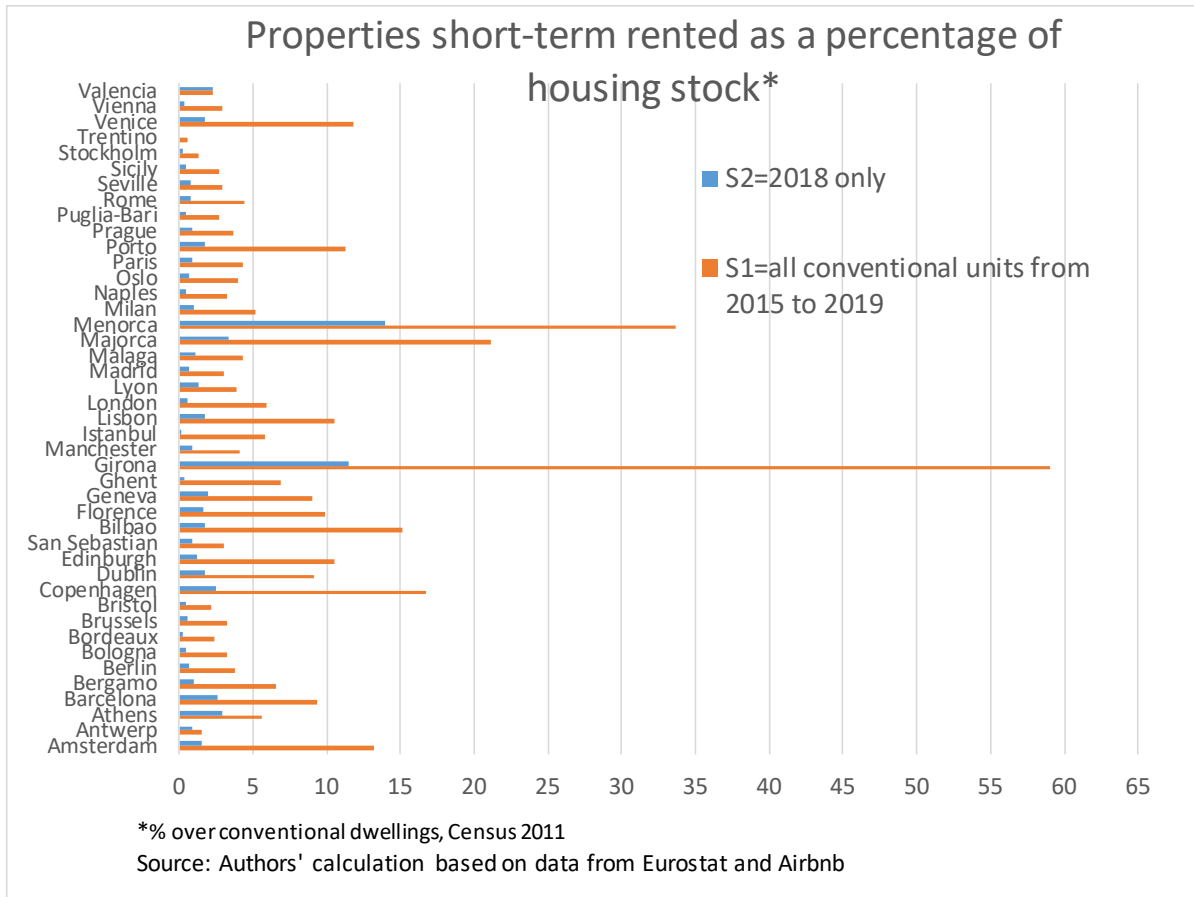
The ratio of the number of properties to the total existing stock (2011 Census data) is low across the locations. Approximately 7.6 per cent of the total housing stock on average was used for short-term rentals between 2015 and 2020. In 2018-2019, the average number of units used for short-term rental dropped substantially at 1.5 per cent of the housing stock (Figure III.1C). There are many reasons for this including the establishment of new regulations, simultaneous publishing on multiple platforms or own use.

The ratio of short-term rental units to total housing stock is called short-term rental density. According to this indicator, the locations can be grouped into low density (1.5 per cent to 3 per cent) and high density (more than 3 per cent). The high-density locations coincided with locations that are conventional tourist areas (Figure III.1C).

These observations suggest a high level of turn-over (number of whole days rented) as the number of listings is large, but a low proportion of the housing stock (conventional houses) is used.

The proportion of short-term rental units to the total number of occupied dwellings is 3.1 per cent on average, and 22.14 per cent if unoccupied ones are counted. Figure III.1C support the hypothesis that most houses used for the short-term rental market are unoccupied. This also suggests that not much housing stock for short-term rentals is used in the 43 locations. The level at which housing stock that are permanently used by owners (i.e., not rented out) is penetrating the short-term rental market is not known and should be investigated.

Figure III.1C



### Occupancy rate

The relationship between the number of days a listing was booked and the total number of days it was listed for the year gives the occupancy rate. The average occupancy rate for each location is shown in Figure III.1D. Findings also show that, on average, a unit is booked around 199 days per year, which is a little more than half of the year. Occupancy rates vary considerably in the 43 locations averaging at 52.4 per cent, which supports the theory of high turn-over of every unit in the market.

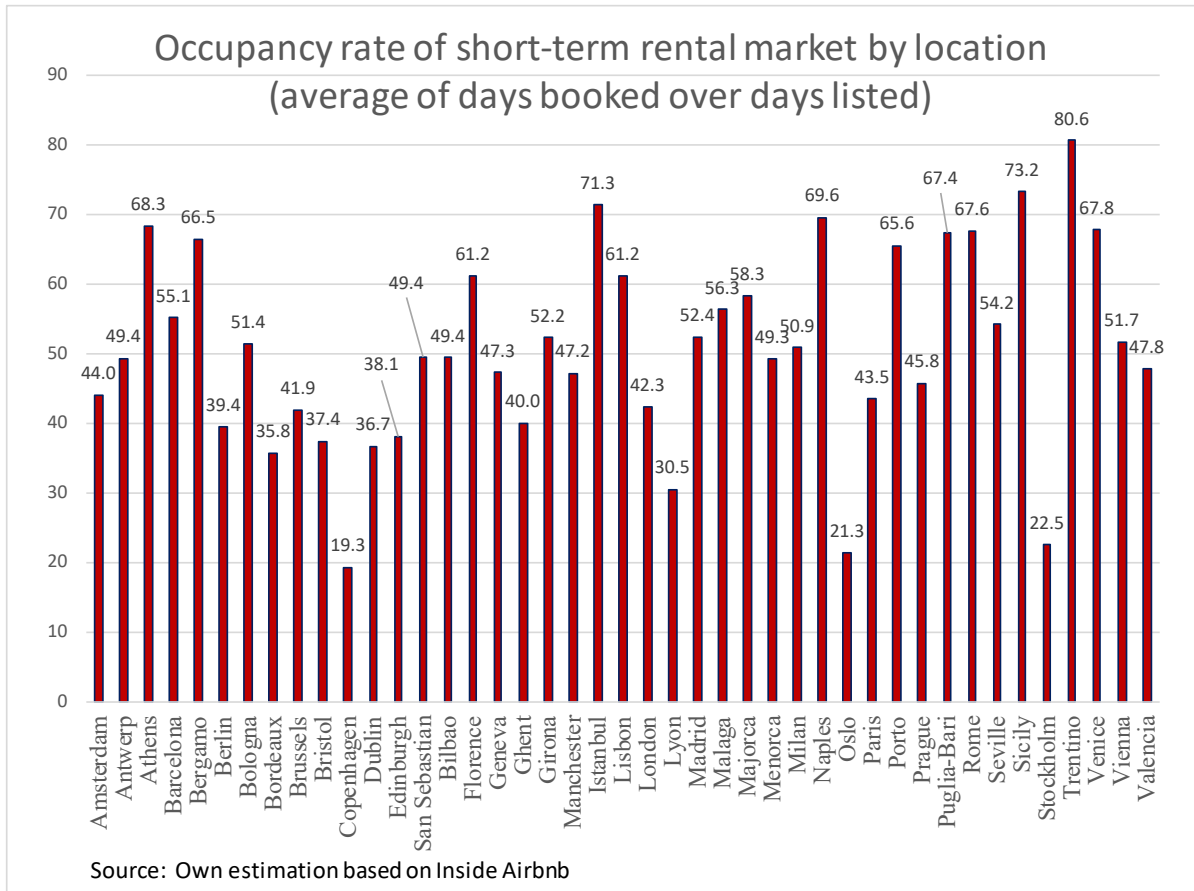
The Figure III.1D approximates the occupancy ratio in the short-term rental market.

For comparison purposes, occupancy rates were classified according to “intensity” of bookings:

1. Occupancy rates of 60 per cent or more are considered highly intense. It was observed that locations with coastal areas fall into this classification.
2. Average booking intensity refers to bookings of units for 10-12 days a month, that is, with occupancy rates between 40 and 60 per cent. Most of the locations fall into this category.
3. Between 20 and 40% is considered low occupied.
4. Very low-intensity occupancy rates (around 20 per cent) are those below the average. Copenhagen, Oslo and Stockholm fall into this category.

Figure III.1D shows how Istanbul, Sicily and Trentino-Venice could be defined as having the highest occupancy rate, all with an average of over 70 per cent, followed by Athens, Barcelona, Bergamo, Florence, Lisbon, Naples, Porto, Puglia, Rome and Venice, with over 60 per cent. The average occupancy rate of Valencia (47.8 per cent) is similarly categorized as other areas with occupancy rates close to the average (equates to between 10 and 12 days per month). The group of locations classified as having low occupancy rates are Lyon, Oslo, Stockholm and Copenhagen.

**Figure III.1D**



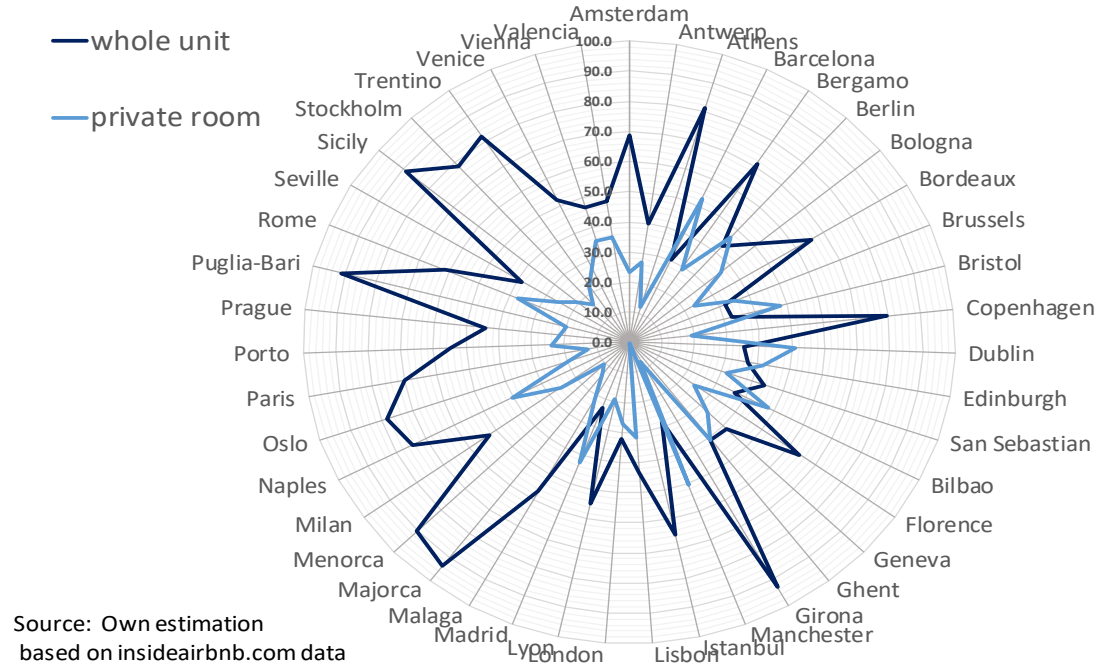
### Type of housing unit booked

The database provides information about the typology of unit booked - single house, castle, room, apartment, etc and about the type of rental contract - rental of an entire property, individual room or shared room. Almost 70 per cent of renters booked an entire property while less than 30 per cent booked private rooms (see Figure III.1E). Rented shared rooms had a marginal percentage share at around 2.2 per cent.

A whole property is preferred by guests in very tourist-oriented locations: Malaga, Menorca, Majorca, Puglia, Sicily, Trentino, Naples and Girona and in cities of Milan, Rome, Prague, Stockholm, Athens, Copenhagen and Florence. In some cities (Barcelona, Bristol, Dublin, Bilbao, Manchester and Madrid), there were more private room bookings.

**Figure III.1E**

## Short-term rental contracts by type of properties (avg 2015-2019, % of total in each category)



The typology of the unit booked depends on the stock. Apartments are the most-rented properties in most of the locations analysed (in the largest locations in Southern and Eastern Europe) while single-family homes are most popular in the Northern European locations. Thus, apartments is the primary type of property for short-term rental.

However, single-family homes is also a relevant property type in the following locations:

1. In coastal areas - Sicily, Puglia, Menorca, Majorca, and Girona - which, on average, have 50 per cent single-family houses or apartments in the short-term rental-sharing market stock.
2. In cities of Manchester, Ghent, Dublin, and Bristol, where most of the units in the market are mainly detached or single-family houses.

Regarding the type of rental contract, data showed that around 58 per cent of single-family houses are rented entirely, while in 30 per cent of them only rooms are rented. Guests rented full apartments in 74 per cent of the cases, while less than 23 per cent rented rooms only.

The data showed considerable amount of activity on renting rooms in single-family houses compared to apartments, suggesting that:

1. The P2P rental market is more highly developed in single-family homes than in apartment markets.
2. Rooms in those units are rented out short-term without the owner or household permanently living there; they are being managed for business purposes.

The estimates conducted for the study suggest that there are two models of locations by property typology:

1. *Apartment-sharing locations.* Apartments dominate short-term rental activities and only few houses or other types of properties are being rented out.
2. *Single-family-home-sharing locations.* Locations where the single-family house comprise the majority of the housing stock that are being rented out. Some 30-40 per cent of the total rental properties fall into this category.

The data show considerable rental activity of rooms in single-family houses compared to apartments, which could reflect a pure P2P model where the owner shares unused space. However, it could also reflect management of vacant units (i.e., not permanently inhabited by a household) for their efficient use in which rooms are rented out by "professional" management companies for commercial or sharing purposes. It is impossible to identify which of the two characteristics is more prominent with the current data.

- The data suggests a difference in markets according to the geographical distribution of the locations.

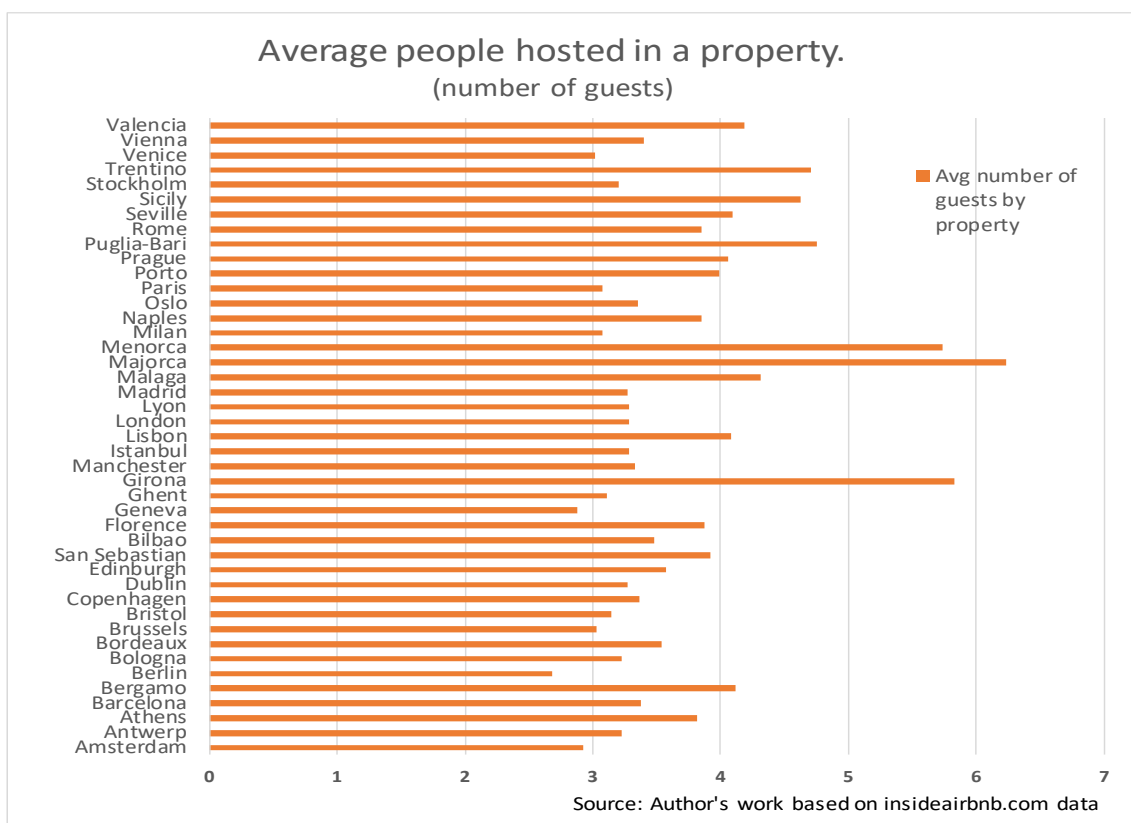
### III.2. Market structure

In describing the structure of the short-term rental market, the study focused on the estimation of indicators showing the potential volume of demand based on the number of visitors residing in the rented dwellings, and the volume of supply based on the number of hosts and their portfolio size (in terms of the number of units AirBnB manages).

#### Market size from the demand side

The data collected indicates that the average number of visitors staying in a rental accommodation is three persons per property per visit. Again, there is great variation between locations (Figure III.2A).

Figure III.2A



- The analysis shows several of the locations are capable of hosting a larger number of people than average; these are mainly the more touristic and coastal locations.

Trentino, Sicily, Puglia, Menorca, Majorca, Malaga, Lisbon, Girona, and Bergamo rent out properties adapted to host more than four people on average, and three could host more than five (Menorca, Majorca and Girona). Venice and Valencia also fall in this group, although they are not beach areas. It could be said that these locations have larger dwelling sizes and allow for greater densification. They are also the locations where the average length of stay is the longest. Larger-sized units, a larger number of people and longer temporary residence are three characteristics associated with conventional tourism areas, which Venice and Valencia have.

- The rest of the locations have average capacity (between 2.5 and 3 people per property).



Given this average and the number of days the properties are booked (and rented), the total number of visitors per year can be calculated. This will give an approximation of the city's transient population from temporary rentals. The ratio of the transient population to the resident population is the transient population density.

The average transient population density of the 43 locations is 21.8 per cent of the permanent resident population.<sup>17</sup> Figure III. 2B shows the transient population density by location.

Some observations are:

- The first group of locations consists of those with very high population density (Puglia, Majorca and Trentino). The ratios calculated in Figure III.2B were computed based on the count of all persons accommodated in short-term rental housing in the whole region (or island) relative to the registered population in the capital city only. Therefore, transient population densities in these locations are exceptionally high.

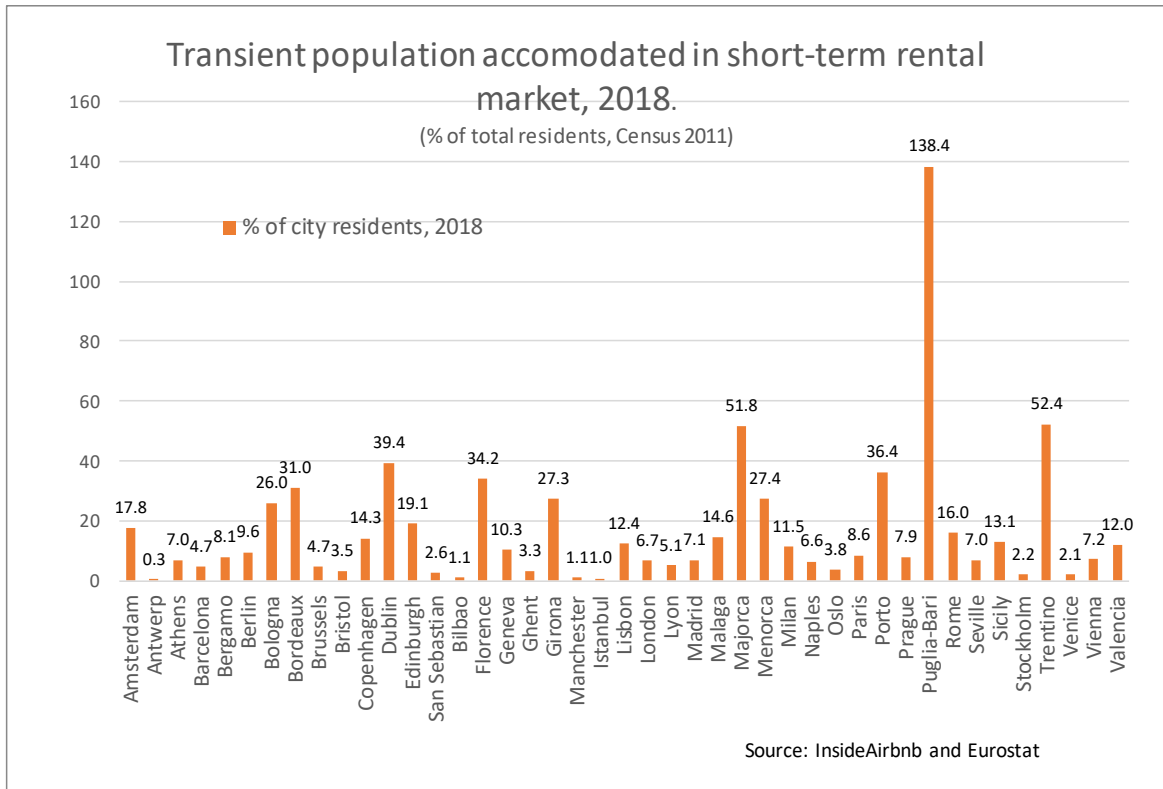
For instance, in 2018, the population visiting Trentino was equivalent to 52.4 per cent of the population of the capital, Trento; and in all of the islands of Majorca, rental visitors represented 51.8 per cent of the population of Palma. In other locations, the proportion is lower ranging from 13.1 per cent in Sicily to 14.6 per cent in Malaga to 27.6 per cent in Girona. In these cases, the densification of the short-rental market is much lower, because these are very touristic areas and the transient population also uses other residential services (hotels, regulated rental housing, etc).

- The second highest level is in locations like Bordeaux, Dublin, Florence and Porto, which received more than 30 per cent of their local population as transient people.
- Copenhagen, Lisbon, Geneva, Malaga, Milan, Rome and Valencia had between 12 per cent and 15 per cent transient population.
- The transient populations of Barcelona (4.7 per cent), Berlin (9.6 per cent), Prague (7.9 per cent) and Vienna (7.2 per cent), despite having the lowest in the sample transient population, generated social reactions because of excessive tourism.

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<sup>17</sup> The total number of people using the short-term rental market is equivalent to 21.8 per cent of the local population.

**Figure III.2B**



The calculated transient population density is a possible indicator for showing the social problems generated through short-term rental markets. There were complains in many cities against the increasing number of tourists staying in the cities<sup>18</sup>. Figure III.2B clearly shows that cities like Bordeaux, Dublin, Florence and Porto (with more than 30 per cent of their local population as transient in a year) experienced a large influx of foreigners. Interestingly, they are not the cities with more short-term rental protests. On the contrary, public reaction seems to occur in locations with lower transient population densities. This could imply that the discontent is a reaction to tourism in general, and not only to the shared housing market. There are also cities with high transient population density but seemingly no public reaction. It is possible that these cities see the short-term rental phenomenon as a productive activity and one that brings wealth. Another reason for public reaction against short-term rentals could be that visitors are concentrated in the centre of municipalities, so that the density of transient population would be much higher there.

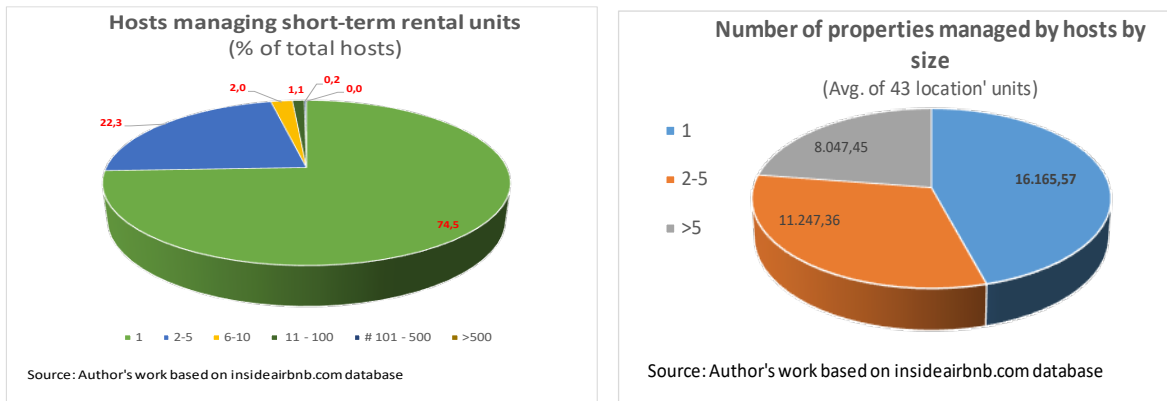
### Market size from the supply side: the hosts

The average number of hosts per location was 20,500. This number is higher in London (with more than 100,000) and Paris (more than 140,000), followed by Berlin (around 54,000) and Amsterdam, Barcelona, Copenhagen and Sicily (about 40,000 each). The rest of the locations have less than 20,000 each, with host numbers proportional to the market size.

<sup>18</sup> For example, people demonstrating in the streets rejecting visitors using sharing rental units. See Nieuwland and Van Melik (2017). Also, city reactions are documented. See <https://www.theguardian.com/travel/2017/aug/10/anti-tourism-marches-spread-across-europe-venice-barcelona> <https://www.cnn.com/2018/05/23/unwelcome-guests-airbnb-cities-battle-over-illegal-short-term-rentals.html> <https://www.bbc.com/news/business-45083954>

This study identifies whether the manager of the short-term rental property is a single manager (P2P) or a business activity reoriented to this platform as an alternative means of intermediation. Evaluating the hosts' housing supply indicates its market power and the level of management. The hosts have been classified by the number of units they manage to have a measure of the management concentration in this market, and it is assumed here that managing more than five homes may be a regular business<sup>19</sup>. Results showed that 74.5 per cent of all hosts in the locations manage just one property, and 22.8 per cent manage between two and five. This indicates that, on average, 96.8 per cent of hosts are P2P-oriented (Figure III.2C).

**Figure III.2C**



The distribution by location of such proportions varies widely, as shown in Figure III.2D. For instance:

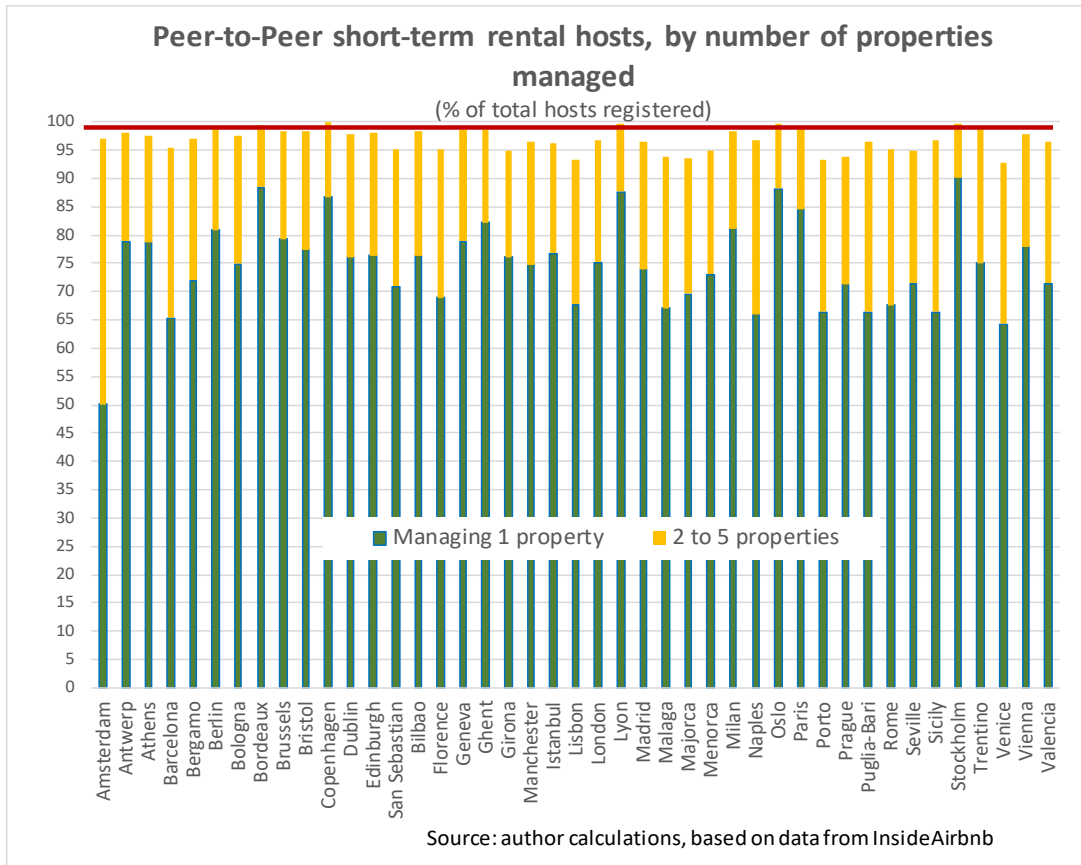
- In Amsterdam, 50 per cent of hosts manage one property, 47 per cent manage two to five properties, and 4 per cent manage more than five properties.
- In Stockholm, Lyon and Oslo, about 90 per cent of hosts operate one unit, 9 per cent operate two to five units, and less than 1 per cent operate more than five units.
- In Brussels and Copenhagen, 80 per cent of hosts manage one property.

The average number of hosts managing more than five units is 3.5 per cent of the total hosts across the sample. It can be said that these hosts are business-oriented (business-hosts) and the locations where the number of business-hosts are the highest are Barcelona, San Sebastian, Florence, Girona, Lisbon, Malaga, Majorca, Porto, Prague and Venice.

Regarding the total properties managed by each host, the perspective of the market concentration changes. Data shows that 45.3 per cent of total units rented (15,848 units) are managed by a host that only manages one property. The total number of hosts managing more than 5 properties (business-oriented) is 8,079 units, which is equivalent to 23.2 per cent of total properties (Figure III.2C). Such percentage indicates that almost one fourth of the market (accounted from the property perspective) is business-oriented.

<sup>19</sup> Additional research made by authors concludes that companies interact in this market for business purposes with no association to a specific minimum number of units, sometimes one or two units. Therefore, it is possible that the sharing rental market could be a marginal channel of renting homes for business purposes in periods of weak demand or excess in vacancies. Such use seems reasonable, given that Airbnb is one of the platforms with the lowest prices.

Figure III.2D

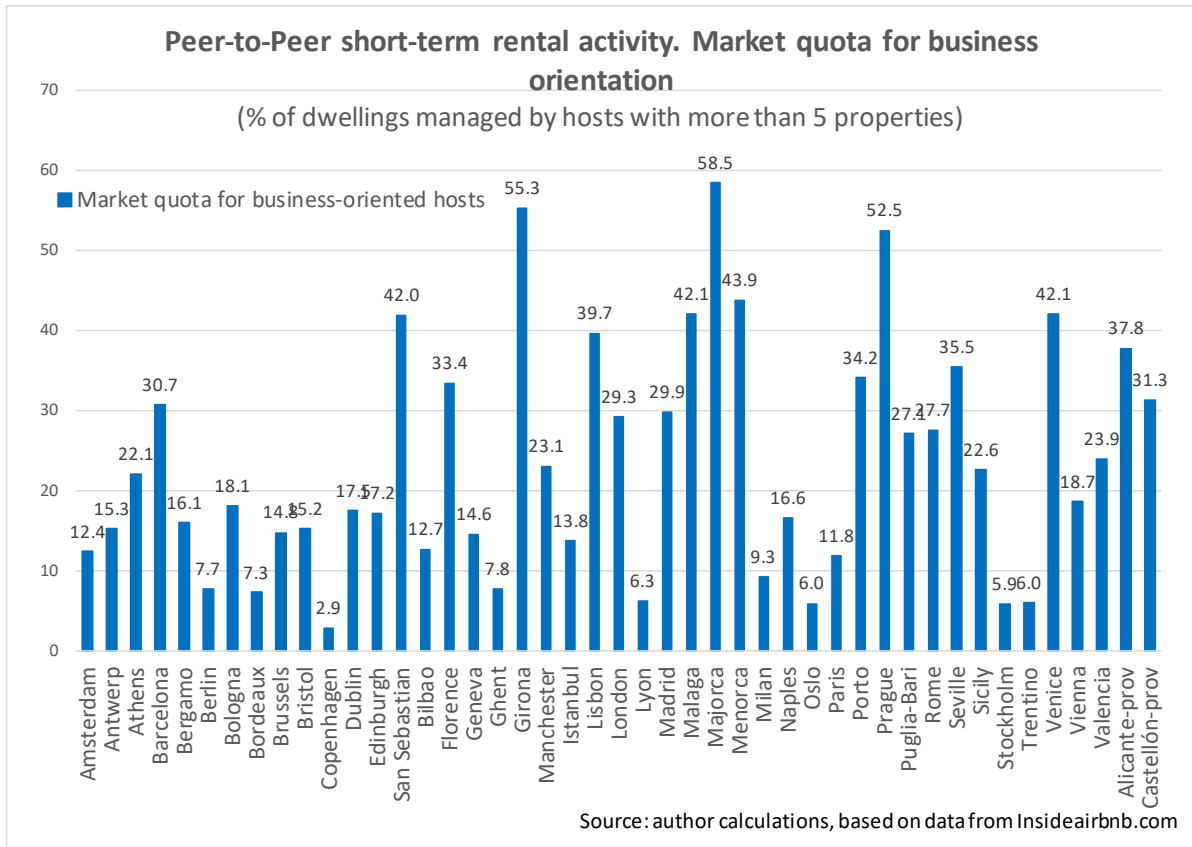


The distribution by location of the properties that are managed by hosts with more than 5 properties in their portfolio can be seen in Figure III.2E. It represents the percentage of total units by location managed by those hosts relative to the total existing properties, so-called market-quota.

The market quotas of business-hosts vary significantly among the locations (see Figure III.2E).

- In Girona, Majorca and Prague, business-hosts manage more than 50% of the dwellings rented in the short-term market.
- In San Sebastian, Lisbon, Malaga, Menorca and Venice, more than 40 per cent of properties are managed by those companies.
- In Barcelona, Florence, London, Madrid, Puglia, Rome and Seville, the market quota is around 30 per cent.
- In the first two cases, the short-term rental market is driven by business reasons, and the existence of market power cannot be denied.
- In Berlin, Bordeaux, Copenhagen, Ghent, Lyon, Milan, Oslo, Stockholm and Trentino, less than 10 per cent of properties are managed by business-hosts, suggesting that they are mainly P2P markets.

**Figure III.2E**



The analysis suggests that the higher the number of business-oriented hosts in a location, the higher the likelihood of each host managing a larger number of properties. In these cases, there is increasing number of properties managed per host, which would imply an evolution from the P2P mode to the B2C mode. This trend is not related to the market size.

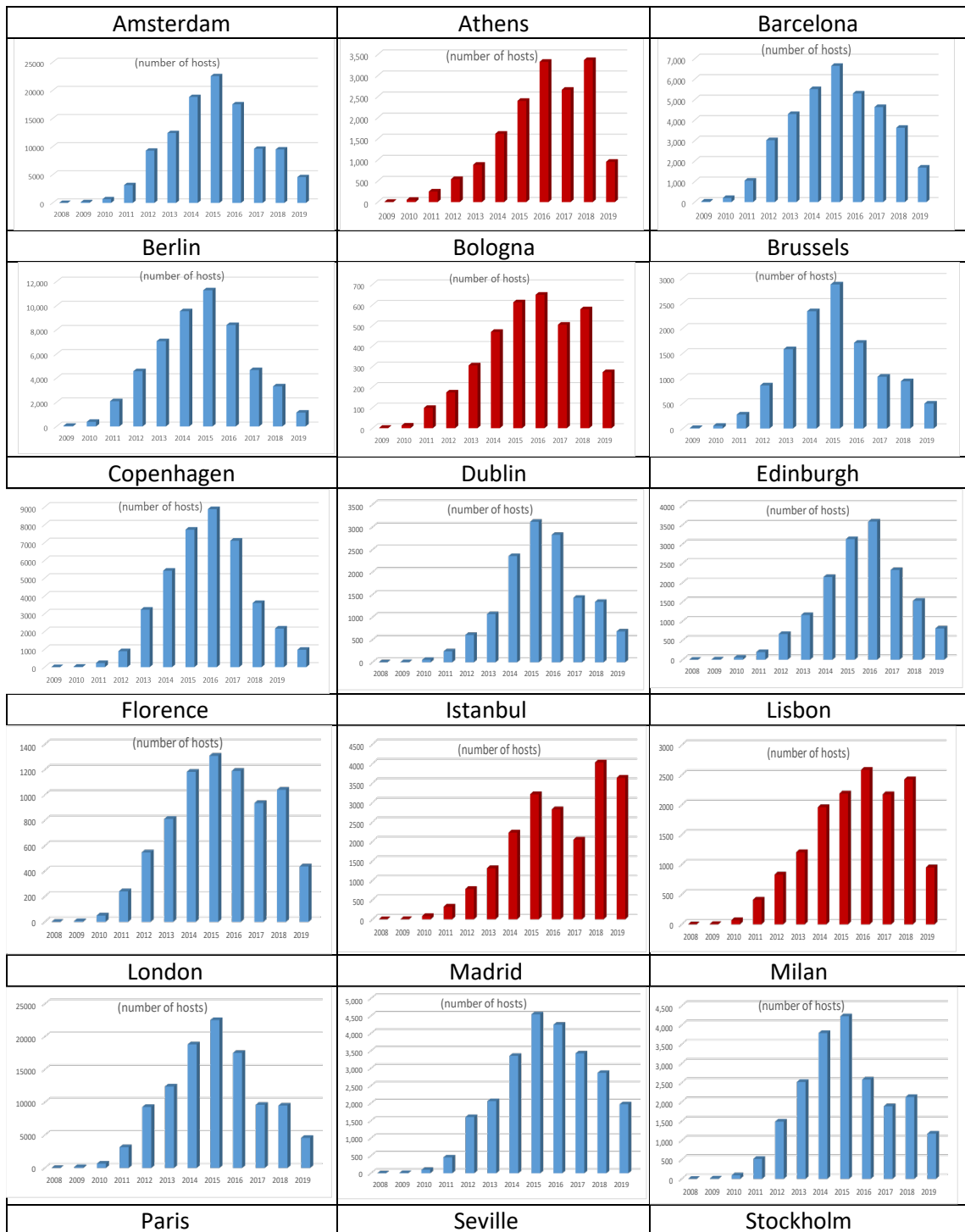
The role of the platform regarding recommending or fixing rental prices has been deliberately left out from the analysis. The literature in the technology field specifies what mechanisms platforms use as basis in recommending the average rental rates for each location. Through information management techniques obtained in several platform, those operating in P2P markets automatically set prices through algorithms that use mass information captured from the past and information on current demand, calculating and advising prices that, by definition, constitute a form of price-fixing (Einav and others, 2018). The price-fixing practices observed in this report do not seem to control the market, as literature would imply.

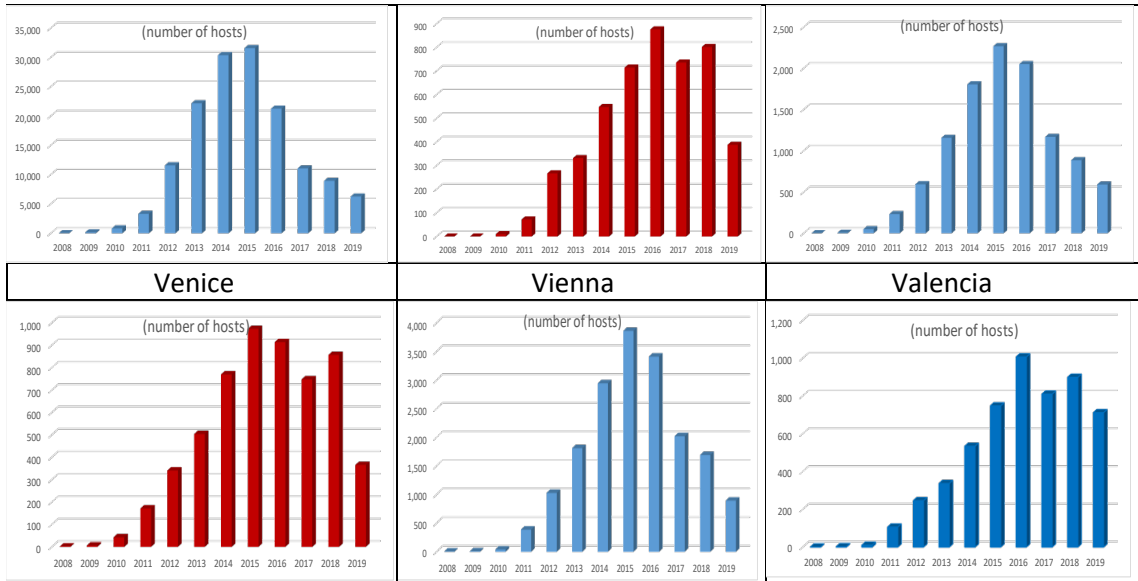
The final point in this section shows when the currently active hosts began their activity on the platform. Data showed that, since 2010, the number of active hosts increased until 2015 in most of the locations. Based on this indicator, two types of locations were identified: locations where the decline of new hosts started in 2015; and those in which the number of new hosts still increased after 2015. Figure III.2F<sup>20</sup> presents a sample of the two mentioned types of locations. Blue pertains to locations where the number of new hosts showed a decline from 2015 while red represents locations which still showed an increase in the number of hosts after 2015.

<sup>20</sup> This is a partial sample for illustration purposes. Details of all the cities can be found in panel 4, page 81 of the full report. It can be provided upon request.

In addition to the locations in Figure III.1, Bergamo, Bilbao, Manchester, Naples, Porto, and Sicily have also shown increased number of hosts from 2015.

**Figure III.2F Registered hosts by year in selected locations**





Source: Author's work based on extrapolated data.

### III.3. Market efficiency

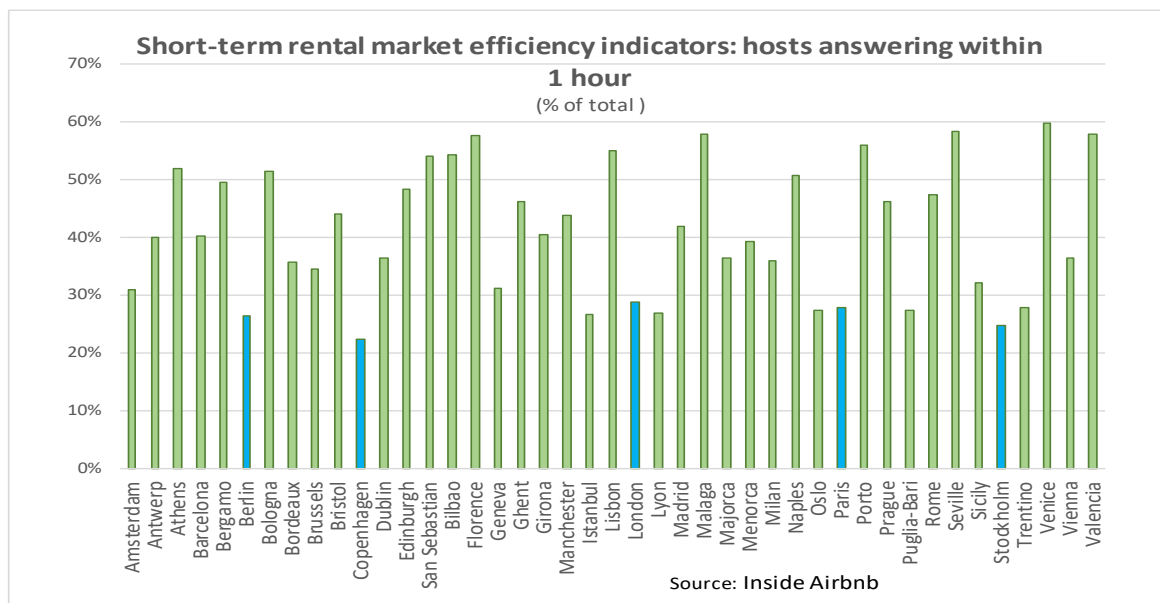
Market efficiency was analysed using three host characteristics: speed of response in closing a booking; trust in existing information; and quality of services. These are the direct variables available in the database extracted from the InsideAirbnb website.

#### Response speed

Hosts respond in different time parameters. A quick host response to a contract or information requirement is a sign of efficiency in market performance. Here, high speed is associated with larger efficiency. A location has 'high speed' when 50-60 per cent of hosts answering within an hour and 'low speed' when this number is lower than 30%.

On average, 40.3 per cent respond immediately (within an hour, Figure III.3A) to a request for information, but this average varies substantially between locations.

Figure III.3A

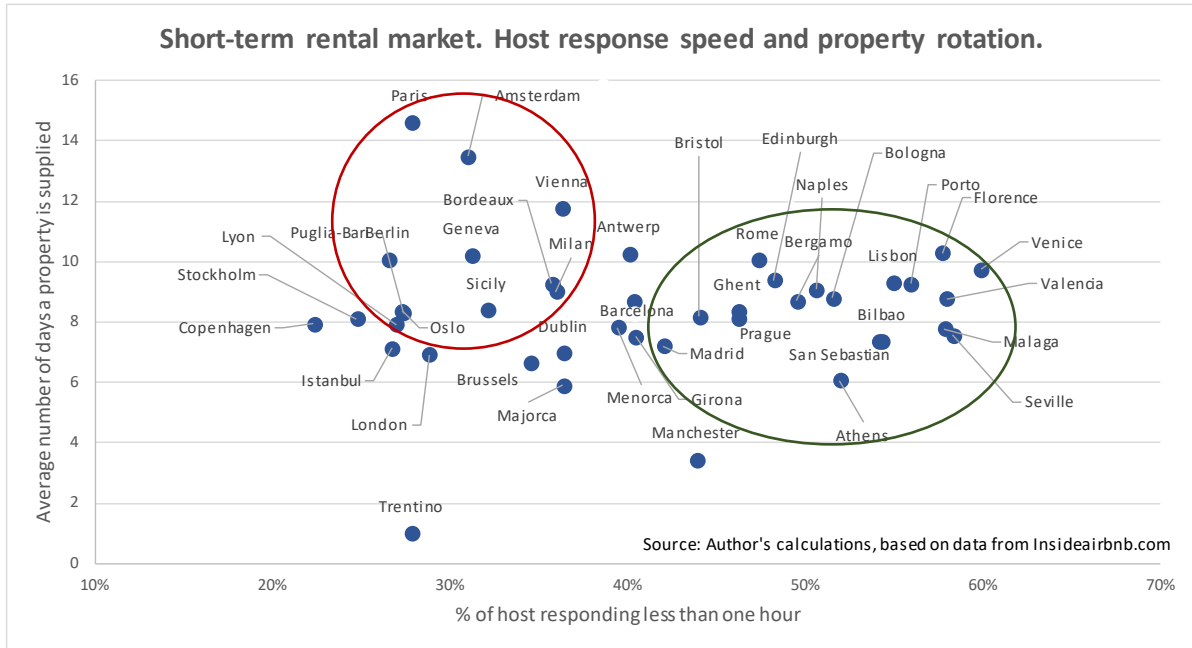


When classified according to speed, the locations with low speed (with only less than 30 per cent of hosts responding quickly) are mainly cities like London, Paris, Berlin, Copenhagen and Stockholm. Those with very high speed (more than 50 per cent of hosts answering clients within one hour) are Valencia, Vienna, Seville, Porto, Malaga, Lisbon, Florence, San Sebastian, Bilbao and Bologna.

High speed in closing deals could generate a high housing turnover (housing rotation) that could create an ideal "free market", where available housing would be used intensively over time. Data used in this report allow for the testing of this hypothesis, and the results show that the average number of times a property is rented out is 8.2 times a year, which is very stable, and is the average across most locations. However, Amsterdam, Vienna and Paris are above average, with properties rented out more than 12 times a year. Regarding the speed of hosts responding to a new booking requirement; Figure III.3B shows that the larger the city, the lower the speed and the higher the turnover; that is, turnover is higher in the slower-speed locations and lower in the high-speed locations (Figure III.3B).



**Figure III. 3B**



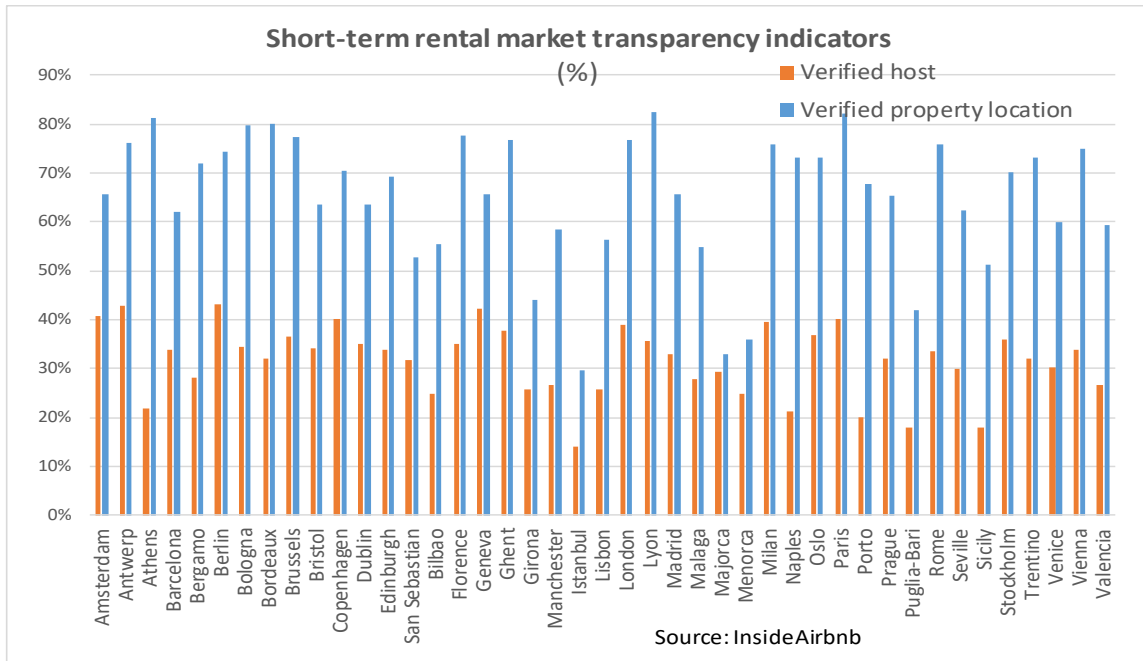
The cross-distribution between speed and rotation shows that higher turnover (the number of times the house is rented in a year) is consistent with lower response speed. These could be due to several reasons, such as:

- Intense demand (or limited supply) impedes the hosts from reacting quickly.
- A P2P market is only supplying properties occasionally because their owners use them.
- Regulations limiting the use of a property on the short-term rental market.

The degree at which information provided about the properties and the hosts are verified by the platform was also analysed as an indicator of information transparency: the larger the verification rate, the higher the transparency. This information is summarised in Figure III.3C by location. The data show that, 63.7 per cent of the properties on average are verified. In Athens, Lyon and Paris, more than 80 per cent of the properties are verified, while Istanbul, Majorca, Menorca and Puglia have the lowest verification rates (30-40 per cent of the total number of properties).

In contrast, host verification is very low across the sample, with only 30.2 per cent of hosts information verified on average among locations. In Athens, Istanbul, Naples, Porto, Prague and Sicily, less than 20 per cent of hosts are verified, while in Amsterdam, Antwerp, Berlin, Copenhagen, Geneva, Milan and Paris, the figure is around 40 per cent (Figure III.3C).

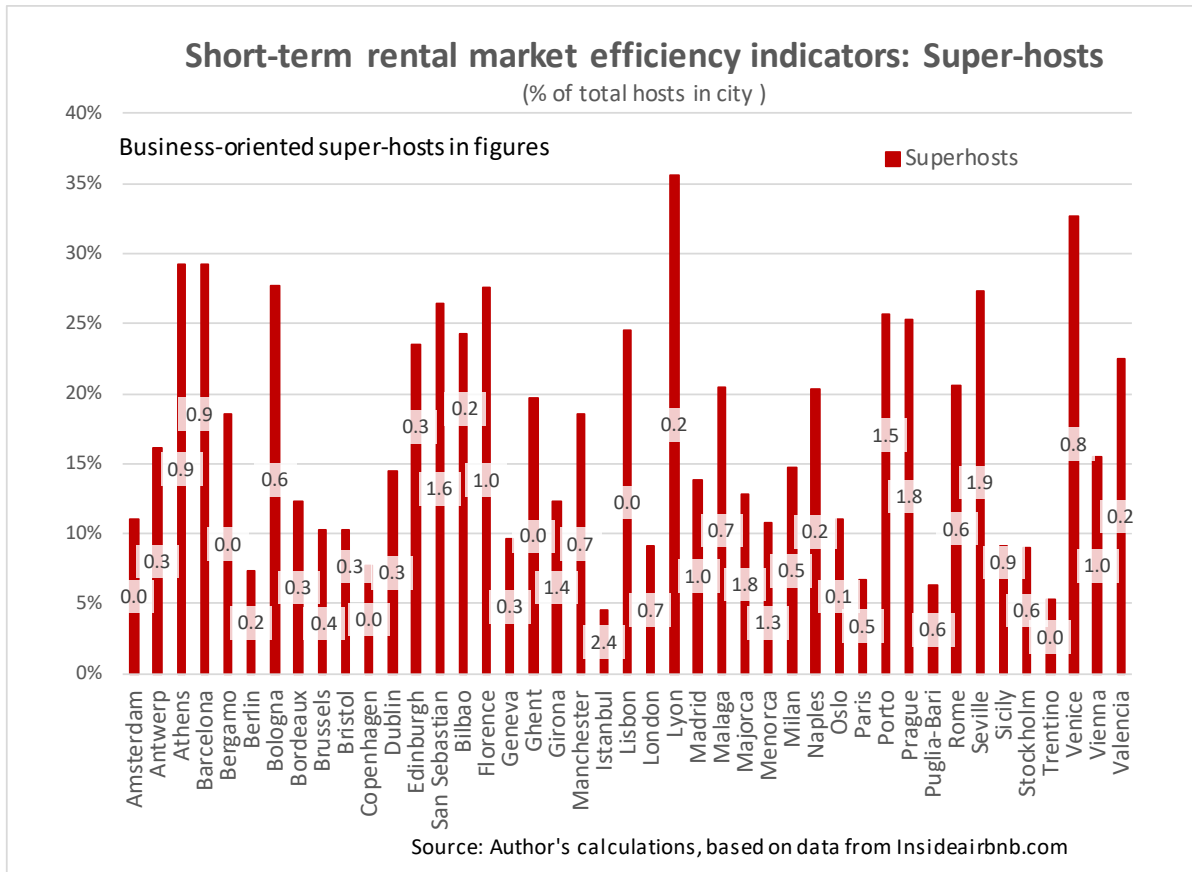
**Figure III.3C**



The figure also shows an association between the host and property verifications that can be interpreted as "the more accurate the property information is, the better the verification of the hosts". If this is the case, this relationship could be the effect of existing regulation (city level) applied to short-term rental market activities.

An indicator of the quality of services is the number of "superhosts" in the market. Experienced hosts can be classified as "superhosts" based on criteria like response rate, cancellation rate and their overall rating. In general, this number is small, as reported by the platform, at an average of 16.5 per cent. Figure III. 3D shows the proportion of superhosts out of the total number of hosts operating in the city. The number in each column represents the proportion of company superhosts running the rental as a business (B2C, not P2P). For example, in Istanbul, almost 5 per cent of all hosts are superhosts and 2.5 per cent of them are business oriented (B2Cs).

Figure III.3D



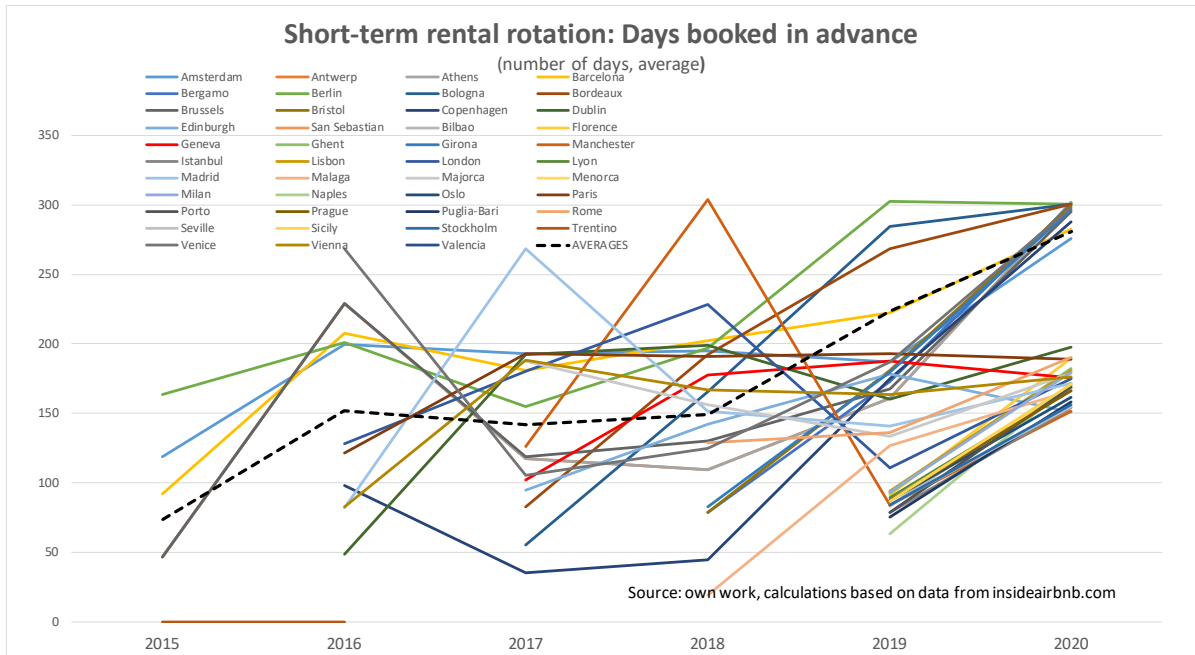
Some locations have more than 25 per cent superhosts, and they are mainly in cities such as Lyon, Venice, Athens, Barcelona, Bologna, San Sebastian and Florence. Of these, less than 1 per cent are companies. In contrast, Istanbul, Trentino, Berlin, Copenhagen, Paris, and Puglia have only around 7 per cent or less of superhosts, with very little or no B2C. The locations with the highest proportion of superhosts oriented towards B2C are Istanbul (2.4 per cent), Prague (1.8 per cent), Seville (1.9 per cent) and Porto (1.5 per cent).

Speed of response and quality of services indicate increasing efficiency in the market, and this is shown in the evolution and lead time of bookings. If there is trust in the platform, customers will make longer duration bookings which guarantee future revenues in the market and the earlier a booking is made, the more secure the future revenue is for the host. These data can be used to estimate the impact of COVID-19 in each city and the results are presented in the last section.

### Business dynamics

The database shows that almost all locations have experienced an increase in the number of days being booked since 2018. The pre-booking time increased from 122.4 days in 2017 to 274.7 days in 2020, which means that guests were booking around nine months in advance of their stay date. The increase in rentals and advance bookings gives stability to this market, and stability is one condition for generating wealth and positive effects in the economy. The lengthening of the booking period is a sign that the market has grown, and demand is expanding. The evolution of bookings with data up to January 2020 can be seen in Figure III.3E. The effects of the COVID-19 pandemic are not yet visible with the data.

Figure III.3E



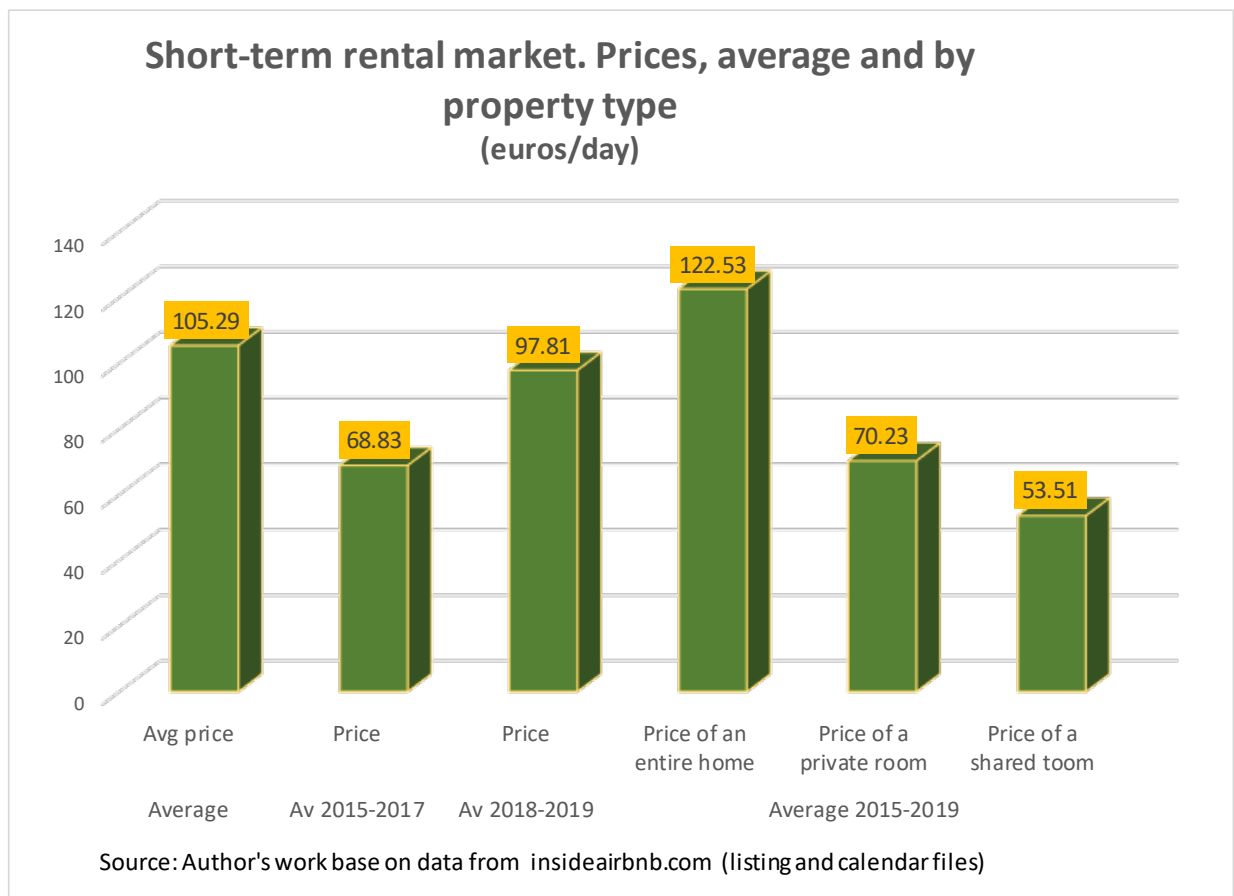
Berlin, Bologna and Bordeaux are the most pre-booked capitals since 2018. From 2019, they are joined by Valencia, Copenhagen, Oslo, Amsterdam and other cities. Interestingly, the more-tourist focused provinces or islands have shorter pre-booked time, possibly because most of the homes are offered in other specialised platforms or tourist channels.

### III.4. Rental prices and wealth creation

This sub-section analyses the economic aspects of the short-term rental market: prices, spatial distribution, rental dynamics, and the contribution of rental activity to the wealth of the city's economy.

On average, the rental price per night is 105.30 euros per dwelling per day. This figure increased during the period 2015-2019 by almost 40 per cent. Using the average rental price, an entire dwelling is more expensive to rent (122.50 euros/day/property) than a private room (70.20 euros) or a shared room (53.50 euros) (see Figure III.4A).

Figure III. 4A



The most expensive locations are Amsterdam, Majorca and Menorca at more than 150 euros per day per property, followed by locations ranging from 100 to 150 euros (Barcelona, Dublin, Edinburgh, San Sebastian, Bilbao, Florence, Geneva, Girona, London, Paris, Rome and Venice).

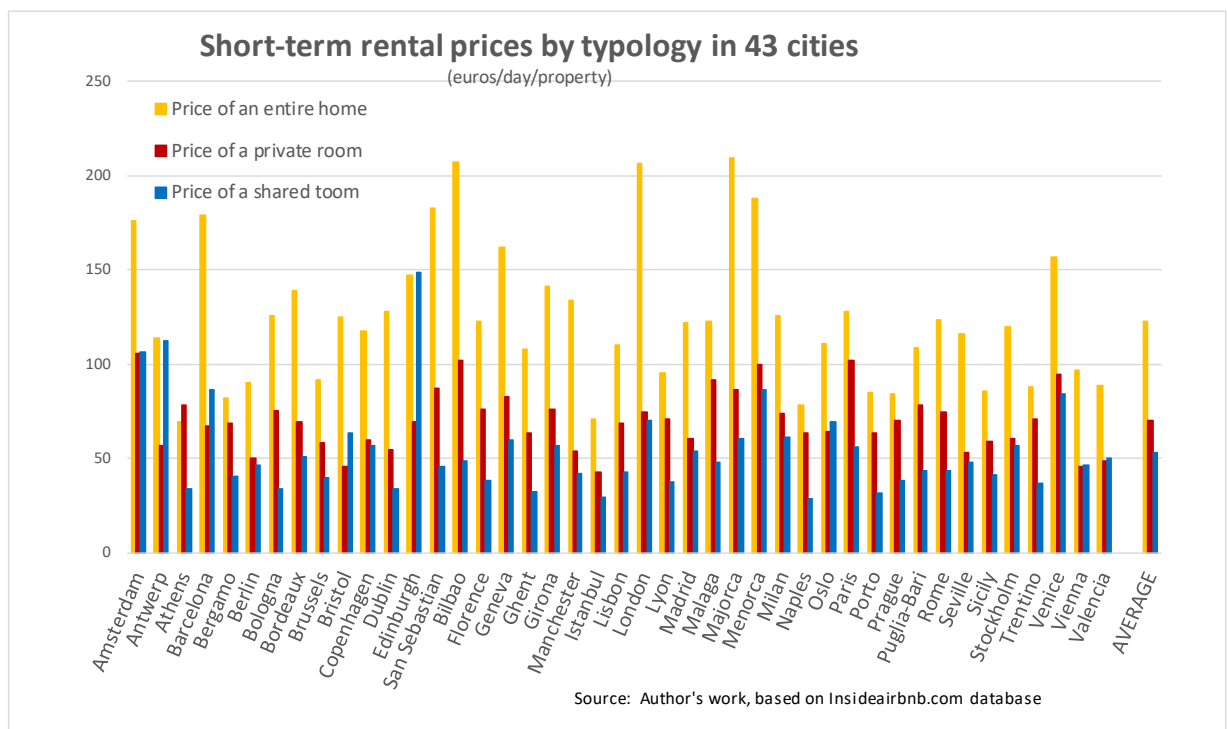
Rental of entire properties is expensive, with prices of approximately 200 euros in Bilbao, London and Majorca, and more than 150 euros in Amsterdam, Barcelona, San Sebastian, Geneva, Menorca and Venice. Private rooms are half those prices at an average of 70.20 euros/day/property. However, there are cases where renting a private room is quite expensive and sometimes costs almost the same as renting a whole property, as in Athens, Bergamo, Naples, Porto, Prague, Lyon and Trentino (see Figure III.4B).

Higher rental prices for entire homes and private rooms are in very touristic areas (Majorca, Menorca, and San Sebastian) and in some cities (Amsterdam, London, Barcelona, Geneva, and Venice). In the rest of the locations, the average rental prices are quite similar. Analysis of the collected data revealed that:

- The price of renting an entire property influences the rise of average rental prices in the short-term rental market as these represent the highest-valued property types to rent (see Figure III.4B for the rental price distribution of property types per location).

Short-term rental prices have risen since 2018, reaching maximum levels in 2020; on average, there was a 14.7 per cent average increase in price between 2018 and 2019, with projected increase of 19.23 per cent in 2020.

**Figure III.4B**



This development seems to support the literature arguing that the short-term rental market acts as a balancing element for hotel supply and may have played a role by adding to the supply of hotel rooms in some locations. However, this evidence would need to be verified.

### The wealth generated by short-term rentals

Knowing the daily rental price and the days booked per dwelling, it is possible to estimate the total amount of income generated in the short-term rental sector. From 2018 to 2019, rents amounted to

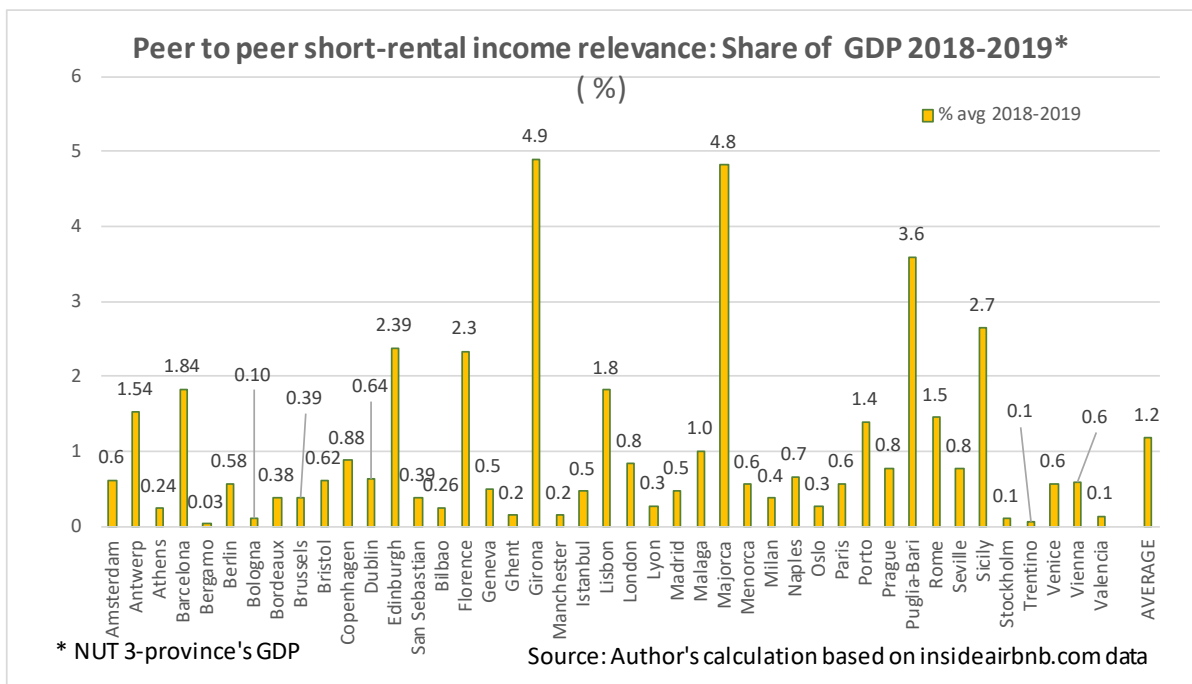
an average of 1.5 billion euros per locality per year. London had the highest estimate annual average at 7 billion euros. Paris and Puglia came in second, with approximately 4.8 billion euros, and Rome, Sicily and Barcelona came in third with 3 billion euros or more.

The ratio of short-term rental income to the GDP of the region measures the contribution of short-term rental activity to the local wealth (Figure III.4C). Regional GDP is calculated according to the NUTS 3 (small regions for specific diagnoses) statistical unit designation provided by Eurostat (see Eurostat, NUTS 2021 classification)<sup>21</sup>.

In 2018, short-term rental income in each city accounted for 1.2 per cent of regional GDP on average. The short-term rents in the province of Girona and island of Majorca accounted for 4.8-4.9 per cent of regional GDP; in Puglia and Sicily, short-term rental income accounted for approximately 3.6 and 2.7 per cent of regional GDP, respectively<sup>22</sup>.

Edinburgh (2.4 per cent of GDP) and Florence (2.3 per cent) topped the cities with the highest wealth contribution of short-term rental income to the local economy. Six locations contributed between 1 and 2 per cent to GDP: Antwerp, Barcelona, Lisbon, Malaga, Porto and Rome. In remaining locations, the figures were less than 1 per cent, with some of these representing the largest cities by total area and population, including Amsterdam (0.6 per cent), London (0.8 per cent) and Paris (0.6 per cent). The relatively low contribution of rental income in these localities is primarily due a larger range of productive sectors in the local economy.

**Figure III.4C**



The percentages shown in Figure III.4C demonstrate that localities earn a substantial amount of income from external economies (i.e., foreign or extra-regional) through short-term rents.

<sup>21</sup> Eurostat, Nomenclature of Territorial Units for Statistics, available at: <https://ec.europa.eu/eurostat/web/nuts/background>

<sup>22</sup> It should be noted that Girona, Puglia, Majorca and Sicily are some of the few cases in the database where the data cover the whole region and not only the main city (Girona province, Puglia coast, and Majorca and Sicily Islands). Others are Menorca, Lisbon and Bergamo, which are very touristic areas. Data for rest of the locations refer to the city.

This additional flow of income plays an important economic role through:

- (1) The generation of a substantial income redistribution effect in favour of the locality;
- (2) The creation of other economic activities (services associated with goods, transport and cultural activities, among others) increasing employment and added value;

The ratios presented measure only the initial gross effect of short-term rental income to the income of the city. Such initial flow of resources may generate a multiplier effect on employment and income, i.e., an added effect with the potential of increasing overall economic impact.

### Price diffusion or spill-over effects

Lastly, this sub-section analyses the ability of short-term rental prices to "spill over" into adjacent property markets. The diffusion effect of rental prices identifies areas of price stress, which could be the result of a concentration of demand. This analysis tests the hypothesis that visitors want to be in historical centres, and that this generates the negative externalities of noise and distortion of social life discussed at the beginning of this paper.

The Moran's I test was calculated in local markets<sup>23</sup>. The results support other evidence that demand is oriented towards city centres, coastal areas, and rural regions with specific tourist services. Such concentration generates a spatial spill-over effect on short-term rental prices in most locations, which "overheat" in areas where demand is concentrated. In the case of cities and coastal areas, this demand puts pressure on prices in historical centres and on the seafront. Therefore, popular perception seems to be accurate. Despite not finding a dense concentration of transient population in some capitals, this population may be concentrated in a small area of the city (the centre), generating the mentioned negative externalities. Figure III.4D shows the values of Moran's I for the locations.

In general, the spatial correlation is not large in the locations analysed, although there are particularities that can be summarized as follows:

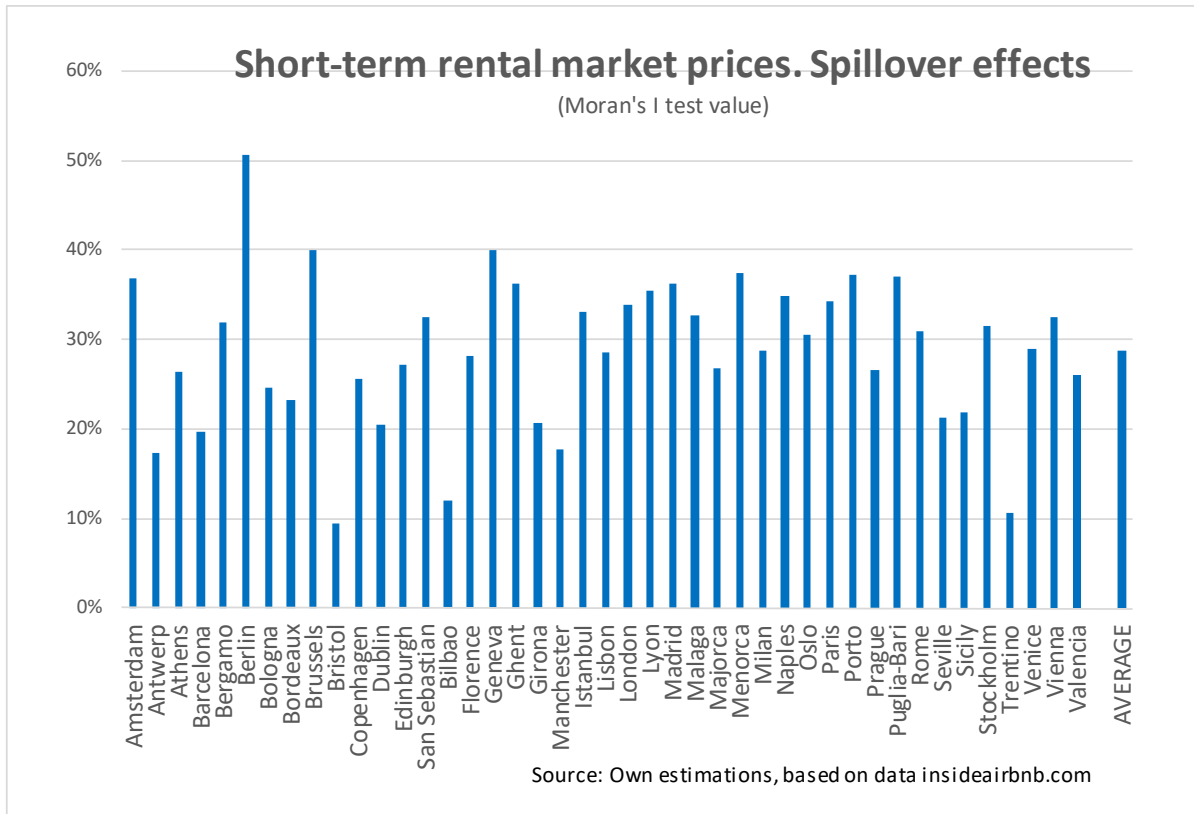
- Cities with considerable spatial influence in their centres include Amsterdam, Berlin, Brussels, Geneva, Ghent, London, Lyon, Madrid, Naples, and Paris. An increase in short-term rents in specific neighbourhoods has an immediate indirect effect on other properties in the same area.
- Porto, Menorca and Puglia also show a significant spatial influence concentrated in coastal areas.
- There is no spatial relationship observed in rental prices in Bristol, Bilbao, Girona, Manchester and Trentino.

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<sup>23</sup> Moran's I refers to a measure of spatial autocorrelation measuring the relative degree of correlation or dispersion among local units using statistical calculation.



Figure III.4D



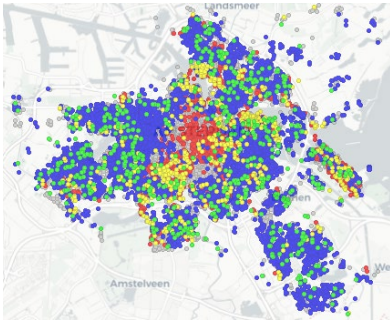
Spillover effects (Clusters with spatial correlation in their centres.) in city centres represent a testament to the value of the city (buildings, culture, etc), defined as “amenities”, attracting visitors paying short-term rents. The greater the proximity of the property is to amenities, the higher the property price. If this hypothesis is correct, proximity to amenities determines rental prices, with amenities acting as demand-pull factors, e.g., in coastal areas demonstrating a high degree of spatial correlation, the sea view represents the central amenity influencing short term rental prices.

Selected price impact maps were reproduced below (Figure III.2). The maps show the effects on short-term rental prices in colours: red areas are those with the strongest price transmission, causing them to grow by proximity to other temporarily rented dwellings; yellow areas are areas with increasing rental prices; and blue and green areas are those with stable lower or decreasing prices.

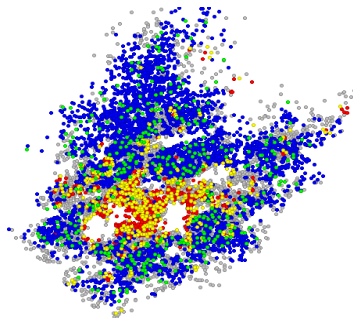
### Panel III.2. Spillover effects on prices in the short-term rental market

(the red areas are those with more intensive price transmission)

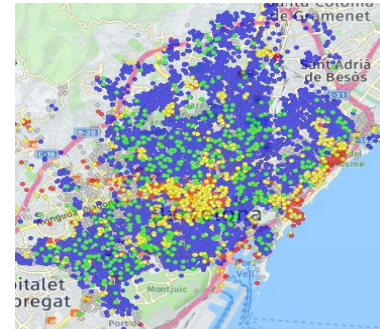
Amsterdam



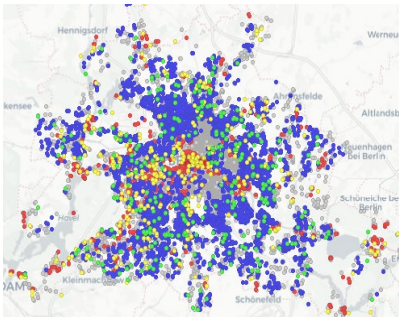
Athens



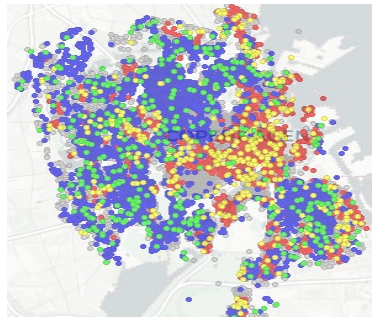
Barcelona



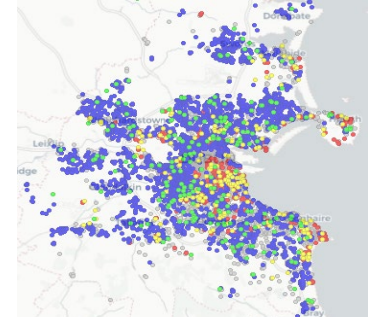
Berlin



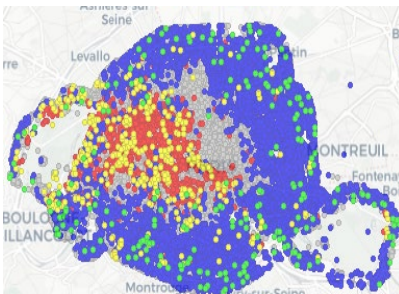
Copenhagen



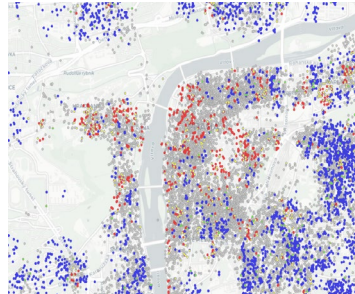
Dublin



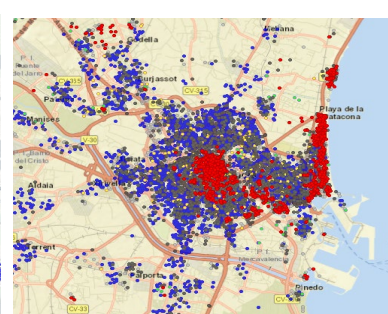
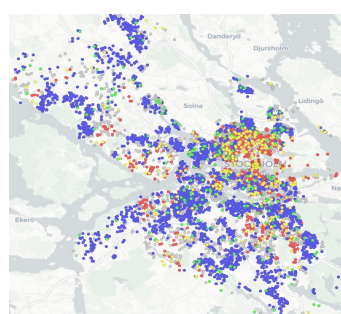
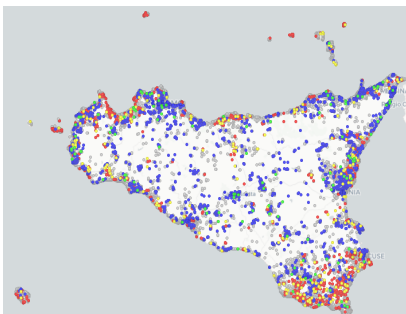
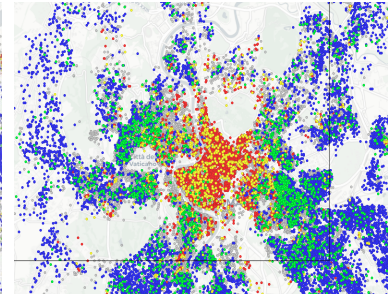
Paris



Central Prague



Rome



Source: Author's work based on data from insideairbnb.com

## Section IV. Short-term rental market regulation

The previous sections of this report show how short-term rental activity can substantially impact housing markets. The increase in short-term rental prices has been exponential in many cities and has led both to benefits and adverse external effects, mainly through overcrowding and population densification. Technological facilities associated with the automatic contract processes (booking, agreement and services provisions), together with both the stable (global) demand and market signals, have facilitated transactions (in real time) and the consequent population mobility to particular destinations.

The process described may have several effects on the local housing market. For instance, the activity in the short-term rental markets may increase rental prices while simultaneously providing a source of income for the local economy. Higher prices can decrease residential affordability while rental management becomes a new economic activity for the unemployed in the area. The concentration of people using short-term rent could negatively affect social life by creating bustling areas, noise and loss of tranquillity, but may increase the activity of restaurants, bars and other services in the neighbourhood, increasing their revenues.

The ultimate effects of an increase in the short-term rental market seem to show both positive and negative impacts, as recognized and reflected in current research (as seen in the literature review). The variety of results means that implementing any policy measure that attempts to solve some of the negative aspects has undetermined effects. The asymmetric effects, depending on the location, reinforce the idea that any regulation should take into account (and have an in-depth knowledge of) the specific problem at hand and the location where the solution should be applied.

Short-term rental activity management has a particular mechanism that makes it challenging to design and apply regulations to. Since it uses an international platform, it follows similar formulas to that of transnational corporations (i.e. Google), which implies that no specific regulatory environment can establish rules for this market. It is not easy to determine the legal scope of application as the (global) short-term rental market is in a supra-national domain where regulation should be agreed upon between States. However, the housing markets are local, indicating that regulation is also needed at the national level, and for cities and tourist destinations. The two dimensions (international and local) may have created a discrepancy between the need for regulation at the local or regional level and the global scope of the short-term rental phenomenon, which may have acted as the main barrier to understanding the lack of (unified) regulation in this sector. The novel aspect of short-term rentals in cities, coupled with a lack of understanding regarding full performance and the different areas it affects, may have contributed to a certain inconsistency among regulations and a lack of balanced and adequate rules.

Public authorities (primarily at the local level) are increasingly regulating different aspects of the short-term rental market in order to control the adverse external effects or compensate for those effects perceived as problematic. Much of the regulation follows the findings remarked upon in the literature and in practice and tends to give solutions to specific problems identified regarding the short-term rental market; however, a full body of regulation adapted to this market does not exist. The existing regulation develops rules in different directions, including population movement controls (through registration requirements); avoiding adverse external effects at the social level (establishing limits to the amount of rental days); ensuring competition with conventional tourism sectors (by administrative rules); and following fiscal reasons.

This Section presents some existing rules and evidence based on published research, reports and general practices. It is not a full compilation of the existing norms in European countries. Rather, it

summarizes several sources of information, such as the regulatory proposals highlighted by the analysed documentation; existing practices; missing regulation as evidenced by short-term rental activity in 43 localities; and some regulations applied in EU countries.

Current research provides empirical evidence of the adverse effects of the short-term rental market. Most research identifies the need for regulation in some areas, especially regarding compensation for negative externalities; however, only a limited degree of research focuses on the detailed regulation applied by localities to compensate for the latter.

This Section summarizes the existing literature concerning regulation of the short-term rental housing market. From the literature review finalized in 2019, the publication covering the largest number of cities is by Nieuwland and Van Melik (2008). They evaluate the standard features of regulations applied to the short-term rental market in 11 cities in the United States and Europe. They found that:

- Most ordinances try to regulate rather than prohibit the activity, so as not miss out on potential benefits and/or avoid legal problems with platforms.
- Regulations focus on hosts claiming when rules are violated. Only a few impose duties on the platform or penalize guests.
- Fines are commonly determined related to the number of days rented or the property size.

These three characteristics frame the sets of different measures that cities implement that specifically reflect the regulator's perception of the short-term rental impact. The authors found significant disparity among rules with a heterogeneous list of measures. They found that classification according to the final objectives (problems to solve) was the relevant way to clarify the regulatory process followed in most cities over recent years.

In a later work, Nieuwland and Van Melik (2020) collected and analysed the measures applied in 11 cities. Most of the rules had been put in place to prevent three types of problems:

1. Those related to housing, i.e., whether or not the housing is affordable, to guarantee enough supply in the formal permanent market or to prevent commercial or business activity in the short-term rental of this type of housing;
2. Those related to neighbourhood, i.e., preserving residential living and neighbourhood quality; protection public health and welfare; preventing nuisance issues; reducing the pressure of tourism; preserve quality of life; and maintaining equilibrium in a mix of uses;
3. Other issues, e.g., taxation and economy, safety issues, the creation of a hotel industry in the area, or law enforcement.

Usually, cities apply a combination of objectives when defining a specific regulation; however, it is difficult to apply some of these rules due to a lack of empirical-based evidence regarding the overall impact of short-term rental and the potential (contrary) effects of hard policies (Barron and others, 2021; Nieuwland and Van Melik, 2020). As put forward by Nieuwland and Van Melik, "The reality in most cities is that although regulations are in place, enforcement is problematic, and the short-term rent-related problems remain" (Nieuwland and Van Melik, 2020). These authors highlight a crucial issue in short-term rental market regulation, namely, whether the definition of the measure to be applied is sufficiently precise to enable it to solve the problem for which it has been created. The authors concluded that current applied rules are not precise enough.

The differences in the impact of Airbnb across the cities and the need for different regulation responses are also analysed in the other studies (Wegman and Jiao, 2017). Furthermore, the need to clearly understand and evaluate the effect of Airbnb in the housing market is vital for defining

regulations and avoiding perverse effects of a “bad-shape rules”<sup>24</sup> limiting or prohibiting certain activities (Sheppard and Udell, 2016). Some studies found the regulations in the United States stricter than those in European cities, for example, in regard to number of days rented, or number of properties managed (Barron and others, 2018a). Barron and others suggest that “regulations on home-sharing should (at most) seek to limit the reallocation of housing stock from long-term rentals to short-term rentals without discouraging the use of home-sharing by owner-occupiers” (op. cit, p.33) by using tax or occupation fee. Such evidence should be similar in other countries' cities, such as European countries.

Similarly, the proposals of Lee (2016) include applying a set of measures which distinguish between the type of short-term rental managers. This would differentiate between “bona fide” homeowners who occasionally host guests, and professional Airbnb managers. This would prevent “hotelization” and impede subsidized or rent-controlled homes being listed. He proposes three measures: to exempt non-professional hosts from short-term rental revenue taxation; to set a limit of 75 days that a unit can be listed; and to control the number of units in a building that owners could list. Recognizing the economic benefits of short-term rental activity, this author also proposes establishing rules that could provide incentives to host managers to build additional and affordable housing.

Crommelin et al. (2018) analyse regulatory responses to Airbnb in five cities (Hong Kong, London, New York, Paris and Sydney). The analysis confirms the need to evaluate the impact of short-term rental activity in each city when deciding the regulatory responses to that activity<sup>25</sup>. The regulation implemented by those five cities is in the private law framework, with each stressing rules and obligations related to the homeownership domain or use in condominium buildings; these likewise apply to the short-term rental contracts. The regulatory instruments found in the analysis include:

- A compulsory licence for rental accommodation length falling under 28 days and housing insurance covering different events;
- Notarized deeds and property rights restrictions (e.g., a homeowner permanently living in a residence not being allowed to short-term let housing space <sup>26</sup>);
- Co-owner by-laws or condominium by-laws;
- Other by-laws, from which numerous regulations are being developed.

Through these instruments, the cities have: (i) restricted use other than as a private residence; (ii) restricted sub-letting undertaken by occupants, not owners; (iii) a requirement of co-owner permission in condominiums; and (iv) other measures restricting the possibility of sub-letting.

Aguilera and others (2019) identify three different regulatory responses in their study on three leading European cities (Barcelona, Paris and Milan):

- The type of actors who mobilize short-term rental activity
- Multi-level government arrangements
- Pre-existing policy instruments, which have been adapted to short term rental.

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<sup>24</sup> Bad-shape rules appear when the norm is imprecisely defined to address a specific problem (because it is so general, for instance). A rule forbidding some specific and legal activity would have the contrary effect to that expected.

<sup>25</sup> “The targeted regulatory responses need to be underpinned by careful conceptual and empirical analysis of the Airbnb impact. ... [so that] ... Airbnb should share their data with regulators but it is unwilling to do so indicating that its sharing rhetoric is more of a sales pitch than a guiding philosophy” (Crommelin and others, 2018, p. 442).

<sup>26</sup> In the United States regulation.

In addition to these three, new forms of corporate "digital capitalism" (op. cit., p. 20) affect the cities differently and require some type of regulation to apply to platforms managing the rental market.

Most of the regulatory tools mentioned in the literature refer to rules applied by cities under the city legal framework limit.

**Figure IV.1. Regulatory approaches in 11 European and US cities**

		<b>FULL BAN</b>	
		<i>Cities</i>	
Measures			Measures
		Abaheim	Full ban in whole city, Start phasing out existing short-term rentals, January 2018.
Partial ban for new licences in Old Town: <b>Quantitative:</b> one listing per property owner, no more people than (the) property is built for. <b>Qualitative:</b> Hygiene, contact details provided for neighbours.		Barcelona	
		New Orleans	Partial ban in Vieux Carre. <b>Quantitative:</b> one party of guests per unit. <b>Qualitative:</b> insurance, safety and emergency precautions, contacty details provided, information about trash collection and noise provided, no nuisance.
Restrictions. <b>Quantitative:</b> one listing per property owner. <b>Qualitative:</b> no entire units, host present during rental period, only in spaces intended for living, emergency information provided		Santa Monica	
		New York	Restrictions. <b>Quantitative:</b> Only one listing per address. <b>Qualitative:</b> permanent resident needs to be present during rental period in multifamily dwellings.
Restrictions. <b>Quantitative:</b> maximum 90 hosted nights. <b>Qualitative:</b> permanent residents only, safety precautions provided.		San Francisco	
		Berlin	Restrictions. No entire apartments, only allowed if at least 50% of apartment is used by property owner
Restriction. <b>Quantitative:</b> max. 4 guests, max 60 nights renting per year, owner on site at least 6 months per year. <b>Qualitative:</b> no nuisance, safety precautions provided.		Amsterdam	
		Paris	Restrictions: <b>Quantitative:</b> max. 4 months a year (otherwise, registration as business required).
Restrictions. <b>Qualitative:</b> primary residence only, safety precautions provided		Denver	
		London	Restrictions: <b>Quantitative:</b> max. 80 nights renting per year
		<b>LAISSEZ-FAIRE</b>	

Source: Based on Nieuwland and Van Melik (2020:816).

An example of how precise rules have been applied in selected cities to solve short-term rental market-specific problems is given in Figure IV.1.

Regarding the whole list of rules analysed, three main options for the regulation of short-term rental activity would be:

- Full prohibition
- Laissez-faire
- Limitations under certain restrictions<sup>27</sup>.

<sup>27</sup> As Guttentag, 2015 also remarked.



Maximum freedom (*laissez-faire*) would have the same effect as regulation where no concrete measures are taken (auto-regulation); the municipalities agree with the platform on some issues, such as paying taxes or providing information. Prohibition implies the application of significant fines to any short-term rental participant who ignores the rules. Those measures and their application are limited, as has been evidenced by the authors.

The standard regulation is a mixed bag of rules, with the application of restriction to different issues. Restrictions include<sup>28</sup>:

- (1) Quantitative restrictions regarding the number of units rented; unit size; number of days rented; number of visitors; and number of times the property can be rented per year;
- (2) Locational restrictions, when the activity is restricted to certain neighbourhoods of the metropolitan area;
- (3) Density restrictions, for instance, by limiting the number of short-term rented properties in specific neighbourhoods;
- (4) Qualitative restrictions, such as the type of accommodation or the requirement of specific types of installation or equipment;
- (5) Other obligations, such as permissions or licences, are also simplified<sup>29</sup>.

The idea of combining several different regulations due to the different impacts of short-term rental depending on location or property type underlies most of the research. The heterogeneity of findings in the short-term market analysis supports the idea that short-term rental is a complex issue requiring the correct combination of rules to compensate for impacts<sup>30</sup>.

Spanish regulation provides an example of how countries could structure regulations regarding the short-term rental market along several legal, social and economic dimensions. In Spain, the short-term rental market is considered part of the tourism sector, the properties rented considered tourism properties; thus, this sector comes under the tourism rental regulation, which is further subject to three levels of law:

1. National regulation (as the property is considered a tourism production good), bringing the activity and revenues under the national tax regulation and the properties under the building (technical) conditions and security rules.
2. Regional laws, responsible for land regulation and social housing conditions.
3. City regulation, which can define planning and any other issue related to the housing market and social equilibrium.

Several other regulations were modified at the national level so as to apply to the short-term rental sector. For instance, in 2018, the condominium management law (*Ley de Propiedad Horizontal*) included a new rule allowing homeowners to decide to permit or prohibit short-term rental activity in buildings (this is a case of a national law with local application). Another regulation at the national level considers the short-term rental contract as being the same as any other property transaction (such as long-term contracts) and requires an energy-efficiency certificate every time the unit is rented.

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<sup>28</sup> The classification from Nieuwland and Van Melik (2020:814) is reproduced here.

<sup>29</sup> Guttentag (2015); Cocola Gant (2016); Codwell (2017), among others..

<sup>30</sup> Guttentag (2015), Edelman and Geradin (2015), Oskam and Boswijk, quoted in Nieuwland and Van Melik (2020).

As tourism and housing regulation is under the competence of the regional governments, the application of national regulation differs depending on where the short-term rental takes place. Differences can be seen regarding specific regulation among Spanish regions as well, with each Regional Authority deciding which ones to put in place or specifically define for their territory. A summary of the main rules for tourism apartment rentals in Spanish regions are given in Figure IV.2; they also apply to short-term rentals. One of the essential rules covers the minimum nights of stay. In the general tourism rental market, the apartment must be rented out to tourists for a minimum of five days per rental<sup>31</sup> to be considered to be tourism related. Recently, the Madrid Municipal Government determined that tourism rental apartments would be considered when they accommodate at least one guest per day; such a rule has the automatic effect of including short-term rental activity under the tourist regulation framework.

**Figure IV.2. Regulations regarding the provision of rental housing to tourists in Spain**

Region (Autonomous Communities and Autonomous cities)	List of obligations:						
	Register	Minimum stay (days)*	Maximum stay (days)**	Distinctive Plate	Permanent-home rental prohibited	Rent of whole property by room, prohibited	By-law prohibition
Andalusia	YES	YES	NO	NO	NO	NO	NO
Aragón	YES	YES	NO	YES	NO	YES	YES
Asturias	YES	YES	NO	YES	YES	YES	
Balearic Islands	YES	YES	YES	YES	NO	YES	YES
Valencian Community	YES	YES	NO	YES	NO	NO	NO
Canary Islands	YES	YES	NO	YES	NO	YES	YES
Cantabria	YES	YES	NO	YES	NO	YES	NO
Castile-La Mancha	YES	YES	NO	YES	NO	NO	YES
Castile-León	YES	YES	NO	YES	NO	YES	NO
Catalonia	YES	YES	YES	NO	NO	YES	YES
Extremadura	YES	YES	NO	YES	NO	NO	NO
Galicia	YES	YES	YES	YES	NO	YES	YES
La Rioja	YES	YES	NO	NO	YES	YES	YES
Madrid	YES	NO	NO	YES	YES	YES	NO
Murcia	YES	YES	NO	YES	NO	NO	NO
Navarra	YES	YES	NO	YES	NO	NO	NO
Basque Country	YES	YES	YES	YES	NO	NO	NO
Ceuta	YES	ND	ND	ND	NO	NO	NO
Melilla	YES	ND	ND	ND	NO	NO	NO

\* Number of days determined at municipality level.

\*\* Distinctive Plate is a sign on a plaque located in the housing wall indicating it is eligible for short-term rental. Regions are known as 'Autonomous communities'.

Source: Compiled by Vicente Ruiz and Paloma Taltavull.

The compulsory registration for tourism rental units implies several other obligations for the owner or manager: the host must give details of the property to the local government, give information about the owner (if it is a different person) and give details of the number of days per year it is rented out for tourist purposes. This information is required at the time of the property registration as a tourist house. The owner or manager must also identify the tenants, declare revenues, put the

<sup>31</sup> A tourist apartment is considered different to a dwelling home. It cannot serve as a permanent home and should be rented short term. This rule has the effect of fully separating both markets.



registration number (of the tourist house) on all contracts and provide information to the local government about the rental contract start- and end-dates and payment means used.

In countries without any specific regulation in short-term rental activities, more general mandatory regulations may remain unenforced.

This occurs in the following cases:

1. Collection of taxes and fees, and the official declaration of income;
2. Building security and management;
3. Observance of hygiene standards in the rented property;
4. Observance of the internal and legal rules for living in residential buildings;
5. The registration of the people temporarily using the property;
6. Non-regulated competition between the touristic and residential segments;
7. The withholding of a change in the purpose of the property from residential to tourist purposes; and
8. Lack of a mechanism for the curbing of violations regarding the use of condominiums.

Other rules are also applicable to all agents in the market.

## Potential regulatory areas from the evidence of 43 localities

The empirical evidence collected from the data of 43 European localities gave a broad perspective of the scope the regulation of short-term rental activity would require. The domains of regulation highlighted in this section result from the evidence mentioned above and the author's knowledge and reflect the author's opinion exclusively.

Two main dimensions determine the regulatory domain for short-term rentals: international and local. The international dimension comes from the sharing economy activity concept, which establishes a kind of freedom in the service provision between customers and providers of any geographical origin. The freedom to supply housing services is fully recognized in the EU Service Directive and there are special rules for sharing activities when they represent P2P services<sup>32</sup>.

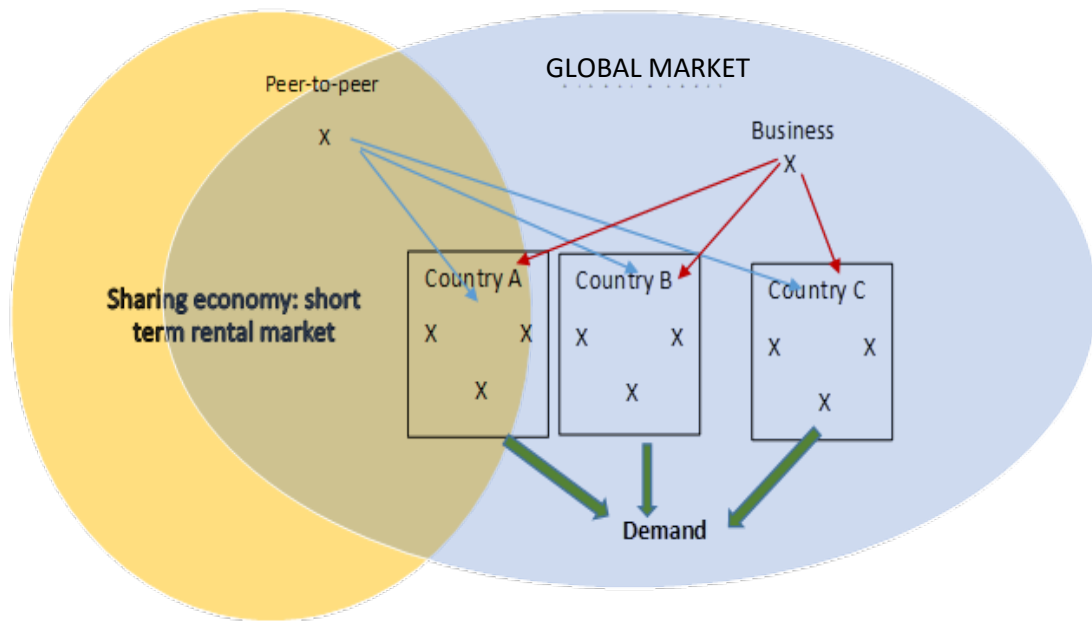
The local dimension comes from the universal regulatory principle: the regulatory framework is determined by the proximity to the affected citizens. As the housing market and the effects of the short-term rental market are local, the regulation should be determined at a lower geographical level, which is the municipality one.

Both dimensions seem to be opposed and point to different regulatory domains where the rules that normalize the short-term rental market should be developed. Figure IV.3 shows the regulation levels.

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<sup>32</sup> It declares the freedom for P2P sharing of capital or goods. SWD (2016) 184 final. Available at <https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=CELEX%3A52016DC0356>.

**Figure IV.3. Regulatory frameworks**



Source: Author's work.

Figure IV.3 identifies sharing activities as a group of economic initiatives fulfilling the P2P principles and being part of those free initiatives in the market. A short-term rental market can provide properties in any country, taking into account that peers may or may not be residents. Business companies can also provide units in this market, in both the local and foreign markets. As a result, the short-term rental market is developed at a local level in different countries, having hosts which can be local or foreign.

From the demand side, the visitors could also come from the locality or country or from abroad; thus, the housing market in the short-term rental activity would provide accommodation services to both locals (residents) and foreigners (non-residents).

The international participation of both hosts and guests has implications for the national accounts: the income paid for the accommodation plus the fee by a non-resident (or paid in other currencies) should be considered an export of services.

The consideration of revenues is not the same from the host's perspective. The origin of the revenues is the property that locally produces the accommodation service streams, which is considered part of the domestic production, either the host is a resident or a non-resident. When the homeowner uses the house, the estimated amount of housing service costs (so-call imputed rents) is already accounted for in the GDP through the added value of services associated with the housing sector. The National Accounting Methodology considers it as an income generated in services. When the owner is a non-resident, it is not accounted for in the GDP. Furthermore, when the owner is short-term renting the property, the rents should be considered international income, which should be indicated in the Balance of Current Accounts in the Balance of Payments. If the non-resident host gets the rental income paid by the customer into a bank account located outside of the country where the property is located, this should also be considered as an international income movement, which should be accounted for in the Balance of Payments.

This suggests that short-term rental activity has several implications for the national accounts and should be taken into account in the macro variables collection. The P2P rent would be considered as

third sector accounts, while the B2C or B2B rent is seen as a regular rental activity in the housing sector. All these aspects have fiscal effects and are relevant to the national/regional tax regulations.

The role of the platform (which charges a fee for each transaction) is another issue that should be understood as international activity (as the same platform may be located in different countries) although it can be regulated at the national level. This is a complex issue, as taxes and rules are different across countries, and there is no experience regarding transnational regulation being applied to the short-term rental market.

The evidence of the 43 localities shows that the regulations to be applied would be taken from the existing experience shown above and may follow the evidence given in this document. Some suggestions for rules include:

### Rules related to the property unit

- The amount of stock devoted to the short-term rental market per year is small, around 1.5 per cent of total conventional homes and 22 per cent of unoccupied units. It is critical to collect information on which type of housing is used in the market, and to evaluate whether the activity is mobilizing unused stock or using pre-existing rental units. This information should be gathered directly (through registration), through the platform or by any indirect method. Specific registration of short-term rental units is strongly recommended.
- Verification of information related to the property is relatively high, and the property is located precisely on the map, which ensures property controls according to the regulations. It allows the local government to determine effective measures to support the neighbourhoods, reduce negative externalities (if they exist), limit the activity to particular areas and increase public services.
- The majority of properties in short-term rental market are apartments. Here, regulation through condominium networks would be beneficial.

### Rules related to the hosts

- The number of hosts is linearly related to the number of units, suggesting that the more units in the market, the greater the number of hosts. This can be interpreted as an increase in the P2P short-term rental market. The host should be identified for classification purposes and to assign the correct regulatory framework. Full identification of each host is strongly recommended. In the case of P2P hosts, the EU recommendations on tax exemption are recommended, as they incentivize the activity and increase the wealth to the economy.
- However, information on hosts is deficient. The lack of identification has adverse effects from several perspectives: it is not possible to identify them as P2P or business, so it is not possible to apply the correct regulation (for example, international or national taxation and international revenue movements for the balance of payments). It is critical to identify the host and his/her information, in order to organize the sector. Measures oriented towards incentivizing the host to give their details could be developed at the city level.
- The overwhelming majority of hosts (97 per cent) manage less than five units; those managing more than five control, on average, around 23 per cent of total units in the market. It seems that the short-term rental market suffers from a certain degree of market control, which should be regulated (as a market failure). There is considerable variability by city, indicating that the measures should differ depending on the location. However, the municipalities would decide the number of units to be managed by a P2P host, analyse the market correctly, and identify the business share to apply the existing rules.

## Rules regarding visitors

- The information on visitors suggests that the properties are not overloaded but that there is a significant rotation of guests staying 1-2 days in cities and 4-5 days in highly touristic areas, on average. The rotation rate is a sign of efficiency in this market and also of the amount of new market participants, which could be the origin of overcrowding in certain areas where the most demanded properties are located. The estimated Figure III.s of the number of visitors relative to the native population suggest that the effect of overcrowding differs depending on the city. As population flow is one of the sources of externalities, each city would decide whether the flow of visitors should be regulated. The collection of information on visitors is recommended and counting of those arriving at the city and location is key to evaluating the needs of additional public services.
- Gross revenue is large, around 1.2 per cent of the city GDP per year on average. The short-term rental market's contribution to the economy varies across locations, with larger revenues relevant to more tourist-oriented areas. This suggests that part of the income is directed towards the tourism sector, which is already regulated. It is crucial to understand the share of the wealth created by short-term rental income originating in the P2P sector and in business-oriented management.
- Information at the local/geographical level would help the municipalities to precisely define interventions in neighbourhoods to reduce negative externalities. The externalities should be identified and defined.

The evidence does not give information about whether or not the short-term rental activity creates negative externalities, gentrification, or an impact on the long-term market's housing prices; however, it provides information for research. The proposals of regulation here are a first step towards gathering enough information to allow the authorities to better understand the short-term rental market and its implications, and to correctly define the regulatory measures fitting each city or urban area.

## Summary: main highlights

In conclusion, the regulation of short-term rental markets under the sharing economy depends on the P2P definition and how hosts give or share goods or services (coordinated by the platform, Hamari and others, 2015). It should differentiate between P2P and market-based provision, with consumers or companies mutually guaranteeing temporary access to underutilized physical assets<sup>33</sup>. The **critical issue is the identification of whether the activity is business-oriented or not**. Following this, the regulatory process becomes easier to define.

Regulation adapted to the situation appears to be needed. The creation of national or regional rules to distinguish between residential properties rented in the short-term versus those for long-term rent would improve rental market performance with positive fiscal, social and economic consequences for society. In contrast, a lack of regulation and a failure to distinguish between tourist and residential properties could affect the overall property market and affordability of housing for the population.

The location, development, use and control of the rental market comes under public and regional responsibility and depends on factors outside of condominium and housing policies.

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<sup>33</sup> Fradkin, A., Grewal, E., Holtz, D., and Pearson, M. (2015)

For the correct definition and application of the specific regulation, in-depth statistical information and new technologies are critical.

More sweeping statistical information on the rental market can be used to precisely define rules regarding short-term rental activities and be used in other analyses to help the development and regulation of a territory. In this regard, the sharing economy can provide many advantages through internet platforms for collecting information in an easy and accessible way, while automated procedures produce fast results.

The adaptation of the data technologies already known (networks, apps, blockchains, machine learning and others) will aid in the design of new and precise legal tools to support the short-term rental market.

The purpose of regulation is to achieve the interests of public administration, protect consumers, and preserve the right to property; thus, legal certainty must be fostered in short-term rental activity regulation. To ensure this, easy access to certain information about the characteristics of the unit, conventional or legal limits regarding its use and the legitimacy and capacity of the owner or the lessor are required.

Initiatives already exist regarding the implementation of public tools to gather information, such as creating an electronic registry for short-term rental contracts<sup>34</sup>.

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<sup>34</sup> An automatic system to register short-term rentals would avoid legal gaps and help customers to diminish the risk in their contracts. It also gives legal certainty and security to both the person renting out the unit and customers, and also to public administration and other stakeholders. An example already implemented can be found at: <https://www.iuristech.es/2020/03/regturi-turismo-y-blockchain.html>

## V. Conclusions

The sharing rental market (short-term rental) is a new service activity which was developed, among other domains, in an IT framework, and follows similar trends as other sectors. This market has created new dynamics in localities, distorting the status quo and requiring that regulation, social life, and citizens adapt to the new activity. The short-term rental market falls between conventional rental markets and tourism in different degrees depending on the locality and the percentage of the housing stock shared. It creates considerable wealth (around 1 per cent of GDP), which is shared mainly among owners, especially if the locality has a large number of hosts managing few units. Transparency on the number of transactions would increase income taxation and public budget resources, although it is not known how much is already included in corporate tax returns.

It also creates an "activity" rather than real jobs (it is not accounted for in labour statistics), protecting citizens from the adverse effects of economic shocks. The COVID-19 pandemic has directly affected the basic principles that have driven the short-term rental market, i.e., population mobility worldwide. The reaction of market participants to the pandemic differs between locations where the length of stay was longer (small effect) and those with shorter lengths of stay (greater effect).

The rental-sharing market promotes population mobility and plays a role in the temporary densification of some city areas, with different effects depending on the city.

The transient population using short-term rental units annually can reach the equivalent of several times the residential population occupying high demand areas, which can create negative externalities in terms of the intensive use of public transport, public services and health services. This should be taken into account by local authorities to minimize adverse effects on the quality of social life and services for locals.

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