Study on the Assessment of the Regulatory Aspects Affecting the Collaborative Economy in the Tourism Accommodation Sector in the 28 Member States (580/PP/GRO/IMA/15/15111J)

European Commission - Directorate General Internal Market, Industry, Entrepreneurship and SMEs (DG GROW)

Task 4

Cross-analysis report

Valdani Vicari & Associati

Spark
Legal network and Consultancy ltd

This study was carried out for the European Commission by

Spark Legal Network and Valdani Vicari & Associati.

Spark Legal Network

Patricia Ypma
Mariana Chaves
Peter McNally
Kaja Kazmierska
María Domínguez Gaitán
Network of legal experts

Valdani Vicari & Associati

Julia Rzepecka
Marius Dragulin
Lison Rabuel
Ricardas Juskevicius
Vilma Kuuliala
Timothe Peroz
Iva Plasilova
Adriana Rodriguez Diaz

DISCLAIMER

ISBN 978-92-79-84013-5

doi: 10.2873/697265

TABLE OF CONTENT

FIGURES

TABLES

DEFINITIONS USED in TASK 4 REPORT

The key terms used in Task 4 are defined below. It should be noted that these definitions may differ from the definitions used by the European Commission.

Primary residences: those residences (dwellings) where the person resides more than 180 days per year.

Secondary residences: those residences (dwellings) where the owner spends at least some days per year.

Short-term rental: the rental of an accommodation (room or entire property) on a short-term basis. "Short-term" can be defined by local laws as the maximum period per year during which an accommodation provider can rent out their property or part thereof under specific circumstances.

Long-term rental: the rental of an accommodation (room or entire property) on a long-term basis. "Long-term" can be defined as a period exceeding any short-term threshold imposed by local, regional or national laws (see definition of "short-term rental").

Vacant property: A residence (dwelling) that is not occupied by their owners or any tenants.

Peer provider: For the purpose of this study, the term is used to designate all providers of short-term rentals on collaborative platforms. In certain cases, where data are available, the text makes a distinction between "peer" and "professional" provider. In this case, "peer provider" refers to individuals who do not conduct such activities on a professional basis, i.e. earning the majority of their income through to short-term rentals.

Conventional dwelling: The term is defined according to its definition on EUROSTAT, namely a room or a suite of rooms and its accessories in a permanent building or structurally separated part thereof which by the way it has been built, rebuilt or converted; it is designed for habitation by one private household all the year round and is not at the time of the census used wholly for non-residential purposes.

Vacant conventional dwelling: According to EUROSTAT, vacant conventional dwellings are conventional dwellings (see above) which have no usual residents at the time of the census but are available to become the principal usual residence of at least one person. Vacant dwellings could be either: seasonally vacant, holiday homes, seasonal workers' quarters, non-seasonally vacant, secondary residences, for rent, for sale, for demolition, or for other purposes.

Executive summary

Task 4 report complements the regulatory analysis in Tasks 1 - 3 with **11 in-depth market case studies** assessing the economic development of the collaborative short-term rental platforms.

The following 11 cities were under consideration: Athens, Amsterdam, Barcelona, Berlin, Brussels, Florence, Lisbon, London, Paris, Prague and Stockholm. The case study findings were cross-analysed in the present report and complemented with pan-European data to identify more wider trends.

Task 4 report provides data and identify trends in the development of collaborative accommodation platforms by assessing their impacts on the local short- and long-term housing availability, the local tourism sector, and the local community. These impacts have been measured with a series of indicators, which have been collected through **EU-level interviews** with collaborative platforms and experts, **desk research**, and **city-level interviews** with local stakeholders.

In this study, collaborative accommodation platforms include peer-to-peer (P2P) short-term rental platforms and home exchange platforms.

Overview of the accommodation sector

The tourism and accommodation sector is an important component of the economy in the 11 EU cities under the scope of this study. Overall, between 5% and 10% of businesses offer tourism-related activities and most businesses in the sector are small or micro-enterprises.

The research has identified six large collaborative short-term rental platforms across the 11 cities considered: **AirBnB, Wimdu, 9flats, HomeAway, HomeExchange,** and **GuestToGuest.** Other international platforms such as **Booking.com**, **HouseTrip**, **FlipKey**, and **LoveHomeSwap** also host collaborative short-term rental listings, but their offer focuses on traditional providers.

The study has found just over **355,000 available properties for short-term rental**. In total, 280,000 listings (or 79%) are entire properties, and 59,00 (or 17%) are private or shared rooms. However, the number of available properties for short-term rental should be interpreted with caution. First, it is difficult to list all collaborative short-term rental platforms due to the size of the accommodation offer. Second, attention must be paid to the duplication of listings, as hosts tend to advertise the same room or property across multiple collaborative short-term rental platforms.

Although short-term rentals existed before the arrival of collaborative platforms, the development of such platforms has contributed to an **explosion of the short-term rental market** over the past decade. In the EU cities considered, the number of AirBnB listings has raised from almost zero in 2012 to more than 60,000 in Paris, 45,000 in London, or 25,000 in Barcelona. Although less spectacular, there is also a growing trend to share homes, as shown by the increased number of listings and membership growth of home exchange platforms such as GuestToGuest or Home Exchange.

It cannot be concluded if the regulatory environment has affected the growth rate of the collaborative accommodation offer. Cities with stricter market access requirements for peer providers have seen their short-term rental listings increase slower over time than in cities more permissive regulatory environments. Nonetheless the study also shows that some cities with a more permissive regulatory environment have noted slower growth in collaborative short-term rental listings, which prevents from drawing definite conclusions on this aspect.

Real estate and housing availability

Except for Athens, Florence, and Prague, **average long-term rental market prices have increased** in the other EU cities considered. In some cities, like London or Berlin, this increase is significant, with prices having raised by more than a third between 2011 and 2016.

Local stakeholders tend to associate rising long-term rent prices with an increase in the short-term rental offer, arguing that price rise often occur in the more touristic areas where the short-term rental offer is higher. Conclusions are more balanced regarding housing availability, with more uncertainty about causal factors of housing shortage. The study found that local specificities play an important role, such as average income growth, unemployment rates or rates of housing ownership.

Housing availability is primarily established as the difference between the rate of housing construction and the rate of local population increase: the more households there are, the more need there is for new housing to be built. Local authorities should keep pace with population fluctuations to ensure a balanced housing market but as shown in the case study reports, this is hardly the case in any of the 11 cities. Moreover, existing imbalances before 2008 were aggravated by the slow recovery of the construction sector post-crisis.

Traditional accommodation providers

In terms of **price**, collaborative short-term rental platform listings tend to be cheaper than hotel rooms (up to a third in Athens, Brussels, Lisbon or Paris). However, the study suggests traditional accommodation operators are not negatively impacted by the collaborative accommodation offer, as overall both types of actors benefit from the increasing tourist flow in the city.

In terms of **occupancy rate**, the 11 case studies show that occupancy rate is lower for collaborative economy listing compared to hotels, which suggests that providers of short-term rentals operate on an occasional basis.

The research findings suggest potential **complementarity** between the two offers, as the collaborative accommodation supply meets the demand of a different target group (e.g. budget travellers, seeking local experiences), and is more deconcentrated in rural areas/outskirts of the city centre.

Income and tourism indicators

The study shows that the income providers earn from their collaborative economy activity accounts for a **minor part of their monthly revenue** and tends to be **seasonal**. This can be attributed due to lower prices in the short-term rental market, the occasional nature of the activity, and, in some cities, the limits imposed on the number of days providers can rent out their property (e.g. Amsterdam, Paris and London). In most cities, average revenues tend to increase year-on-year, with highest growth noted in Barcelona, Stockholm, Amsterdam and Lisbon.

Qualitative evidence from the case studies illustrates that collaborative short-term rental platforms tend to have **a positive impact on tourism** in increasing the number of incoming tourists overall, or in certain (more remoted) areas of the city. Short-term rental platform guests tend to stay longer in their rentals and to travel more often, which is attributed to lower prices, and the intention to discover local and non-touristic areas.

In the cities considered, the attractiveness of the short-term rental or home exchange offer **did not seem to deter travellers from booking hotels**, as the number of nights spent in all types of tourist accommodation facilities has increased in most cities under the study.

Impacts on local communities

Overall, the **impact of the collaborative accommodation sector** on the local economic growth is challenging to assess. The study shows that while collaborative economy guests tend to spend in local businesses, and stay longer, they tend to spend less than the average tourist.

Most case study reports conclude that the increase in the number of short-term rentals, cumulated with the high percentage of entire place listings, may have put **pressure on the local housing supply**. Clear correlation between the two factors are challenging to establish, as other factors should be taken into account such as scarcity of the number of dwellings for residential use, rise of prices due to the economic and financial crisis. The study found that in some cities, local authorities have made efforts to counter the housing supply shortage with the construction of new dwellings for residential purpose (e.g. London), the promotion of sustainable home sharing (e.g. Amsterdam), or the cap in the number of short-term rentals and hotels allowed (e.g. Barcelona).

The study has reported mixed views from inhabitants regarding the collaborative economy in the accommodation tourism sector. While academic research and collaborative platforms highlight advantages for local residents (i.e. the opportunities to gain additional income, positive externalities brought in outer areas, social and cultural experiences), local stakeholders have pointed out negative impacts on the peacefulness of neighbourhoods or housing prices. Opinion surveys in some cities (i.e. Barcelona and Florence) have shown that **the majority of inhabitants perceive tourism positively**, and negative opinions are higher in areas with high tourist pressure.

There are limited data available on the relationship between the collaborative accommodation sector and public services. Most local-level stakeholders have highlighted possible pressures on the public service offer, for instance in transport services, waste, garbage disposal, or public infrastructure. Yet, it is difficult to attribute these issues to the collaborative accommodation offer only, and they should be rather taken as a consequence of mass tourism as a whole.

Future developments

The collaborative economy in the tourism accommodation sector has grown in recent years and, for this reason, is increasingly under the focus of policy makers. In cities like Athens, Berlin, Brussels, Paris or Florence the collaborative short-term rental market has already been regulated, but in most cases, it is **yet too early to assess effectiveness of regulatory changes**.

The cross analysis of case study reports shows that there are several ongoing and future developments at the city level:

There are plans to regulate the collaborative economy in the accommodation sector (i.e. city level: Barcelona, London; country level: France, Portugal);

- There are plans to extend cooperation with collaborative short-term rental platforms at the local level and enforce existing agreements (i.e. Amsterdam and London);
- New cities plan to set up online registers of short-term accommodation providers (i.e. Lisbon); and
- Another new development is an attempt to create an alternative to already established collaborative short-term rental platforms. For example, FairBnB is a recent movement by local Amsterdam residents to set up their own platform.

1 Introduction

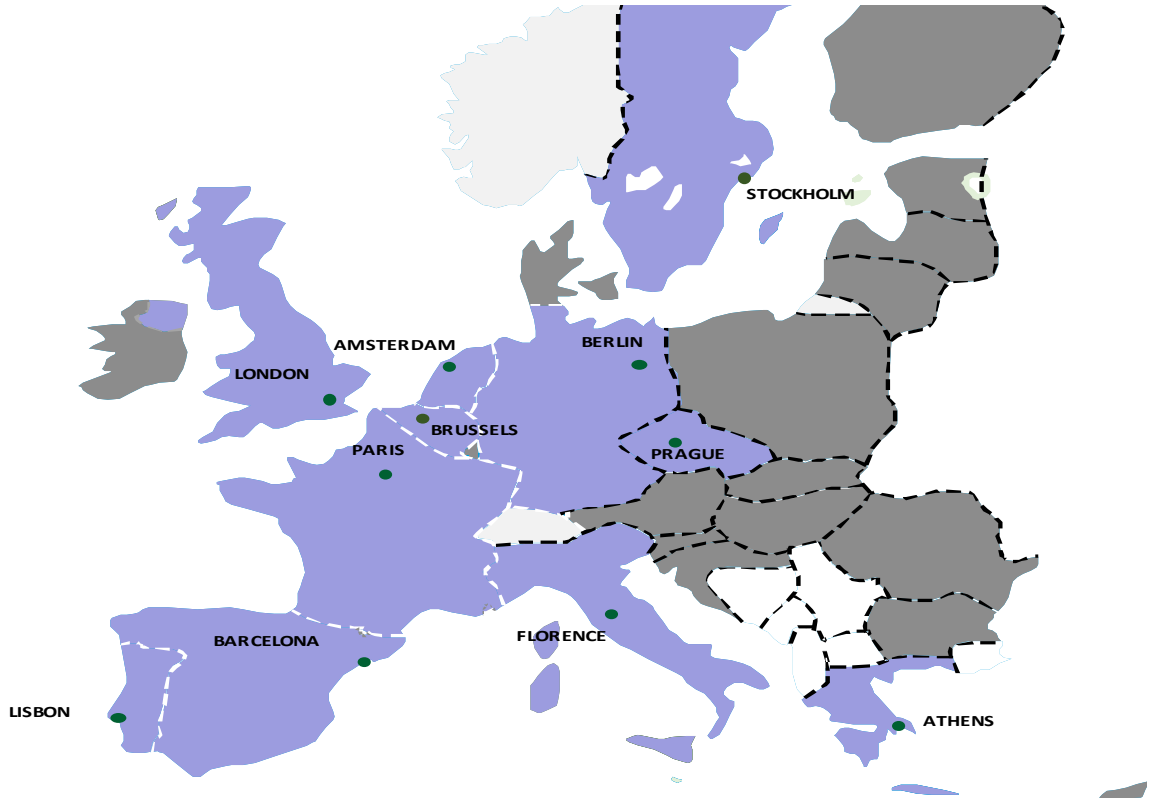
1.1 Aims and objectives of this task

The **objective** of Task 4 is to complement the regulatory analysis in Tasks 1 - 3 with 11 in-depth market case studies describing the economic development of the short-term rental market in EU cities. The **aim** of this task is to provide data and identify trends in the development of collaborative short-term rental platforms by assessing their impacts on:

- the local short- and long-term housing availability,
- the local tourism sector, and
- the local community.

The 11 cities assessed are: Athens, Amsterdam, Barcelona, Berlin, Brussels, Florence, Lisbon, London, Paris, Prague and Stockholm.

Figure 1: Map of the 11 EU cities within the scope of Task 4



The report presents a **cross-analysis** comparing impacts of the collaborative economy in the short-term accommodation sector evidenced in the 11 case studies. Additional EU-level literature, as well as input from EU-level stakeholders complement the cross-analysis report by placing the comparison within the context of broader European trends.

1.2 Methodological approach

The **market case studies** are structured according to a list of indicators as specified in the Terms of Reference and presented in Table 1.

Table 1: List of indicators

No.	Indicators	Type of assessment	Reference in the report
A1	Average market rental prices for short-term rentals[1]	Quantitative	Table 3
	Average market rental prices for long-term rentals [2]		Table 6
A2	Rooms or residences available for short-term rental[3,4]		Sub-section 2.1
A3	Number of available residences (housing stock) [5]		Table 5
A4	Number of available properties for long-term rental (vacant dwellings)[6]		Table 6
A5	Number of available rooms/properties offered through collaborative short-term rental platforms		Section 2.1
A6	Short-term occupancy rate[7]		Table 9
A7	Average length of stay[8]		Section 0
A8	Income gained through short-term rental activities[9]		Table 11

[1] Average rental price for renting an entire property for long-term (see definition) in the eleven urban areas considered. The value corresponds to the monthly average rent paid in the last reference year considered in this study (i.e. 2016).
[2] Average rental price for renting an entire property for long-term (see definition) in the eleven urban areas considered. The value corresponds to the monthly average rent paid in the last reference year considered in this study.
[3] The sum of all listings, divided into rooms and entire places, found on the EU-level and local collaborative short-term rental platforms considered in the eleven urban areas. Note that the values do not consider the possibility of double listings, i.e. the same room or property being listed on multiple collaborative short-term rental platforms. The value, however, excludes listings in hotels, but it may include rooms in hostels or other type of touristic houses (e.g. B&Bs) that operate as businesses.
[4] The information presented on collaborative short-term rental platforms does not allow us to distinguish between primary and secondary residences, or between residences (dwellings) and touristic houses. Where available, such distinctions for one or several collaborative short-term rental platforms are indicated in the text, while the indicator value corresponds to the sum of all entire listings available on the EU-level and local collaborative short-term rental platforms considered.
[5] The total number of registered residences (dwellings) available in the eleven urban areas under study in the latest reference year considered (i.e. 2016). The number excludes all dwellings serving purposes other than residential ones.
[6] The number of vacant residences (dwellings) out of the total number of registered residences (dwellings) in the eleven urban areas under study in the latest reference year considered (i.e. 2016 or latest available).
[7] The occupancy rate refers to the percentage of nights a given property is rented out, out of the total number of nights that property is available. Note that, depending on local laws, properties listed on collaborative short-term rental platforms may be subject to a maximum limit of calendar days of availability. This aspect is considered in the indicator: the ratio refers to the actual occupancy rate (i.e. considering the number of days the listing is available), rather than a theoretical occupancy rate, which assumes availability up to the maximum limit permitted, or up to the maximum number of calendar days per year.
[8] The value refers to the average monthly length of rental for a property, either on collaborative short-term rental platforms using AirBnB as a proxy, or in conventional accommodation providers such as hotels.
[9] The value refers to the yearly median or average income gained from the rental of an average listing on collaborative short-term rental platforms using AirBnB as a proxy, or for an average room rented via a conventional accommodation provider. Note that for collaborative short-term platforms, various sources are indicated to provide a more impartial value for this indicator.

No.	Indicators	Type of assessment	Reference in the report
A9	Percentage of total provider revenues accounted for by short-term rental activities[10]		Sub-section 4.1
B1	Number of tourists using collaborative short-term rental platforms		Table 13
B2	Share of collaborative economy users out of tourists using conventional accommodation services		Table 13
C1	Development of ancillary services	Quantitative/ Qualitative	Section 5.1
C2	Housing supply changes	Qualitative	Section 5.2
C3	Inhabitants' perception of collaborative short-term rental platforms		Section 5.3
C4	Impact on public services (e.g. public transport, etc.)		Section 5.4

Task 4 used the following data collection tools:

- Interviews at the EU level;
- Desk research; and
- Semi-structured interviews at the city level.

Interviews at the EU level

10 EU-level interviews with collaborative short-term rental platforms and EU representatives of the tourism sector were completed as a part of data collection. Table 2 presents a list of consulted stakeholders.

Table 2: List of consulted EU stakeholders

Stakeholder	Category
AirBnB	Platform
HomeExchange	Platform
Guest2Guest	Platform
HomeAway	Platform
European Holiday Home Association	Industry organisation
European Tour Operators Association	Industry organisation
European Housing Forum	Industry organisation
HOTREC (Hospitality Europe)	Industry organisation
OuiShare	Industry organisation
NecsTour	Public authorities' association

All interviews were semi-structured in nature and focused on broader European trends of the collaborative economy in the accommodation sector providing context to the case study assessment.

Desk research

Desk research gathered mainly secondary data and information regarding the economic indicators presented in Table 1. The reviewed documents included:

[10] The value refers to the percentage of annual income of the peer provider accounted for by revenues deriving from their collaborative short-term rental platform activities. Due to data availability, the indicator uses AirBnB statistics as a proxy for all collaborative short-term rental platforms in the eleven urban areas under study.

- statistics at the national, regional and local level,
- surveys and economic reports assessing tourist flows, impacts on tourism, developments on the short-terms rental market etc. prepared by national, regional and local authorities
- reports assessing development of collaborative economy in the accommodation sector prepared by collaborative short-term rental platforms and market research companies;
- academic literature
- websites dedicated to market developments, blogs, press publications, consumer blogs etc

Semi-structured interviews at the city level

22 interviews were completed at the city level. In most cities, local authorities and tourism organisations were consulted as part of the assessment. The list of interviewees is provided in each case study report (individual case study reports are annexed to this report - Annexes 1 to 11).

1.3 Issues and mitigation strategies

The main challenge in Task 4 related to obtaining access to quantitative data about the economic indicators in last the five years. Specifically, the following issues with data availability were noted:

- There is no comprehensive database providing data for all economic indicators for the past five years in each city making cross-comparison between cities challenging. In most cases, if available, data go back to 2014 only. In certain cases, we provided historical data (i.e. going back to 2008) to provide context to latest available figures. In addition, the report also includes data on future trends in terms of revenue growth and market penetration of the sector, based on Statista information.

- The city-level trends are assessed based on EU wide reports and studies such as Eurostat, Trivago[11], Statista, World Travel and Tourism Council database[12], Visit Brussels' EU-level analysis[13], and Numbeo statistics on the cost of living[14]. Case study reports focused on the collection of information from national and local sources, which was used to complement cross-analysis performed in Task 4 report.

- Data regarding individual collaborative short-term rental platforms vary significantly. In all cities only individual data regarding AirBnB exist[15]. As a result, given the comparative size of AirBnB's offer in comparison to its closer competition at the local level, AirBnB is used as a proxy for the collaborative short-term rental market.

- There was lack of quantitative information concerning development of ancillary services, housing supply changes, inhabitants' perception of collaborative short-

[11] Data for hotels retrieved from Trivago:
http://ie1.trivago.com/contentimages/press/tHPI_villes_deurope_Dec_2016_VF.pdf
[12] https://www.wttc.org/datagateway/
[13] https://visit.brussels/binaries/content/assets/pdf/baro_hotel_11_2016_fr_extr.pdf
[14] https://www.numbeo.com/
[15] Data was purchased from AirDNA – a platform gathering AirBnB statistics regarding listings and users, i.e. number of listings, number of booking, total host revenues, etc. Input from AirDNA was used to calculate: average market prices for short-term rentals (A1); number of available properties for short-term rentals (A2) and number of available rooms/properties offered through online means (A5).

term rental platforms and impact on public services (e.g. public transport, etc). In most case study reports, quantitative information, if available, is used to complement qualitative assessment.

- The sum of short-term rental properties available in each city should be taken as an estimation. First, it is challenging to list all collaborative short-term rental platforms due to the size of the accommodation offer. Second, attention must be paid to the duplication of listings, as hosts may advertise the same room or property across multiple collaborative short-term rental platforms and little information was found on the number of duplicated listings.

2 Overview of the accommodation sector

There are two types of economic activity in the short-term accommodation sector, notably, conventional (e.g. hotels), as well as collaborative (i.e. services offered via short-term rental platforms). This section of the report reviews the main players in the sector, as well as the recent development trends of the late-comers, the collaborative short-term rental platforms. Concretely, this section of the report answers the following questions:

I. How important is the tourism and accommodation sector in the target cities?
II. What are the largest collaborative short-term rental platforms in Europe?
III. How has the collaborative short-term rental sector evolved over the past five years?
IV. How will the collaborative short-term rental sector likely evolve in the future?
V. How relevant is the regulatory environment in explaining this evolution?

The above-mentioned sequence of questions allows us to complete the first step of the analysis and finds out how relevant the collaborative short-term accommodation sector is in the local economy of the 11 cities under study. Considering available data, Section 3 assesses what impacts it has on local housing conditions, as well as on traditional tourism operators.

2.1 Main players in the short-term rental sector

This sub-section assesses the main collaborative short-term rental platforms operating in the EU, based on the most popular platforms in the 11 cities under study. The objective of this analysis is to estimate the total number of listings available in each city, determine the limitation of such an indicator, and use it to assess to what extent this may affect local conditions such as housing (section 3), tourism (section 4) or the local community (section 0).

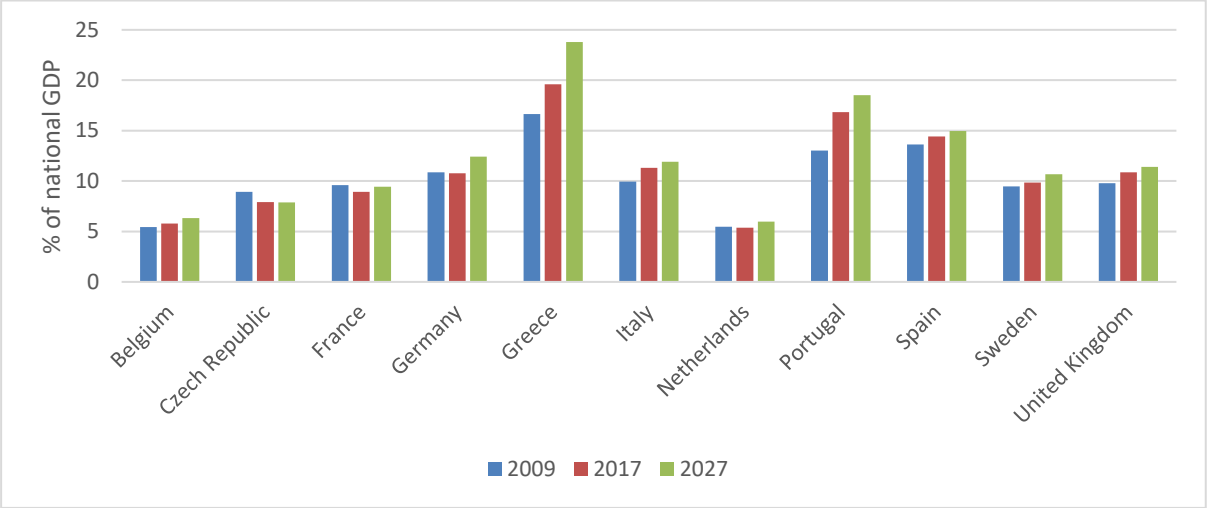
The main questions this sub-section will answer are:

I. How important is the tourism and accommodation sector in the target cities?
II. What are the largest collaborative short-term rental platforms in Europe?

Figure 2 shows that all travel and tourism activities generate total (direct and indirect) value equivalent between 5 and 20% of the national GDP for the cities under study. At EU-level, according to the World Travel and Tourism Council, all tourism and travel activities will generate almost 3% of GDP in 2017,[16]. The same source indicates very similar figures for the sector's share of total employment, both in the 11 Member States, as well as at the EU-level.

[16] World Travel and Tourism Council (2017). Travel & Tourism economic impact 2017 European Union LCU. Available at: https://www.wttc.org/datagateway/

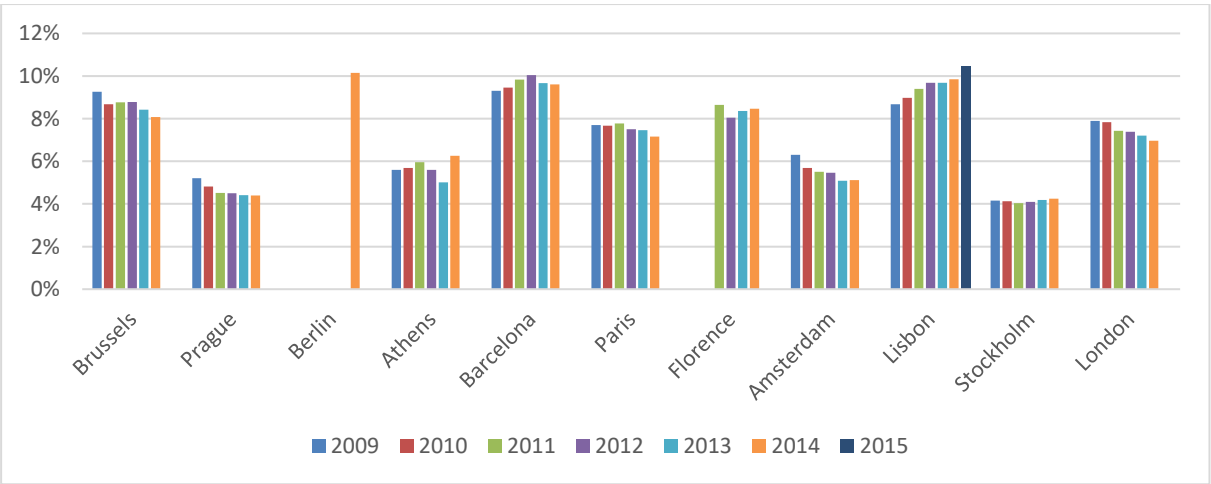
Figure 2: Share of GDP accounted for by the travel and tourism sector



Source: World Travel & Tourism Council Database

The tourism sector also accounts for a significant share of the local business units within the 11 cities under study. Eurostat show that, at regional (NUTS 2-level[17]) close to 10% of local units in Brussels, Berlin, Barcelona Lisbon, Florence or Prague are part of the sector, with an increasing trend evidenced in Florence and Lisbon. Most of these businesses are small or micro-enterprises, as HOTREC, an industry association, suggests based on its representative's opinion during a phone interview[18]. Figure 3 highlights these trends over the period 2009-2015.

Figure 3: Share of tourism local units out of all local units - NUTS 2-level[19]



Source: Eurostat (sbs_r_nuts06_r2)

[17] The statistical sub-division system applied by Eurostat for EU Member States. The "Nomenclature of Territorial Units for Statistics" (NUTS, using the French-language acronym) consists of three levels (NUTS 1, 2 and 3), each one dividing a Member State into smaller units than the precedent. The NUTS-2 level corresponds, for instance, to the French departments, the Italian regions, or the Spanish autonomous communities.
[18] Interview with a HOTREC representative, 03.05.2015.
[19] The graph presents data at NUTS 2-level, therefore the entire regions around the cities are included. For instance, Barcelona in the graph stands for Catalunya, while Amsterdam stands for North Holland, or Florence for Tuscany.

To define what the most commonly used collaborative short-term rental platforms are in the 11 cities under study, the case studies investigated the international collaborative short-term rental platforms with the largest number of listings in each city. The websites were also selected according to their availability in other EU Member States, so that the data could be comparable across the 11 cities.

Based on statistics retrieved at EU-level via literature and reports, as well as using platform data at local level, the largest collaborative short-term rental platforms in the 11 cities under study are **AirBnB**, **Wimdu**, **9flats**, **HomeAway**, **HomeExchange** and **GuestToGuest**. Other collaborative short-term rental platforms, which are not specifically focused on P2P short-term rentals but host them, are Booking.com, HouseTrip and FlipKey. In addition, LoveHomeSwap is an important player in the home exchange market, however it is difficult to correctly identify the number of listings available for certain locations.

In addition, as shown in the 11case study reports other collaborative short-term rental platforms, such as LeBonCoin, EntreParticulares, 2deHands, SpareRoom or KamerNet host classified ads for short-term rentals, although these are not easily distinguishable from long-term listings. Finally, some collaborative short-term rental platforms are only available in certain Member States, and thus specific to them. These include Rentalia and Idealista in Spain, Bedycasa and Sejourning in France or WG-Gesucht in Germany.

We have identified 274,756 listings on the six main EU-level collaborative short-term rental platforms: AirBnB, Wimdu, 9flats, HomeAway, HomeExchange and GuestToGuest in the 11 cities under the study. Additionally, adding listings from more local collaborative short-term rental platforms, as well as from international platforms primarily targeting hotels, such as Booking.com or TripAdvisor, we find a total of **355,903 available properties for short-term rental**. In total, 280,099 listings (or 78.7%) are entire properties, and 59,162 (or 16.6%) are private or shared rooms[20].

Table 3 provides an overview of the size of the EU-level collaborative short-term rental platforms in the 11 cities assessed in this task. As evidenced in the table, AirBnB has, by far, the most listings (55.6% of the total), followed by HomeAway. In total, 269,360 short-term rental listings (87%) and 40,530 (13%) home exchange listings were identified at EU-level in the period May-August 2017.

Table 3: Overview of available platform listings in the 11 cities under study, for the main EU-level collaborative short-term rental platforms

City	AirBnB	Wimdu	9flats	Home Away	Home Exchange	Guest to Guest	Total
Amsterdam	**12,581**	**766**	**161**	**3,352**	**1,042**	**1,300**	**19,202**
Entire property	9,359	490	161	3,352	1,042	1,300	15,704
Private/shared room	3,161	625	-	-	-	-	3,786
Athens	**4,593**	**581**	**156**	**395**	**4**	**1,100**	**6,829**
Entire property	3,908	532	155	395	4	1,100	6,094
Private/shared room	679	49	1	-	-	-	729
Barcelona	**17,369**	**3,417**	**1,419**	**5,051**	**1,113**	**5,700**	**34,069**

[20] The calculation was made based on the available data, disaggregated by type of listing, on certain platforms. Among the EU-level platforms under study, AirBnB, Wimdu and 9flats specify the number of entire properties and of rooms, while the other platforms only list entire properties. At city-level, certain platforms also provide this level of disaggregation, and their data was included in the calculation to sum up with the overall numbers of entire properties and rooms.

City	AirBnB	Wimdu	9flats	Home Away	Home Exchange	Guest to Guest	Total
Entire property	8,762	1,356	1,323	-	1,113	5,700	18,254
Private/shared room	8,607	299	73	-	-	-	8,979
Berlin	**11,902**	**1,129**	**600**	**1,092**	**703**	**1,600**	**17,026**
Entire property	5,933	947	495	1,092	703	1,600	10,770
Private/shared room	5,969	182	105	-	-	-	6,256
Brussels	**4,489**	**214**	**139**	**619**	**28**	**1,100**	**6,589**
Entire property	2,978	185	139	619	28	1,100	5,049
Private/shared room	1,511	29	-	-	-	-	1,540
Florence	**8,379**	**1,027**	**610**	**7,822**	**128**	**650**	**18,616**
Entire property	6,251	887	597	7,822	128	650	16,335
Private/shared room	2,128	140	13	-	-	-	2,281
Lisbon	**10,682**	**1,802**	**877**	**4,729**	**79**	**560**	**18,729**
Entire property	8,227	1,643	814	4,729	79	560	16,052
Private/shared room	2,455	159	47	-	-	-	2,661
London	**49,348**	**3,527**	**1,840**	**6,374**	**653**	**1,100**	**61,186**
Entire property	24,543	2,767	1,681	6,374	653	1,100	37,118
Private/shared room	23,157	760	103	-	-	-	24,020
Paris	**41,355**	**2,298**	**1,462**	**9,915**	**2,276**	**18,500**	**75,806**
Entire property	36,184	2,178	1,435	9,915	2,276	18,500	70,488
Private/shared room	5,171	120	27	-	-	-	5,318
Prague	**10,411**	**1,009**	**377**	**1,415**	**77**	**180**	**13,469**
Entire property	8,225	946	360	1,415	77	180	11,203
Private/shared room	2,186	63	17	-	-	-	2,266
Stockholm	**2,413**	**115**	**14**	**266**	**411**	**16**	**3,235**
Entire property	1,996	91	13	266	411	16	2,793
Private/shared room	415	24	1	-	-	-	440
Total	**173,522**	**15,885**	**5,999**	**41,030**	**6,514**	**31,806**	**274,756**

Source: collaborative short-term rental platform websites, as well as interview with GuestToGuest on 18/04/2017.

The **number of available properties for short-term rental** should be interpreted with caution. First, it is difficult to list all collaborative short-term rental platforms due to the size of the accommodation offer. Second, attention must be paid to the duplication of listings (see Box 1), as hosts tend to advertise the same room or property across multiple collaborative short-term rental platforms. This view was supported by stakeholders in Amsterdam, Barcelona, London, Lisbon, Paris and Brussels, as well as from EU-level stakeholder such as the EHHA and HOTREC and there is very little information of the ratio of duplicated listings. Third, it might be the case that entire flats are listed as independent rooms, therefore, for instance, a three-bedroom flat might count as three listings, if each room is listed separately. Fourth, shared rooms might also be separately advertised as private rooms.

Box 1: Duplication of listings

The duplication of listings is a feature specifically highlighted by stakeholders in five of the eleven case studies[21]. Unfortunately, data on duplicated listings was not available from local stakeholders, although interviewees in Amsterdam[22], Barcelona[23] and Lisbon[24] admitted that this practice is widespread and should be accounted for.

The Government of Catalonia found that 40% of collaborative short-term rentals are not registered (illegal), and that only 23% of AirBnB listings are registered (legal)[25]. In Amsterdam, the municipality pointed to the emergence of property managers such as IAmBnB, which manage one listing on several platforms, and sees them as key actors in the future development of collaborative short-term rental market in the city[26]. In Lisbon, the homeowners' association states that 1/3 of providers exclusively rely on AirBnB, while the rest use multiple collaborative short-term rental platforms. Only 10% of listings, according to them, are not on major collaborative short-term rental platforms[27]. As a result, it is very challenging to estimate the number of listings for a given city, and public authorities themselves have encountered this problem for their own research.[28]

The phenomenon of listing a property on multiple collaborative short-term rental websites is common, and is discussed on online forums[29], in news articles[30], and even in books related to short-term rental in general[31]. According to a statement by HomeAway's CEO in 2014, 6% of HomeAway listings that year were also listed on AirBnB, an increase from the 2% recorded in 2012[32]. Fortune (2014) also states that 40% of listings on HomeAway are posted by property managers rather than homeowners.

There are many tools for property managers and homeowners to list their properties on more than one collaborative short-term rental platform. **Property managers** take care of the full process of the listing, renting out, cleaning and charging tourists. Such property managers include IAmBnB, AirSorted, Pillow.com HostMaker or Halldis. AirBnB also launched a co-hosting service in October 2016, allowing its peers to act as property managers and earning a fee[33].

On the other hand, **channel managers** are online software tools allowing property managers and homeowners to efficiently track the listings on multiple collaborative short-term rental platforms, and to handle bookings. Such channel managers include Kigo.net, Lodgify, Beds24 or Guesty.

[21] Amsterdam, Barcelona, Lisbon, London and Paris.
[22] Interview with Amsterdam municipality representative 2: 08/06/2017.
[23] Interview with the Directorate for Tourism of the Barcelona City Council, 30/05/2017.
[24] Interview with Associação do Alojamento Local em Portugal on 27/06/2017.
[25] Barcelona City Council, 2016, Impacte del lloguer vacacional en el mercat de lloguer residencial de Barcelona.
[26] Interview with Amsterdam municipality representative 2: 08/06/2017.
[27] Interview with Associação do Alojamento Local em Portugal on 27/06/2017.
[28] As noted notably by the City Council of Barcelona on 30/05/2017.
[29] https://www.tenerifesforumoffun.com/t9282-airbnb-duplicate-properties
[30] https://www.tnooz.com/article/silently-debuting-homestays-booking-com-jabs-airbnb/
[31] https://getpaidforyourpad.com/podcast/airbnb-vs-homeaway-vrbo/
[32] http://fortune.com/2014/03/12/growing-quietly-in-airbnbs-shadow/
[33] https://peymans.uk/airbnb-co-hosts-feature-is-launched/

Local authorities have also attempted to estimate the share of duplicated listings: in Amsterdam, an upcoming study will rely on input from local providers, collaborative short-term rental platforms and rental agencies[34]. In Lisbon, the Portuguese Association of Local Lodgings estimated that **two thirds of all listings are advertised on multiple collaborative short-term rental platforms**.

An alternative way to calculate the number of available properties for short-term rental is to use local landlord registers, where available. However, there are two caveats to this method. Firstly, these registers are not available in all cities under the study. Secondly, as the registers came into the force only recently, not all providers would feature in the databases. For example, in Lisbon, where such a registry is available nationwide, the Portuguese Association of Local Lodgings highlighted that 22% of all active listings are not in the registry, however, no evidence was found to support this view[35]. In Barcelona, where peer providers must register with the Catalan Tourist Register, the City Council found 5,257 non-registered properties, or 35% of all listings accounted in their study. In Brussels, where such a registry was implemented in March 2016, at the time of drafting only less than 2,000 peer providers were listed.

Other stakeholders involved in the discussion regarding the short-term rental sector include local public authorities, tourism associations, short-term rental sector associations, collaborative economy associations, housing associations and homeowners' association. These types of stakeholders consulted as part of this study, expressed their opinions regarding the development of the short-term rental sector and its impacts.

2.2 Overview of the economic development of the short-term rental sector

This section focuses on the past and foreseen development trends of the collaborative short-term rental sector in the EU, as well as in the 11 cities under study. In doing so, this sub-section attempts to answer the following questions:

I. How has the collaborative short-term rental sector evolved over the past five years?
II. How will the collaborative short-term rental sector likely evolve in the future?
III. How relevant is the regulatory environment in explaining this evolution?

The collaborative short-term rental sector has been rapidly developing over the past decade. EU-level stakeholders like OuiShare, EHHA, AirBnB, HomeAway, NecsTour, as well as city-level stakeholders[36], noted that peer-to-peer short-term rentals were common before the arrival of collaborative short-term rental platforms, but such platforms contributed to making the sector more efficient[37]. Collaborative platforms involved in the home exchange sector also point to a strong growth of their market in the past decade and expect this trend to continue in the coming years[38].

[34] At the time of drafting, the Amsterdam municipalities specified that they are conducting a study in which they attempt to provide statistics on the number and type of platforms in the short term renal sector operating in the city, as well as on the impacts these have on the local community. Based on an interview with the Amsterdam municipality on 08/06/2017.
[35] Interview with the Portuguese Association of Local Lodgings on 26/06/2017.
[36] For instance, the Government of the Czech Republic (interview on 09/06/2017).
[37] Interviews with EHHA (26/04/2017), OuiShare (27/04/2017), AirBnB (13/04/2017), HomeAway (20/06/2017) and NecsTour (12/04/2017).
[38] Interviews with HomeExchange (07/04/2017) and GuestToGuest (18/04/2017).

The growth of the short-term rental sector is evidenced by various city- and national-level statistics and studies. Although more detailed information on such trends is available in the annexes to this report, it is worth mentioning a few examples:

- In **Lisbon**, based on the number of providers registered in the National Registry of Local Lodgings, the number of short-term rental lodgings increased by 260.2% between 2015 and end May 2017. In June 2017, 8,147 establishments were registered as local short-term rental lodgings in Lisbon (19% of the total number of registered lodgings in Portugal), with a total capacity of 30,987 beds. [39].

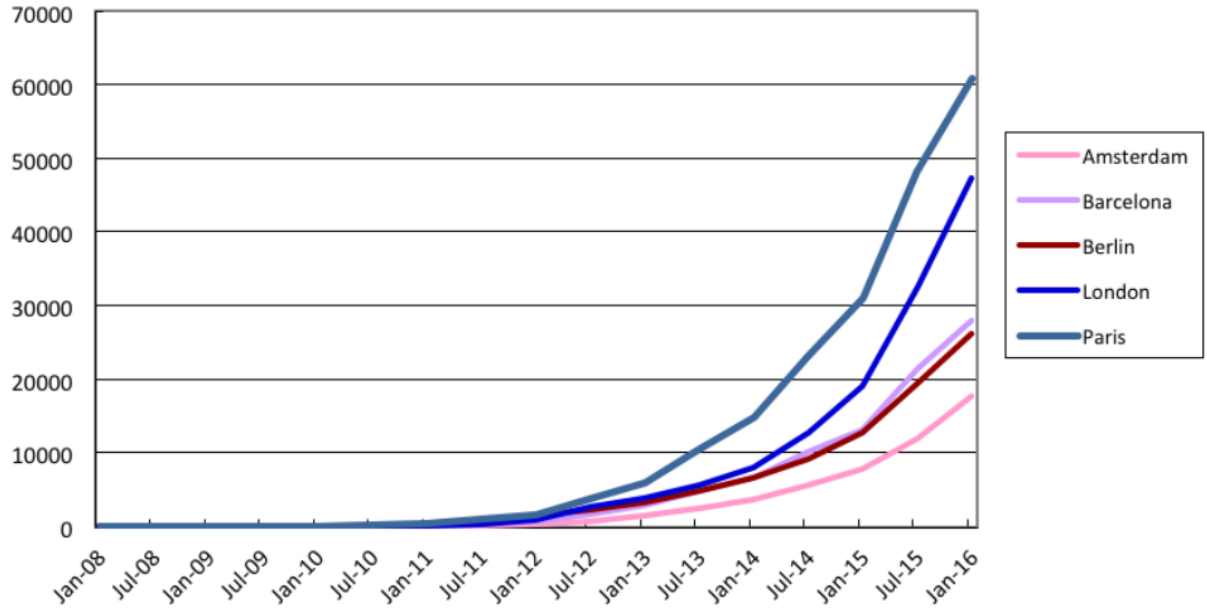
- In **Barcelona** between 2010 and 2015 the number of registered residences for tourist use increased more than four-fold (from about 2,350 to 9,600), prompting authorities to place a moratorium on the number of providers[40]. Despite this, the Barcelona City Council suggests that 40% of the supply of tourist homes is illegal[41]. InsideAirBnB, a website retrieving and analysing data from AirBnB's publicly available information, finds that 78% of listings do not display their license number[42].

- In **France**, the French National Institute of Statistics and Economic Studies (INSEE) found that between 2015 and 2016 the number of properties rented out via collaborative short-term rental platforms increased by 30%, to 25 million[43]. In Florence, between 2012 and 2015, the number of holiday dwellings for renting has grown by 15%[44].

City- and country-reports published by AirBnB also evidence the fast growth of collaborative short-term rental platforms in Europe (see case studies annexed to this report). To complement such reports, Coyle and Yeung (2016) map the development of AirBnB listings in 14 European cities and rely on AirBnB data to display their growth trends in Amsterdam, Barcelona, Berlin, London and Paris[45]. Figure 4 maps the evolution of the number of AirBnB listings between 2008 and 2016, based on their findings.

[39] Written answers provided by the Lisbon Tourism Office on 07/06/2017.
[40] Studies Department, Barcelona City Council based on Catalan Government data.
[41] El País, 7 September 2016, "El 40% de los pisos turísticos de Barcelona son ilegales". Available at: http://ccaa.elpais.com/ccaa/2016/09/06/catalunya/1473172001_414770.html, accessed on 24/05/2017.
[42] Inside AirBnB – Barcelona. Available at: http://insideairbnb.com/barcelona/#, accessed on 29/05/2017.
[43] INSEE (2017). Les logements touristiques de particuliers proposés par internet. Available at : https://www.insee.fr/fr/statistiques/2589218. Accessed on 21/04/17.
[44] Data extracted on 10 May 2017 16:33 UTC (GMT) from I.Stat: https://www.istat.it/en/
[45] Coyle, D., Yeung, T. (2016). Understanding AirBnB in Fourteen European cities. The Jean-Jacques Laffont Digital Chair, Toulouse School of Economics.

Figure 4: Evolution in the number of AirBnB listings in five cities



Source: Coyle, D., Yeung, T. (2016) [46]*, based on data provided by AirBnB*

Collaborative platforms in the home exchange sector, such as HomeExchange and GuestToGuest, also point to a growing trend to share homes[47]. HomeExchange was launched in 1992 in California, and only became international around 2010. Between 2005 and 2016, its membership has grown eleven-fold to 67,000 in 2016, and the platform claims to have facilitated over one million home exchanges since 1992[48].

The initial philosophy of early market entrants like HomeExchange was to be very regional and as close to its users as possible. The collaborative platform indicated that this approach constricted the market to grow at a moderate level over the years, before expanding internationally[49]. With the emergence of new home exchange market entrants like GuestToGuest, Trampolinn or SwitchHome, the market expanded internationally, especially due to their 'a la carte' offer[50]. The success of some, like GuestToGuest, founded in 2011, enabled them to take over older market players – GuestToGuest acquired HomeExchange in March 2017. The international orientation of new home exchange providers, as well as innovations in their service range contributed to a faster growth rate: between 2014 and March 2017 GuestToGuest increased its number of listings six-fold to 280,000[51]. GuestToGuest, along with newly-acquired HomeExchange aim for a community of one million people by 2019. According to home exchange platforms, their growth will have them compete with collaborative short-term rental platforms like AirBnB or HomeAway, rather than with hotels. As a consequence of the increased regulatory zeal of local authorities towards short-term rentals, collaborative home exchange platforms see

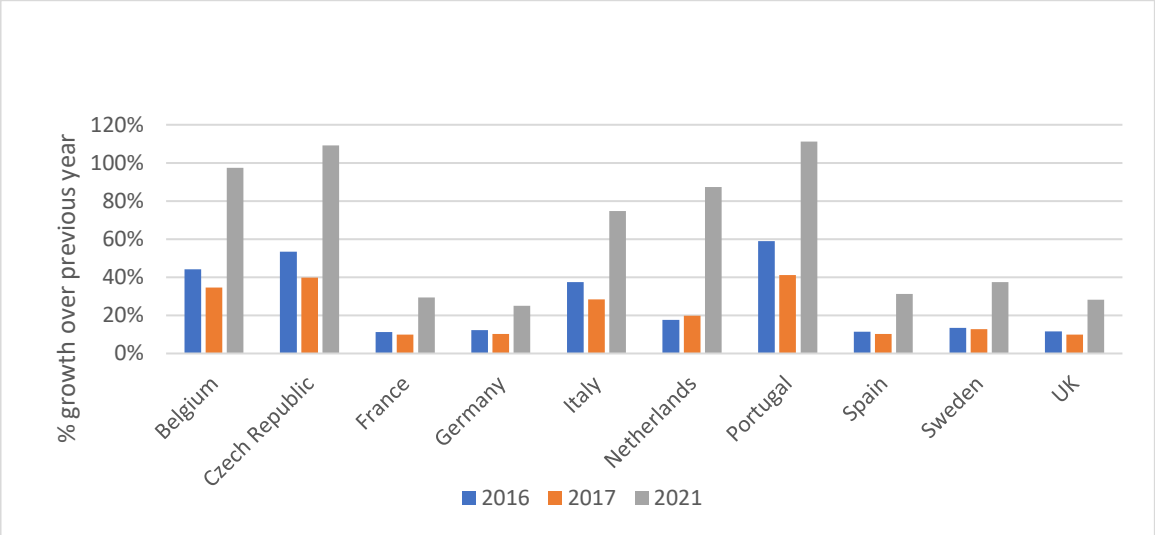
[46] Coyle, D., Yeung, T. (2016). Understanding AirBnB in Fourteen European cities. The Jean-Jacques Laffont Digital Chair, Toulouse School of Economics.
[47] Interviews with HomeExchange (07/04/2017) and GuestToGuest (18.04.2017).
[48] HomeExchange (2017). HomeExchange factsheet. Available at: https://dax87tnsniies.cloudfront.net/images/in-the-news/5b6acmul6.pdf
[49] Interview with HomeExchange (07/04/2017).
[50] Interview with HomeExchange (07/04/2017).
[51] http://blog.guesttoguest.com/guesttoguest-acquires-homeexchange/

an opportunity to provide an alternative which, according to them, has a more limited impact on real estate prices or nuisance to locals[52].

Looking at prospects for future development, Statista, a private global statistics service, provides forecasts into the vacation rentals industry[53]. Statista estimates that the industry has experienced growth in EU Member States and is expected to further develop in the future. In terms of industry revenues for the 11 EU Member States, where 11 cities under the study are based, Statista estimated a growth of 12.54% between 2015 and 2016, 11.14% between 2016 and 2017, and forecasts a growth of 33.47% between 2017 and 2021[54].

Figure 5 shows the growth trends in revenues for the vacation rentals industry between 2015 and 2021 for the 11 EU Member States whose cities are within this report's scope.

Figure 5: Current and forecasted revenues for the vacation rentals industry



Source: Statista; Data for Greece is not available.

All EU-level stakeholders interviewed as part of this study agree that the short-term rentals sector, including home exchange activities, will grow over the coming years. Platforms like AirBnB and HomeAway see their growth coming ever more from listings in peripheral and rural areas, rather than city centres. As also evidenced by HomeExchange, this trend points

[52] Interviews with HomeExchange (07/04/2017) and GuestToGuest (18/04/2017).
[53] The "Vacation Rentals" segment comprises of private accommodation that was arranged and booked online. This includes private holiday homes and houses e.g. HomeAway, as well as short-term rental of private rooms or flats via portals such as Airbnb. Users represent the people who booked the accommodation, independent of the number of guests staying at the accommodation on that booking. Offline bookings made, for example, in a travel agent's office or by telephone are not included; a prerequisite for this segment is an online checkout process. Furthermore, hotels and professionally-run accommodation such as guest houses are not included.
[54] Information retrieved from Statista on 30/06/2017. Available at: https://www.statista.com/outlook/268/100/vacation-rentals/worldwide

to the increase in families and seniors using their services, who are late adopters of these trends and who prefer calmer and larger properties during their holidays[55,56,57].

To address the third research question in this sub-section, related to how much the regulatory environment affected the development of collaborative short-term rental platforms, an ETOA representative suggested that in the past the collaborative short-term rental platforms developed the fastest in cities that had little or no regulatory obstacles, such as Amsterdam, Paris, Barcelona or Florence[58]. However, as the case study reports show, it should be noted that in those cities already significant regulatory efforts were undertaken.

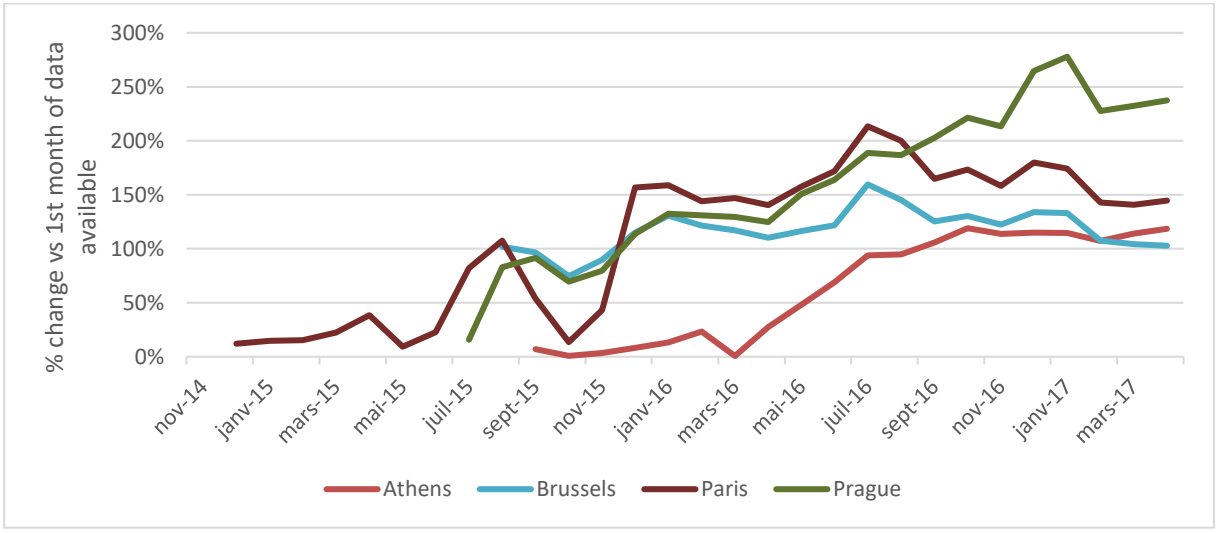
Stakeholders agreed that the collaborative economy will develop further, but this will depend on the regulatory environment imposed upon them by national and local authorities. The impact of the regulatory environment on the collaborative economy's development is also broadly prevalent in the literature for all collaborative economy sectors[59,60,61,62,63,64,65]. In fact, data from AirDNA on the evolution in the number of AirBnB listings in the 11 EU cities under study over the past years support this view to certain extent. Figure 6 shows the growth in the number of AirBnB listings in ten[66] of the 11 cities under study, classifying them according to the rate of growth[67].

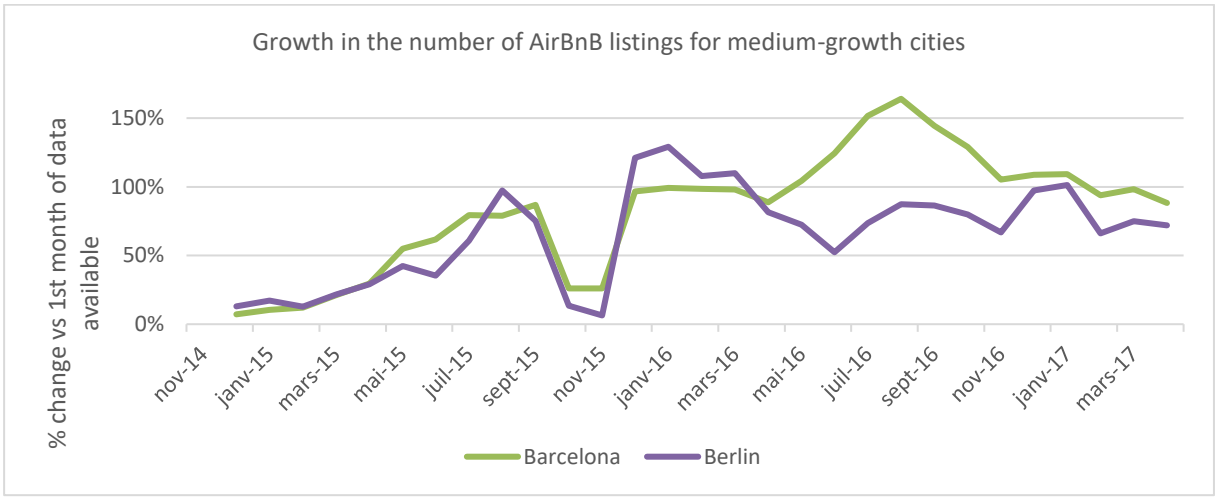
It is difficult to assess if the regulatory environment has affected the growth rate of the collaborative accommodation offer. Barcelona and Berlin, for instance, which have stricter market access requirements for peer providers, have seen their AirBnB listings increase slower over time than more permissive regulatory environments like Athens, Prague or Brussels. Nevertheless, as the following charts show, cities with permissive regulatory environments (e.g. Lisbon, Amsterdam) can have a slower growth rate in collaborative short-term rental listings, possibly due to reasons such as market saturation or housing availability or others.

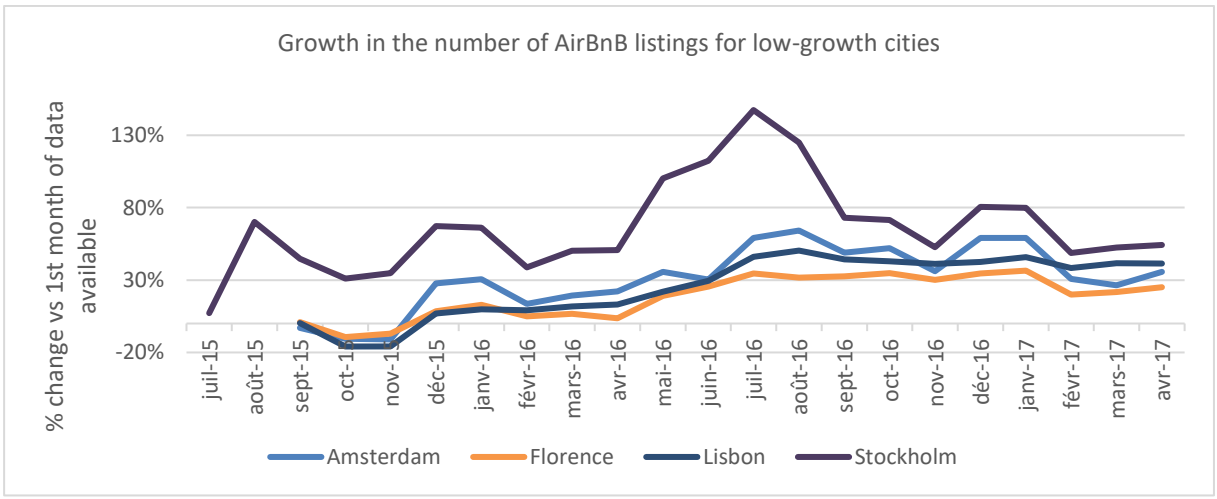
---

[55] Interviews with AirBnB (13/04/2017), HomeAway (22/06/2017) and HomeExchange (07/04/2017).
[56] HomeExchange (2013). My House is Yours. A worldwide study on Home Exchangers' Profiles and Motivations. Available at: https://blog.homeexchange.com/blog/ln/typical-home-swapper-young-tech-savvy-budget-traveler-right-wrong/1811/
[57] HomeAway (2016). Estudio Nacional de Alquiler Vacacional. Available at: https://www.homeaway.es/info/homeaway-lab/estudios/barometro-alquiler-vacacional/estudio-nacional-2016-multimedia/estudio-alquiler-vacacional-datos-nacionales-2016
[58] Interview with ETOA on 10/04/2017.
[59] Finck, M., Ranchordas, S. (2016). "Sharing and the city". Vanderbilt Journal of Transnational Law, 49. Available at: https://www.vanderbilt.edu/jotl/wp-content/uploads/sites/78/8.-Ranchordas-Finck_Paginated.pdf
[60] Codagnone, C. and Martens, B. (2016). "Scoping the Sharing Economy: Origins, Definitions, Impact and Regulatory Issues. Institute for Prospective Technological Studies". Digital Economy Working Paper 2016/01. JRC100369. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2783662
61 Goudin, P. (2016). The Cost of Non-Europe in the Sharing Economy: Economic, Social and Legal Challenges and Opportunities. PE 558.777.
[62] European Parliament (2015). Tourism and the sharing economy: challenges and opportunities for the EU. IP/B/TRAN/FWC/2010-006/Lot5/C1/SC3, PE 563.411.
[63] Smorto, G. (2015). "The sharing economy as a means to urban communing." Conference paper, 1st IASC Thematic Conference on Urban Commons, November 6-7th, 2015, Bologna, Italy. Available at: https://wiki.p2pfoundation.net/Sharing_Economy_as_a_Means_To_Urban_Commoning
[64] PwC (2016). "Assessing the size and presence of the collaborative economy in Europe". Assessment prepared for DG GROW. Available at: http://ec.europa.eu/DocsRoom/documents/16952/attachments/1/translations/en/renditions/native
[65] Cologne Institute for Economic Research (2016). Collaborative Business Models and Efficiency. Potential Efficiency Gains in the European Union. Impulse Paper No. 07.
[66] Data for London was not available to the study team.
[67] Given the diverging trends and growth rates in the number of AirBnB listings in the ten cities for which data is available, this study groups them into three: high-growth cities are those that, over the studied period noted the number of AirBnB listings increase by 100% or more, medium-growth cities which noted the same percentage increase by between 55% and 99%, and low-growth cities, where the percentage varies between 25 and 54.

Figure 6: Growth in the number of AirBnB listings for high-growth cities







Source: AirDNA

Data from Statista for the 11 EU cities under the study confirm that the revenues from vacation rentals sector[68] is expected to grow, but the growth rates will gradually decline until 2021. Growth rates, as suggested by several EU stakeholders will be affected by multiple factors among which national/regional/city regulatory environment towards the collaborative economy may play a key role. Box 3 provides further insights into what other factors might influence the growth of collaborative short-term rental platforms.

Box 2: Other features contributing to the growth of the collaborative economy

Apart from the regulatory environment, the academic and policy literature on the collaborative economy points to various other factors influencing the sector's growth rate. While authors differ in their categorisation of factors, three main themes emerge: **economic, technological and societal drivers**. For instance, Owyang (2013)[69] or Finck and Ranchordas (2016) [70] share this view.

In terms of **economic drivers**, the most relevant factors mentioned in the literature are the 2008 financial crisis, cheaper access to goods as opposed to ownership, increased financial flexibility for peer providers, as well as an increase in funding for collaborative platforms. In brief:

- Financial crisis: due to a decrease in purchasing power and increasing unemployment, people resorted to cheaper and more efficient ways to obtain resources[71]. This is shown, for instance by the Economist (2013) [72] or Hansen and Windekilde (2016) [73].

- Cheap access to goods: price is among the most important drivers for the collaborative economy, as shown by papers by Agyeman, McLaren and Chaefer-Borrego (2013)[74], Amar (2016) [75] or Ellen (2015) [76].

- Access to funding: access to both public and private funding for collaborative economy ventures contribute to the sector's rapid development[77]. Owyang (2013) analysed 200

[68] The "Vacation Rentals" segment comprises of private accommodation that was arranged and booked online. This includes private holiday homes and houses e.g. HomeAway, as well as short-term rental of private rooms or flats via portals such as Airbnb. Users represent the people who booked the accommodation, independent of the number of guests staying at the accommodation on that booking. Offline bookings made, for example, in a travel agent's office or by telephone are not included; a prerequisite for this segment is an online checkout process. Furthermore, hotels and professionally-run accommodation such as guest houses are not included.

[69] Owyang, J. (2013). The collaborative economy: Products, services, and market relationships have changed as sharing startups impact business models. To avoid disruption, companies must adopt the collaborative economy value chain.

[70] Finck, M., Ranchordas, S. (2016). "Sharing and the city". Vanderbilt Journal of Transnational Law, 49. Available at: https://www.vanderbilt.edu/jotl/wp-content/uploads/sites/78/8.-Ranchordas-Finck_Paginated.pdf

[71] Dillahunt and Malone, 2015; Jaffray, 2013; Howe, 2016; Finley, 2013.

18 All eyes on the Sharing Economy". The Economist 72 (2013). Available at: http://www.economist.com/news/technology-quarterly/21572914-collaborative-consumption-technology-makes-it-easier-people-rent-items

[73] Henten, A., Windekilde, I. (2016). "Transaction costs and the sharing economy." info 18.1 (2016): p. 4 Available at: https://ideas.repec.org/p/zbw/itse15/127145.html

[74] Agyeman, J., McLaren, D., Schaefer-Borrego, A. (2013). „Sharing cities". Friends Of The Earth. Available at; https://www.foe.co.uk/sites/default/files/downloads/agyeman_sharing_cities.pdf

[75] Amar, 2016; Howe, 2016; OCU et al, 2016; Owyang, 2013; Nelson and Chan, 2001; Hall and Krueger, 2015; Cohen and Ketzmann, 2014.

[76] Ellen, I. G. (2015). "Housing Low-Income Households: Lessons From the Sharing Economy?". Housing Policy Debate, 25(4), pp. 783-784. Available at: http://www.tandfonline.com/doi/abs/10.1080/10511482.2015.1042204?journalCode=rhpd20

[77] Owyang, J. (2013). The collaborative economy: Products, services, and market relationships have changed as sharing start-ups impact business models. To avoid disruption, companies must adopt the collaborative economy value chain.

collaborative start-ups and found that 37% of them received, on average, EUR 24.9 million each[78].

Technology is one of the most important support systems for the development of collaborative economy initiatives. For instance, many of the collaborative platforms assessed by the European Commission (2017) use software such as geolocation or online payment systems[79]. Important technology-enabled factors that contribute to the development of the collaborative economy include social networking, mobile apps and online payment systems[80].

Societal drivers can facilitate the development of the collaborative economy alongside regulatory, market or technological features. They often relate to cultural tendencies, and the literature generally identifies social capital, generational altruism, environmental concerns, social demographics and trust-building as the most relevant societal drivers.

- Social capital[81] was found as a leading cause of generational altruism, and thus contributing to the popularity of P2P transactions[82]. A poll conducted by UCLA in 2015 found that over 75% of incoming freshman believe it is essential or very important to help others[83].

- Environmental concerns are often a cornerstone in some collaborative platforms' values, like Peerby, BlaBlaCar, GreenWheels or Home Exchange. Internet users become more concerned of the potential environmental impact of their consumption, and look for alternatives in P2P transactions[84,85].

- Social demographics foster direct[86] and indirect network effects, which in turn lead to bandwagon effects (i.e. the more people in a network, the more advantageous it is to join it) [87], especially in areas with young and highly-educated inhabitants. The 2016 Eurobarometer indicates a more intensive use of collaborative platforms among young, highly-educated respondents living in urban areas and who are self-employed or employees[88].

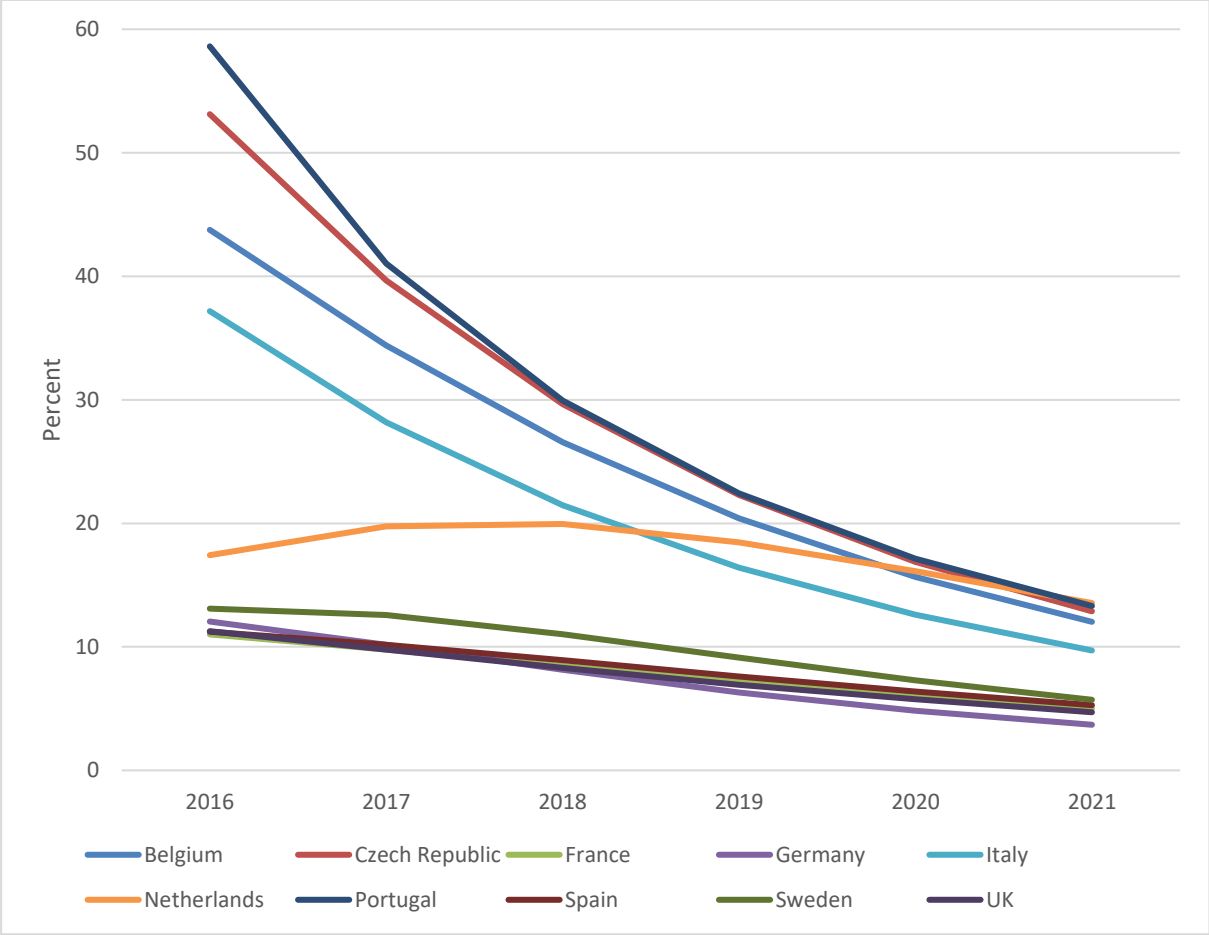
[78] Owyang, J. (2013). The collaborative economy: Products, services, and market relationships have changed as sharing start-ups impact business models. To avoid disruption, companies must adopt the collaborative economy value chain.
[79] European Commission (2017). Exploratory study of consumer issues in online peer-to-peer platform markets.
[80] Owyang, J. (2013). The collaborative economy: Products, services, and market relationships have changed as sharing start-ups impact business models. To avoid disruption, companies must adopt the collaborative economy value chain.
[81] Zvolska (2015). Sustainability potentials of the sharing economy- the case of accommodation sharing platforms.
[82] Owyang, J. (2013). The collaborative economy: Products, services, and market relationships have changed as sharing start-ups impact business models. To avoid disruption, companies must adopt the collaborative economy value chain..
[83] UCLA labour center (2015). "Ridesharing or ridestealing? Changes in taxi ridership and revenue loss in Loss Angeles 2009-2014." Policy Brief. Available at: http://irle.ucla.edu/old/publications/documents/Taxi-Policy-Brief.pdf
[84] See, for instance, the UCLA (2015) study, as well as the descriptions provided by Peerby, BlaBlaCar or GreenWheels on their websites.
[85] Hamari, J., Sjöklint, M., Ukkonen, A. (2015). "The sharing economy: why people participate in collaborative consumption". Journal of the association for information science and technology. Available at: http://people.uta.fi/~kljuham/2015-hamari_at_al-the_sharing_economy.pdf
[86] Katz, M.L., Shapiro, C. (1985). "Network Externalities, Competition and Compatibility". American Economic Review, 75(3), pp. 424-440. Available at: http://brousseau.info/pdf/cours/Katz-Shapiro%5B1985%5D.pdf
[87] Martin, Chris J. (2016). The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism?
[88] Eurobarometer Report (2016). The use of collaborative platforms. p.4.

- Trust building tools created by collaborative platforms or national/local authorities (e.g. consumer protection laws) enable peers to feel safe in P2P transactions, and thus make such transactions more attractive[89]. Slee (2013) [90], Luca[91] or Lobel (2016)[92] suggest that platforms foster trust through reputational systems like reviews, ratings and recommendations.

Figure 7 maps the current and forecasted growth of the vacation rentals sector between 2016 and 2021 in the 11 EU Member States where 11 studied cities are based. The sector is expected to mature over time, and the local markets to saturate. As a consequence, the expected growth rates will decrease over time, in some countries more than in others.[93]

[89] Botsman, R. (2016). "Thinking". Available at: http://rachelbotsman.com/thinking/
[90] Slee, T. (2013). "Some obvious things about internet reputation systems". Tom Slee. Available at: http://tomslee.net/2013/09/some-obvious-things-about-internet-reputation-systems.html
[91] Luca, M. (2016). "Designing Online Marketplaces: Trust and Reputation Mechanisms (No. w22616)". National Bureau of Economic Research. Available at: http://www.hbs.edu/faculty/Publication%20Files/17-017_ec4ccdc0-4348-4eb9-9f46-86e1ac696b4f.pdf
[92] Lobel, O. (2016). "The Law of the Platform". Univ. of San Diego, Legal Studies Research Paper Series. Available at http://ssrn.com/abstract = 2742380
[93] Based on Statista data and interviews with EU-level stakeholders: NecsTour, GuestToGuest, HOTREC.

Figure 7: Current and expected growth rates of revenues in the vacation rentals sector[94]



Source: Statista

As briefly mentioned above, the development of the short-term rental sector is expected to be more prominent in rural and peripheral areas, rather than city centres. Within the case studies reports, this trend was highlighted by local/regional authorities through interviews, as well as through studies, some funded by AirBnB and HomeAway, in London, Paris, Barcelona, Berlin, Lisbon, Stockholm and Prague. For example, the INSEE (2017) highlights that the growth perspectives for collaborative platform-intermediated bookings are far higher in provincial France than in the Paris region (Ile-de-France). The study shows a 35% year-on-year growth in the number of collaborative platform-listed properties in provincial France in the two last quarters of 2016, while the figure for Ile-de-France properties is below 4%[95]. Also, AirBnB foresees that the number of listings will grow in rural and peripheral areas, rather than in city centres. The collaborative short-term rental

[94] The "Vacation Rentals" segment comprises of private accommodation that was arranged and booked online. This includes private holiday homes and houses e.g. HomeAway, as well as short-term rental of private rooms or flats via portals such as Airbnb. Users represent the people who booked the accommodation, independent of the number of guests staying at the accommodation on that booking. Offline bookings made, for example, in a travel agent's office or by telephone are not included; a prerequisite for this segment is an online checkout process. Furthermore, hotels and professionally-run accommodation such as guest houses are not included.

[95] INSEE (2017). Les logements touristiques de particuliers proposés par internet. Available at: https://www.insee.fr/fr/statistiques/2589218. Accessed on 21/04/17.

platform published studies on this trend: a 2016 study on the spread of AirBnB listings in rural Ireland[96], and a broader 2014 study showing that 74% of the properties advertised on the collaborative short-term rental platform are outside the main hotel districts.[97]

[96] AirBnB (2016). Home Sharing: Empowering Regional & Rural Ireland. Available at: https://bqbj13mpozj2b62rz3s6tpfq-wpengine.netdna-ssl.com/wp-content/uploads/sites/36/2016/11/RuralIrelandMiniReport111116FORWEB.pdf

[97] AirBnB (2014). The economic impacts of home sharing in cities around the world. Available at: https://www.airbnb.co.uk/economic-impact, accessed on 28/06/2017.

3 Real estate and housing availability

While section 0 described the composition and the development trends of the short-term rental sector in the 11 EU cities under study and more broadly in the EU, this section provides an overview of the impact of such trends on conventional accommodation operators and on housing availability. This section answers the following research questions:

I. How have average long-term rental prices evolved in the target cities over the past five years?
II. What impact have collaborative short-term rentals had on long-term rent prices?
III. How many vacant properties are there in the cities under study?
IV. How do collaborative short-term rentals affect housing availability in the cities under study?
V. How do collaborative short-term rentals affect traditional accommodation providers?
VI. How do collaborative short-term rentals compare in price and availability to traditional accommodation offers?

The research questions listed above address some of the most important concerns flagged by local authorities and industry stakeholders during the interviews conducted in this study. In the current economic climate, with a significant decrease in construction rates, a shift to rental as opposed to owned housing[98], and prevalent housing shortages experienced in almost all 11 cities under study, the topic is particularly relevant for regional and local authorities seeking to increase the availability of this service of general interest. Exact impacts differ between cities and these are described in detail in the case study reports.

The topic of the collaborative economy impact on conventional accommodation operators is also very relevant, particularly from a public policy perspective. While the European Commission (2016)[99] encourages the development of the collaborative economy, while not favouring one business model over the other, opinions widely diverge on whether complementarity effects (e.g. greater accessibility to rural/peripheral areas, increased product range for tourists, a more flexible accommodation supply in overcrowded areas, etc) negatively impact incumbent operators.

3.1 Overview of average rental market prices

This sub-section explains the evolution of long-term rent prices in the 11 cities under study, and then to look at the potential effect of collaborative short-term rental platforms on such prices.

Concerns raised by stakeholders interviewed for this study mainly revolve around the fact that, after the financial crisis (and in some cities like Paris, long before), long-term rental prices have been increasing, often to unsustainable levels. Housing Europe (2015) observes the strong short-term impact the financial crisis has had on the housing market in Europe. Except for Germany, Member States have seen significantly lower construction rates. The number of building permits per 1,000 inhabitants was reduced in all Member States in the cited study. While owner occupied dwellings still represent the most

[98] Housing Europe. The State of Housing in the EU 2015. Available at: http://www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015, accessed 28/06/2017.
[99] European Commission (2016). A European agenda for the collaborative economy. Available at: https://ec.europa.eu/docsroom/documents/16881/attachments/2/translations/en/renditions/native

widespread form of occupation in the EU, **many countries see an increase in rental housing** as fewer people either can afford to become homeowners or prefer renting due to mobility reasons[100].

Housing Europe (2015) states that in some countries housing construction is not currently keeping up with demographic trends, leading to significant housing shortages around the main urban centres and in the most economically attractive regions.[101] For instance:

- In the **UK**, approximately 245,000 new dwellings/year are needed in England alone, but only half of the amount is built. Projections for **London** suggest 53,000 homes a year are required, but only about 27,000 were built yearly in 2001-2011.

- In the **Netherlands**, a shortage of 300,000 dwellings is forecasted by 2020, concentrated around Amsterdam, The Hague, and Utrecht[102]. In **Amsterdam**, 56% of the housing stock is made of rental homes. Social housing capacity has decreased, and new constructions mainly target private tenants[103].

- **Sweden** is affected by a shortage of rental housing of up to 156,000, especially in Stockholm, Goteborg and Malmö[104]. In **Stockholm**, city-wide wait times for rental flats average six to eight years, and over twenty years for an apartment in the inner city. As of 2014, over 470 000 people were in the queue to obtain a first-hand rental contract for a municipal rental apartment. In addition, in the last 10 years, 35,000 rental units have been privatised and transferred to a tenant ownership model[105].

- In **Germany,** increasing demand leads to higher rents in metropolitan areas like Munich and Hamburg. However, population has been decreasing in other areas, leading to structural vacancy in the housing stock[106]. The population of **Berlin** is expected to grow by around 40,000 inhabitants by 2020[107].

- In **France**, the housing market has been experiencing a rebound since early 2015. Transaction numbers grew 15% in 2015. In mid-2016, cumulative 12-month totals were again up by about 15% and approached the high points of the 2004-2007

[100] Housing Europe. The State of Housing in the EU 2015. Available at: http://www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015, accessed 28/06/2017.
[101] Housing Europe. The State of Housing in the EU 2015. Available at: http://www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015, accessed 28/06/2017.
[102] Housing Europe. The State of Housing in the EU 2015. Available at: http://www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015, accessed 28/06/2017.
[103] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[104] Housing Europe. The State of Housing in the EU 2015. Available at: http://www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015, accessed 28/06/2017.
[105] Thoem, James, 2015, Belong Anywhere, Commodify Everywhere - A critical look into the state of private short-term rentals in Stockholm, Sweden. Sustainable Urban Planning and Design, School of Architecture and the Built Environment, Kungliga Tekniska Högskolan. Available at: http://www.diva-portal.org/smash/get/diva2:825261/FULLTEXT01.pdf, Accessed 28/06/2017.
[106] Housing Europe. The State of Housing in the EU 2015. Available at: http://www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015, accessed 28/06/2017.
[107] BPD, 2016, Germany, France, The Netherlands: Housing markets in perspective 2016. Available at: http://www.bpdeurope.com/media/107467/q540_bpd_dunefra-2016_engels-lr-web.pdf, accessed 28/06/2017.

cycle. Prices were on the rise, even if the trend was still modest[108]. New housing output is at around 400,000, which is approximately the pre-crisis level[109].

- In **Barcelona**, housing is 16% more expensive than in other areas in Spain. It is also put under further pressure by rapidly expanding short-term holiday rentals in the central areas. Between 2014 and 2015, the available stock of homes for tourist use (*viviendas de uso turístico*) increased by 36%, with the concentration in the inner city exceeding 10% of the total housing stock.

- In **Brussels**, increased net migration and a positive birth rate increased the city population since the mid-1990s. The population of Brussels increased by 225,000 inhabitants in only 20 years (on average 11,250 per year), reaching 1,175,000 at the beginning of 2015. During the same period, the number of households has only increased by 75,500 units (on average 3,800 per year)[110].

Table 4 presents the changes in long-term rental prices in the 11 cities under study, relying on Numbeo for data on the average rent price for a one-bedroom apartment in the city centre. While the case studies contain more detailed information about average rent prices, based on other statistical sources, this report relies on the same source in order to make data more comparable. The data show that between 2010 and 2016, London rents increased by almost 63%, while they fell by almost 28% in Athens over the same period. This points to potential affordability issues, especially among low-income households. In Amsterdam, the National Institute for Family Finance Information (2015) finds that families with below-average incomes find it difficult to live in Amsterdam, as the gap between rising rents and incomes increases[111].

Table 4: Evolution of average rent prices, in EUR[112]

City	Average rent (2011)	Average rent (2016)	% change
Amsterdam	1,212.5	1,285.4	+6.0%
Athens	346.67	267.52	-22.8%
Barcelona	723.89	741.94	+2.5%
Berlin	500	690.36	+38.1%
Brussels	750	760.12	+1.3%
Florence	812.5 (2012)	655.38	-19.3%
Lisbon	568.83	603.61	+6.1%
London	1,627.24	2,150.92	+32.2%
Paris	1,038.89	1,082.06	+4.2%
Prague	578.04	537.95	-6.9%
Stockholm	684.39	1,198.19	+75.1%

Sources: NUMBEO

[108] Crédit Agricole S.A., 2016, FRANCE Housing Market: Recent developments and outlook for 2016-2017. Available at: https://economic-research.credit-agricole.com/medias/Persp16_282_France_Realestate_20161026_EN.pdf, accessed 28/06/2017.
[109] BPD, 2016, Germany, France, The Netherlands: Housing markets in perspective 2016. Available at: http://www.bpdeurope.com/media/107467/q540_bpd_dunefra-2016_engels-lr-web.pdf, accessed 28/06/2017.
[110] DESSOUROUX Christian, BENSLIMAN Rachida, BERNARD Nicolas, DE LAET Sarah, DEMONTY François, MARISSAL Pierre, SURKYN Johan, BSI synopsis. Housing in Brussels: diagnosis and challenges, Brussels Studies, Numéro 99, June 6th 2016. Available at: http://brussels.revues.org/1353, accessed 28/06/2017.
[111] http://www.dutchnews.nl/news/archives/2015/02/amsterdam-housing-unaffordable-for-people-on-lower-incomes/
[112] The prices refer to the long-term rent for a one-bedroom apartment located in the city centre, retrieved from the website NUMBEO.com for all 11 cities.

The evolution of rent prices points to local imbalances in housing supply and demand, as detailed in the 11 case study reports. Local stakeholders typically associate the rising long-term rent prices with an increase in the short-term rental offer. This is particularly the case in more touristic neighbourhoods: Athens' Conventions and Visitors Bureau attributes the increase in long-term rental prices in central and touristic neighbourhoods to the increase in the number of homes rented out on collaborative short-term rental platforms. However, no quantitative evidence was found to support this view[113]. In any case, the trend would be contrary to the general trend noticeable in the city of decreasing rents (see also Table 4, which shows a drop in rental prices by 27.9% between 2010 and 2016).

In Barcelona, local authorities rely on quantitative data to prove the correlation between short-term rentals and long-term rent prices. In Barcelona, the Catalan Statistics Institute (2017) observed an increase of 11.3% in average rental prices between 2012 and 2016. The City Council attributes this increase to the growth in vacation rentals listings, which restrict the supply of residential dwellings. According to the study conducted by the Catalan Government, it would be up to four times more profitable to rent out a property on a short-term rental basis than on a long-term basis. The study assessed the neighbourhoods in Barcelona where most collaborative short-term rental listings are available and compares their growth in average long-term rent growth rate with those of other neighbourhoods or cities in Catalonia. The study concludes that long-term rent prices increased because of the availability and profitability of short-term rentals[114]. This increase drives residents towards more peripheral areas, where rents are cheaper[115].

In London, the IPPR (2016) also notes that the use of available accommodation for short-term rental can increase at the expense of long-term rentals, contributing to a shortage of homes and to higher rents. However, the report analyses the statistics surrounding the listing of entire properties on AirBnB, claiming that the proportion of entire properties is unusually low in London compared to other cities (23%, much lower than the figures presented in Figure 8 for other cities), and that the average time length that they are rented out (30 days/year) corresponds to average holiday periods of main tenants, during which they would not use the property. Given these facts, the report claims that it is unlikely that AirBnB entire listings would lead to upward pressures on long-term rents[116].

Box 3: Evidence of the impact of short-term rentals on rents and housing availability in the US and the EU

Several studies have sought to examine the relation between the availability of short-term rentals, rent prices and housing availability. This box briefly examines the most well-known results from both sides of the Atlantic, particularly focusing on AirBnB as a proxy for the short-term rental sector.

In North America, studies generally show that AirBnB tends to drive up housing prices and determines a part of the housing stock to be unavailable for long-term rentals. A 2016 study finds a direct correlation between the concentration of AirBnB listings in New York City and the median rental price. In some areas, the number of entire listings and rental prices are increasing at similar rates. In the top 20 AirBnB neighborhoods, average rent

[113] Interview with the Athens Convention and Visitors Bureau on 30/05/2017.
[114] Government of Catalonia, Viviendas de uso turistico. Available at: http://empresa.gencat.cat/es/treb_departament/treb_preguntes_i_respostes/emo_turisme/emo_habitatges/, accessed on 07/06/2017.
[115] Barcelona City Council (2016). Impacte del lloguer vacacional en el mercat de lloguer residencial de Barcelona. Available at: http://ajuntament.barcelona.cat/turisme/sites/default/files/160921_informe_impacte_lloguer_vacacional.pdf
[116] IPPR, op. cit., p. 8.

increased by 17% between 2011 and 2015, compared to a city-wide average of 10%[117]. AirBnB disagreed with the findings, stating that it was a "misleading" study funded by the hotel industry[118]. The tendency of these findings was confirmed, however, also shown in a 2015 research by TheRealDeal.com (a real estate news outlet). The report finds that rental prices in popular New York City neighborhoods like Williamsburg and Greenpoint are elevated, but not as much: 1.2% and 2.3% more costly in rents because of the fact that 0.6% and 1.5%, respectively, of their rental stock is commercial (i.e. short-term). The report finds that short-term rentals lead to rent prices going up by USD 69/month per flat in some districts of the city[119].

In New Orleans, Levendis and Dicle (2016) find no statistically-significant effect of AirBnB on rental prices in any zip codes[120]. Barron, Kung and Proserpio (2017) look at the whole US territory by adopting a methodology similar to that of Levendis and Dicle (2016): they regress house prices in each zip code, rental rates and the number of AirBnB listings. They find that a 10% increase in the number of AirBnB listings leads to a 0.39% increase in rents, and a 0.64% increase in house prices[121]. Similar researches show an impact on rental prices in Los Angeles[122] and Boston[123]. In Victoria and Vancouver (Canada), AirDNA's CEO states that the impact of AirBnB on rental prices and hotel prices is minimal, based on his company's data[124].

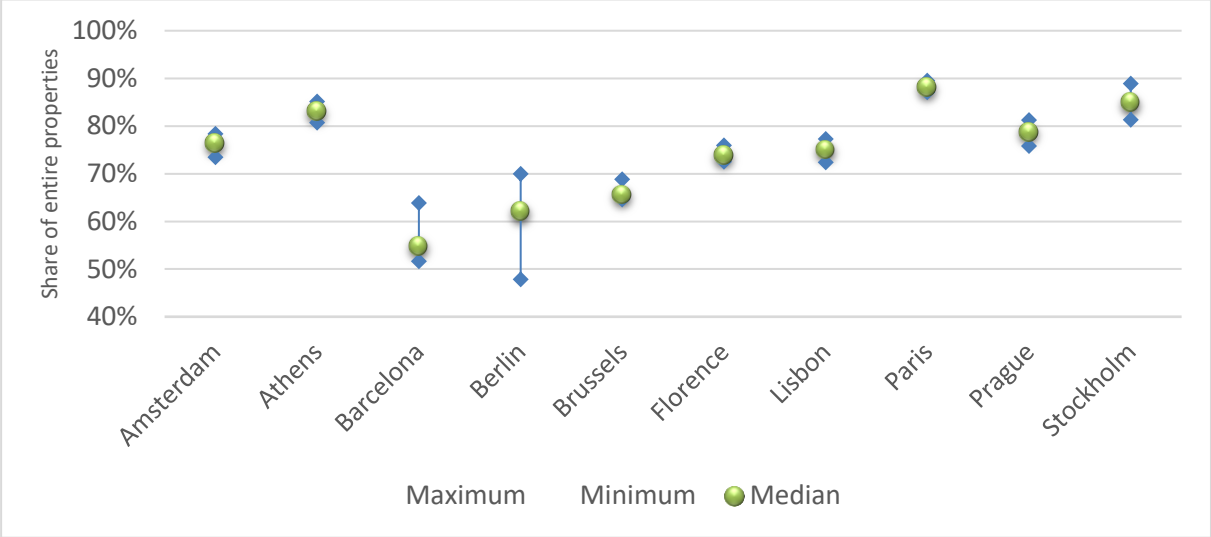
In the EU, stakeholders generally agree that the impact of short-term rentals on rent prices exists, but they consider that it is not as large as some sources predict. In Amsterdam, ING (a bank) finds that homeowners who rent out their Amsterdam property up to 60 days a year can afford mortgages of up to EUR 100,000 more, and therefore can drive up house prices in touristic districts[125]. The city council disagrees with the rigor of the ING and other studies, but it does agree that there is a likely effect of short-term rentals on the city's housing prices, a view also shared by a professor at TU Delft[126]. The Irish news outlet, The Independent, states that, while AirBnB has had an impact on rents in Ireland, it is nowhere near as dramatic as some sources say[127]. In London, an AirBnB co-funded study conducted by the IPPR (2016) finds that the use of residential dwellings for short-term rental purposes is likely to lead to a shortage of homes and to higher rents[128].

---

[117] BJH Advisors LLC (2016). Short Changing New York City. The impact of AirBnB on New York City's housing market. Available at: http://www.sharebetter.org/wp-content/uploads/2016/06/NYCHousingReport_Final.pdf
[118] https://skift.com/2016/06/28/measuring-the-impact-of-airbnb-rentals-on-new-york-citys-housing-crisis/
[119] https://therealdeal.com/2015/10/14/how-much-does-airbnb-impact-nyc-rents/
[120] Levandis, J., Dicle, M. (2016). The Neighbourhood Impact of AirBnB on New Orleans. Research by the Numbers. Available at: https://www.airbnbaction.com/wp-content/uploads/2016/10/new-orleans-rental-study-2016-2.pdf
[121] Barron, K., Kung, E., Proserpio, D. (2017). The Sharing Economy and Housing Affordability: Evidence from AirBnB. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3006832
[122] Lee, D. (2016). How AirBnB Short-Term Rentals Exacerbate Los Angeles' Affordable Housing Crisis: Analysis and Policy Recommendations. Harvard Law and Policy Review, vol 10(24). Available at: http://blogs.ubc.ca/canadianliteratureparkinson/files/2016/06/How-Airbnb-Short-term-rentals-disrupted.pdf
[123] Merante, M., Horn, K. (2016). Is Home Sharing Driving up Rents? Evidence From AirBnB in Boston. Department of Economics, University of Massachusetts, Boston. Available at: http://repec.umb.edu/RePEc/files/2016_03.pdf
[124] http://www.cbc.ca/news/canada/british-columbia/airbnb-victoria-vancouver-rental-vacancy-hotels-1.3886623
[125] https://www.ing.nl/nieuws/nieuws_en_persberichten/2016/04/airbnb_heeft_flink_opwaarts_effect_op_amsterdamse_huizenprijzen.html
[126] https://www.theguardian.com/cities/2016/oct/06/the-airbnb-effect-amsterdam-fairbnb-property-prices-communities
[127] http://www.independent.ie/business/personal-finance/property-mortgages/no-doubt-that-airbnb-impacts-on-rents-but-its-not-all-bad-35757306.html
[128] The Institute for Public Policy Research (IPPR), 2016. Homesharing and London's housing market

Broader claims on the impact of short-term rentals on long-term rents (and consequently on housing availability) could also be explained by looking at how many entire residences are listed on such collaborative short-term rental platforms. Using AirBnB as a proxy, Figure 8 illustrates the median share of entire listings out of all AirBnB listings in ten of the 11 cities under study[129]. The figure also indicates the fluctuation range within which the median percentage oscillated over the studied period.

Figure 8: Variation in share of entire properties out of total AirBnB listings between November 2014 and April 2017[130]



Source: AirDNA

Figure 8 presents stark differences in the percentage of entire properties out of all AirBnB listings among the ten cities for which data is available. Barcelona (55%) and Berlin (62%) have the lowest rates, while Paris (88%), Stockholm (85%), Athens (83%) and Amsterdam (76%) have the highest values. Note, however, that in all cities over half of all AirBnB listings were made up of entire properties. The findings are similar to those presented in section 2.1 (see Table 3), which shows that entire listings across all international and local collaborative short-term rental platforms considered in this study account for 80.9% of all listings.

The findings in Figure 8 cannot be meaningfully correlated to those in Table 4: the data show no indication that cities where AirBnB entire property listings are more prevalent also tend to display the largest increases in rental prices. Nevertheless, it is important to note the different timeframes used between the indicators: while Table 4 observes rent fluctuations between 2010-12 and 2016-17, Figure 8 only considers the period November 2014 and April 2017 for most cities.

One possible explication for the differences in the share of entire property listings could be the different regulatory framework imposed: while Barcelona and Berlin have very strict local policies, thus banning entire property listings, Paris and Amsterdam expressly allow entire property rentals, while regulation in Athens passed in May 2017 is yet to have an

[129] Data for London was not available to the study team.
[130] The time series differ between cities, depending on data availability, as such: Amsterdam (Aug 2015 - Apr 2017), Athens (Aug 2015 - Apr 2017), Barcelona (Nov 2014 - Apr 2017), Berlin (Nov 2014 - Apr 2017), Brussels (Jul 2015 - Apr 2017), Florence (Aug 2015 - Apr 2017), Lisbon (Aug 2015 - Apr 2017), Paris (Nov 2014 - Apr 2017), Prague (Jun 2015 - Apr 2017), Stockholm (May 2015 - Apr 2017). Data for London is unavailable.

effect. Other local specificities, such as average income growth, unemployment rates or rates of housing ownership may also play an important role.

3.2 Overview of number of vacant properties

This sub-section considers the impact of short-term rentals on housing availability. By considering the trends in house construction and dwelling vacancy in the 11 cities under study, qualitative and quantitative input from the annexed case studies, along with EU-level reports are used to establish a correlation between short-term rentals and housing availability. The following research questions are targeted in this sub-section:

I. How many vacant properties are there in the cities under study?
II. How do collaborative short-term rentals affect housing availability in the cities under study?

Housing availability is primarily established as the difference between the rate of housing construction and the rate of local population increase: the more households there are, the more need there is for new housing to be built. Consequently, local authorities should keep pace with population fluctuations to ensure a balanced housing market. As shown in the case study reports, this is hardly the case in any of the 11 cities. Moreover, existing imbalances before 2008 were aggravated by the sluggish recovery of the construction sector post-crisis.

Table 5 presents the fluctuations in the rates of population and conventional dwellings change. Eurostat data is scarce for the number of dwellings, therefore some cities have a longer time span in the table than others, while some do not have one at all.

Table 5: Number of conventional dwellings

City	Earliest figure	Year	Latest figure	Year	% change	Population change
Amsterdam	391,181	2009	413,697	2014	**5.76%**	**+7.32%**
Athens	403,173	2009	427,825	2011	**6.11%**	**-17%**[131]
Barcelona	654,364	2009	675,780	2014	**3.27%**	**-1.18%**[132]
Berlin	1,894,564	2009	1,902,675	2015	**0.43%**	**+1.54%**
Brussels	548,981	2012	558,345	2014	**1.71%**	**+2.10%**
Lisbon	291,784	2009	323,422	2015	**10.84%**	**+6.13%**[133]
London	3,300,460	2010	3,454,500	2015	**4.67%**	**+7.55%**
Florence	-	-	165,829	2011	-	-
Paris	1,353,036	2009	1,358,884	2013	**0.43%**	**-0.18%**[134]
Prague	-	-	587,832	2011	-	-
Stockholm	439,416	2009	442,615	2010	**0.73%**	**+2.13%**[135]

Source: Eurostat (urb_clivcon, urb_cpop1)

The figures presented in Table 5 indicate that in five cities (Amsterdam, Berlin, Brussels, London and Stockholm), the rate of dwellings constructions has not kept pace with the rate of population increase. Nevertheless, even in cities which did keep pace, such as Paris,

[131] Refers to the city of Athens, while the greater area decreased in population by 12.27% over the same period.
[132] Refers to the city of Barcelona, while the greater area decreased in population by 1.18% between 2010-2014.
[133] Refers to the city of Lisbon, while the greater area increased in population by 2.89% over the same period.
[134] Refers to the city of Paris, while the greater area increased in population by 0.88% between 2011-2014.
[135] Over the period 2009-2015, the population of the greater Stockholm area increased by 11.09%.

Barcelona or Lisbon, sub-section 3.1 as well as the annexed case studies testify to a persistent housing shortage.

There can be many explanations for the discrepancies between data presented in Table 5 and real-life housing issues. In Paris, for instance, housing shortages were reported from as early as 2005[136] and 2008[137]. In 2010, the New York Times was blaming illegal short-term rentals for the city's housing crisis.[138] In Barcelona, while the housing supply changed considerably faster than population growth, the large share of vacant properties (see Table 6), along with a considerable increase in rent prices (see section 3.1) made a lot of existing properties unaffordable for the local population. In Athens, housing shortages are localised, being more prevalent in touristic areas, which have staggering numbers of vacant properties and increasing prices (see case study in annex).

Vacant dwellings constitute a significant obstacle to ensuring housing availability, as is the case in Athens, Amsterdam or Barcelona. Table 6 relies on Eurostat data to calculate the share of vacant dwellings in each city, while data from Table 3 is used to estimate what percentage of the vacant dwellings is represented by the number of short-term rental listings. Note that Eurostat data availability is very limited, and the number of listings can be exaggerated using the present calculations, in line with the limitations in section 2.1. In addition, the timeframes for both indicators are different in the table.

Considering the limitations, Table 6 shows that generally, the share of vacant dwellings decreased in four cities, while it increased in one. Trend data is not available to estimate the fluctuation in the remaining six cities. However, the table's latest figures show, for example, that the share of vacant dwellings in Barcelona, Lisbon or Prague is significant, even though no trend can be observed. On the right hand-side, the share of short-term rental properties as a percentage of vacant dwellings can be very high in some cities (impossibly high in Lisbon and Florence, due to data limitations), while limited in other like Athens.

Table 6: Percentage of vacant conventional dwellings out of total

% of vacant dwellings	Earliest figure	Year	Latest figure	Year	Trend
Amsterdam	N/A		10.05%	2008	-
Athens	28.66%	2007	30.85%	2011	**increase**
Barcelona	-		10.88%	2011	-
Berlin	8.3%	2008	5.84%	2010	**decrease**
Brussels	-	-	-	-	-
Lisbon	-		15.54%	2011	-
London	2.25%	2011	0.60%	2015	**decrease**
Florence	-		3.11%	2011	-
Paris	7.81%	2009	7.69%	2013	**decrease**
Prague	-		7.77%	2011	**decrease**
Stockholm	-		-		-

Source: Eurostat (urb_clivcon)

[136] Schofield, H. (2005). Paris fire highlights housing shortage. BBC. Available at: http://news.bbc.co.uk/1/hi/world/europe/4199320.stm

[137] Dymond, J. (2008). France's sordid housing crisis. BBC. Available at: http://news.bbc.co.uk/1/hi/programmes/crossing_continents/7290139.stm

[138] Rafferty, J. (2010). To Address Its Housing Shortage, Paris Cracks Down on Pied-à-Terre Rentals. New York Times. Available at: http://www.nytimes.com/2010/07/07/business/global/07rent.html

Input from the case studies attempts to correlate housing availability with the development of the short-term rentals sector in each city. Cities where stakeholders claim a correlation between the two but without presenting robust evidence include: Amsterdam, Barcelona, Brussels, (partly) Lisbon, London, Paris and (partly) Prague. On the other hand, stakeholders in Athens and Berlin do not associate housing shortages to collaborative accommodation listings.

Table 7: Overview of case study findings on potential correlations between housing availability and the development of the short-term rental sector

City	Does correlation exist?	How it is measured?	Where does it occur?
Amsterdam	Yes	Opinions of municipality representatives[139]. A study on the topic is ongoing at the time of drafting.	Especially in non-touristic neighbourhoods, facilitated by specialised rental agencies[140].
Athens	No	Opinion of a local stakeholder[141]. There are no available studies on this topic.	In both central and touristic areas, according to stakeholders interviewed.
Barcelona	Yes	Stakeholder opinions, and a 2016 study empirically showing the correlation[142].	Especially in non-touristic neighbourhoods, and in areas with high numbers of short-term rental listings.
Berlin	No	Stakeholder opinions, an AirBnB report showing that short-term rentals account for 0.6% of total housing stock[143], and Berlin Investment Bank report suggesting the number of illegal short-term rentals is expected to decrease[144].	No particular areas of impact identified.
Brussels	Yes	Stakeholder opinions, stating that the phenomenon is especially aggravated by the	No particular areas of impact identified.

[139] https://www.theguardian.com/cities/2016/oct/06/the-airbnb-effect-amsterdam-fairbnb-property-prices-communities
[140] Interview with the Amsterdam Municipality on 08/06/2017.
[141] Interview with the Athens Convention and Visitors Bureau on 30/05/2017.
[142] Barcelona City Council (2016). Impacte del lloguer vacacional en el mercat de lloguer residencial de Barcelona. Available at: http://ajuntament.barcelona.cat/turisme/sites/default/files/160921_informe_impacte_lloguer_vacacional.pdf
[143] Airbnb and the housing market in Berlin.Available at: https://www.airbnbaction.com/wp-content/uploads/2016/10/GEWOS-Study-Airbnb-and-the-Berlin-Housing-Market-2016_ENg.pdf accessed on 11/06/2017
[144] IBB Wohnungsmarktbericht 2016. Available at: https://www.ibb.de/media/dokumente/publikationen/berliner-wohnungsmarkt/wohnungsmarktbericht/ibb_wmb_tabellenband_2016.pdf accessed on 11/06/2017

City	Does correlation exist?	How it is measured?	Where does it occur?
		large number of unoccupied dwellings in the city[145].	
Florence	N/A	No available information.	No available information.
Lisbon	Yes	Stakeholder opinions[146].	Mainly central and touristic areas.
London	Yes	Stakeholder opinions[147], but also local studies[148]. The main problem, as with Brussels, is the under-occupancy of available dwellings.	Mostly in non-touristic areas.
Paris	Yes	Stakeholder opinions, pointing to a shift from long-term to short-term rental contracts for available rental properties[149, 150]	Particularly in peripheral neighbourhoods, as also shown by an AirBnB study[151].
Prague	Yes	Stakeholder opinions[152].	Mainly central and touristic areas.
Stockholm	N/A	No available information.	No available information.

While opinions diverge on the possible causal effect between short-term rentals and housing availability, the case study reports confirm previous findings - such effects depend on local specificities and not to macro-economic trends like dwelling construction rate or property vacancy rates. Correlations might be more established in some cities (see table above), while they are absent in others, allowing for a broad range of hypotheses as to why this is so.

3.3 Overview of impacts on traditional accommodation providers

While sections 3.1 and 3.2 focused primarily on possible effects that short-term rentals have on local housing prices and availability, this section explores the impact that the

[145] Interviews with a representative of the Economics and Employment department of the Brussels Capital Region conducted the 18/05/17 and with a representative of the Brussels Tourist Office conducted the 10/05/17.
[146] Peralta, H. C. (2017). Faltam casas para arrendamento em todo o país. Expresso 19/03/2017. Available at: http://expresso.sapo.pt/economia/2017-03-19-Faltam-casas-para-arrendamento-em-todo-o-pais-1. Last Accessed on 25/05/2017.
[147] The finding was confirmed by the stakeholders interviewed (London Councils and the British Hospitality Association).
[148] IPPR (2016).
[149] Interview with Syndicat National Des Hotels, Restaurants, Cafetiers Traiterurs on 05/05/2017.
[150] Interview with National Association of Property Owners on 17/04/2017.
[151] AirBnB Economic impact report, Ile-de-France, France,2017. Available at : https://france.AirBnBcitizen.com/economic-impact-reports/ile-de-france/. Accessed on 25/04/27
[152] Interviews with Prague City Tourism and the Office of the Government of the Czech Republic.

sector might have on traditional accommodation providers. For this reason, this sub-section addresses the following research questions:

I. How do collaborative short-term rentals affect traditional accommodation providers?
II. How do collaborative short-term rentals compare in price and availability to traditional accommodation offers?

The main statistical indicators highlighted to pinpoint this effect are **prices** and **occupancy rates**, which are complemented by literature findings and stakeholder opinions on broader types of competition, or even collaboration factors.

There are numerous reports, as well as stakeholder opinions, which suggest that traditional accommodation providers are directly competing with collaborative short-term rental platforms, rather than complementing each other. Zervas, Proserpio and Byers (2016) estimate that in Austin, Texas, in places where the Airbnb supply is highest, the causal impact on hotel revenue is in the 8-10% range; the impact is non-uniform, with lower-priced hotels and those hotels not catering to business travellers being the most affected[153]. OuiShare also confirmed this competitive rapport between the two industries, as an example in Barcelona where the hotel industry fears it is losing market share[154].

On the other hand, several reports point to the notion of complementarity – rather than competition – between collaborative short-term rentals and traditional accommodation providers. AirBnB (2016) shows that its listings in rural Ireland help attract visitors in areas where very few, if any, traditional accommodation providers operate[155]. In rural France, AirBnB (2017) noted that over 15% of towns with AirBnB listings do not have a hotel. At the same time, the number of French communes with AirBnB listings increased three-fold between 2014 and 2016, with over 70% of them having less than 2,000 inhabitants.[156] The short-term rental market offer can therefore complement or replace to some extent traditional accommodation offer in areas where the demand for tourism services is lower and the supply of traditional accommodation is low.

Outside of Paris, a study from Terra Nova (2017)[157] highlighted the positive impacts of AirBnB on remoted areas. Indeed, the development of the platform diversifies the accommodation offers and represents a new source of revenues for local businesses and guests. The study estimated an additional income of EUR 14 million since 2012 for AirBnB hosts in remote areas, where the traditional accommodation offer is low.[158]

In terms of **prices**, collaborative short-term rental platform listings tend to be cheaper than average hotel room prices, as evidenced in Table 8 . Taking AirBnB as a proxy for the industry, average prices in the 11 cities under study were 3% to 36% cheaper than hotels. The highest differences are recorded in Athens (36%), Brussels (29%), Lisbon (28%) or Paris (28%).

[153] Zervas, G., Proserpio, D., Byers, J. (2016). The rise of the sharing economy: estimating the impact of AirBnB on the hotel industry. Available at: http://people.bu.edu/zg/publications/airbnb.pdf
[154] Interview with OuiShare on 27/04/2017.
[155] https://www.airbnbaction.com/wp-content/uploads/2016/11/RuralIrelandMiniReport1103.pdf

[157] Terra Nova, 2017. Que peut le numérique pour les territoires isolés? Available at : http://tnova.fr/rapports/que-peut-le-numerique-pour-les-territoires-isoles. Accessed on: 26/04/17.
[158] According to the study, only 17.5% of villages in remote areas have an hotel, and 30% have some kind of traditional accommodation offer (including hotels, campings and other touristic residence).

Table 8: Comparison between hotel rooms and AirBnB listings in average price/listing

City	Average price (2016) - EUR			% change
	Hotel[159]	**AirBnB**[160]	**Difference**	
Amsterdam	162	157	5	3.1%
Athens	94	60	34	36.2%
Barcelona	142	126	16	11.3%
Berlin	101	85	16	15.8%
Brussels	110	78	32	29.1%
Florence	126	104	22	17.5%
Lisbon	106	76	30	28.3%
London	182	108[161]	74	40.7%
Paris	151	109	42	27.8%
Prague	79	73	6	7.6%
Stockholm	165	127	38	23%

Source: AirDNA for AirBnB-related statistics. Other sources are indicated in footnotes.

Demary and Engels (2016) attribute the lower prices to efficiency gains through technological and process advantages that collaborative platforms have over their brick-and-mortar counterparts. For instance, these relate to the much lower capital investment and lower labour operating input for collaborative economy. In addition, collaborative platforms benefit from reduced transaction costs, achieved through an increased allocative efficiency, and therefore from a higher allocative efficiency in matching providers and consumers because of a reduced level of information asymmetry[162].

Despite price differences, the case studies reports highlighted different trends in rate fluctuations. For instance, between 2015 and 2017, AirBnB listings in Barcelona and Lisbon constantly reviewed their prices upwards, while the opposite is true for Brussels or Paris. The trends, presented in Figure 9, could indicate market adaptations to fluctuations, or possible results of regulatory measures.

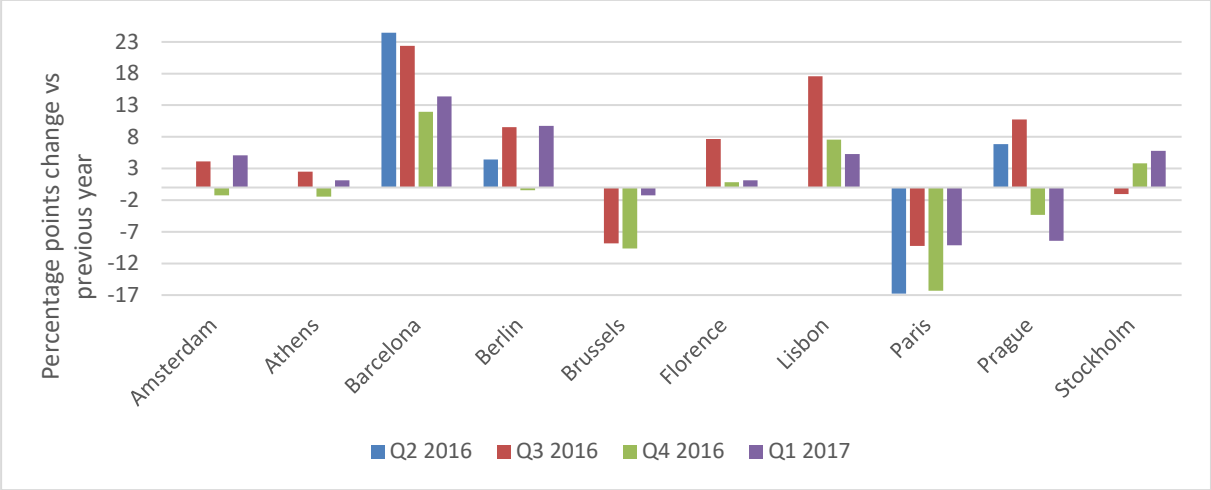
[159] Data for hotels retrieved from Trivago for a standard double room in an average hotel. Retrieved from: http://ie1.trivago.com/contentimages/press/tHPI_villes_deurope_Dec_2016_VF.pdf

[160] Average daily rates refer to average yearly prices for entire properties listed on AirBnB in 2016 in each of the eleven cities.

[161] Information retrieved from InsideAirBnB for an average price for a London listing on AirBnB as at 17.08.2017. The price of GBP 98 was converted to EUR using the daily exchange rate of GBP 1 = EUR 1.1. Available at: http://insideairbnb.com/london/

[162] Demary, V., Engels, B. (2016). Collaborative Business Models and Efficiency. Potential Efficiency Gains in the European Union. Impulse Paper No 7. Cologne Institute for Economic Research, on behalf of the European Commission.

Figure 9: Percentage point change in quarterly average daily rates for AirBnB listings[163]



Source: AirDNA

Collaborative short-term rental platforms are not the only actors adjusting their prices according to local market conditions – evidence from the case studies suggest that hotel prices in some cities also experienced large fluctuations. In Athens, according to the Hellenic Chamber of Hotels, average hotel prices for a room dropped from EUR 107 in 2015 to EUR 94 in 2016 due to a decrease in guests. This trend comes despite the overall increase in the number of tourists in the city as a whole[164].

Evidence from case studies suggests that, despite price competition, traditional accommodation operators were not negatively impacted by the collaborative accommodation offer. In Amsterdam, for example, the municipality shows evidence of increased price competition between hotels and private providers, but that overall both types of actors benefit from the increasing tourist flow in the city[165]. In Stockholm, where no tourist tax is in place, the local authority sees no significant changes caused by collaborative short-term rental platforms to traditional operators. Without a tourist tax, hotels do not feel threatened by private landlords who would be able to rent without a tax the hotels themselves have to pay.

In academic literature, Coyle and Yeung (2016)[166] assess the development and impact of AirBnB listings in 14 EU cities. The authors find that AirBnB activities may not be as harmful as presumed to the hotel industry. The study attributes this partly to the different target groups for the two services: while AirBnB targets budget tourists, this allows hotels to charge a higher price to other travelers, whose demand is less price-elastic. While average daily revenues might increase, occupancy rates may drop, therefore total revenues, estimated in the model to be positive, may be ambiguous in real life. Overall, the study highlights the importance of local market conditions, especially from a regulatory point of view, which are crucial in determining the hotels-AirBnB dynamics. To complement their

[163] Data for London was not available to the study team.
[164] Trivago (2017). Hotel Price Index. Available at: https://www.statista.com/statistics/614099/overnight-accommodation-costs-athens-city/.
[165] http://www.ois.amsterdam.nl/pdf/2017_fact%20sheet%20tourism.pdf
[166] Coyle, D., Yeung, T. (2016). Understanding AirBnB in Fourteen European cities. Jean-Jacques Laffont Digital Chair, Toulouse School of Economics.

research, the 11 case study reports closely look at local conditions, highlighting the impact they have on traditional providers, businesses and the community as a whole.

In terms of **occupancy rates**, all case studies with the exception of Florence show a lower occupancy rate for AirBnB listings compared to hotels. Also considering the number of users with multiple listings, as well as the income earned from such activities, the case studies conclude that AirBnB providers overwhelmingly operate on an occasional basis, within the maximum national legal timeframes allowed. Occupancy rates, taken in this study from AirDNA, reflect the percentage of booked listing nights from the available listing nights. It is important to mention that most AirBnB listings, as also evidenced by InsideAirBnB, are only available for short durations. This is also imposed by regulations in cities like London (90-day limit), Amsterdam (60-day limit) or Paris (120-day limit). Therefore, AirBnB listings are available much less time per year than hotel rooms, and even within that timeframe, their occupancy rates tend to be lower.

Table 9 lists the occupancy rates observed in hotels and AirBnB listings in 2016. High differences are observed in Athens, Amsterdam, Prague or Barcelona.

Table 9: Comparison between AirBnB and hotels in terms of occupancy rates

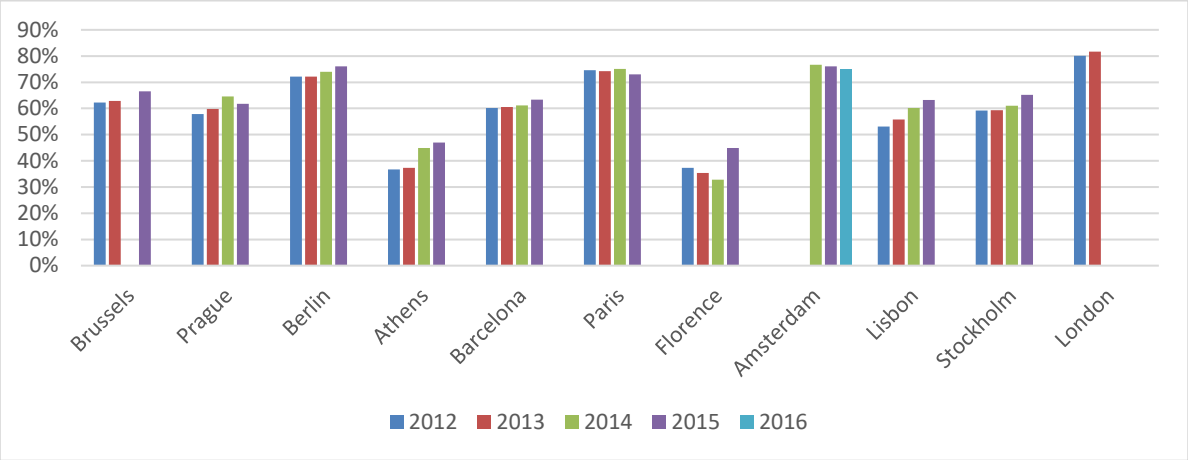
City	Occupancy rate (2016)		
	Hotel[167]	**AirBnB[168]**	**Difference (%)**
Amsterdam	82.4%	60%	22.4
Athens	76.2%	53%	23.2
Barcelona	80.7%	59%	21.7
Berlin	78%	61%	17
Brussels	60.9%	51%	9.9
Florence	45%[169]	54%	-9
Lisbon	77%[170]	59%	14
London	84.3%	???	-
Paris	69.1%	57%	12.1
Prague	77.3%	55%	22.3
Stockholm	72%[171]	58%	14

Source: AirDNA for the AirBnB statistics. Other sources are in footnotes.

Occupancy rates, as prices, tend to fluctuate according to seasonal trends, a common feature of the hospitality sector. While the figures presented in Table 9 refer to yearly averages, occupancy rates can differ substantially within the same years, as well as across a longer time period. Figure 10 displays yearly trends between 2012 and 2016 in net hotel occupancy rates in the 11 cities under study. While in Brussels, Berlin, Athens, Barcelona, Lisbon, Stockholm and London occupancy rates increased over time, mixed trends exist in Prague and Florence, while a slight decreasing trend exists in Amsterdam.

[167] Information retrieved from the Brussels Tourism Office (https://visit.brussels/binaries/content/assets/pdf/baro_hotel_11_2016_fr_extr.pdf), unless otherwise indicated, and refers to the occupancy rate of all available rooms in the hotels assessed in each city by MkG Hospitality, on behalf of the Brussels Tourism Office. The occupancy rate refers to the first 11 months of 2016.
[168] The percentages were retrieved from data purchased from AirDNA, and refer to the occupancy rate of entire listings available on AirBnB in each of the target cities for the year 2016. Occupancy rate, as defined at the start of this report, refers to the percentage of nights booked out of the total nights available for each property.
[169] The data refers to the region of Tuscany, for the year 2015. Retrieved from Eurostat (tour_occ_anor2)
[170] Information retrieved from https://www.publituris.pt/2017/03/16/hoteis-fecharam-2016-68-ocupacao/.
[171] The figure refers to the year 2015. Data retrieved from: http://www.investstockholm.com/globalassets/2.-understartsidor-investment-opportunities/7.-hospitality/stockholm-hotel-report---short-version.pdf

Figure 10: Net occupancy rate of hotel bedrooms, at NUTS 2-level

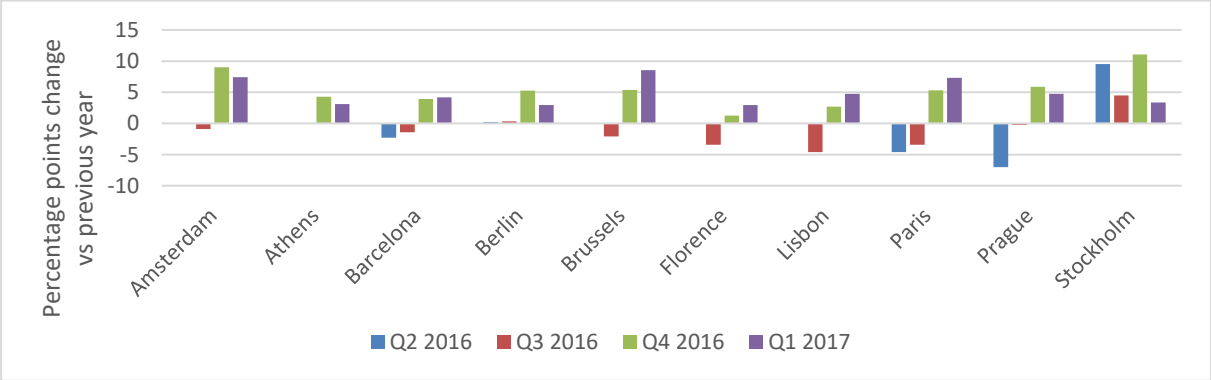


Source: Eurostat (tour_occ_anor2)

When looking at occupancy rates for the short-term rental sector as a whole, data for AirBnB listings was taken as a proxy, given its more prevalent availability compared to that of other collaborative short-term rental platforms. Nevertheless, using AirDNA, data could only be retrieved for the period November 2014 – April 2017 for most cities.

The findings presented in Figure 11 compare year-on-year quarterly trends in AirBnB occupancy rates for the 11 cities under study. The data show that, in general, occupancy rates during summer (quarters two and three) tend to be lower in 2016 compared to the same period in 2015. However, winter occupancy rates (quarters one and four) are considerably higher in 2016/2017 than in the previous year. On the one hand, seasonality plays a role in determining these trends, but a role is also played by a constant increase in collaborative short-term rental platform users over the years. Cities with less occupancy rate variations include Barcelona, Berlin and Florence, while large shifts are seen in Amsterdam, Brussels, Prague and Stockholm.

Figure 11: Percentage point change in quarterly AirBnB occupancy rate[172]



Source: AirDNA

Input from the case studies indicates that variable occupancy rates in the short-term rental sector are typical, and that they generally do not threat traditional short-term

[172] Data for London was not available to the study team.

accommodation establishments. In Athens, the Hellenic Chamber of Hotels noted that collaborative short-term rental platform occupancy rates tend to be seasonal, since it is common among the city's residents to own a secondary home in the city[173]. In both Amsterdam[174] and Prague[175], local stakeholders highlight that lower occupancy rates for collaborative short-term rental platform listings underscore the fact that they do not impose undue competition to traditional providers.

Looking forward, stakeholders suggest that traditional accommodation operators adapt to the changing trends and attempt to diversify by working with collaborative short-term rental platforms. This, however, is only valid for larger operators, which see the collaborative economy as an emerging market, while it is not the case for SMEs, according to HOTREC[176].

The EHHA notes that both traditional and collaborative actors are increasingly operating on the same collaborative short-term rental platforms, or through the same travel agencies[177]. For instance, Booking.com or AirBnB advertise both P2P and B2C listings, and this is true for a number of other collaborative short-term rental platforms.

Another trend observed between the hotel and collaborative economy markets is the tendency for operators on both sides to converge towards the same business model through diversification. This trend was highlighted by GuestToGuest, HomeAway and the EHHA[178]. For example, OneFineStay, a high-end rival to AirBnB providing luxury homes for short-term rental, is financed by the Hyatt hotel group[179]. Another example is the investment by Wyndham Worldwide hotel group into the collaborative home exchange platform LoveHomeSwap[180].

[173] Interview with the Hellenic Chamber of Hotels on 22/05/2017.
[174] Interview with Amsterdam municipality representative 1: 08/05/2017.
[175] Interviews with Prague City Tourism and the Office of the Government of the Czech Republic.
[176] Interview with HOTREC on 03/05/2017.
[177] Interview with the EHHA on 26/04/2017.
[178] Interviews with GuestToGuest (18/04/2017), HomeAway (20/06/2017) and the EHHA (26/04/2017).
[179] http://www.wsj.com/articles/hyatt-invests-in-home-rentals-firm-1432232861
[180] http://www.ft.com/intl/cms/s/0/27bfc262-1b4c-11e5-8201-cbdb03d71480.html#axzz3eRooRSPd

4 Income and other tourism indicators

This section reviews the potential impacts that short-term rentals might have on peer providers[181] (section 4.1) and on tourists themselves (section 0). The macro-economic and sector-specific trends identified thus far are acknowledged in this section and contribute to explaining the trends presented here. Therefore, the main research questions addressed in this section are:

I. How do collaborative short-term rentals affect peer providers on platforms?
II. What are the attitudes of tourists towards collaborative short-term rentals?

The information presented in this section relies on studies prepared by collaborative short-term rental platforms or associations representing them, on platform and sector-specific statistical data, as well as on stakeholder input retrieved from the 11 case study reports. Given that most of the quantitative input relies on studies conducted by collaborative short-term rental platforms, or on statistics targeting AirBnB in particular, Table 10 presents an overview of the cities in which information pertaining to income and tourism indicators was found, along with the sources.

Table 10: Collaborative short-term rental platform-specific information retrieved through desk research

City	AirBnB-specific			Trends from other collaborative platforms		
	AirBnB	AirDNA	Inside AirBnB	Home Away	Home Exchange	EHHA
Amsterdam	✓	✓	✓			
Athens		✓	✓			
Barcelona	✓	✓	✓	✓		✓
Berlin	✓	✓	✓	✓		
Brussels	✓	✓	✓			
Florence		✓				
Lisbon	✓	✓				
London	✓	✓	✓	✓		✓
Paris	✓	✓	✓	✓		
Prague	✓	✓				
Stockholm		✓				
Country-specific	✓			✓	✓	✓
Broader EU	✓			✓	✓	✓

4.1 Income indicators

This section reviews the potential benefits accrued to peer providers as a result of their participation in the short-term rentals sector. Due to data availability, the analysis will mainly focus on peer providers on AirBnB and take them as a proxy representing the industry as a whole. However, if available, data from other collaborative platforms is used as well. The research question addressed here is, therefore:

[181] Please note that data does not always differentiate between "peer" and "professional" activity, e.g. for AirBnB figures. In this case, provider figures include peers and professionals.

I. How do collaborative short-term rentals affect peer providers on platforms?

Table 11 presents an overview of the average and median monthly revenues on AirBnB per provider in each of the 11 cities under study, as well as at EU-level. Data was retrieved from AirBnB economic impact reports (median), as well as from the website InsideAirBnB (average), which operates independently from the collaborative short-term rental platform[182].

Table 11: Average and median monthly revenue on AirBnB per provider (EUR)

City	Average and median monthly revenue on AirBnB (EUR)	
	InsideAirBnB (average)	AirBnB report (median)
Amsterdam	982	316.7[183]
Athens	382	-
Barcelona	582	442[184]
Berlin	471	210[185]
Brussels	412	191.6[186]
Florence	-	525[187]
Lisbon	-	530[188]
London	753	400[189]
Paris	668	191[190]
Prague	-	326[191]
Stockholm	6,165	-
EU-level	-	192

Source: InsideAirBnB, AirBnB economic reports

As shown in Table 11 AirBnB median estimates tend to be much lower, except for Athens, where the collaborative short-term rental platform's estimate is higher than

[182] While data on the average revenue per listing is also available through AirDNA, even on a monthly basis, it is not a reliable indicator in this case, since oftentimes providers have more than one listing. The InsideAirBnB estimate considers the average number of listings per city, rather than assuming (as the AirDNA revenue per listing does) that an average provider has only one listing.

[183] AirBnB (2016). Economic Impact Report Amsterdam. Available at: https://amsterdam.airbnbcitizen.com/economic-impact-reports/sharing-data-on-the-airbnb-community-in-amsterdam/

[184] AirBnB, 2017, Overview of the AirBnB Community in Barcelona and Catalonia.

[185] https://www.airbnb.co.uk/berlin-economic-impact

[186] AirBnB, 2015. Overview of the AirBnB Community in Belgium available at: https://www.AirBnBaction.com/wp-content/uploads/2015/11/Belgium-V3.pdf. Accessed on 29/05/17.

[187] AirBnB. Overview of the AirBnB Community in Italy. Available at: https://www.AirBnBcitizen.com/wp-content/uploads/2016/05/overview_of_the_AirBnB_community_in_italy.pdf

[188] The AirBnB overview of Lisbon estimates the monthly earnings of a typical AirBnB host to be EUR 530, therefore EUR 6,360 per year. Source: AirBnB, (2016). Overview of the AirBnB Community in Lisbon & Portugal. Available at: https://2sqy5r1jf93u30kwzc1smfqt-wpengine.netdna-ssl.com/wp-content/uploads/2016/06/Portugal_EIS_English_20160627b.pdf. Last Accessed on 24/05/2017.

[189] Average earnings are the median value of total income earned by host during the one-year study period. Source: AirBnB, "Overview of the AirBnB Community in London". Available at: https://AirBnB.app.box.com/s/0k73ecqlfzi9u1c7fccheu45iit6dcnz/1/5606850377/45517799029/1, accessed on 02/03/2017.

[190] AirBnB Economic impact report, Ile-de-France, France,2017. Available at : https://france.AirBnBcitizen.com/economic-impact-reports/ile-de-france/. Accessed on 25/04/27

[191] Converted with the EUR-CZK exchange rate as of on 31st December 2015. Available at: https://sdw.ecb.europa.eu/curConverter.do. Source: AirBnB Citizen, (2016). Overview of the Airbnb Community in Prague. Available at: https://www.airbnbcitizen.com/data/. Last Accessed on 18/6/2017.

InsideAirBnB's[192]. Economically, the median value in this case is always lower than the average, and the extent to which they differ points to the level of discrepancy in the population: where the median is much lower than the average, there are very few providers earning vastly more than all other providers, raising the average income, but lowering the median one.

As the case study reports attest, based oftentimes on AirBnB impact reports, the monthly income gained from AirBnB activities in each city are usually a minor part of their monthly revenues. Moreover, such income is often seasonal, as in cities like Amsterdam, Paris or London there is a limit to the amount of days per year that peer providers can rent out their property. Nevertheless, such additional income was deemed significant in the case studies for Lisbon and Athens, given that the amount gained is equal to or higher than average long-term rents (see section 3.1).

According to AirBnB, the income generally goes to lower-income households, which use it to **make ends meet** (31% of revenues in Amsterdam[193], 33% in Berlin[194], 44% in Brussels[195], 43% in Lisbon[196], 47% in London[197]), to **avoid eviction or foreclosure** (3% of revenues in Amsterdam, 6% in Prague[198]), on **rent** (35% of revenues in Athens, 53% in London), on **upkeeping their property** (24% of revenues in Athens, 44% in Brussels, 26% in Lisbon, 45% in London, 42% in Paris). Other uses of the additional income include extra spending allowance, vacation or savings.

In comparison to hotels, the daily average revenue that peer providers on AirBnB earn per listing are lower. This is because, as shown in earlier sections a) prices are lower for such listings, b) most peer providers use AirBnB on an occasional basis and c) in some cities there is a yearly limit on how many days hosts can rent out their property. Differences in average daily revenues between AirBnB listings and hotel rooms range from 13.5% in Amsterdam to 26% in Prague and Barcelona as shown in Table 12.

Table 12: Comparison of revenue per room/listing between AirBnB and hotels

City	Revenue[199] per room per night (2016) - EUR		
	Hotel	AirBnB	Difference
Amsterdam	108.5[200]	95	13.5
Athens		32	-

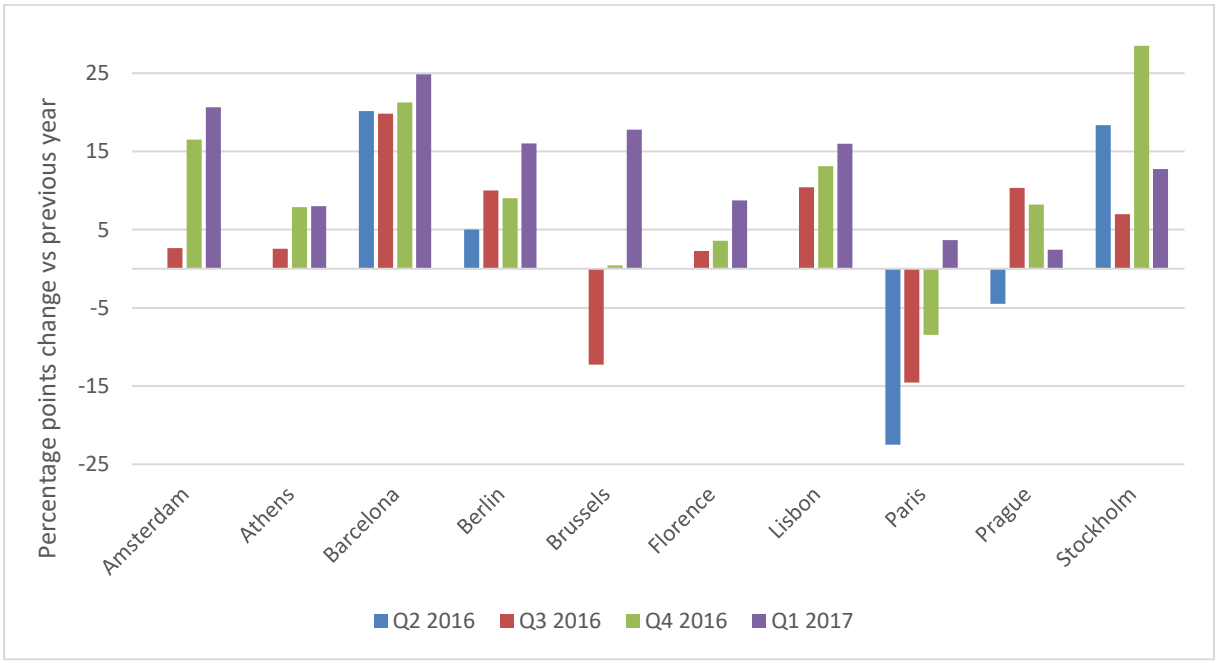
[192] For Athens, although there is an AirBnB report (http://blog.atairbnb.com/economic-impacts-in-athens/), it does not indicate typical earnings for hosts. For Stockholm there is no such report.
[193] AirBnB (2016). Economic Impact Report Amsterdam. Available at: https://amsterdam.airbnbcitizen.com/economic-impact-reports/sharing-data-on-the-airbnb-community-in-amsterdam/
[194] https://www.airbnb.co.uk/berlin-economic-impact
[195] AirBnB, 2015. Overview of the AirBnB Community in Belgium available at: https://www.AirBnBaction.com/wp-content/uploads/2015/11/Belgium-V3.pdf. Accessed on 29/05/17.
[196] AirBnB, (2016). Overview of the AirBnB Community in Lisbon & Portugal. Available at: https://2sqy5r1jf93u30kwzc1smfqt-wpengine.netdna-ssl.com/wp-content/uploads/2016/06/Portugal_EIS_English_20160627b.pdf. Last Accessed on 24/05/2017.
[197] https://www.airbnb.co.uk/press/news/new-study-airbnb-community-generates-502-million-in-economic-activity-in-the-uk
[198] AirBnB Citizen, (2016). Overview of the Airbnb Community in Prague. Available at: https://www.airbnbcitizen.com/data/. Last Accessed on 18/6/2017.
[199] Revenue per room refers to the amount of money earned by the economic operator (collaborative provider or hotel) for a typical room (for AirBnB, this refers to an entire property), averaged for the year 2016. The revenue is calculated as the average yearly income generated by a room/listing, taking into account its price and its occupancy.
[200] The data relates to the statistics for the first 11 months of 2016. Retrieved from: https://visit.brussels/binaries/content/assets/pdf/baro_hotel_11_2016_fr_extr.pdf

City	Revenue[199] per room per night (2016) - EUR		
	Hotel	AirBnB	Difference
Barcelona	101[200]	75	26
Berlin	75.1[200]	53	22.1
Brussels	65.1[200]	40	25.1
Florence		56	-
Lisbon		46	-
London	158.7[200]	N/A	-
Paris	87.6[200]	62	25.6
Prague	67[200]	41	26
Stockholm	85.38[201]	74	21.4

Source: AirDNA for the AirBnB data. Footnotes for the other sources.

Average revenue per room per year hide the seasonal (or daily) oscillation in income that is typical to the hospitality sector. Figure 12 shows the trend in revenue per listing on a quarterly basis, using data from AirDNA. The graph uses data between November 2014 and April 2017 for most cities, and compares the year-on-year percentage point change between average daily revenues per listings.

Figure 12: Percentage point change in quarterly revenue/listing for AirBnB listings[202]



Source: AirDNA

Figure 12 shows that, in most of the cities within this study's scope, average peer revenues tend to increase year-on-year. The highest growth is noted in Barcelona, Stockholm, Amsterdam and Lisbon. On the other hand, Paris is the only city in which quarterly average revenue/listing decrease in more than one quarter. Considering the fact that over 80% of Paris listings are entire properties, the change might reflect the adaptation of peer

[201] The figure refers to the year 2015. Data retrieved from: http://www.investstockholm.com/globalassets/2.-understartsidor-investment-opportunities/7.-hospitality/stockholm-hotel-report---short-version.pdf
[202] Data for London was not available to the study team.

providers to the 2014 regulation limiting them to renting out their property for up to 120 days per year. This conclusion, however, cannot be empirically confirmed.

4.2 Tourism indicators

This section assesses the extent to which consumers use collaborative economy services as opposed to their traditional counterparts. Past and future trends are also considered. The research question addressed here is the following:

I. What are the attitudes of tourists towards collaborative short-term rentals?

The qualitative evidence retrieved from case studies shows that collaborative short-term rental platforms tend to have a positive impact in increasing the number of incoming tourists overall, or in certain areas of the city. This is the case for Greece, where a third of tourists would not have come without the option of staying in an AirBnB[203] but no evidence was collected to support this view. Similar opinions were expressed in Amsterdam, London, Barcelona or Paris.

Data provided by AirBnB, as well as by other collaborative platforms and academic studies show that collaborative economy guests tend to stay longer in their rentals, and to travel more often. Quattrone et al (2016)[204] highlight this aspect for AirBnB travellers in London, citing the advantages offered to them by lower rental prices, among others. AirBnB guests in the EU tend to stay, on average, 4.1 nights per guest, while HomeAway users in Spain stay, on average, 5.74 days in their short-term rental[205]. By comparison, average stays in hotels tend to be lower: 2.5 nights in Barcelona (2016)[206], 2.1 nights in Paris (2016)[207], 1.9 nights in Amsterdam (2016)[208], or 4.6 nights in London (2014)[209]. The reasons for this include price, but also the intention to live like a local, to discover non-touristic areas or to meet more locals.[210] In fact, Coyle and Yeung (2016) find that AirBnB targets budget tourists, which allows hotels to charge a higher price to other travellers, whose demand is less price-elastic.[211]

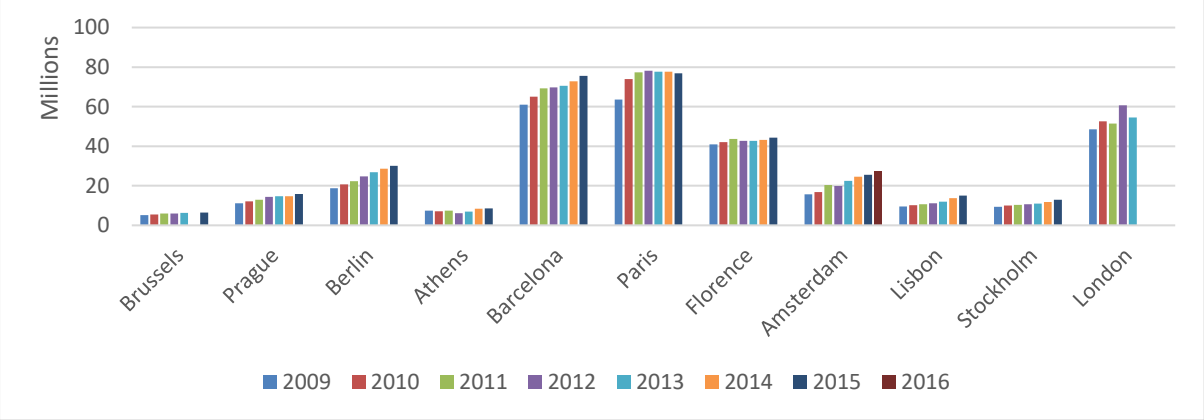
HomeExchange shows for instance that 42.1% of its peers exchange their homes for periods between two weeks and one month, considerably more than hotel guests. This is despite the fact that home exchangers, as opposed to short-term renters, are not looking for the cheapest option - 78.5% of them would have chosen alternative accommodation options in the high end of the money spectrum (e.g. hotels, resorts, inns, B&Bs, second homes).[212]

The attractiveness of the short-term rental or home exchange offer does not, however, deter travellers from booking hotels. As indicated in sub-section 2.2 or sub-section 3.3, the case studies and academic articles agree that the decline in hotel occupancy rates is

[203] Interview with a Hellenic Chamber of Hotels representative, 22/05/2017.
[204] Quattrone G. et al., 2016, "Who Benefits from the 'Sharing' Economy of AirBnB?", UCL Paper, p. 5.
[205] HomeAway (2016). Holiday Rental Barometer in Spain. Fevitur (2015). Study of holiday rentals, executive report.
[206] Gremi d'Hotels de Barcelona – Turisme de Barcelona. Source: data received from Barcelona City Council on 29/05/2017.
[207] Paris Visitors and Convention Bureau. Key figures of the tourism in Paris. Available at: http://fr.zone-secure.net/42102/324705/#page=1 Accessed on 25/04/27
[208] Municipality of Amsterdam (2017). Tourism in Amsterdam: Nights, Accommodations and Jobs in the tourism sector 2015-2016 and trend analysis. Available at: http://www.ois.amsterdam.nl/pdf/2017_fact%20sheet%20tourism.pdf
[209] Office for National Statistics, International Passenger Survey 2014.
[210] Coyle, D., Yeung, T. (2016). Understanding AirBnB in Fourteen European cities. Jean-Jacques Laffont Digital Chair, Toulouse School of Economics.
[211] Coyle, D., Yeung, T. (2016). Understanding AirBnB in Fourteen European cities. Jean-Jacques Laffont Digital Chair, Toulouse School of Economics.
[212] HomeExchange (2013). My House is Yours. A Worldwide Study on Home Exchangers' Profiles and Motivation. Available at: http://www.oits-isto.org/oits/files/resources/401.pdf

not as sharp as the industry presents. By way of example, Figure 13 shows the cumulative number of nights spent in all types of tourist accommodation facilities[213] between 2009 and 2016, based on Eurostat data for the 11 regions hosting the cities under study.

Figure 13: Total number of nights spent in tourist accommodation facilities, at NUTS 2-level



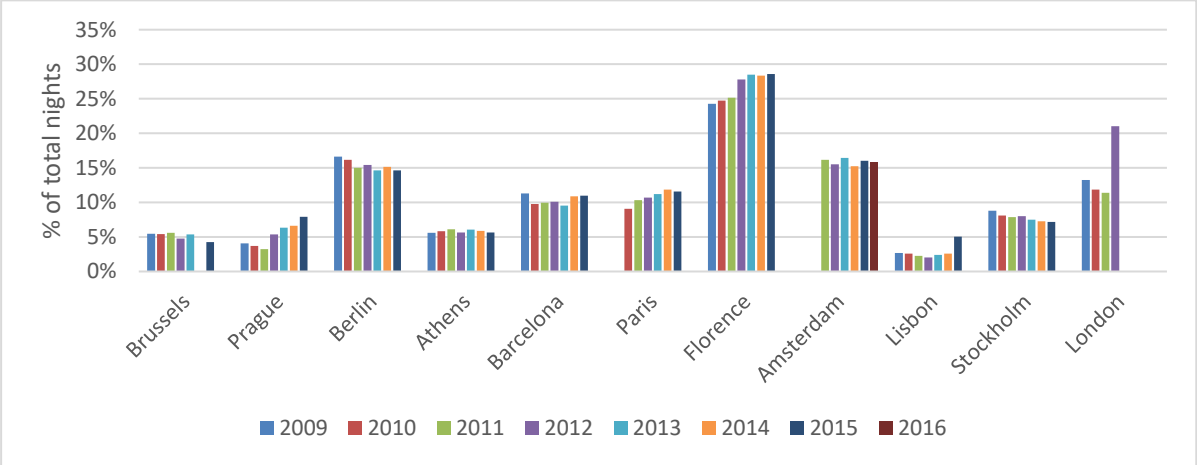
Source: Eurostat (tour_occ_nin2)

As Figure 13 indicates, the number of nights spent in all types of tourist accommodation facilities has increased in most cities under the study. When looking at the trend for hotels and similar accommodation Eurostat suggests that in the period 2009-2016 the number of nights spent increased for all cities, most in Berlin (+64%), and least in the Paris region (+6.5%).

On the other hand, the share attributed to holiday and other short-stay accommodation varies between regions as presented in Figure 14. There is a steady growth towards alternative short-term rental options in Paris, Florence and Prague, a decline is noted in Stockholm, while mixed trends are observed in other cities.

[213] The statistics reported in Figure 13 include (a) hotels and similar accommodation, (b) camping grounds, recreational vehicle parks and trailer parks, and (c) holiday and other short-stay accommodation.

Figure 14: Percentage of nights spent in holiday and short stay accommodation facilities[214] out of total nights spent in touristic accommodation facilities, at NUTS 2-level



Source: Eurostat (tour_occ_nin2)

To translate these trends into market shares, Table 13 estimates the percentage of tourist arrivals, as well as nights spent in short-term rentals out of those spent in hotels.

Table 13: Share of AirBnB arrivals and nights spent out of the traditional accommodation sector

City	Arrivals			Nights		
	Hotels	AirBnB	%	Hotels	AirBnB	%
Amsterdam	6.83m[215] (2015)	575,000[216] (2016)	8.42%	12.9m[217] (2015)	759,000[218] (2016)	5.88%
Athens	-	243,000[219]	-	-	-	-
Barcelona	8.3m[220] (2016)	1.3m[221] (2016)	15.66%	17.7m[222] (2016)	2.1m[223] (2016)	11.86%

[214] The term "holiday and short stay accommodation" is used by EUROSTAT to refer to the provision of accommodation, typically on a daily or weekly basis, principally for short stays by visitors, in self-contained space consisting of complete furnished rooms or areas for living/dining and sleeping, with cooking facilities or fully equipped kitchens. This may take the form of apartments or flats in small free-standing multi-storey buildings or clusters of buildings, or single storey bungalows, chalets, cottages and cabins. Very minimal complementary services, if any, are provided.

[215] http://www.ois.amsterdam.nl/pdf/2017_fact%20sheet%20tourism.pdf

[216] https://amsterdam.airbnbcitizen.com/economic-impact-reports/sharing-data-on-the-airbnb-community-in-amsterdam/

[217] http://www.ois.amsterdam.nl/pdf/2017_fact%20sheet%20tourism.pdf

[218] Figure obtained by multiply the total number of AirBnB guests by the average length of stay, then dividing by the average party size. Source: https://amsterdam.airbnbcitizen.com/economic-impact-reports/sharing-data-on-the-airbnb-community-in-amsterdam/

[219] Interview with AirBnB on 01/04/2017.

[220] Barcelona Tourism Activity Report 2015, p. 33.

[221] Number of guests staying in AirBnB in 2016. Source: AirBnB, 2017, Overview of the AirBnB Community in Barcelona and Catalonia.

[222] Barcelona Tourism Activity Report 2015, p. 33.

[223] According to AirBnB (2017). The number of nights spent was calculated by multiplying the number of arrivals (1.3 million) by the average length of stay (4.2 days), and then dividing by the number of tourists per AirBnB property (2.6).

City	Arrivals			Nights		
	Hotels	AirBnB	%	Hotels	AirBnB	%
Berlin	12.36m[224] (2015)	600,000[225] (2016)	4.85%	31.1m[226] (2016)	1.2m[227] (2016)	3.86%
Brussels	3.54m (2015)	176,500[228] (2015)	4.99%	6.79m (2015)	-	-
Florence	2.1m (2014)	364,000[229] (2016)	17.34%	5.2m[230] (2014)	448,000[231] (2016)	8.62%
Lisbon	5.76m[232] (2015)	433,000[233] (2016)	7.52%	11.6m (2016)	682,807[234] (2016)	5.89%
London	31.5m[235] (2015)	1.5m[236] (2016)	4.76%	50m[237] (2015)	3m[238] (2015)	6%
Paris	30.4m[239] (2016)	2.2m[240] (2016)	7.24%	61.5m[241] (2016)	3.92m[242] (2016)	6.37%

[224] Federal National Statistic office. https://www.destatis.de/DE/ZahlenFakten/WirtschaftsbereicheBinnenhandelGastgewerbeTourismus/Tourismus/Tourismus.html

[225] AirBnB, "Overview of the AirBnB Community in Berlin. Available at: https://24h9v83kisji99lh33ahl141-wpengine.netdna-ssl.com/wp-content/uploads/sites/59/2017/04/BerlinCommunityReport2016-2.pdf accessed on 11/06/2017.

[226] Incoming-Tourism Germany. Available at: https://www.germany.travel/media/pdf/dzt_marktforschung/GNTB-Incoming-Tourism-Germany-2014.pdf, accessed 26/06/2017

[227] Figure obtained by multiply the total number of AirBnB guests by the average length of stay, then dividing by the average party size. Source: https://24h9v83kisji99lh33ahl141-wpengine.netdna-ssl.com/wp-content/uploads/sites/59/2017/04/BerlinCommunityReport2016-2.pdf

[228] https://www.airbnbaction.com/wp-content/uploads/2015/11/Belgium-V3.pdf

[229] https://www.airbnbcitizen.com/wp-content/uploads/2016/05/overview_of_the_airbnb_community_in_italy.pdf

[230] Annuario Statistico del Comune di Firenze: http://annuario.comune.fi.it/dataset

[231] Figure obtained by multiply the total number of AirBnB guests by the average length of stay, then dividing by the average party size for Italian (not particularly for Florence) guests. https://www.airbnbcitizen.com/wp-content/uploads/2016/05/overview_of_the_airbnb_community_in_italy.pdf

[232] Number of international and domestic arrivals. Source: Instituto Nacional de Estatística (2016). Estatísticas de Turismo 2015. Edição 2016. Available at: https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOEStipo=ea&PUBLICACOEScolecao=107668&selTab=tab0&xlang=pt. Last Accessed on 5/6/2017.

[233] AirBnB Citizen, (2016). The Airbnb Community Contributes €268 Million in Economic Activity to Lisbon. Available at: https://www.airbnbcitizen.com/the-airbnb-community-contributes-e268-million-in-economic-activity-to-lisbon/. Last Accessed on 24/05/2017.

[234] Figure obtained by multiply the total number of AirBnB guests by the average length of stay, then dividing by the average party size. Source : AirBnB Citizen, (2016). The Airbnb Community Contributes €268 Million in Economic Activity to Lisbon. Available at: https://www.airbnbcitizen.com/the-airbnb-community-contributes-e268-million-in-economic-activity-to-lisbon/. Last Accessed on 24/05/2017.

[235] According to the Office for National Statistics, International Passenger Survey 2015.

[236] The Institute for Public Policy Research (IPPR), 2016. Homesharing and London's housing market, p. 6.

[237] According to the Office for National Statistics, International Passenger Survey 2015.

[238] According to AirBnB (2015). The number of nights spent was calculated by multiplying the number of arrivals (1.5 million) by the average length of stay (4.8 days), and then dividing by the number of tourists per AirBnB property (2.4).

[239] According to INSEE data for Ile-de-France. The number was calculated as the amount of arrivals in hotels (available at: https://www.bdm.insee.fr/bdm2/choixCriteres?codeGroupe=1610), plus the amount of arrivals in camping sites (available at: https://www.bdm.insee.fr/bdm2/choixCriteres?codeGroupe=1611)

[240] According to AirBnB (2017). La communauté Airbnb en région Île-de-France. Available at: https://2bho6c2hmy4330940m4div9h-wpengine.netdna-ssl.com/wp-content/uploads/sites/60/2017/03/France_IleDeFrance_20170228-V2.pdf.

[241] According to INSEE data for 2016 for Ile-de-France. Available at: https://www.insee.fr/fr/statistiques/2012672#tableau-TCRD_020_tab1_regions2016.

[242] According to AirBnB (2017). La communauté Airbnb en région Île-de-France. Available at: https://2bho6c2hmy4330940m4div9h-wpengine.netdna-ssl.com/wp-content/uploads/sites/60/2017/03/France_IleDeFrance_20170228-V2.pdf. The number of nights spent was calculated by multiplying the number of arrivals (2.2 million) by the average length of stay (4.1 days), and then dividing by the number of tourists per AirBnB property (2.3).

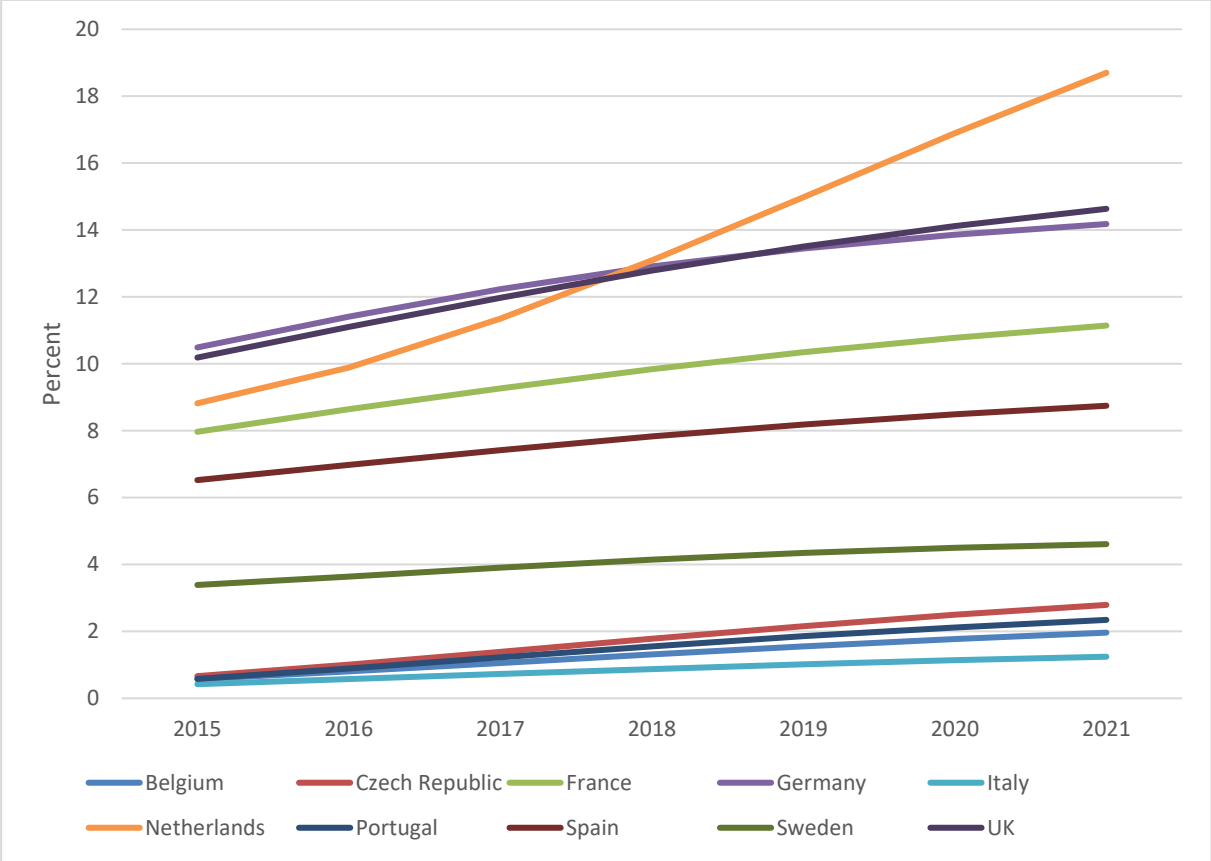
City	Arrivals			Nights		
	Hotels	AirBnB	%	Hotels	AirBnB	%
Prague	7.1m[243] (2016)	602,000[244] (2016)	8.48%	16.7m[245] (2016)	-	-
Stockholm	-	157,000[246] (2016)	-	13.4m[247] (2016)	-	-

Table 13 show that the cities under study differ substantially in their short-term rentals' market share of the hotel travel sector. The cities where the largest percentage of tourists choose short-term rentals as opposed to hotels are Florence (17.34%), Barcelona (15.66%) and Prague (8.48%). Most nights spent in short-term rentals, as opposed to hotels, are seen in Barcelona (11.86%), Florence (8.62%) and Paris (6.37%).

Although there is very limited data available to demonstrate trends, Statista has information available concerning the forecasted growth in market shares for the vacation rentals sector [248]. Figure 15 maps these trends at country-level for the 10 Member States hosting the cities under study[249].

[243] Český Statistický Úřad (2016). Návštěvnost hromadných ubytovacích zařízení hl. m. Prahy ve 4. čtvrtletí a od počátku roku 2016 (předběžné údaje). Available at: https://www.czso.cz/documents/11236/26929654/RI_20170208.pdf/c601678b-57b7-4a20-8b00-7f9cb5bba0a5?version=1.1. Last Accessed on 16/06/2017.
[244] Information provided by AirBnB on 13/04/2017.
[245] Český Statistický Úřad (2016). Návštěvnost hromadných ubytovacích zařízení hl. m. Prahy ve 4. čtvrtletí a od počátku roku 2016 (předběžné údaje). Available at: https://www.czso.cz/documents/11236/26929654/RI_20170208.pdf/c601678b-57b7-4a20-8b00-7f9cb5bba0a5?version=1.1. Last Accessed on 16/06/2017.
[246] Interview with AirBnB on 01/04/2017.
[247] The Swedish Agency for Economic and Regional Growth and Statistics Sweden: Nights spent. All hotels, holiday villages, hostels, camping sites, commercially arranged private cottages and apartments by region/county Year 2008 - 2016. Available at: http://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__NV__NV1701__NV1701A/NV1701T910Ar/?rxid=2438edf3-625a-42fe-a684-e50e020cef44. Accessed n 16/05/2017
[248] The "Vacation Rentals" segment comprises of private accommodation that was arranged and booked online. This includes private holiday homes and houses e.g. HomeAway, as well as short-term rental of private rooms or flats via portals such as Airbnb. Users represent the people who booked the accommodation, independent of the number of guests staying at the accommodation on that booking. Offline bookings made, for example, in a travel agent's office or by telephone are not included; a prerequisite for this segment is an online checkout process. Furthermore, hotels and professionally-run accommodation such as guest houses are not included.
[249] Statista does not provide data for Greece.

Figure 15: Current and forecasted penetration rate for the vacation rentals sector[250]



Source: Statista

Figure 15 shows that the vacation rentals sector is expected to grow in all 11 Member States, highest in the Netherlands and lowest in Italy. Statista's forecast predicts that, by 2021, 18.7% of consumers in the accommodation sector in the Netherlands will opt for short-term rentals as opposed to conventional accommodation operators. The second largest market predicted is the UK, with 14.63% of holiday-seekers choosing short-term rentals, while Germany is ranked third, with the equivalent percentage at 14.18%.

This sub-section showed that the short-term rental sector, depending on the city, can have a significant and, depending on the Member State, growing share of the local/national accommodation market, and this is expected to grow further in the future. In such circumstances, of importance to local authorities will be how to ensure a sustainable development of the sector, particularly regarding its impacts on the local communities, which is addressed in Section 5.

[250] The "Penetration Rate" shows the share of active paying customers (or accounts) from the total population (adults aged 16 and older) of the selected market (market segment, region) for each year.

5 Impact on local communities

This section describes implications of the collaborative economy accommodation offer on local communities in the 11 case study cities. It answers the following research questions:

I. What effects do collaborative short-term rentals have on local development, including businesses, in the cities under study?
II. How do collaborative short-term rentals affect the supply of housing in the cities under study?
III. How do inhabitants in the cities under study see the changes brought by collaborative short-term rental platforms in their communities?
IV. How does collaborative short-term rental tourism affect local public services?

AirBnB has conducted city-level research in seven cities (e.g. Amsterdam, Athens, Barcelona, Berlin, Lisbon, London, Paris) to assess the economic impact of the collaborative short-term rental platform. In some cities, local authorities or universities have tried to measure impacts of the short-term rental market. Table 14 shows the availability of such studies at city-level.

Table 14: Availability of short-term rental market impact studies at local and national level

	AirBnB	Local	National
Amsterdam	✓[251]	✓[252]	
Athens	✓[253]		✓[254]
Barcelona	✓[255]	✓[256]	✓[257]
Berlin	✓[258]	✓[259]	✓[260]
Brussels			
Lisbon	✓[261]		

[251] AirBnB (2016). New report: AirBnB boosts Amsterdam economy by EUR 380 million.
[252] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 9. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[253] AirBnB (2014). Economic impact in Athens. Available at: http://blog.atairbnb.com/economic-impacts-in-athens/, accessed on 28/06/2017.
[254] The Hellenic Chamber of Hotels, 2015, Operation and impact of the sharing economy on the Greek hotel industry.
[255] AirBnB (2016). The AirBnB community boosts Barcelona economy by EUR 740 million. Available at: https://www.airbnbcitizen.com/airbnb-community-boosts-barcelona-economy-by-e740-million/, accessed on 28/06/2017.
[256] Barcelona City Council, 2016, Impacte del lloguer vacacional en el mercat de lloguer residencial de Barcelona. Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 9. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[257] HomeAway (2016). Holiday Rental Barometer in Spain. Fevitur (2015). Study of holiday rentals, executive report.
[258] AirBnB (2014). The economic impacts of home sharing in cities around the world. Available at: https://www.airbnb.co.uk/economic-impact, accessed on 28/06/2017.
[259] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 9. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[260] FeWo-direkt, Marktstudie private Ferienimmobilien 2017.
[261] AirBnB (2016). The AirBnB community contributes to EUR 268 million in economic activity to Lisbon. Available at: https://www.airbnbcitizen.com/the-airbnb-community-contributes-e268-million-in-economic-activity-to-lisbon/, accessed on 28/06/2017.

	AirBnB	Local	National
London	✓[262]	✓[263]	
Florence		✓[264]	
Paris	✓[265]	✓[266]	✓[267]
Prague			
Stockholm			

5.1 Development of ancillary services

The first step in the analysis on the impact of collaborative short-term rentals on local communities is to assess potential effects on the local business environment, and on businesses dependent on tourism. The research question addressed here, therefore, is:

I. What effects do collaborative short-term rentals have on local development, including businesses, in the cities under study?

Case study reports have asked whether the collaborative economy has had an effect on cities' economic growth, in particular in encouraging the development of ancillary services in the tourism accommodation offer (e.g. restaurants, cafes, local shops).

Most case study cities have a significant economic weight within their respective country. All case study cities' GVA (Gross Value Added), except for Berlin and Florence, represented the fifth of their national GDP in 2015. This share is particularly high for Athens, where local GVA accounted for nearly half of Greece's GDP, as Table 15: Percentage of regional GDP out of national GDP at NUTS 2-level shows.

Table 15: Percentage of regional GDP out of national GDP at NUTS 2-level

GEO/TIME	2009	2015
Amsterdam	20%	21%
Athens	49%	48%
Barcelona	19%	19%
Berlin	4%	4%
Brussels	19%	18%
Lisbon	38%	36%
London	21%	23%
Florence	7%	7%
Paris	30%	30%

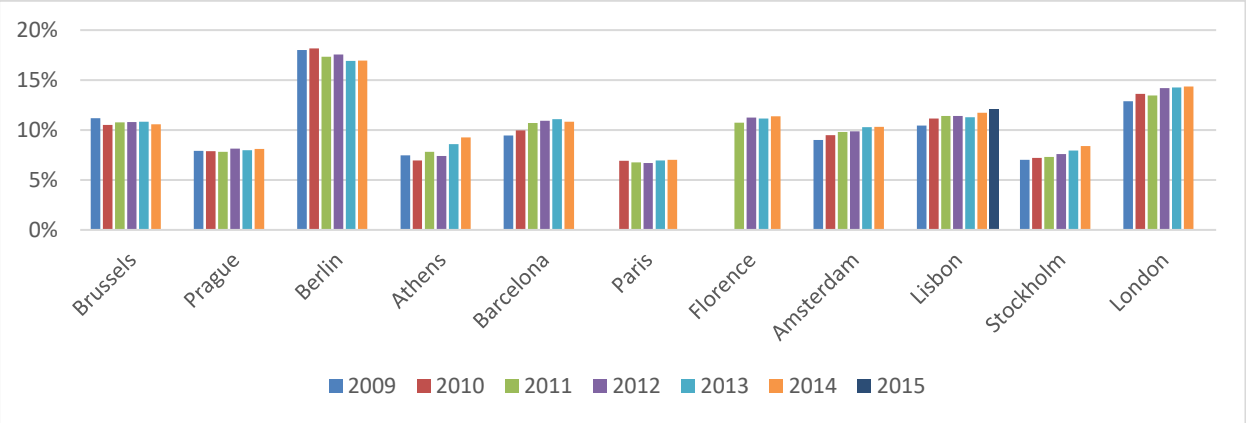
[262] AirBnB (2014). New study: AirBnB community generates EUR 502 million in economic activity in the UK. Available at: https://www.airbnb.co.uk/press/news/new-study-airbnb-community-generates-502-million-in-economic-activity-in-the-uk, accessed on 28/06/2017.
[263] The Institute for Public Policy Research (IPPR), 2016. Homesharing and London's housing market.
[264] ETOA, SCT & Life Beyond Tourism (2016) Il Turismo a Firenze: Il Punto di Vista dei Residenti. Comune di Firenze.
[265] AirBnB (2016). Economic impact report, Ile de France. Available at: https://france.airbnbcitizen.com/economic-impact-reports/ile-de-france/, accessed on 28/06/2017.
[266] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 9. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[267] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 9. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.

Prague	26%	24%
Stockholm	31%	32%

Source: Eurostat (nama_10r_2gdp)

Most studies cities local economy relies on the tourism sector. In seven case study cities, tourism employment accounted for about one tenth of total employment in 2015, as Figure 16 shows. This share is higher for Berlin (16%) and London (14%).

Figure 16: Share of tourism employment out of all employment - NUTS 2-level[268]



Source: Eurostat (sbs_r_nuts06_r2)

Data do not suggest an important impact on economic growth overall, but an increase in tourism activity can be noticed in most cities. This is particularly relevant for local communities, as evidenced in section 2.2, because of the tendency of short-term rental listings to expand to rural or peripheral areas. As noted by several studies, **collaborative economy guests tend to spend in local businesses.** According to AirBnB, 42% of guest spending occurs in the neighbourhood they stay in,[269] primarily on food services and shopping.[270] HomeAway estimates that, in Spain, in 2016, non-accommodation expenditures (i.e. food, leisure) accounted for 81% of total expenditure for holiday rental users. The first sources of expenses are food and drinks (i.e. restaurants, coffee shops, bars, etc.) and purchases of everyday products consumed in the accommodation, which is likely to support the activity of local businesses.[271] A 2015 study by the Spanish short-term rental association Fevitur found that 32% of short-term rental guest spending goes to local businesses, either to eat out (12%), buy food to cook in the rental (9%), do shopping (7%) or go out for a drink (4%).[272] Put differently, a HomeExchange study on European users in 2013 found that 80% of home exchangers prepare their own food, and 73% purchase organic food.[273]

In general, **collaborative economy accommodation users tend to stay longer**, which is likely to have positive economic repercussions. On average, AirBnB guests stay 2.1 times

[268] The graph presents data at NUTS 2-level, therefore the entire regions around the cities are included. For instance, Barcelona in the graph stands for Catalunya, while Amsterdam stands for North Holland, or Florence for Tuscany.
[269] AirBnB (2014). The economic impacts of home sharing in cities around the world. Available at: https://www.airbnb.co.uk/economic-impact, accessed on 28/06/2017.
[270] AirBnB economic impact in France, Paris 2015. Available at: http://blog.AirBnB.com/AirBnB-economic-impact-in-france-paris/. Accessed on 25/04/17.
[271] HomeAway (2016). Holiday Rental Barometer in Spain.
[272] Fevitur (2015). Study of holiday rentals, executive report.
[273] HomeExchange (2013). My House is Yours. A Worldwide Study on Home Exchangers' Profiles and Motivations. Available at: http://www.oits-isto.org/oits/files/resources/401.pdf

longer, and spend 2.1 times more than hotel guests.[274] A 2015 study conducted by Fevitur in Spain confirmed that short-term rental market users spent three days more than the average hotel guest. This has also been underlined by several EU-level stakeholders.[275]

AirBnB's economic impact studies report economic benefits of several million euros in some case study cities, as Table 16 shows. However, reported to the local GVA, the total economic impact of AirBnB in the cities considered is not significant, i.e. less than 1%. However, in the cities which conducted two successive studies in 2014 and 2016 (e.g. Barcelona and Paris), this share has raised by one third, which may suggest a stronger impact in the future.

Table 16: Total economic impact of AirBnB

City	Year	Total spent during stay (EUR)	Total economic impact (EUR)	% of total GVA	Nb of jobs supported
Amsterdam[276]	2015	-	380 million	0.27	-
Athens[277]	2013	-	69 million	0.08	1,060
Barcelona[278]	2015	-	740 million	0.36	-
Berlin[279]	2013	845	100 million	0.09	-
Brussels	-	-	-		-
Lisbon[280]	2015	-	268 million	0.41	-
London[281][282]	2013	1,457	420 million	0.37	5,751
Florence	-	-	-		-
Paris[283]	2015	-	2 billion	0.30	1,100
Prague	-	-	-		-
Stockholm	-	-	-		-

Source: AirBnB, Eurostat (nama_10r_2gdp)

HomeAway estimates that between 2014 and 2016 the holiday rental sector in Spain has (excluding the traditional accommodation offer) generated EUR 12.3 billion, which accounted for 0.58% of Spanish GDP. In France, HomeAway estimates a total contribution of between EUR 32.68 billion and EUR 43.97 billion in 2015, which represented between 1.5% and 2% of the French GDP. These figures take into account direct impacts to hosts,

[274] AirBnB (2014). The economic impacts of home sharing in cities around the world. Available at: https://www.airbnb.co.uk/economic-impact, accessed on 28/06/2017.
[275] Interview with HomeExchange (07/04/2017) and GuestToGuest (18/04/2017).
[276] AirBnB (2016). New report: AirBnB boosts Amsterdam economy by EUR 380 million.
[277] AirBnB (2014). Economic impact in Athens. Available at: http://blog.atairbnb.com/economic-impacts-in-athens/, accessed on 28/06/2017.
[278] AirBnB (2016). The AirBnB community boosts Barcelona economy by EUR 740 million. Available at: https://www.airbnbcitizen.com/airbnb-community-boosts-barcelona-economy-by-e740-million/, accessed on 28/06/2017.
[279] AirBnB (2014). The economic impacts of home sharing in cities around the world. Available at: https://www.airbnb.co.uk/economic-impact, accessed on 28/06/2017.
[280] AirBnB (2016). The AirBnB community contributes to EUR 268 million in economic activity to Lisbon. Available at: https://www.airbnbcitizen.com/the-airbnb-community-contributes-e268-million-in-economic-activity-to-lisbon/, accessed on 28/06/2017.
[281] Converted with the GBP-EUR exchange rate as of October 2013 (average).
[282] AirBnB (2014). New study: AirBnB community generates EUR 502 million in economic activity in the UK. Available at: https://www.airbnb.co.uk/press/news/new-study-airbnb-community-generates-502-million-in-economic-activity-in-the-uk, accessed on 28/06/2017.
[283] For the Ile de France region. Source: AirBnB (2016). Economic impact report, Ile de France. Available at: https://france.airbnbcitizen.com/economic-impact-reports/ile-de-france/, accessed on 28/06/2017.

but also indirect and induced impacts to property-related businesses (i.e. cleaning or building services), and repercussions to the food, retail, and leisure industry.

Positive economic impacts have been emphasised by interviewees in the six of the case study reports (e.g. Amsterdam, Brussels, Lisbon, Paris, Stockholm), although all have noted that it was difficult to isolate the short-term rental sector from other potential sources of economic growth. Some local-level stakeholders, especially hotel industry representatives, have balanced this view, stating that collaborative economy users tend to spend less than the average tourist.[284] In Barcelona, city-level research has confirmed this view.[285] Therefore, it is difficult to draw entirely reliable conclusions about the economic impact of the collaborative economy accommodation offer.

5.2 Housing supply changes

While collaborative short-term rentals are likely to have positive impacts on local businesses, these are often feared to be offset by the effects they have on the local housing supply. The topic was partly addressed in sub-section 3.2. This sub-section assesses, rather than long-term rental prices, the impact that collaborative short-term rental services can have, more broadly, on the housing supply in the cities under study. The research question addressed here is, therefore,

I. How do collaborative short-term rental services affect the supply of housing in the cities under study?

All case study reports have underlined housing supply problems, mainly concerning availability and affordability of the long-term accommodation offer. According to a 2016 paper from Aalborg University, there is a relationship between housing affordability and the growth of the short-term rental market. Residents tend to seek additional income through renting, and real estate investors aim to convert housing stock into short-term rental for tourists where this is more profitable than renting to local residents (e.g. in cities where there is no limit on the number of days such short-term rentals are allowed).[286]

In all case study reports, the number of short-term rental properties has significantly increased over the past years. AirBnB reports a growth of 1.7% of active listings between July 2015 and 2016.[287] For the home swapping sector, HomeExchange outlines a tenfold membership growth since 2005.[288]

Case study report data found that most AirBnB listings are entire places, which may divert the housing stock from residential use if properties are rented out often during the year. Entire place listings account for more than 70% in seven case study cities. This trend has been stable over the past two years, except for Berlin, where it has slightly decreased.

The increase in the number of short-term rentals, cumulated with the high percentage of entire place listings, may have put pressure on the local housing supply. This correlation was evidenced in Barcelona, where the influx of tourists using

[284] Interview with Prague City Tourism (29/05/2017), Office of the Government of the Czech Republic (09/06/2017), and Barcelona Hotels (24/05/2017).
[285] Barcelona City Council, Barcelona tourism activity report – 2015, p. 23.
[286] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 9. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[287] AirBnB (2016). Overview of the AirBnB Community in the European Union.
[288] HomeExchange (2016). HomeExchange by the numbers.

short-term rental of residential housing stock has been linked to declining numbers of permanent residents.[289] This evidence is based on figures from the newspaper El Pais for the central Barri Gotic area, where 10% of all apartments are vacation lets, and where population fell by 17.6%[290],[291] This view was also shared by most local-level interviewees.[292] In Paris, one stakeholder highlighted a decrease in leases renewal which may be linked to the short-term rental market development, although there are no figures to support this view.[293] In Florence, residents survey conducted in 2016 highlighted that 82% of inhabitants believe that tourism causes a rise in property prices in the city, while 64% of respondents thought that tourism causes residents to live outside the historic centre.[294]

However, as pointed out by EU-level stakeholders, it is difficult to establish a clear correlation between the increase in short-term rental offer and shortages in housing supply. Policy and socio-economic factors play an important role, and more evidence needs to be found at city-level.[295] Also, in some cities, such as London and Paris, case study reports outlined that housing supply was already under pressure before the development of the collaborative economy offer.

Moreover, despite the high percentage of entire place listings available on collaborative short-term rental platforms such as AirBnB, it should be noted that occupancy rates for AirBnB listings in the case study cities are fairly low, as sub-section 3.3 highlights, which shows that those properties are not used for short-term rental purposes all year-round.

It should be noted that local authorities make efforts to counter the housing supply shortage. For instance, Berlin, Paris and London new dwellings for residential purpose are built on year-on-year basis.[296] On 1st of December 2016, the City of Amsterdam signed an agreement to control the supply of short-term rentals by tackling illegal hotels and promoting responsible and sustainable home sharing.[297] In 2015, the Barcelona City Council has capped the number of licenses issued to short-term rental houses, as well as the number of hotel building permits, in order to increase residential housing supply.[298]

5.3 Inhabitants' perception of collaborative short-term rental platforms

This sub-section focuses on the *perceived* impacts of collaborative short-term rentals on the local inhabitants. It assesses changes in inhabitants' concerns and complaints related to the sector. The research question answered in this sub-section, therefore is

[289] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 7. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[290] https://www.citylab.com/equity/2015/12/barcelona-airbnb-tourism/421788/
[291] https://economia.elpais.com/economia/2015/12/10/actualidad/1449738303_311413.html
[292] E.g. Amsterdam, Athens, Barcelona, Berlin, Brussels, Paris. See Annex 1, 2, 3, 4, 5, and 9.
[293] Interview conducted with a representative of the Syndicat National des Hôtels Restaurants Cafetiers Traiteurs, the 05/05/17.
[294] ETOA, SCT & Life Beyond Tourism (2016) Il Turismo a Firenze: Il Punto di Vista dei Residenti. Comune di Firenze.
[295] Interview with AirBnB (13/04/2017) and HomeAway (20/06/2017).
[296] See Annex 4, 8, and 9.
[297] https://www.amsterdam.nl/nieuwsarchief/persberichten/2016/persberichten-1/amsterdam-and-airbnb/
[298] Interview with the Directorate for Tourism of the Barcelona City Council, 30/05/2017.

I. How do inhabitants in the cities under study see the changes brought by collaborative short-term rental platforms in their communities?

In the studies cities, there are mixed views from inhabitants towards the collaborative economy. Academic research highlights advantages for residents, notably the opportunities to gain additional income, the positive economic externalities brought in outer areas, and the social and cultural experience stemming from peer-to-peer transactions.[299] These positive features are emphasised by collaborative short-term rental platforms such as AirBnB.[300]

On the other hand, there are concerns about the negative impact of collaborative short-term rental platforms on the peacefulness of neighbourhoods, housing prices, and the hotel industry. Academic research in Amsterdam, notably, found a correlation between concentration of AirBnB properties and higher levels of nuisance for local population.[301]

The cities of Barcelona, Florence and Lisbon have conducted **opinion surveys on the perception of tourism by residents.** Results highlight that a large majority of inhabitants perceive tourism positively. In Barcelona, more than 91.5% of respondents believed that tourism was beneficial for the city.[302] In Florence, inhabitants perceived tourism as providing economic benefits, boosting culture and strengthening the identity of the city.[303] A large majority (68%) of respondents did not think that tourism made the city less secure. In Lisbon, over 90% of respondents have a very positive opinion about tourism and its contribution to the city.[304]

Despite favourable figures as regards tourism, all three surveys emphasised **inhabitants' concerns.** In Barcelona[305], 43% of residents considered tourism to be reaching its limits in terms of the city's capacity to provide services for tourists.[306] In Florence, 61% of respondents estimated that tourism caused congestion of urban spaces and shortage of services for residents, and half of them thought that it took away resources for important projects for the city and its residents.[307] In Lisbon, about 40% of respondents indicated negative impacts, such as noise pollution or increased cost of living.[308]

There is limited data about **resident complaints.** In Barcelona, the City Council has registered 2,750 complaints related to short-term rentals, either to report illegal properties, or to denounce noise or disorder.[309] According to a 2015 study by HomeAway, the city of Paris receives about 300 complaints per year, but less than one percent (0.86%) are caused by vacation rentals.[310] In Lisbon, only three complaints related to increased

[299]Schmucker, D., Sonntag, U., Wagner, P. (2016). Assessing the impact of "shared accommodation" for city tourism. The 14th Global Forum on Tourism Statistics. Available at: http://tsf2016venice.enit.it/images/articles/Papers_Forum/6.2_Assessing%20the%20impact%20of%20shared%20accommodation%20for%20city%20tourism.pdf, accessed on 28/06/2017.

[300] AirBnB (2014). The economic impacts of home sharing in cities around the world. Available at: https://www.airbnb.co.uk/economic-impact, accessed on 28/06/2017.

[301] https://vastgoedkennis-data.vakliteratuur.info/Server/getfile.aspx?file=docs/publicaties/site/UVA/Bijl_VM.pdf

[302] Barcelona City Council (2015). Barcelona Tourism Activity Report.

[303] ETOA, SCT & Life Beyond Tourism (2016) Il Turismo a Firenze: Il Punto di Vista dei Residenti. Comune di Firenze.

[304] Intercampus (2017). Estudo de opinião sobre O Turismo na cidade de Lisboa. Relatório Global.

[305] It is interesting to note that, in Barcelona, the share of positive responses is lower in very central areas, where tourism pressure is higher.

[306] Barcelona City Council (2015). Barcelona Tourism Activity Report.

[307] ETOA, SCT & Life Beyond Tourism (2016) Il Turismo a Firenze: Il Punto di Vista dei Residenti. Comune di Firenze.

[308] Intercampus (2017). Estudo de opinião sobre O Turismo na cidade de Lisboa. Relatório Global.

[309] Data received from the Barcelona City Council on 29/05/2017.

[310] HomeAway (2015). Impact of the vacation rental industry in France.

noise have been taken to court. Local representatives from Amsterdam and Brussels municipality also highlighted a rise of complaints related to noise, although noise sources could not be identified.[311] In Florence, the resident survey emphasised that the short-term rental sector was perceived to have increased noise and associated reasons for residents moving outside the city centre.[312]

In some cities (e.g. Barcelona, London), there is a growing demand for reduction of tourism, embodied by local authorities, associations and social movements. The hotel industry complained about unfair competition (e.g. in London), although it should be noted that most case study reports outline a growth of hotel capacity in the cities considered. This trend is also noted at EU-level, as underlined by a 2016 European Commission impulse paper focusing on Amsterdam, Barcelona, Berlin and Paris.[313]

During interviews, local representatives from most cities argued that local residents, especially in the city centre, are complaining more about tourists using collaborative short-term rental services. In some cities, such as Athens, Berlin or Lisbon, local authorities do not see significant problems with such tourism. In Lisbon, for instance, the local authority stated that constant media reports regarding complaints by residents against short-term rental tourism may make it seem as if the phenomenon is widespread, when in fact, only three registered cases of formal noise complaints were registered in 2017. [314]

In Amsterdam, representatives from the municipality admitted that the number of resident complaints increased over the past years, especially in the city centre[315]. The municipality attributes such increases to collaborative short-term rental tourism, since many of these complaints came from residential neighbourhoods. In Barcelona in 2016, the City Council has received **2,750 complaints from Barcelona inhabitants that concerned homes for tourist use.[316]** According to the Barcelona City Council, these complaints related to the denunciation of illegal rentals, but also covered noise or disorder problems.[317] In London, the borough of Westminster argued evidence of "widespread community concern": impact of short-term letting on neighbourhood character, quality and cohesion of constant population loss. The borough also highlighted that short-term letting can be linked with criminal activity, such as Housing Benefit fraud.[318]

5.4 Impact on public services

There are limited data available on the relationship between the collaborative economy in the accommodation sector and public services.

Most local-level stakeholders highlighted **possible pressures on the public service offer.** In Amsterdam and Barcelona, local stakeholders mentioned that transport services get crowded in tourist areas, which put additional resource requirements on public

[311] See Annex 1, 5.
[312] ETOA, SCT & Life Beyond Tourism (2016) Il Turismo a Firenze: Il Punto di Vista dei Residenti. Comune di Firenze.
[313] Dredge, D, Gyimóthy, S., Birkbak, A.,Jensen, T.E. & Madsen, A. K.2016. The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. Impulse Paper No 9 prepared for the European Commission DG GROWTH. Aalborg University, Copenhagen, p. 11. Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2853564f, accessed 28/06/2017.
[314] Interviews with the Portuguese Association of Local Lodgings and Association of Lisbon Home Owners.
[315] Interview with Amsterdam municipality representative 1: 08/05/2017.
[316] Data received from the Barcelona City Council on 29/05/2017.
[317] Interview with the Directorate for Tourism of the Barcelona City Council, 30/05/2017.
[318] BHA Website, Policy paper on short-term lettings published by the Borough of Westminster, 2015. Available at: www.bha.org.uk/wordpress/wp-content/uploads/2014/07/Short-Term-Lettings.pdf*, accessed on 24/03/2017.*

transportation services. Yet, they emphasised the difficulty to attribute the phenomenon to the collaborative economy accommodation offer only and stated that this should be taken as a consequence of mass tourism as a whole.[319]

Apart from transport, local stakeholders mentioned possible effects on amount of waste, garbage disposal and transportation (e.g. Amsterdam, Prague, London), as well as pressure on public infrastructure and public services in general (e.g. Prague, Paris). These concerns on public service availability are reflected in the Florence inhabitant survey, with 61% of residents estimating that tourism caused less services for residents.[320]

On the other hand, in other cities (e.g. Brussels and London), local stakeholders have emphasised positive externalities, notably that the displacement of population outside the city centre may bring better connection of outer neighbourhoods.

[319] Interview with the Barcelona City Council (30/05/2017), and Amsterdam municipality representative (08/05/2017).
[320] ETOA, SCT & Life Beyond Tourism (2016) Il Turismo a Firenze: Il Punto di Vista dei Residenti. Comune di Firenze.

6 Future developments

The collaborative economy in the tourism accommodation sector has grown in recent years and, for this reason, is increasingly under the focus of policy makers. In cities like Athens, Berlin, Brussels, Paris or Florence the collaborative short-term rental market has already been regulated, but in most cases, it is **yet too early to assess effectiveness of regulatory changes**. For example:

- In **Athens**, collaborative short-term rental platforms are under the attention of Greek authorities, with a succession of two laws regulating the sector in 2016 and 2017. According to one stakeholder, the Greek government is expected to collect additional taxes with the provisions introduced by the 2017 law; however, no quantitative evidence is available to support this view.
- In **Berlin,** the Law on Prohibition of illegal repurposing of real estate came into force only in 2016. The Berlin-city senate believes that the ban, known as "ban on wrongful use", will help to reclaim short-term holiday apartments for the rental market amid rising property prices and a growing housing shortage. In the past few months' run-up to the law change, the effects have been noticeable, with the pool of available vacation rentals dropping. In February 2016, Airbnb listed 11,000 entire apartments for short-term rental in the city, by March the number dropped to 6,700. The number of apartments offered by commercial operators fell further over the same period, from 2,000 to 1,000.
- In **Brussels**, the most recent regulatory change came into effect in 2016 having as a goal to contribute to a more regulated provision of services in the short-term accommodation sector. The city administration appointed staff to enforce new rules as the property owner can be fined or having its authorization to rent withdrawn[321].
- In **Paris**, following the amendment of the Digital Republic Law in 2016, a registration may be requested to rent a dwelling to tourists.
- In **Florence** (and elsewhere in Italy), only in April 2017, the Italian Government introduced a new tax-scheme for the collaborative economy in the accommodation sector. The collaborative short-term rental platforms will be responsible for automatically collecting the money and transferring it to the Italian Revenue Agency (i.e. sostituto d'imposta)[322] but effectiveness of this system is yet to be seen.

The cross analysis of case study reports shows that there are several ongoing and future developments at the city level:

- **There are plans to regulate the collaborative economy in the accommodation sector**. For example, in Barcelona, the Draft Decree on room rentals, due at the end of 2017, will further regulate short-term rentals. In France, according to the Finance Act of 2016, as from 1 January 2019, collaborative short-term rental platforms will directly transmit to the tax administration the annual renters' revenue.[323] In Portugal, the role of the Tourism of Portugal and the register of the local lodgings is expected to be amended in 2017. Also, in London the topic of collaborative short-term rentals is likely to be subject to further regulatory developments, as shown by the bill introduced by Westminster North Westminster

[321] Rudi Vervoort press release (2016). Réglementation des hébergements touristiques dans la région de Bruxelles-Capitale. Available at : http://rudivervoort.be/MP/wp-content/uploads/2016/04/16.04.25-entre%CC%81e-en-vigueur-he%CC%81bergement-touristique-FR-annexe.pdf. Retrieved on 31/05/17.
[322] http://www.gazzettaufficiale.it/eli/id/2017/04/24/17G00063/sg
[323] Zonebourse,2017. Impôts : les nouveautés 2017 pour les entreprises et les investisseurs.

MP Karen Buck aiming at helping local authorities to enforce the 90-day threshold for short-term or holiday lets.

- **There are plans to extend cooperation with collaborative short-term rental platforms at the local level and enforce existing agreements**. For example, this was signalled by a record EUR 300,000 fine, imposed in February 2017, on a landlord and an agency, who breached the allowed renting time of 60 days, that was agreed by the Amsterdam municipality and AirBnB.[324] A London Councils representative mentioned a project of London local authorities to strengthen partnerships with collaborative short-term rental platforms, in line with the AirBnB initiative to ban hosts renting their apartment for more than 90 days.

- **New cities plan to set up online registers of short-term accommodation providers**. For example, in Lisbon, an online register of short-terms accommodation providers has been in place since 2014. Each local lodging establishment[325] needs to be registered in the Local Lodgings Registry by notifying the territorially responsible city council through a Single Electronic Counter tool accessible on each city council's website or the Tourism of Portugal website. In Amsterdam authorities plan to set up an online register, where every short-term accommodation provider will have to maintain records of their activity. Every time hosts have guests, they will have to declare it to the municipal government.[326]

- **Another new development is an attempt to create an alternative to already established collaborative short-term rental platforms**. **FairBnB** is a recent movement by local Amsterdam residents to set up their own platform.[327] The main goal is to self-regulate collaborative accommodation in the city, to make it more transparent and accountable, to encourage vacation rentals that comply with the principles of a fair, non-extractive and collaborative economy.[328] In large part, this movement arose due to dissatisfaction over the practices of the traditional short-term rental operators, and some of the unwanted impacts in city's traditionally non-tourist neighbourhoods.

There are also ongoing discussions about the future regulatory approach towards the collaborative economy. For example, in **Prague** public debate focuses on type of regulatory approach towards collaborative short-term rental platforms. Examples from other cities (i.e. Barcelona or New York) are considered as best practices. In **London**, the city of Westminster[329] has put forward suggestion to include a permit/licensed system for homeowners wishing to enter the short-term lets market. In **Portugal** discussions are ongoing within the Parliament. One political party proposed a new law that would tie the possibility to rent out a property (flat, apartment etc.) short-term only with the authorisation of the rest of the building's inhabitants (i.e. the other flat owners in a block of flats).

---

[324] http://www.dutchnews.nl/news/archives/2017/02/amsterdam-hits-illegal-AirBnB-landlord-with-e300000-fine/

[325] Specified as providing temporary, remunerated accommodation services to tourists and fulfilling other requirements of the Decree-Law No. 128/2014. More information can be found in Lisbon case study report.

[326] Interview with Amsterdam municipality representative 2: 08/06/2017.

[327] Interview with Amsterdam municipality representative 2: 08/06/2017.

[328] https://www.meetup.com/FairBnB/

[329] BHA Website, Policy paper on short-term lettings published by the Borough of Westminster, 2015. Available at: www.bha.org.uk/wordpress/wp-content/uploads/2014/07/Short-Term-Lettings.pdf, accessed on 24/03/2017.

7 Annexes

Individual case study reports are submitted as separate documents.

Task 4 - Annex 1 – Amsterdam

Task 4 - Annex 2 – Athens

Task 4 - Annex 3 - Barcelona

Task 4 - Annex 4 – Berlin

Task 4 - Annex 5 – Brussels

Task 4 - Annex 6 – Florence

Task 4 - Annex 7 – Lisbon

Task 4 - Annex 8 – London

Task 4 - Annex 9 – Paris

Task 4 - Annex 10 - Prague

Task 4 - Annex 11 – Stockholm

European Commission

Study on the Assessment of the Regulatory Aspects Affecting the Collaborative Economy in the Tourism Accommodation Sector in the 28 Member States

Luxembourg, Publications Office of the European Union

2018 – 67 pages

ISBN 978-92-79-84013-5

doi: 10.2873/697265

ET-04-18-360-EN-N

doi: 10.2873/697265