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The 'Airbnbfication' of the Icelandic capital.
Towards an assessment of the socio-spatial impacts of Airbnb in the Reykjavik capital area

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Titill: The 'Airbnbfication' of the Icelandic capital. Towards an assessment of the socio-spatial impacts of Airbnb in the Reykjavik capital area

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SUMMARY

This report aims to shed some light on the socio-spatial impacts of Airbnb and short-term rentals on the Reykjavík Capital Area. It tackles the following questions:

- **Where is the Airbnb supply in the Reykjavík Capital area and what are the main features of its spatial distribution?** In 2018, there were 4154 listings in the Capital area. There has been a significant increase from 2016 to 2017, and the growth rate went slower between 2017 and 2018. This supply is highly concentrated in the city centre since 60% of the listings are located in 101, 105 and 107. Around 20% of the housings of the city centre are listed on Airbnb. In 2018, this figure amounts to 50 indeed 70% in some very specific districts of the centre (around the old harbour and in some central streets such as Hverfisgata or Grettisgata). Furthermore, the report assesses that in April 2019, 58% of the supply did not have an official license or registration number.
- **Who are the Airbnb hosts? Are they from the middle-class as argued by Airbnb?** The report shows that the four most represented job categories among Airbnb hosts in the Reykjavík capital area are: higher professional employees (engineers, managers, researchers), intermediate professional employees (teachers and nurses for instance), artist and other freelance creative jobs, and students. These results contradict significantly Airbnb's assumption according to which Airbnb hosts mostly belong to the middle class and call for a very balanced appraisal of the social impact of Airbnb.
- **What are the reasons that push local to become Airbnb hosts?** Interviews with Airbnb hosts led to the identification of 5 types of hosts who have very different impacts on the housing market. (1) The 'entrepreneurial host' is a host who has more than 5 listings and who makes a job of this activity. It gathers classic forms of tourism accommodation using Airbnb as a new way to advertise their supply, new forms of companies such as service providers, or holiday homes. (2) The investor host advertises less than 5 listings, but bought one or several properties with the primary purpose of turning it/them into tourism rentals to take advantage of their higher profitability. (3) The pragmatic hosts already had an under-utilized property before the boom of tourism and opportunistically decided to turn it into tourism rental. The first subcategory turned a full apartment into a tourism rental on a full-time basis. (4) The second subcategory let only a part of their homes to tourist on an occasional basis. (4) The last category gathers hosts who are using the supplemental income provided by Airbnb to cope with a difficult financial situation. The entrepreneurial and investor hosts' strategies have dramatic effects on the housing market by withdrawing residential units from the housing stock. The pragmatic host A is delicate to interpret since it removes housings from the rental market, but it improves the host's quality of life. On the contrary, Airbnb helped the pragmatic host B and the host who had to cope with a difficult financial situation to improve their situation on the housing market.
- **What is the impact of this new kind of tourism accommodations on locals who are not Airbnb hosts?** The report identifies 3 forms of displacement of people that are triggered by Airbnb. (1) Direct displacement occurs when a landlord decides to turn her/his property into an Airbnb and ask her/his tenant to leave. (2) Temporary displacement occurs when a landlord ask her/his tenant to leave for a few months in order to let the place on Airbnb during the summer months. (3) Different forms of indirect displacements happen when a household has to move out of the city centre because of the shortage of housing in the centre or because of the fact that they cannot bear anymore the burden caused by the fact of not having neighbours anymore because their home is surrounded by tourism rentals.

Deliverable attached to this report:

- 3 exhaustive databases of the Airbnb supply in the Reykjavík capital area (January 2016, January 2017, January 2018)

- 2 databases of the permits (*Heimagistingu*[1]) and licenses (*Veitinga- og gististaði*[2]) that have been granted for tourism accommodation in Iceland

- The R code which allowed me to harvest data from Sýslumenn

- The database of the Airbnb hosts in January 2018

[1] Source: https://www.syslumenn.is/skradar-heimagistingar (last checked: February 2018).
[2] Source: https://www.syslumenn.is/thjonusta/utgefin-leyfi/veitinga-og-gististadir/ (last checked: February 2018).

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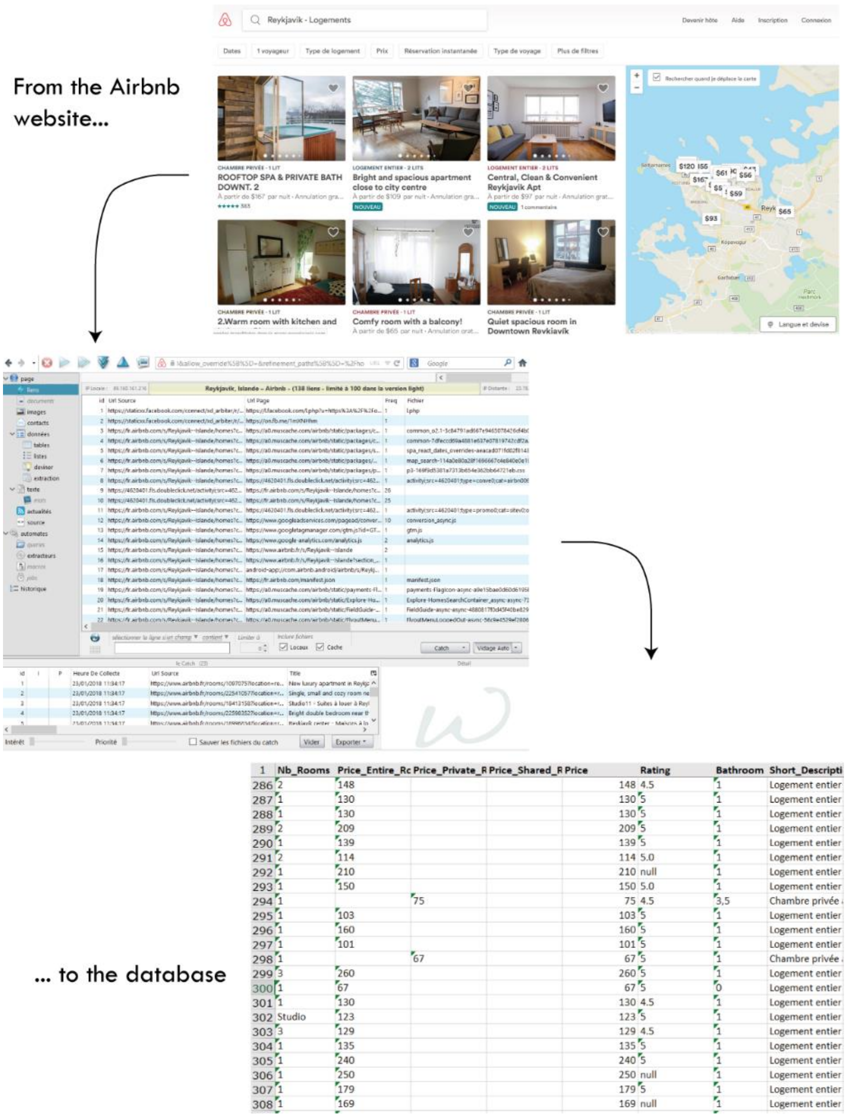
PART 1

Portrait of the Airbnb supply in the Reykjavík Capital Area (2016-2018)

Getting the data



1	Nb_Rooms	Price_Entire_Rc	Price_Private_R	Price_Shared_R	Price	Rating	Bathroom	Short_Descripti
286	2	148			148	4.5	1	Logement entier
287	1	130			130	5	1	Logement entier
288	1	130			130	5	1	Logement entier
289	2	209			209	5	1	Logement entier
290	1	139			139	5	1	Logement entier
291	2	114			114	5.0	1	Logement entier
292	1	210			210	null	1	Logement entier
293	1	150			150	5.0	1	Logement entier
294	1		75		75	4.5	3,5	Chambre privée
295	1	103			103	5	1	Logement entier
296	1	160			160	5	1	Logement entier
297	1	101			101	5	1	Logement entier
298	1		67		67	5	1	Chambre privée
299	3	260			260	5	1	Logement entier
300	1	67			67	5	0	Logement entier
301	1	130			130	4.5	1	Logement entier
302	Studio	123			123	5	1	Logement entier
303	3	129			129	4.5	1	Logement entier
304	1	135			135	5	1	Logement entier
305	1	240			240	5	1	Logement entier
306	1	250			250	null	1	Logement entier
307	1	179			179	5	1	Logement entier
308	1	169			169	null	1	Logement entier

FIGURE 1 – BEHIND THE SCRAPING OF THE WEBSITE

This report is mostly based on an exhaustive dataset of the Airbnb listings available in the Reykjavík Capital Area (including the suburban municipalities of Kópavogur, Hafnarfjörður, Mosfellsbær Seltjarnarnes, and Garðabær). I have collected this data by using a '**web-scraping' method** which, thanks to the preliminary writing of a code, allows me to harvest all the publicly available information from the source page of the Airbnb website (see Figure 1). This recent method is today increasingly used in marketing and consumption studies, but has also been used for a few journalistic analyses on Airbnb or even by the members or the Airbnb community to evaluate the best price of an apartment on the platform. Here, I used the software **OutWit Hub** which works by recognising "patterns" in the source page of each listing. There are other methods to 'scrape' websites that are based on programming languages such as R (Rvest or Rcrawler libraries) or Python (Scrapy or Beautifulsoup libraries) which both use a different approach (they are based on the recognition of CSS or XPath Selector instead of the one of patterns in the source URL).

The different steps of the process are:

- Writing the code which notifies the software where to fetch the data we are interested in and how to 'jump' from one listing to another.
- Applying the code in each neighbourhood of the city (with a pretty large level of zoom because Airbnb hides a significant part of the listings if we just look at the city as a whole), this is the most time-consuming part of the work.

- Cleaning the data (assembling the different scraping for each neighbourhood into a single database, removing the double rows, checking if there has been something wrong with the scraping, etc.).

This method allowed me to gather a database including all the listings that come up when one writes "Reykjavík" in the search bar of the Airbnb website as well as all the publicly available information displayed on each listing, including quantitative (**prices, minimum time of stay, number of rooms available, number of comments, rating, etc**.), qualitative (**ID number of the host, type of housing, type of property, municipality etc**.) but also geographic (**latitude and longitude**) variables. Nevertheless, I could not gather information on the availability of the listings. Therefore, some of these listings may actually be available only a few days per year, while other could be let on Airbnb all year round.

This procedure has been implemented three times, in **January 2016**, **January 2017** and **January 2018** which results in three datasets that are among the deliverables of the project.

Additionally, I have also used data from **Sýslumenn** to get an exhaustive list of the permits (*Heimagistingu*[3]) and licenses (*Veitinga- og gististaði*[4]) that have been granted for tourism accommodation. These two datasets have also been created from the 'scraping' of the Sýslumenn website (with the Rvest library from R this time; the code is among the deliverables attached to this report). I used it to compare the number of licenses and permits to the data on the Airbnb supply, and, thus, to give an account of the potential number of Airbnb listings that are illegal more than one year after the implementation of the new regulation on short-term rentals in Iceland (see Section 4 p. 35).

At last, the maps have been designed thanks to QGIS (an open source GIS software). The contextual geographical data (such as municipalities, postal code areas) have been provided by Landmælingar Íslands, OpensStreetMap or LUKR (Reykjavíkurborg).

To what extent are this data reliable?

Comparing with other available datasets

Comparing the data I gathered with other datasets of the Airbnb supply assembled at the same time with other webscraping methods can provide some insights on the reliability of my dataset.

COMPARISON WITH TOM SLEE'S DATA

The only publicly available other dataset of the Airbnb supply in Reykjavík is provided by **Tom Slee**. Tom Slee is a Canadian data activist involved in gathering data on different forms of sharing economy[5]. He wrote a Python/PostgreSQL code to gather data[6] from the Airbnb website (it is therefore a different method than the one I used). This code allowed him to harvest data on Airbnb in different cities, including Reykjavík and Iceland as a whole, at different times from July 2016 to July 2017[7]. One of his datasets on

[3] Source: https://www.syslumenn.is/skradar-heimagistingar (last checked: February 2018).
[4] Source: https://www.syslumenn.is/thjonusta/utgefin-leyfi/veitinga-og-gististadir/ (last checked: February 2018).
[5] See his book : Slee, T. (2017). What's Yours Is Mine: Against the Sharing Economy. S.l.: Or Books.
[6] https://github.com/tomslee/airbnb-data-collection (last checked: February 2018).
[7] http://tomslee.net/category/airbnb-data (last checked: February 2018).

Iceland has been ‘scraped’ in January 2017, at the same time as mine. **The comparison of these two datasets gives pretty similar results which suggest that the datasets are pretty reliable**.

TABLE 1 – COMPARISON BETWEEN TWO DATASETS

	Tom Slee's data	My data
Number of listings in the Reykjavík capital area	3503	3529
Number of listings in Reykjavík	2845	2898
Average price (€)	116	115
Average number of comments for a listing	27	27

COMPARISON WITH AIRDNA DATA

I do not have access to the **Airdna** data. Nevertheless, the Airdna website displays some basic features regarding the Airbnb supply in the city of Reykjavík. **In January 2018, Airdna found 3073 ‘active listings’ in the city of Reykjavík, which is of the same order of magnitude as my own data (3336 listings).**

Precaution to take before interpreting the data

Yet, one must be very careful in the interpretation of this data for a range of reasons.

- First and foremost, one should keep in mind that **all the information displayed on the platform (and therefore in the databases) is purely declarative.** The information we got relies exclusively on information given by the Airbnb hosts when he/she created his/her listing. Therefore, there may be some inaccuracy in this data.
- One should keep in mind **that this is only a snapshot of the Airbnb supply at a t-time**. Many of these listings are only on the market for one or two weeks (it can for instance be the case of people renting their home while they are in vacation, as it has been confirmed by the interviews I held with Airbnb hosts). It is very easy to open a profile and create a new listing, to close it and delete the listing, etc. **This market is therefore highly volatile, which makes it pretty difficult to capture.**
- **The interpretation of the number of “entire home” and “private rooms”** (which is often used in the literature to assess the number of housing that has been removed from the ordinary market to be turned into tourism rentals) **is also delicate** for the following reasons:
    - Several “private rooms” can actually be located in an apartment entirely dedicated to short-term rentals, since it is often more profitable and easier (because the demand for small places is more significant than the one for big apartments) to rent the rooms one by one.
    - Several “entire homes” are actually apartments or houses that are let only when their owners are away (as for house swapping). It is therefore difficult to conclude that the number of “entire home” of the database corresponds to the number of housings that are actually removed from the regular housing market.
- The database only gives an **imprecise account of the number of multi-hosts** for several reasons:
    - It is really easy for a multi-listing host to create one Airbnb account for each listing, with different names and different ID numbers (indeed, numerous profiles have vague names

such as “Downtown”, “Great apartment”) etc. It is therefore difficult to exactly assess the number of multi-listing hosts with the database.

  - I have also heard (to be confirmed) that one listing can hide several other apartments which are not displayed on the Airbnb website.
  - Moreover, as report n°2 will show, there is an increasing professionalisation of the sector. For example, between 2016 and 2018, several **companies specialised into providing all kind of services for the Airbnb hosts** (such as doing the check-in and check-out, cleaning the accommodation between two guests, but also writing the listing, managing the bookings etc.) have been created. Usually, these companies manage all the listings of their portfolio under a unique profile although they of course do not own all of them. One should therefore be careful when it comes to interpret the number of listings per Airbnb host ID.
  - As suggested further in this report, **Airbnb is increasingly used by more classic stakeholders of the tourism accommodation sector (such as guesthouses or hostels)** to advertise their availability and reach new customers. Thus, some guesthouses create one listing per room, **which could inflate the statistics on multi-listing hosts**. Moreover, here, we have a supply that existed before the boom of the sharing economy and of digital intermediation platforms, but who is advertised in a new way thanks to the ease of use of this platform which is highly user-friendly.
- Lastly, the geographical coordinates of each listing are not 100% accurate, which unfortunately prevents from comparing this data with, for example, the database of the permits/licenses (*Heimagistingu/ Veitinga- og gististaði*) which have a variable providing the accurate address of each permit/license.

Presentation of the database

This section presents the different variables provided by the version 2018 of the database, with the missing values.

TABLE 2 – LIST OF THE VARIABLES AVAILABLE

	Valid	Missing
Cancellation policy	4154	0
Capacity	4154	0
Description	4154	0
Collection time	4154	0
Host ID	4154	0
Host Name	4154	0
Listing ID	4154	0
Instant Booking	4154	0
Latitude	4154	0
Locality	4154	0
Longitude	4154	0
Member since	3673	481
Minimum time of the stay	4154	0
Monthly Discount	4154	0
Native Currency	4154	0
Number of Beds	4154	0
Number of comments	2540	1614
Number of rooms	4153	1
Price (entire home only)	3183	971
Price (private room only)	874	3280
Price (shared room only)	96	4058
Price	4153	1
Rating	4154	0
Bathroom	4151	3
Short description	4154	0
Summary	4154	0
Superhost	4154	0
Title	4154	0
Type of accommodation	4154	0
Type of property	831	3323
Url Source	4154	0
Weekly Discount	4154	0

TABLE 3 – STATISTICAL SUMMARY OF THE QUANTITATIVE VARIABLES

	N	Minimum	Maximum	Mean	Standard deviation
Capacity	4154	1	18	3,99	2,214
Member since	3673	01-AUG-2009	01-JAN-2018	27-FEB-2015	NA
Minimum time of the stay	4154	1	25	2,54	1,828
Number of beds	4154	1	19	2,70	1,962
Number of comments	2540	1	523	46,26	58,914
Number of rooms	4153	0	15	1,75	1,154
Price (entire room only)	3183	0	2712	169,33	141,158
Price (private room only)	874	0	1090	81,19	67,042
Price (shared room only)	96	23	176	48,85	24,653
Price (all)	4153	0	2712	147,99	133,211
Number of bathrooms	4151	0,0	12,0	1,187	,6252

1.2| GENERAL OVERVIEW (JANUARY 2018)

This section provides with a general overview on the Airbnb supply in January 2018. The data reveals that there are **4154 listings** that are registered on the Airbnb website in the Reykjavík Capital Area, but this supply is far to be distributed homogeneously throughout the city.

Location of the Airbnb supply

As the following figures show, **the Airbnb supply is highly concentrated in Reykjavík, and especially in the city centre** (101 gathers 36% of the overall supply).

Location of the Airbnb listings per municipality

TABLE 4 – DISTRIBUTION OF THE AIRBNB LISTINGS IN THE MUNICIPALITIES OF THE REYKJAVÍK CAPITAL AREA

Municipality	Number of listings	Percentage
Reykjavíkurborg	3336	80,8
Kópavogsbær	280	6,8
Hafnarfjarðarbær	225	5,5
Garðabær	124	3
Mosfellsbær	96	2,3
Seltjarnarnesbær	67	1,6

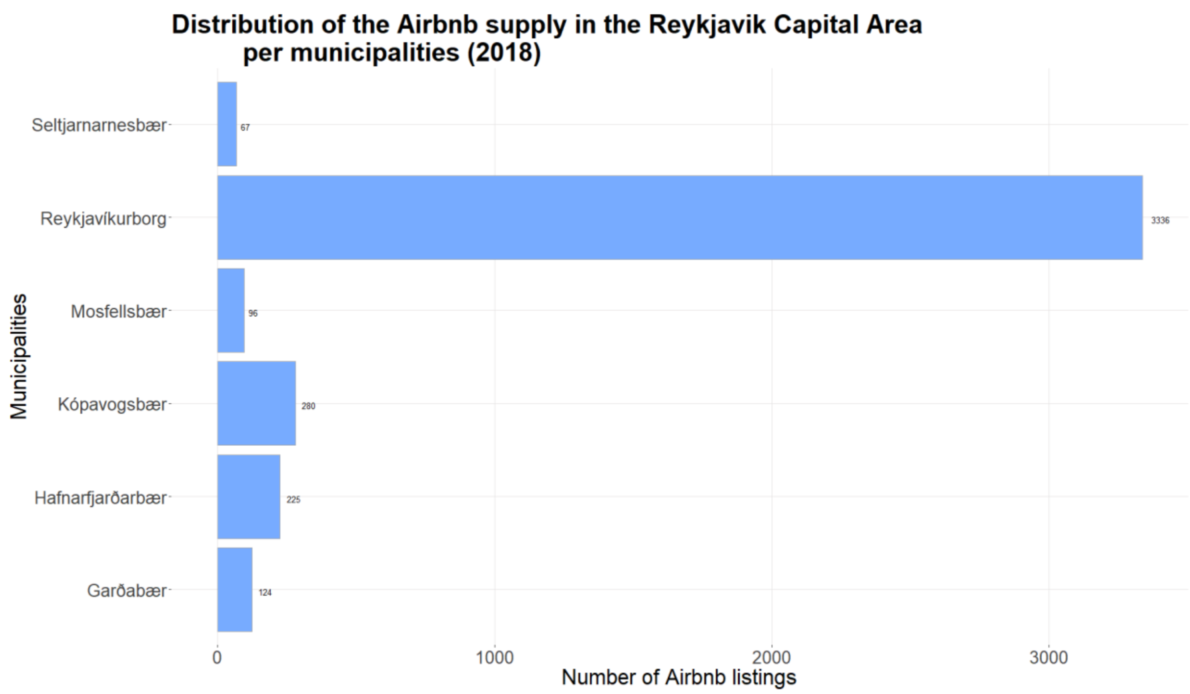


FIGURE 2 – DISTRIBUTION OF THE AIRBNB LISTINGS IN THE MUNICIPALITIES OF THE REYKJAVÍK CAPITAL AREA (2018)

Location of the Airbnb listings per postal code

TABLE 5 – LOCATION OF THE AIRBNB LISTINGS PER POSTAL CODE.

Postal Code	Municipality	Number of listings	%	Postal Code	Municipality	Number of listings	%
101	**Reykjavík**	**1480**	**35,9**	170	Seltjarnarnes	67	1,6
103	Reykjavík	19	0,5	200	Kópavogur	133	3,2
104	Reykjavík	176	4,3	201	Kópavogur	64	1,6
105	**Reykjavík**	**707**	**17,1**	203	Kópavogur	0	0
107	Reykjavík	283	6,9	203	Kópavogur	83	2
108	**Reykjavík**	**214**	**5,2**	203	Kópavogur	0	0
109	Reykjavík	100	2,4	210	Garðabær	108	2,6
110	Reykjavík	127	3,1	220	Hafnarfjörður	140	3,4
111	Reykjavík	53	1,3	221	Hafnarfjörður	85	2,1
112	Reykjavík	112	2,7	225	Garðabær	16	0,4
113	Reykjavík	58	1,4	270	Mosfellsbær	76	1,8
116	Reykjavík	7	0,2	271	Mosfellsbær	20	0,5

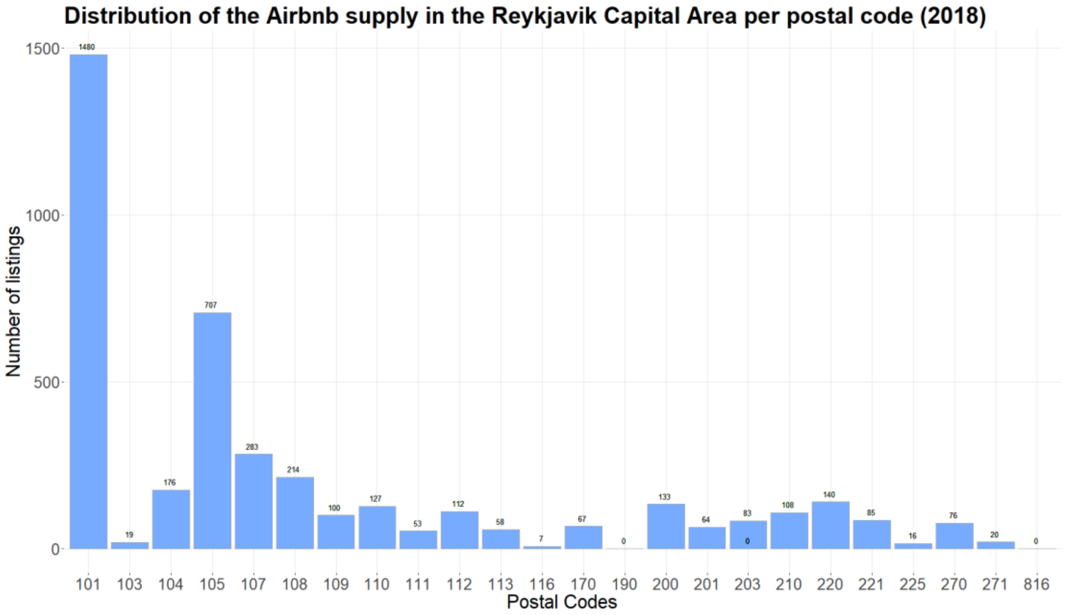


FIGURE 3 – DISTRIBUTION OF THE AIRBNB SUPPLY PER POSTAL CODE (2018)

The 101, 105 and 107 postal codes gather 60% of the overall Airbnb supply in the Reykjavík Capital Area, which confirms the very significant concentration of the market in the city centre.

Mapping the Airbnb accommodation

This section proposes four different ways to map the Airbnb supply in Reykjavík, which have all their advantages and disadvantages:

- Figure 4 is a basic dot map of the Airbnb supply. Each dot represents a listing. It is easily understandable, but due to the fact that the supply is everything but homogeneously distributed over the city, the map is difficult to read for the central districts.
- Figure 5 represents the density of Airbnb listings (number of listings per km²) for each postal code areas. It is easily readable and understandable, but the fact that some part of certain postal codes areas are not dedicated to residential buildings (such as the southern part of 101) can biased the map.
- Figure 6 is a heatmap of the Airbnb supply. QGIS provides a built-in tool to make heatmaps. It is easily understandable (and can be useful to give an account of the spatial advance of Airbnb, see Figure 24), but it is not so easy to interpret.
- This is why I also created a grid map (Figure 7) representing the density of Airbnb listings. The city has been covered with a grid made of squares (250m × 250m). I then counted the number of listings per square. It provides an easily understandable and readable map, with a pretty thin level of measurement, and which is also useful to measure the advance of Airbnb in the city (see Figure 23).
- I have also made a map representing the number of Airbnb listings per street segments. The LUKR spatial data[8] provides a shapefile called 'Miðlínur gatna' representing all the street segments of the city (*i. e.* all the segments of a street that are located between two intersections). Thanks to an algorithm available in QGIS, I have associated each dot representing an Airbnb listing to the closest street section. Afterwards, I counted the number of listings per section. Due to the relative inaccuracy of the XY coordinated provided in the Airbnb database, one must be relatively careful in the interpretation of this map. Nevertheless, the result seems very consistent with all the observations I could make.

[8] http://lukr.rvk.is/gjaldfrjals_gogn/ (last checked: February 2018).

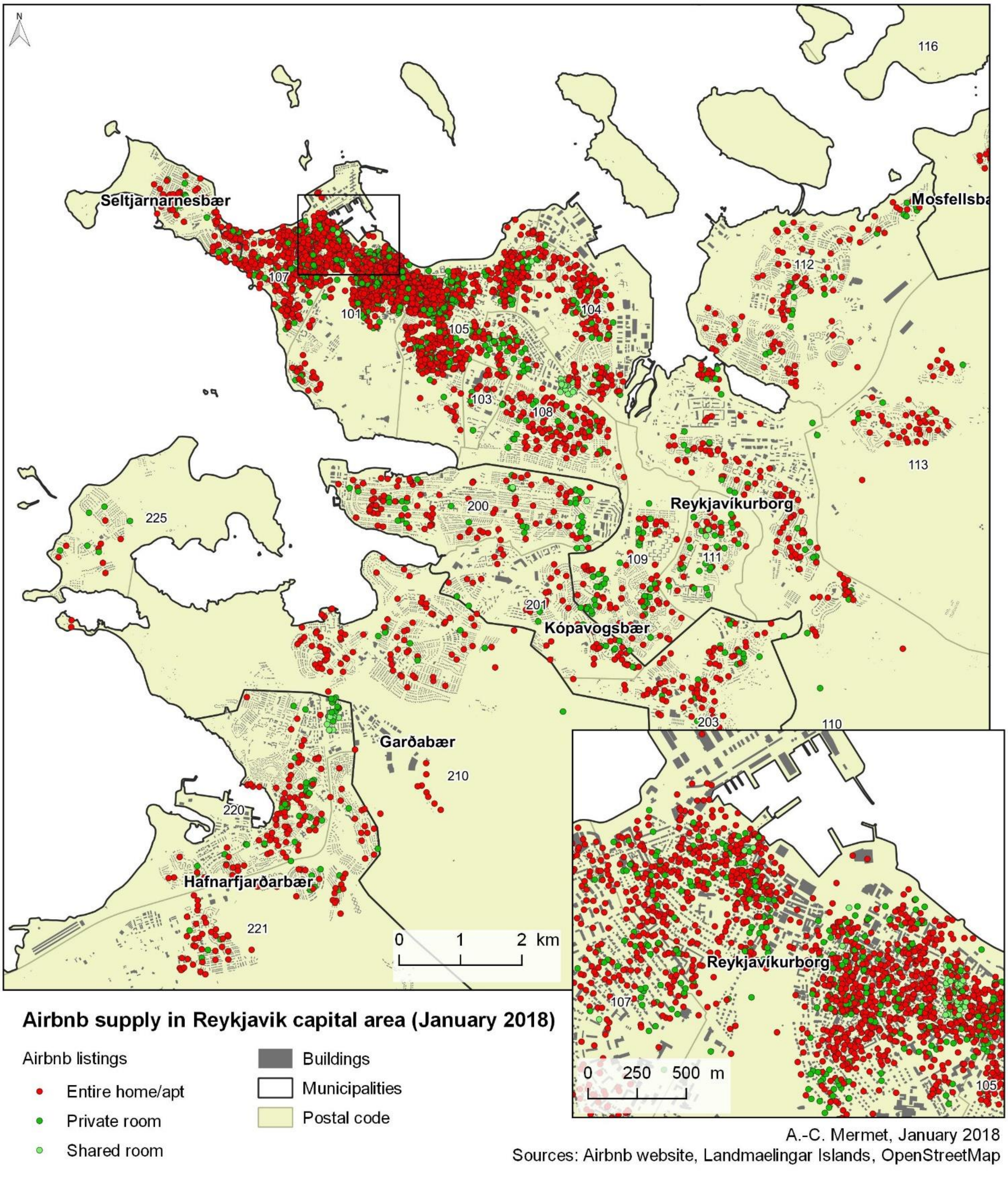


FIGURE 4 – DOT MAP OF THE AIRBNB LISTINGS IN THE REYKJAVÍK CAPITAL AREA (2018).

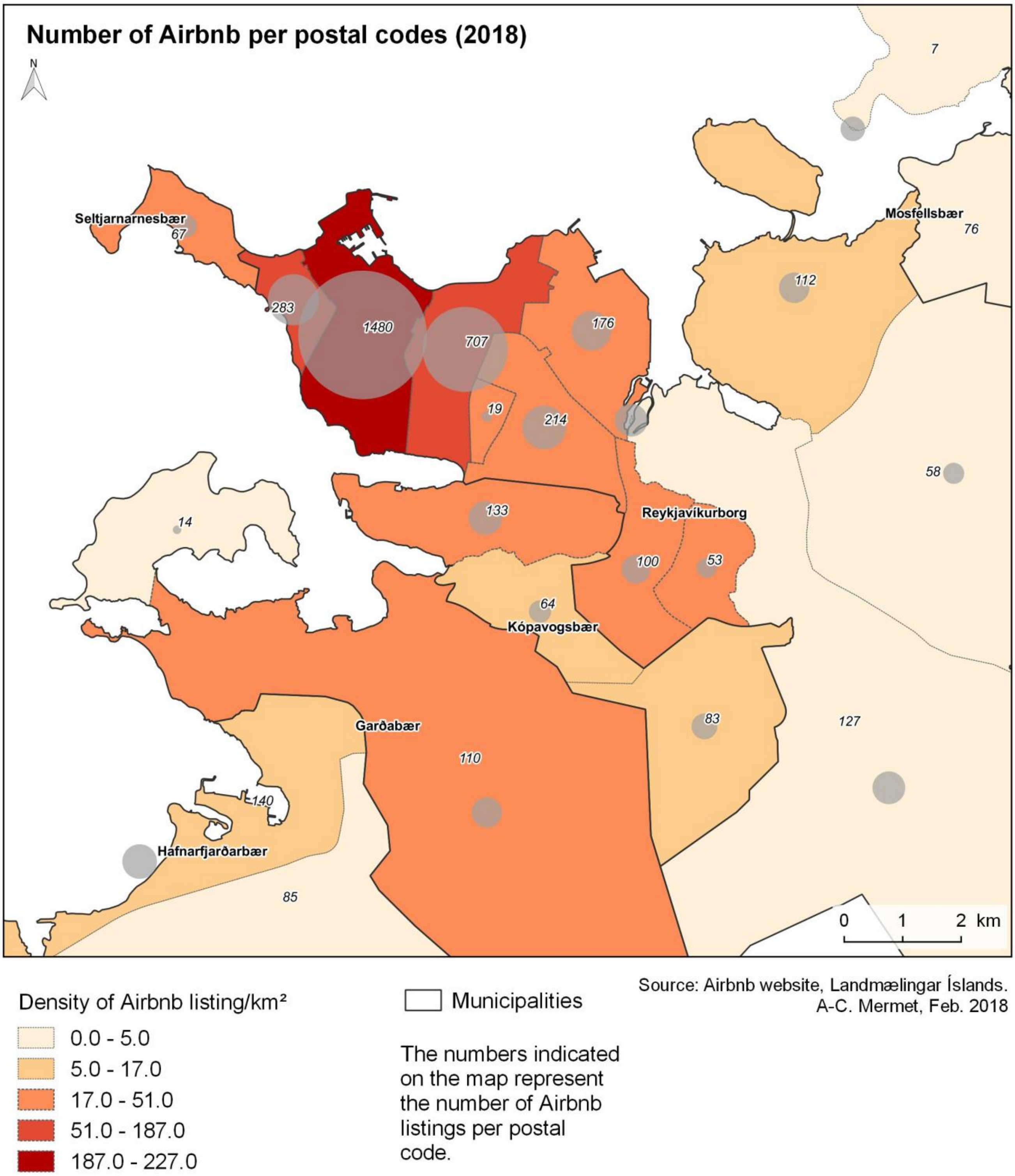


FIGURE 5 – DENSITY MAP OF THE AIRBNB LISTINGS PER POSTAL CODES (2018)

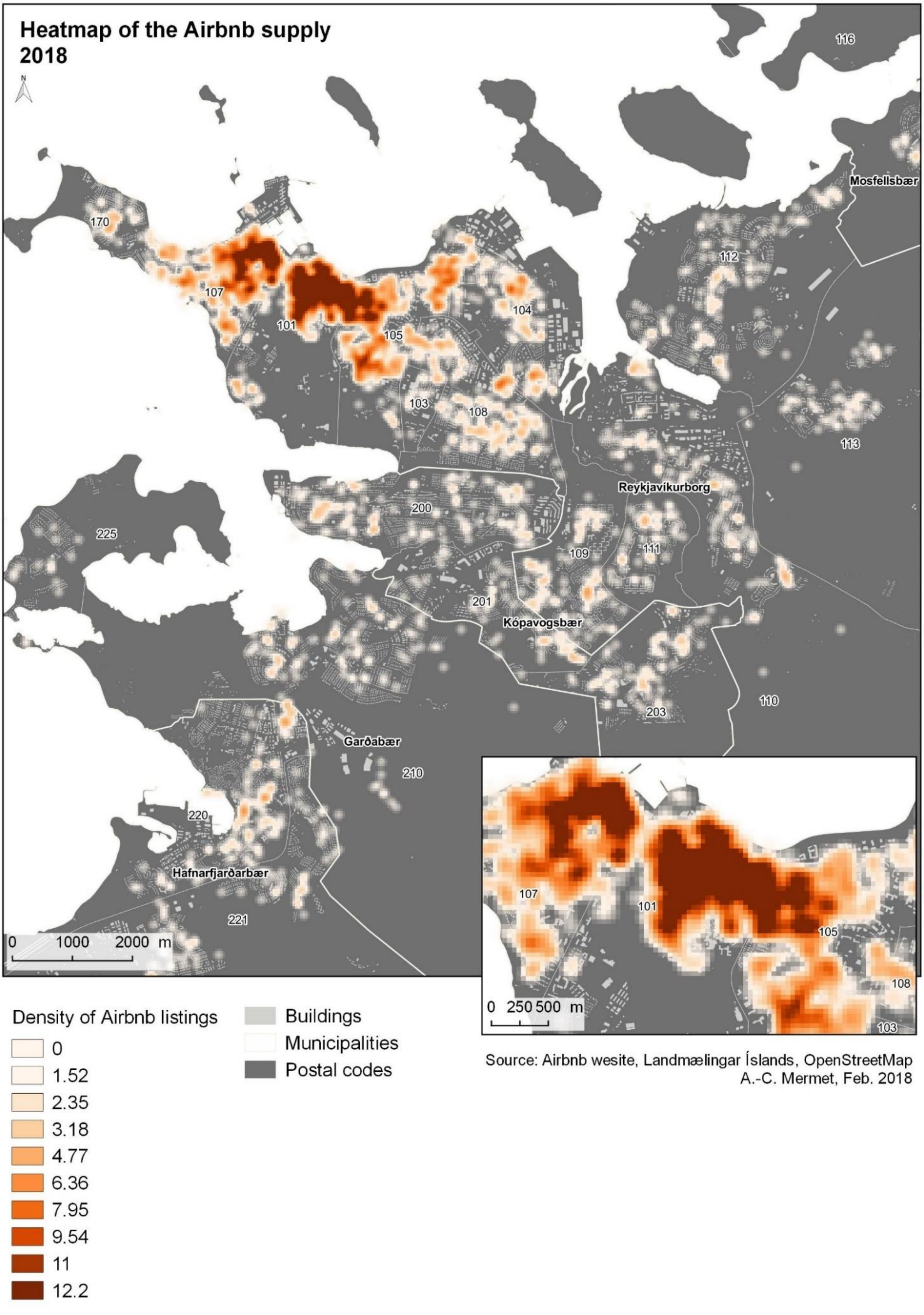


FIGURE 6 – HEATMAP OF THE AIRBNB LISTINGS (2018).

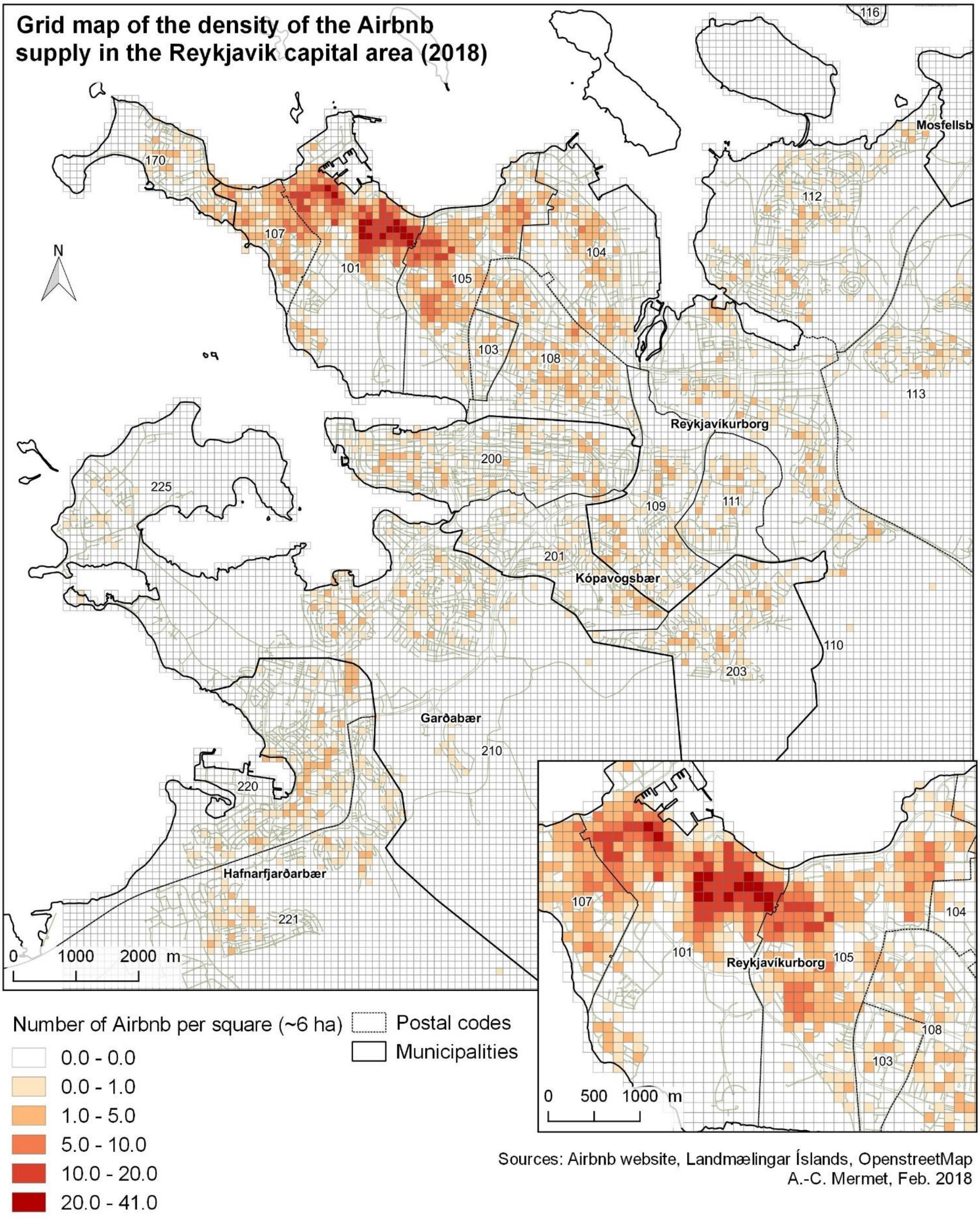


FIGURE 7 – GRID MAP OF THE AIRBNB SUPPLY IN THE REYKJAVÍK CAPITAL AREA (2018).

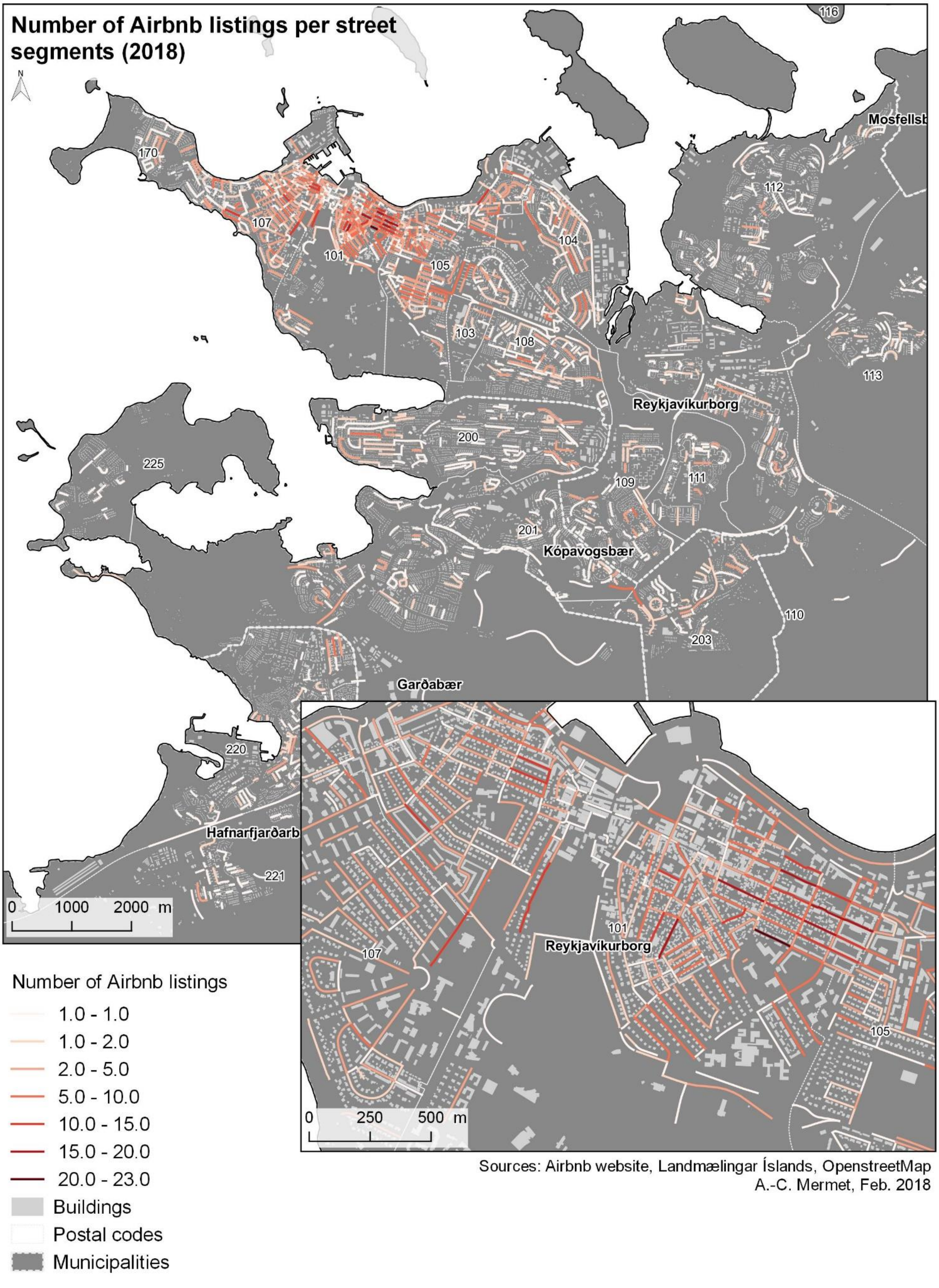


FIGURE 8 – NUMBER OF AIRBNB PER STREET SEGMENTS

Figure 6 and Figure 7 allow to identify more specifically where are **the "hot spots" of the Airbnb supply.** The density of Airbnb listings is the highest around **Laugavegur** and **Þingholt**. The second most concerning area is around **Kvosin** and the **eastern part of Vesturbær** (Vesturgata, Nýlendugata, and surrounding streets). More specifically a few streets gather a pretty high concentration of Airbnb listings (see below). **Grettisgata, Laugavegur, Hverfisgata and** Njálsgata are particularly concerned by the phenomenon. Outside 101, 105 and 107, the supply of Airbnb is much more scattered.

TABLE 6 – STREET SEGMENTS WITH MORE THAN 10 LISTINGS

Street segment	Number of Airbnb
Bergþórugata	23
Hverfisgata 1	19
Laugavegur 1	17
Grettisgata 1	16
Grettisgata 2	16
Laugavegur 2	16
Óðinsgata	16
Bjarnarstígur	15
Bárugata	14
Bergstaðastræti	14
Garðastræti	14
Grettisgata 3	14
Grettisgata 3	14
Laugavegur 3	14
Njálsgata 1	14
Ránargata	14
Laugarnesvegur	13
Lindargata	13
Ásvallagata	12
Njálsgata 2	12
Tjarnargata	12
Birkimelur	11
Hallveigarstígur	11
Hverfisgata 2	11
Nesvegur	11
Grundarstígur	10
Laufásvegur	10
Laugavegur 4	10
Leifsgata	10
Njálsgata 3	10
Sigtún	10
Smáragata	10
Veghúsastígur	10
Víðimelur	10

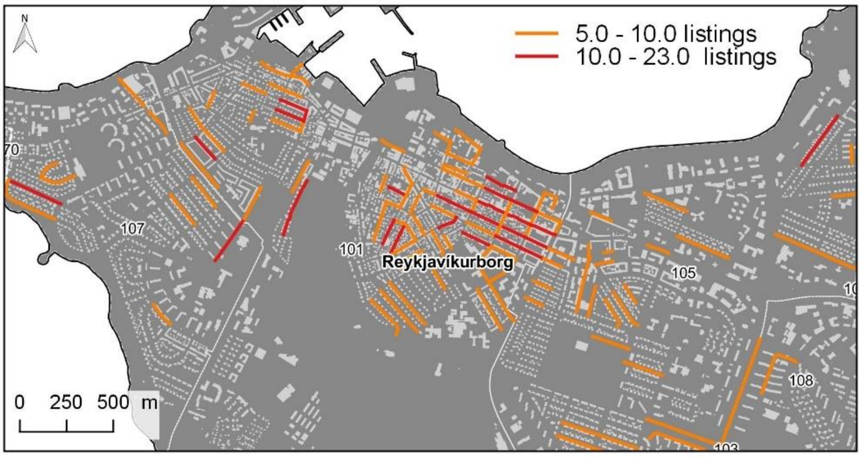


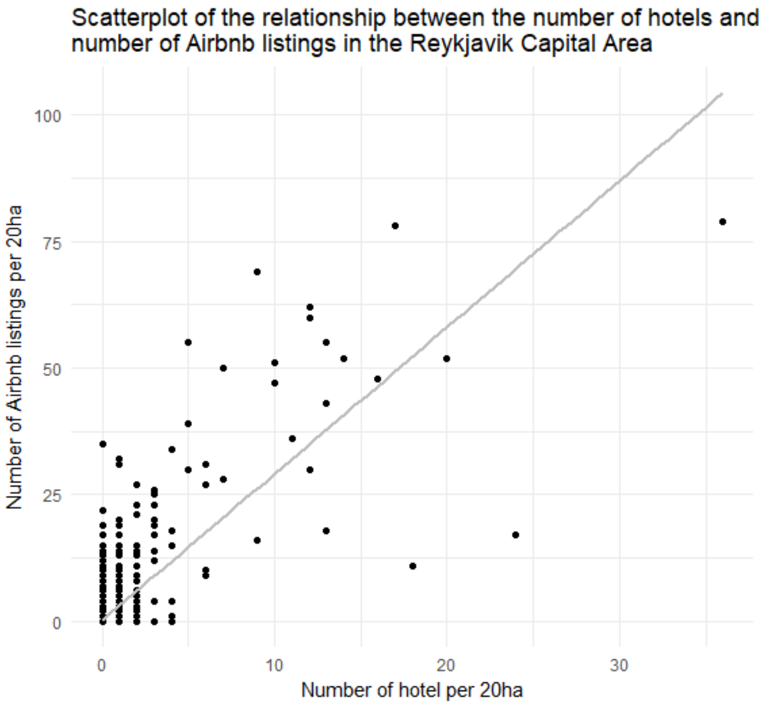
FIGURE 9 – STREET SEGMENTS WITH MORE THAN 5 LISTINGS (CITY CENTRE ONLY)

To sum up, the Airbnb supply is very highly concentrated in the city centre of Reykjavík (especially in 101). It means that it is in this area that the development of this new form of tourism accommodation has the strongest impact. Such a concentration is pretty usual in tourism cities and as already been highlighted by several scholars[9]. **To this regard, the 101 district is more comparable to Ciuttat Vella in Barcelona or to the Marais in Paris than to the local suburban municipalities such as Kópavogur or Hafnafjördur.**

Does Airbnb change the geography of the accommodation supply in the Reykjavík Capital Area?

As highlighted by some scholars[10], the Airbnb company often argue that the development of peer-to-peer accommodation helps to spread tourism accommodation outside of the main tourism districts in cities. The previously mentioned paper demonstrated that this assumption is not true for the case of Barcelona, and I wanted to test this assumption for the case of Reykjavík.

To this end, I cut the Reykjavík capital area into 20 ha squares and I counted the number of hotels and of Airbnb in each square. Afterwards, I calculated the correlation coefficient between these two variables:



$R = 0.7627986$, $p < 0{,}05$

FIGURE 10 – SCATTERPLOT OF THE RELATIONSHIP BETWEEN THE NUMBER OF HOTEL AND OF AIRBNB LISTINGS IN THE REYKJAVÍK CAPITAL AREA

[9] See for example David Wachsmuth work on New York: https://www.researchgate.net/profile/David_Wachsmuth/publication/318281320_Airbnb_and_the_Rent_Gap_Gentrification_Through_the_Sharing_Economy/links/595fe33caca2728c118b64da/Airbnb-and-the-Rent-Gap-Gentrification-Through-the-Sharing-Economy.pdf (last checked: February 2018).

[10] See for instance Sans, A. A., & Quaglieri, A. (2016). Unravelling Airbnb: Urban perspectives from Barcelona. In A. P. Russo & G. Richards (Éd.), Reinventing the Local in Tourism: Producing, Consuming and Negotiating Place; Channel View Publications: Buffalo, NY, USA (p. 209-228). Channel View Publications. Consulté à l'adresse http://www.academia.edu/download/44980826/Arias_-_Quaglieri_-_Unravelling_Airbnb_2016.pdf

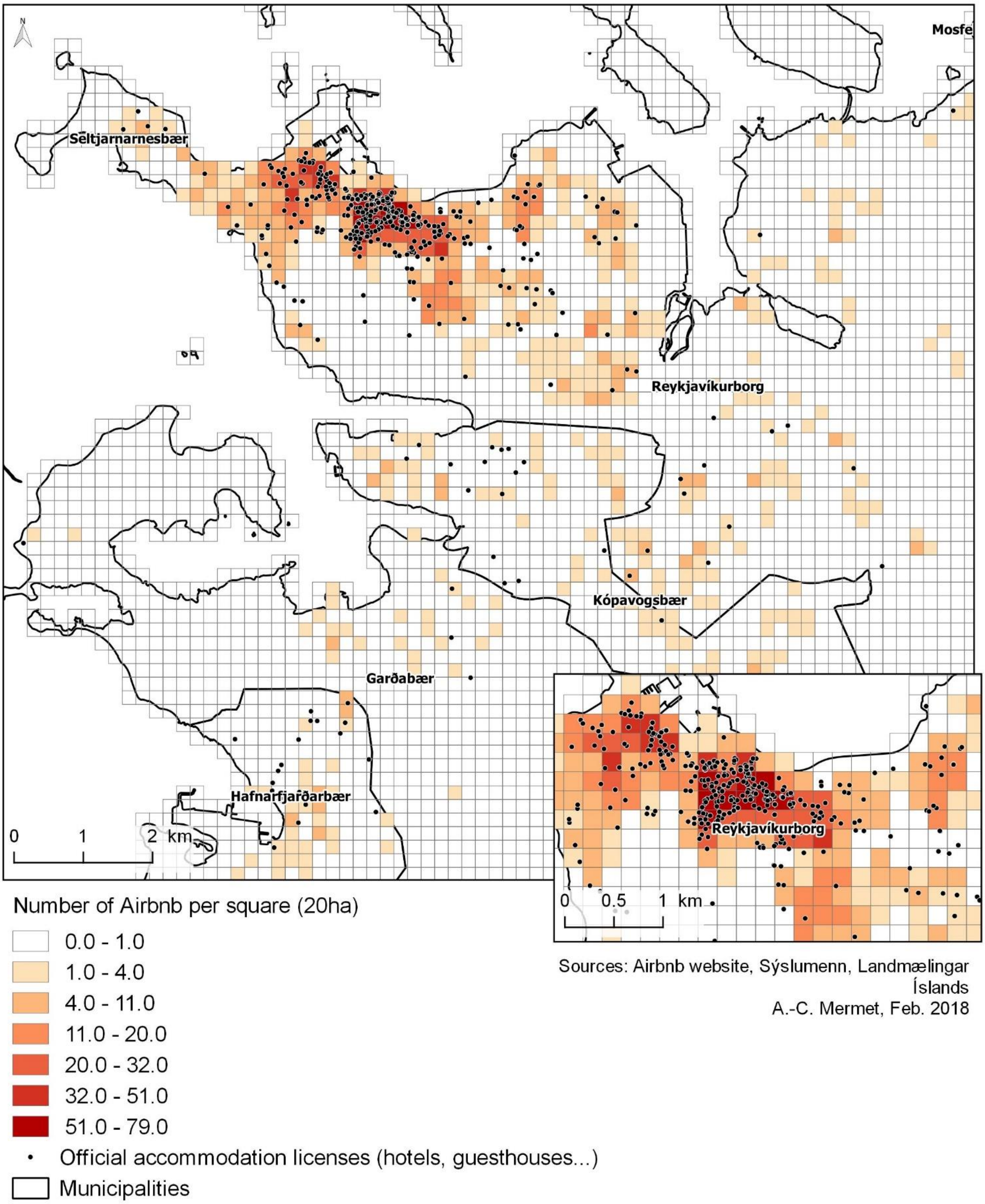


FIGURE 11 – LOCATION OF THE AIRBNB SUPPLY COMPARED TO THE LOCATION OF CLASSIC TOURISM ACCOMMODATION (2018)

The analysis shows that, as for the Barcelona case, the location of the Airbnb listings is highly correlated to the location of more classic forms of accommodation (*i. e.* the more hotels there are in a district, the more Airbnb listings). Therefore, Airbnb does not change much the geography of the tourism accommodation supply. On the contrary, **it increases the pressure on local real estate in the city centre.**

Main features of the Airbnb supply in 2018

This section provides some raw analyses regarding the other main features displayed in the database.

Type of rooms

In January 2018, a majority of the listings advertised on the platform is entire home, which is relatively high comparing with other major tourism destinations (source: Airdna). This rate is pretty close to other Nordic cities.

TABLE 7 – TYPE OF ACCOMMODATION (2018)

	Number of listings	Percentage
Shared room	96	2
Private room	874	21
Entire home	3183	77
Total	*4153*	*100,0*

(1 missing value)

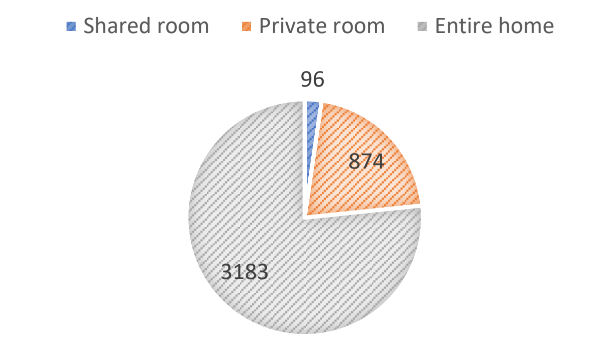


FIGURE 12 – TYPE OF ACCOMMODATION (2018)

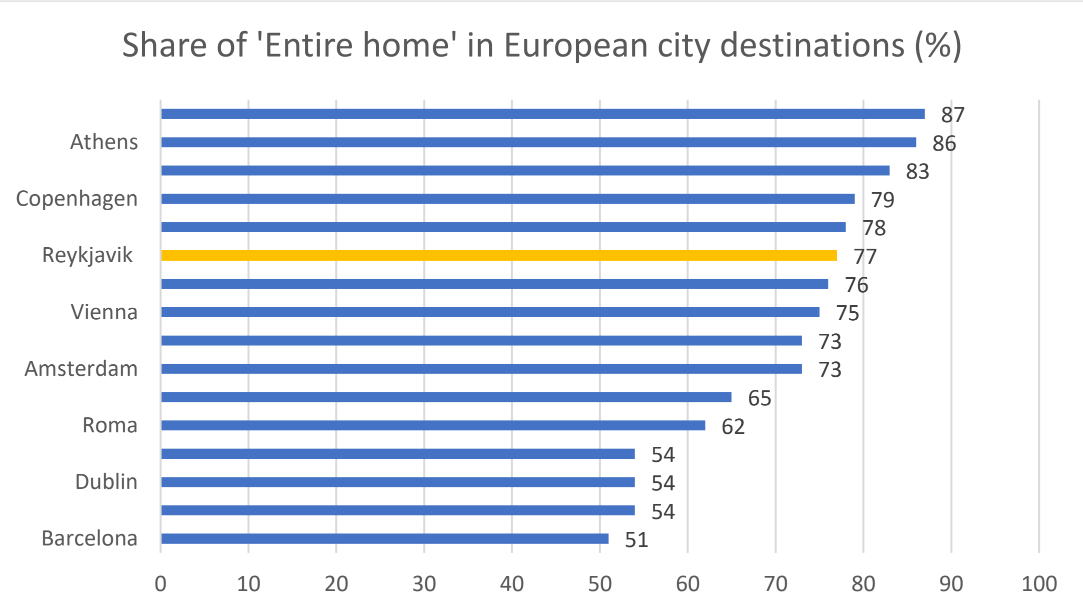


FIGURE 13 – SHARE OF 'ENTIRE HOME' IN THE AIRBNB SUPPLY, AN EUROPEAN COMPARISON (%)

Type of property

TABLE 8 – TYPE OF PROPERTY (2017 AND 2018)

Type of property 2018	Number of listings	Percentage
No data	3323	80,0
Apartment	398	9,6
Apartment in apartment buildings	9	,2
Youth hostel	15	,4
Boat	1	,0
Shop-hotel	1	,0
Bungalow	1	,0
Hut	3	,1
Campingcar-caravan	4	,1
Guesthouse	84	2,1
Outhouse	3	,1
Dormitory	21	,5
Loft	10	,2
House	235	5,7
City house	28	,7
Suite	6	,1
Tent	1	,0
Other	2	,0
Other shared	2	,0
Villa	7	,2
Total	4154	100,0

Type of property, 2017	Number of listings	Percentage
Apartment	2432	73,0
Apartment in apartment buildings	20	,6
Youth hostel	3	,1
Other	40	1,2
Boat	1	,0
Bed & Breakfast	42	1,3
Bungalow	4	,1
Hut	11	,3
Camping/caravane	20	,6
Gueshouse	37	1,1
Dormitory	8	,2
Shanty	1	,0
Loft	15	,5
House	639	19,2
City house	34	1,0
Ecologic house	1	,0
Tourism residence	1	,0
Tent	3	,1
Villa	16	,5
Yurt	5	,2
Total	*3333*	*100,0*

Due to changes in the structure of the Airbnb source page, the scraping of the “type of property” field resulted in a high number of “missing data” for this field: 80% (see Table 2). It is therefore impossible to have a global overview of all the types of properties that are currently advertised on the platform. For sake of comparison, the 2017 data (which are much more complete) are also provided (table on the right).

The great majority of the supply is **apartments and houses**, which suggest that **a significant part of the supply unfolds on the ‘ordinary’ housing stock, which used to be dedicated to locals.** Further analyses on this topic will be provided in report n°3.

Nevertheless, it seems from my personal use of the website during the scraping phase of the study that **Airbnb tends to be a platform used to rent out an increasingly various type of assets**. As suggest before, some **classic guesthouses or hostels** use Airbnb as a platform to find customers (at least 84 listings are presented as located in a guesthouse, 21 as beds in a dormitory, 15 as a room in a youth hostel).

Moreover, some hosts are specialized in more surprising types of accommodation, such as **sailboats[11], tents or even cars**. For example, the Airbnb ID n°2264631(12 listings) only rents out mini-vans, including in wintertime as this listing illustrates:

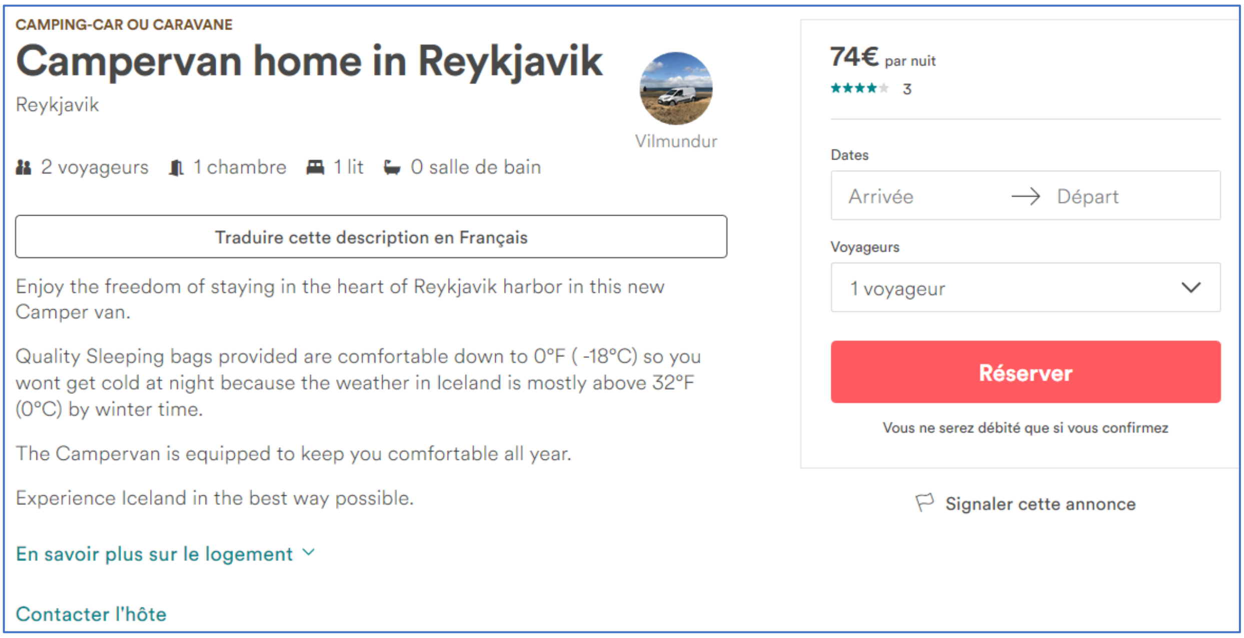


FIGURE 14 – CAMPERVAN FOR RENT ON AIRBNB.

Another host (ID n°129382539, 10 listings) introduces himself as the manager of "Reykjavík Tent Hotel", which only advertises tents (apparently only in summertime though).

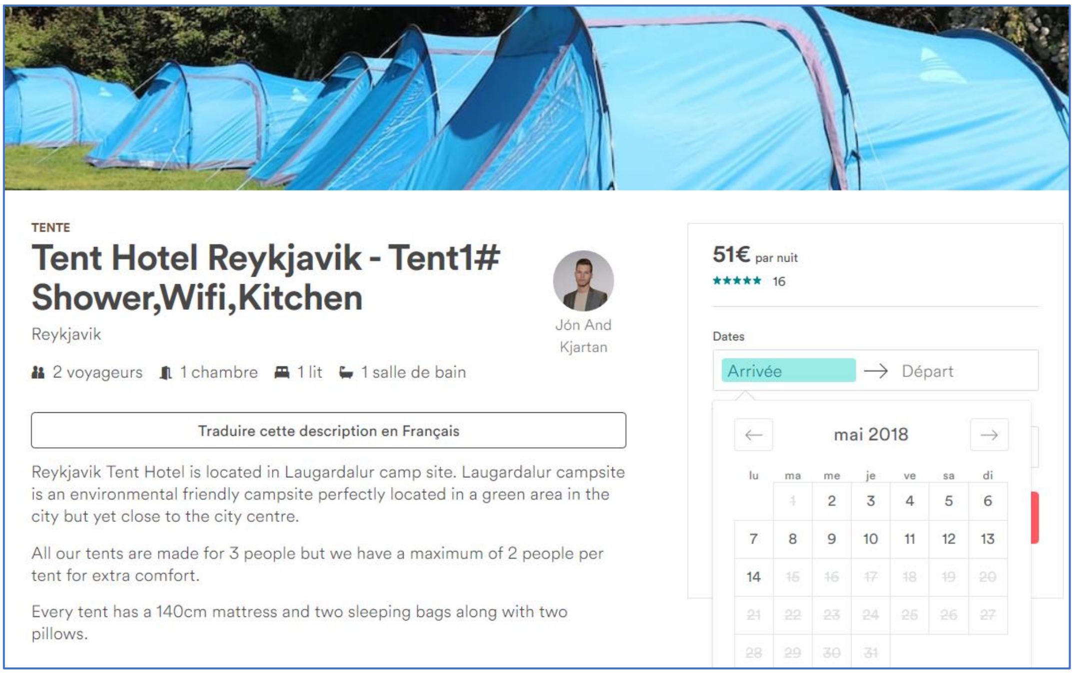


FIGURE 15 – TENT FOR RENT ON AIRBNB

[11] See https://www.airbnb.fr/rooms/13844575?location=Reykjavík (last checked: Febrbuary 2018).

Prices

The average price for a night in an Airbnb accommodation amounts to **148€**. 60% of the listing are in a price range from 50 to 150 € a night.

TABLE 9 – DESCRIPTIVE STATISTICS OF THE PRICE OF AIRBNB LISTINGS (2018)

	Minimum	Maximum	Mean	Standard deviation
Price (for a night)	0	2712	147,99	133,211

TABLE 10 – PRICE RANGE (2018)

Price (€)	2018	%
(0,50]	283	6,8
(50,100]	1418	34,2
(100,150]	1147	27,6
(150,200]	620	14,9
(200,300]	423	10,2
(300,400]	123	3,0
(400,500]	60	1,4
(500,600]	23	0,6
(600,700]	14	0,3
(700,800]	12	0,3
(800,1000]	14	0,3
(1000,2000]	13	0,3

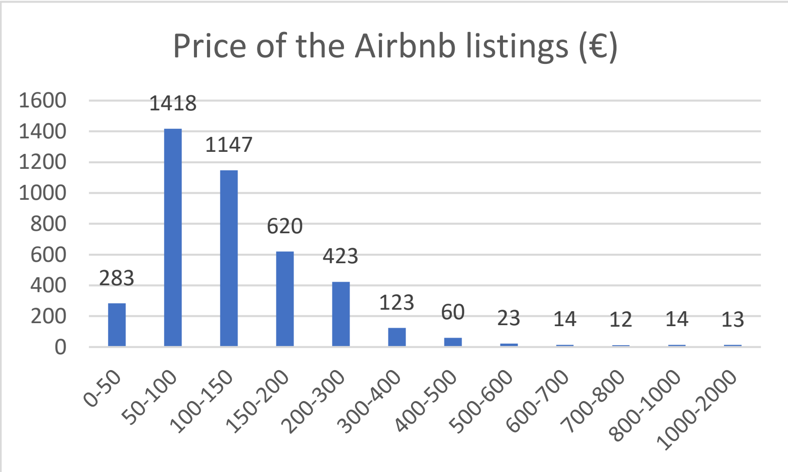


FIGURE 16 – PRICE RANGE

The following map displays the average price per night in an Airbnb accommodation, depending on the postal code area. The price of each listing has been divided by the number or rooms available in each listing to avoid bias due to the fact that bigger accommodation is obviously more expansive than smaller ones. It shows that (apart from Álftanes, which is a pretty exceptional case and only gathers 14 listings), there is a clear centre/periphery pattern: the more central an Airbnb accommodation is, the more money the owner can ask for it. The average price for a night in an Airbnb apartment in 101 amounts to 155€ while the same service makes around 80€ in Mosfellsbær or in Kópavogur.

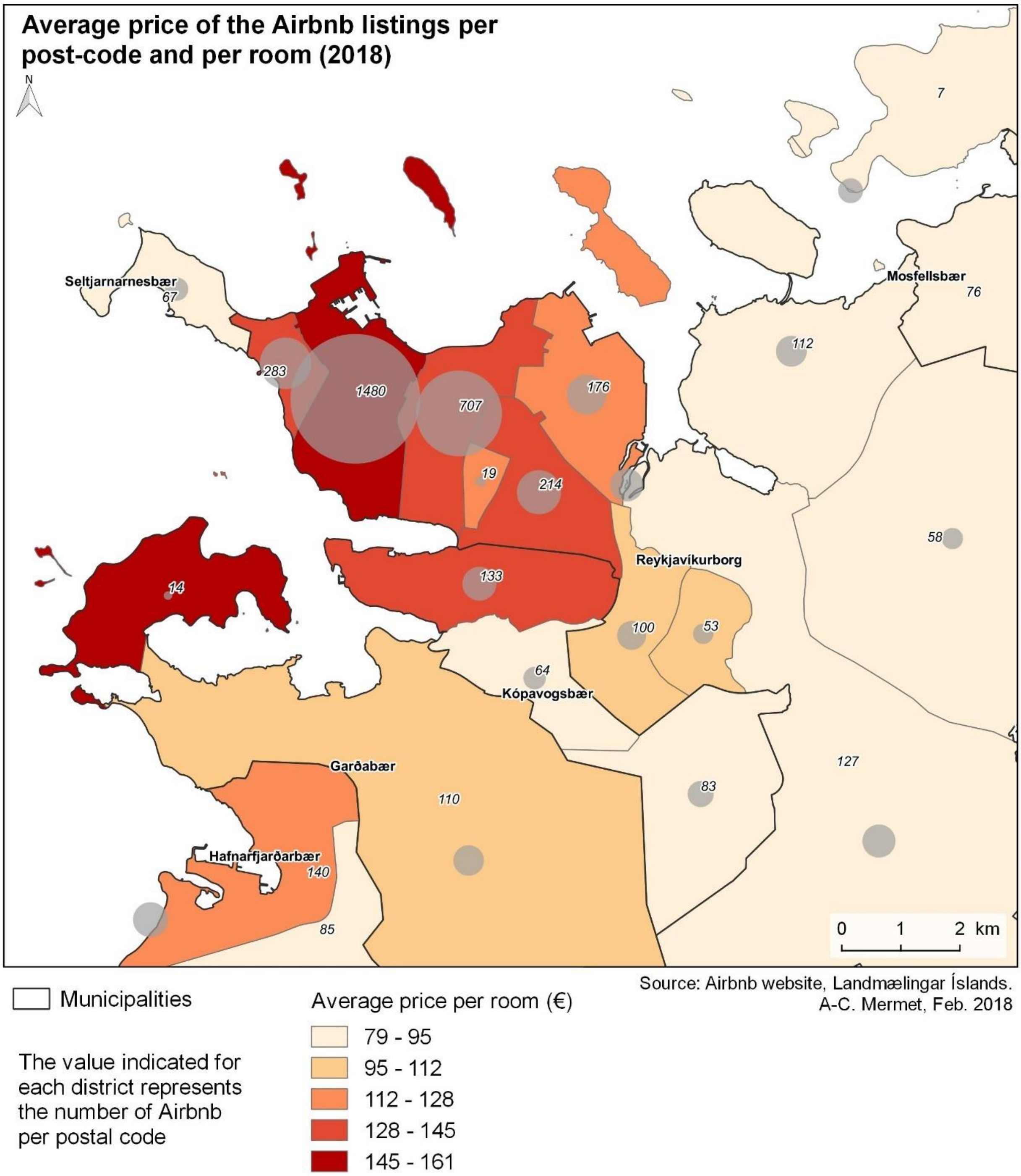


FIGURE 17 – THE AIRBNB PRICES IN THE REYKJAVÍK CAPITAL AREA (2018)

Hosting capacity

Most of the listings can accommodate 2 and 4 hosts (average: 4 guests per listing).

TABLE 11 – CAPACITY OF THE AIRBNB ACCOMMODATION, DESCRIPTIVE STATISTICS

	N	Minimum	Maximum	Mean	Standard deviation
Capacity	4154	1	18	3,99	2,214

The variable "Capacity" can give an account of the overall hosting capacity of the Airbnb supply. Provided that all the listings are activated at the same time, the Airbnb supply could accommodate **16592 guests per night**. This is of course a theoretical assessment since it is highly likely that all the listings are not available all day of the year. According to the Airdna website, around 40% of the listing would be available all year round. *A minima*, the Airbnb supply can therefore hosts around **6500 guests per night all year round**.

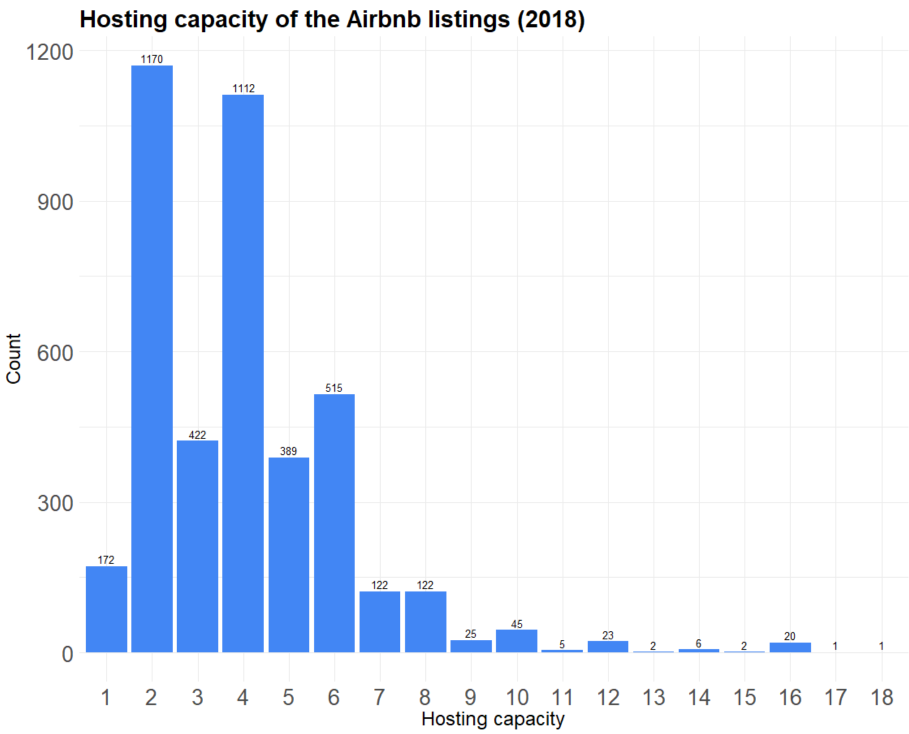


FIGURE 18 – NUMBER OF GUESTS PER AIRBNB LISTING (2018)

1.3|EVOLUTION OF THE AIRBNB SUPPLY (2016-2018)

This section aims to compare the 3 datasets of the Airbnb supply, from 2016 to 2018 to identify the main evolutions of this market.

Evolution of the number of listings

TABLE 12: EVOUTION OF THE NUMBER OF AIRBNB LISTINGS (2016-2018)

Date	Number of listings	Increase (%)
January 2016	2032	NA
January 2017	3528	73,6
January 2018	4154	17,7

According to the datasets I have extracted from 2016, **the supply of Airbnb has doubled in the span of only two years**. It is nevertheless worth noting that **the increase rate is significantly less important between 2017 and 2018 than between 2016 and 2017**, which may indicate an **approaching saturation of the market.**

Evolution of the type of accommodation on the market

As show by Table 13, the share of entire homes among the total Airbnb supply has remained relatively stable over these two years. Similarly, the structure of the distribution of the listings per number of rooms have not changed much over the two last years.

TABLE 13 – EVOLUTION OF THE SHARE OF ENTIRE HOME AMONG THE AIRBNB SUPPLY (2016-2018)

	Entire home	Private room	Shared room
2016	75	23	2
2017	75	23	2
2018	77	21	2

TABLE 14 – EVOLUTION OF THE NUMBER OF ROOMS IN THE AIRBNB SUPPLY (2016-18)

Number of rooms	2016	2017	2018
0	101	176	233
1	1031	1751	1977
2	499	866	1019
3	267	469	585
4	102	199	257
5	18	48	58
6	6	15	15
7	2	1	4
8	1	1	2
9	0	1	2
10	0	1	1
15	0	0	1

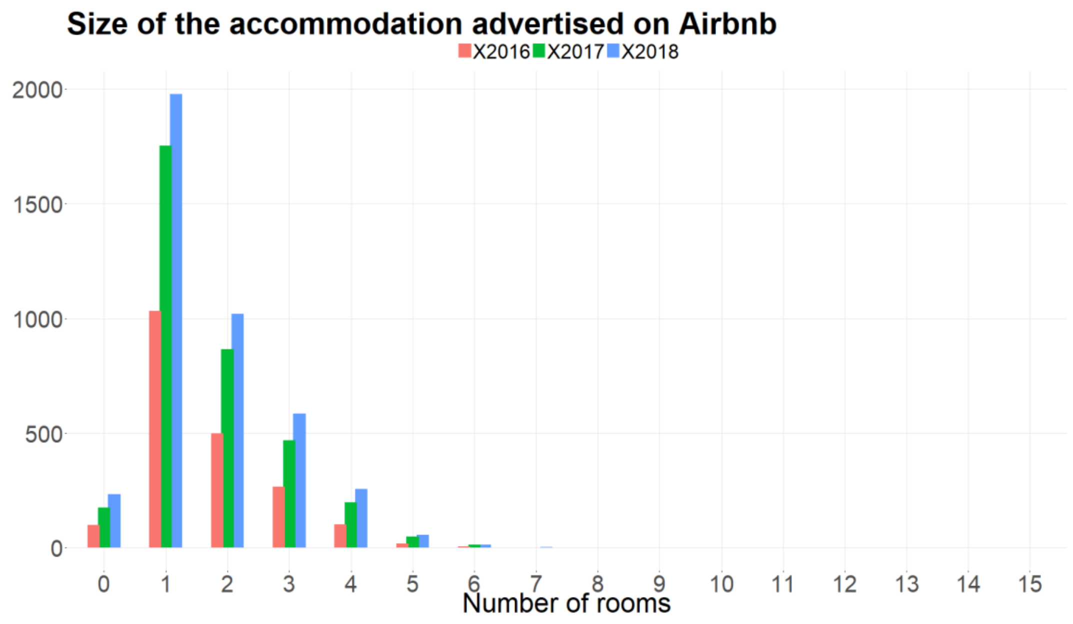


FIGURE 19 – NUMBER OF ROOMS AVAILABLE IN THE ACCOMMODATION ADVERTISED ON AIRBNB (2016-18)

As

Table 14 and Figure 20 show, **most of the Airbnb listings have only 1 room** which might be biased by the private and shared room advertised on the websites which may inflate this segment of the distribution.

Here is the same analysis but only for the listings advertised as 'entire home' on the website:

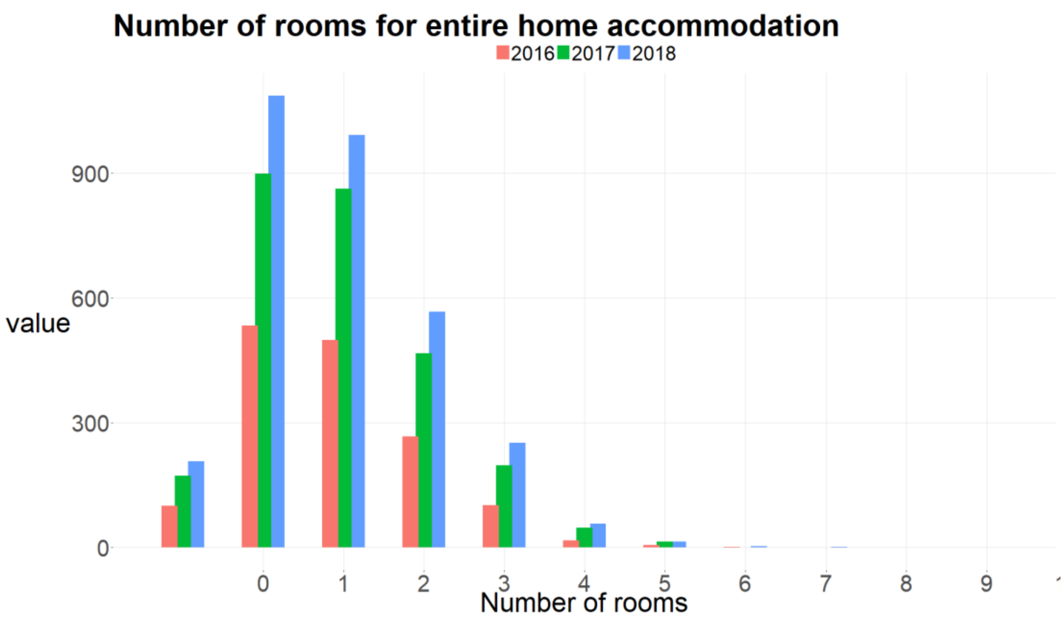


FIGURE 20 – NUMBER OF ROOMS AVAILABLE IN THE ACCOMMODATION ADVERTISED ON AIRBNB, ENTIRE HOME ONLY (2016-18)

It confirms that most of the supply concerns small housing (studio / one-bedroom apartments), which are also the most look-after for young people entering the housing market.

Evolution of the prices

The prices of the Airbnb have significantly increased between 2016 and 2017 and have remained stable over the last year. The distribution of the prices has remained stable.

TABLE 15 – EVOLUTION OF THE AVERAGE PRICE ON AIRBNB (2016-2018), IN €

	2016	2017	2018
Minimum	16	12	0
Maximum	2687	3091	2712
Median	98	115	118
Mean	**117**	**149**	**148**

FIGURE 21 – EVOLUTION OF THE PRICES OF THE AIRBNB LISTINGS (2016-2018)

Evolution of the location of the listings (2016-2018): the Airbnb encroaching 'frontier'

The following maps display the geographical expansion of Airbnb the Reykjavík capital area and more specifically in the central districts of the city. Over these two years, the Airbnb supply has advanced in the city following three main spatio-temporal patterns:

(1) **The phenomenon began to set up in the areas which already gathered most of the tourism accommodation supply** (hotels, hostels, guesthouses) before the development of peer-to-peer accommodation (Kvosin, Laugavegur – up to Barontígur – and the surrounding streets) – see Figure 22.

(2) In a second and third phase, **the Airbnb development escalates in the same areas, probably until the saturation of all the potential real estate opportunities**.

(3) Alongside, **there is a "contagious diffusion" of the neighboring areas** (Austurbær as a whole, the eastern part of Vesturbær over a first phase, Hlemmur, Hlíðar and the remaining streets of Vesturbær in a second phase).

TABLE 16 – MAIN FEATURES OF THE DIFFUSION OF AIRBNB IN REYKJAVÍK (2016-18)

	"Hot spots"	Secondary spots	Other significant spots
2016	• The area located between Hverfisgata, Frakkastigur, Hallgrimskikja and Snorrabraut (including Grettisgata and Njálsgata) • Þingholt as a whole, especially: Baldursgata, Spítalastígur, Óðinsgata, Bjargarstígur, Bragagata, Hellusund, Skálholtsstígur, Bergstaðastræti • Very eastern part of Vesturbær: East of Ránargata, Bárugata and Öldugata	• Other streets of Austurbær • Eastern part of Vesturbær (+ the streets close to Vesturbæjarlaug): Hávallagata, Holtsgata, Drafnarstígur, Öldugata, Ásvallagata, Ránargata, Hofsvallagata, Bræðraborgarstígur, Vesturgata, Framnesvegur, Vesturvallagata, Bárugata, Ásvallagata, Ánanaust, Brekkustígur, Unnarstígur, Marargata, Sólvallagata, Seljavegur	• Hlemmur • Hlíðar • The other streets of Vesturbær
2017	**Intensification of the Airbnb expansion in the three areas previously** identified + • All the streets of Austurbær • All the streets of the eastern part of Vesturbær identified as secondary spots for 2016	• Hlemmur • Hlíðar • The other streets of Vesturbær	• Laugardalur
2018	**Intensification of the Airbnb expansion in all the streets of Austurbær and of Eastern Vesturbær** + • Hlemmur	Intensification of the progression in Hlíðar and in the other streets of Vesturbær • Around Laugardalslaug	• Laugardalur

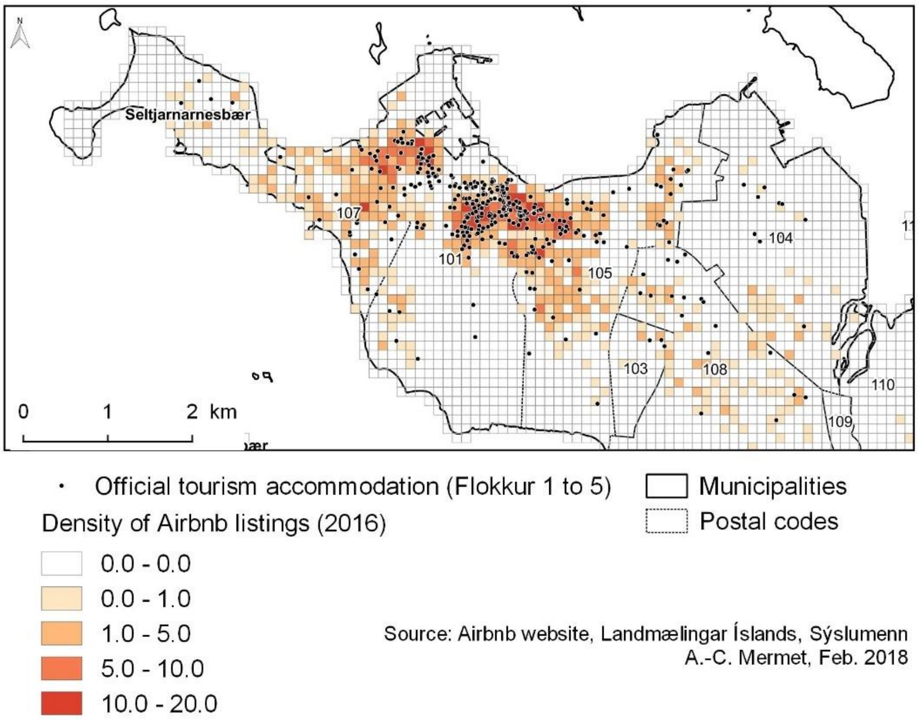


FIGURE 22 – THE AIRBNB SUPPLY IN 2016 COMPARED TO CLASSIC TOURISM ACCOMMODATION

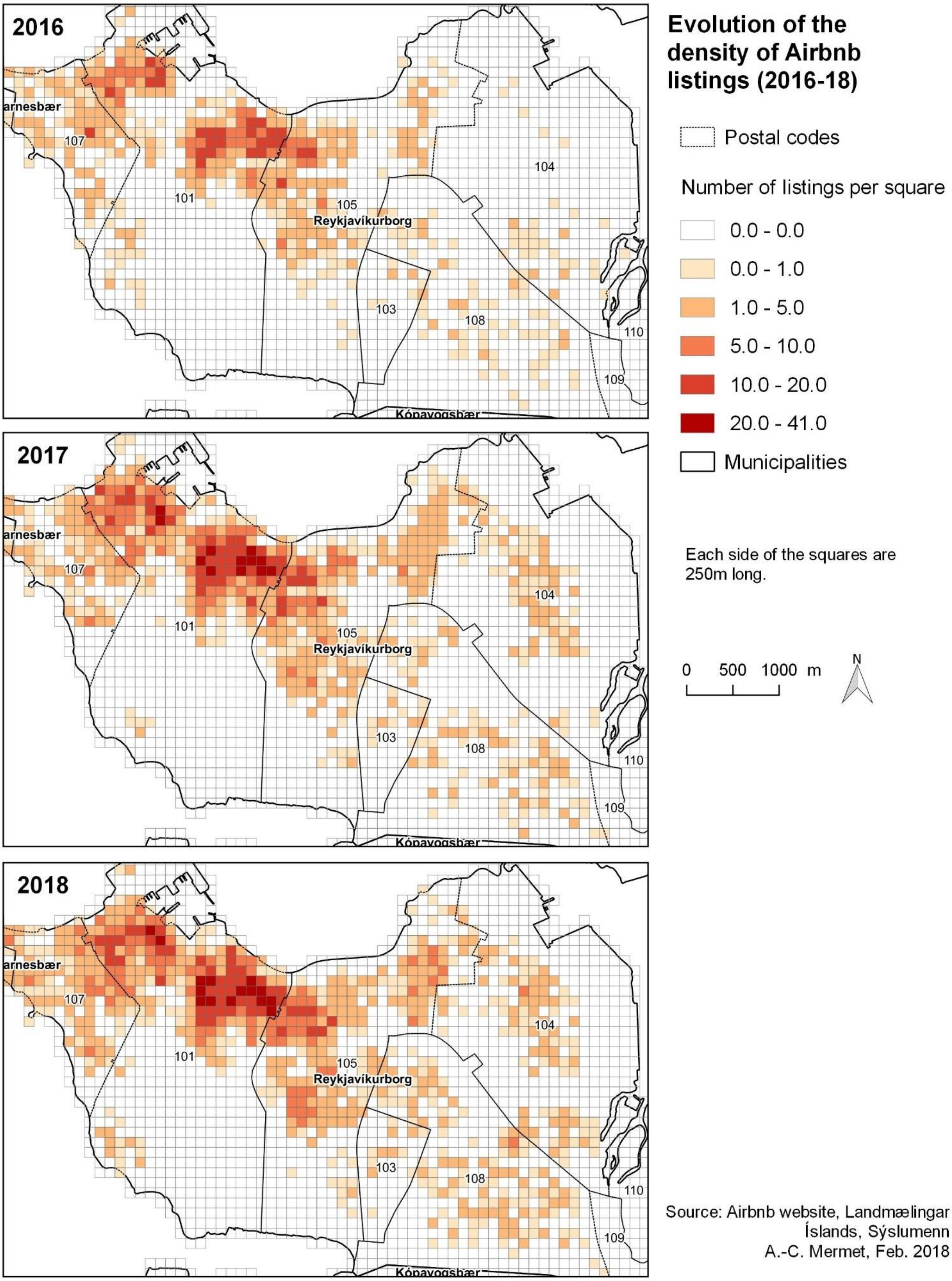


FIGURE 23 – THE ADVANCE OF AIRBNB, GRID MAP (2016-18)

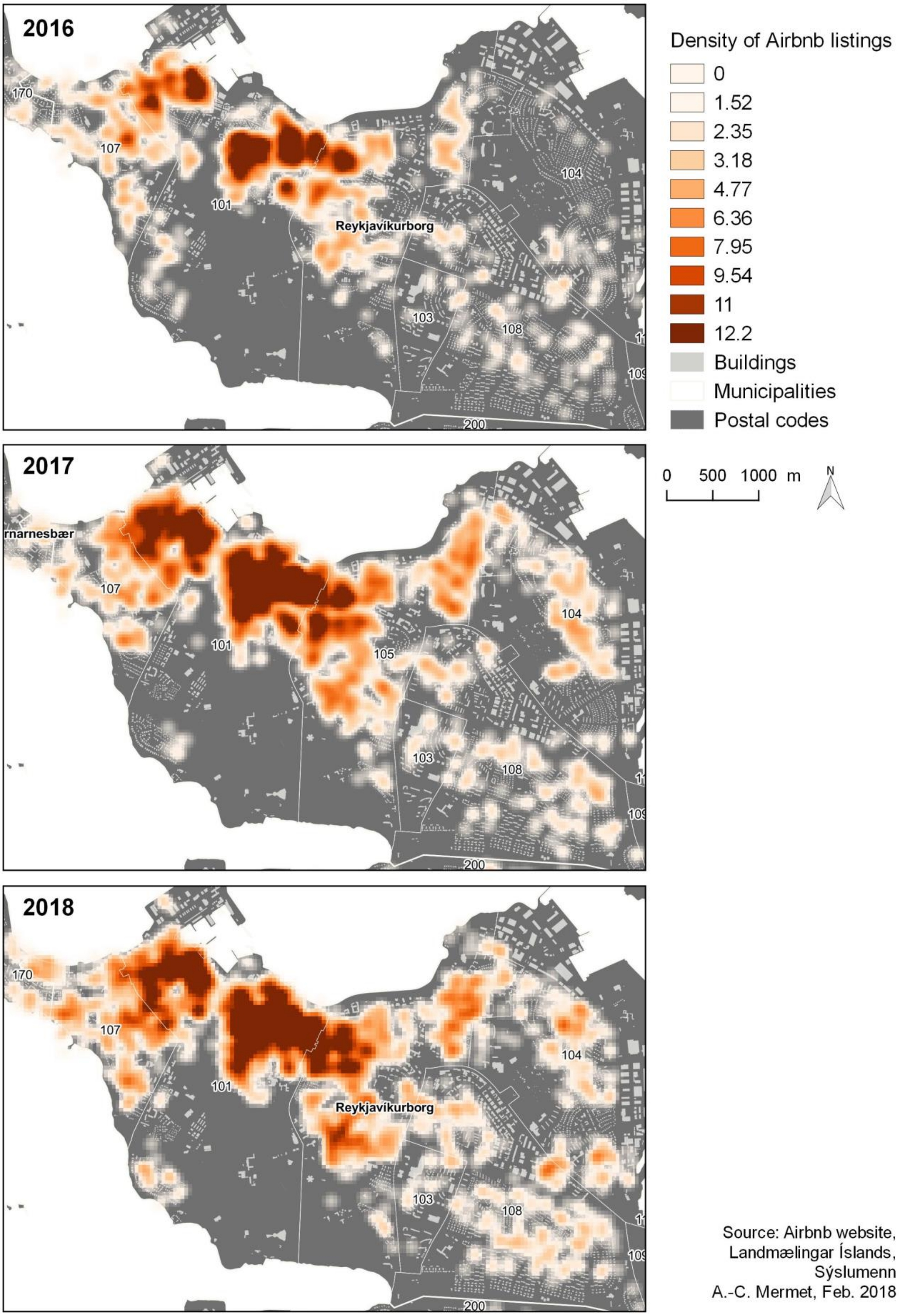


FIGURE 24 – THE ADVANCE OF AIRBNB, HEATMAP (2016-18)

1.4 | TOWARDS AN ASSESSMENT OF THE NUMBER OF ILLEGAL AIRBNB ACCOMMODATION

(updated in April 2019)

The fact that the geographical coordinates provided by the Airbnb datasets are not 100% accurate makes it impossible to precisely identify the illegal listings. Nevertheless, comparing the 2018 version of the database with the data publicly available on **Sýslumenn** website allows me to give an account of the Airbnb listings which have neither an official license to operate as a full-time tourism accommodation (from Flokkur 1 to Flokkur 5[12]) nor a permit to operate as a non-professional tourism accommodation (less than 90 nights a year).

TABLE 17 – COMPARISON BETWEEN THE NUMBER OF AIRBNB ACCOMMODATION AND THE NUMBER OF LICENSES/PERMITS OFFICIALLY GRANTED IN THE CITY OF REYKJAVIK (SUBURBAN MUNICIPALITIES ARE NOT INCLUDED)

Number of Airbnb listings	**2657**
Number of official license to operate as a professional tourism accommodation	567
Flokkur 1	*159*
Flokkur 2	*270*
Flokkur 3	*46*
Flokkur 4	*33*
Flokkur 5	*59*
Number of 'Heimagisting' permits	551
Professional tourism accommodation licenses2 + 'Heimagisting' permit	**1118**

According to Aidna data, in April 2019, there were 2657 active listings in the city of Reykjavík.

The total number of licenses granted for the municipality of Reykjavík, including the "Flokkur" licenses and the non-professional permits amounts to **1118, which represents only 42% of the Airbnb supply. As a consequence, one can assess that 58% of the Airbnb listings are illegal.**

[12] As a reminder :

- Flokkur 1: Homestay
- Flokkur 2: Accommodation without restaurant
- Flokkur 3: Overnight catering, excluding alcoholic beverages
- Flokkur 4: Accommodation with alcoholic beverages

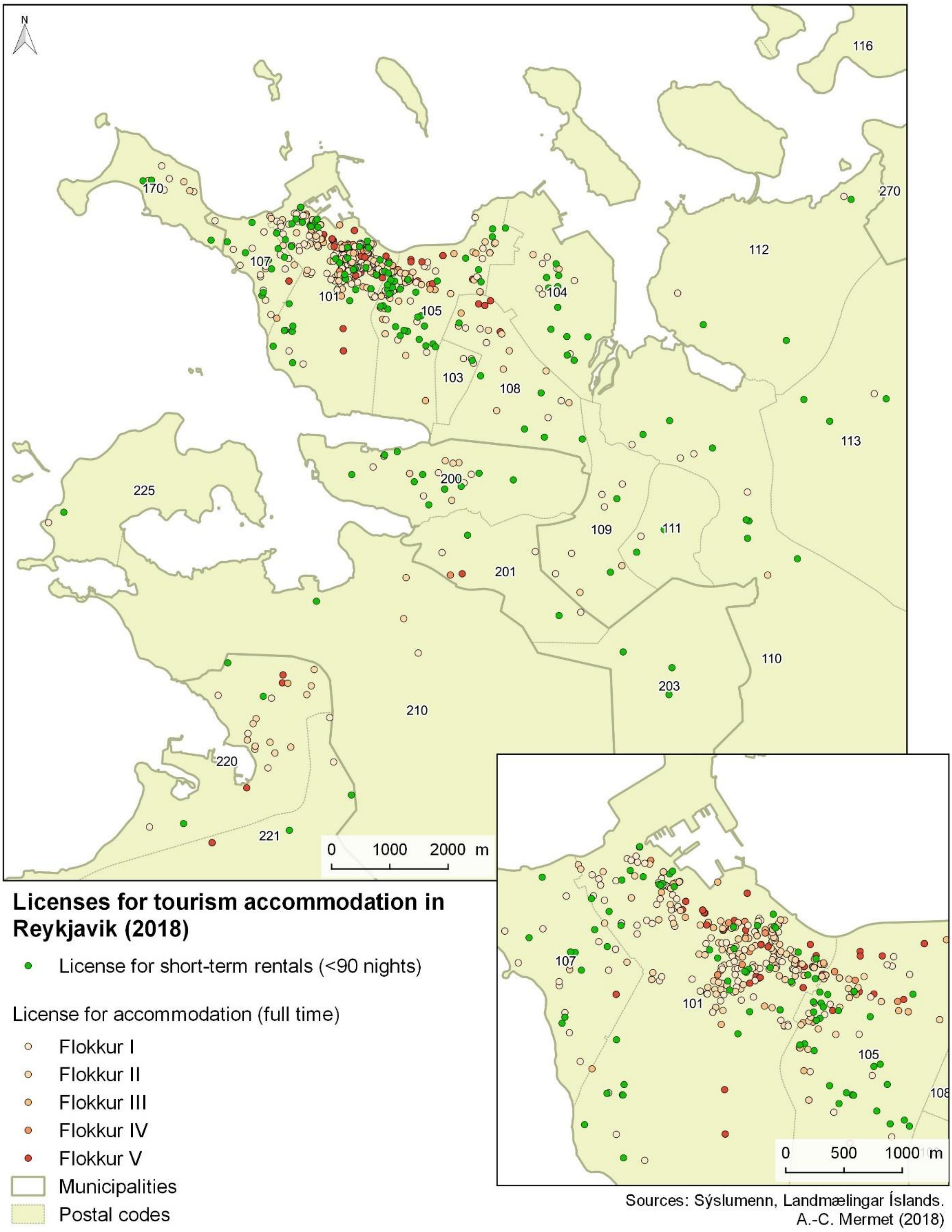


FIGURE 25 – LICENSES FOR TOURISM ACCOMMODATION IN THE REYKJAVÍK CAPITAL AREA (2018)

PART 2

Airbnb, the locals and the housing market

2.1 | INTRODUCTION: WHY IS IT IMPORTANT TO KNOW WHO THE AIRBNB HOSTS ARE?

The rise of digital economy has completely transformed the sector of tourism accommodation, mainly owing to the success of big American companies such as Airbnb. This has led to an unprecedented boom of short-term rentals in tourism cities such as Reykjavík. Yet, the social and spatial impacts of this sector of the "sharing economy" is currently still poorly understood, which turns out to be a major challenge for such cities, for several reasons: legal, tax, safety issues, but also the question of **its impact on local housing markets**. This issue is particularly crucial in the Reykjavík capital area because the situation of the housing market is currently highly tense, both for people wanting to buy (Arion Banki, 2017) or to rent (Fontaine, 2018). **It raises the question of the role of Airbnb and, more generally, of tourism rentals in the current shortage of affordable housing in Reykjavík.**

Determining the actual socio-spatial impact of this new intertwining between the housing market and tourism accommodation is the subject of a heated political and academic debate. On the one hand, companies leading this market such as Airbnb defend the idea according to which it provides local people with the opportunity to earn some supplemental income, thus helping them to pay their rent or to pay off their mortgage (Airbnb, 2017) (see Figure 26), and therefore, to ensure their own situation on the housing market (first in a post-crisis context, and then in a context of shortage of housing and dramatic soaring of real estate prices, both for renters and homeowners).

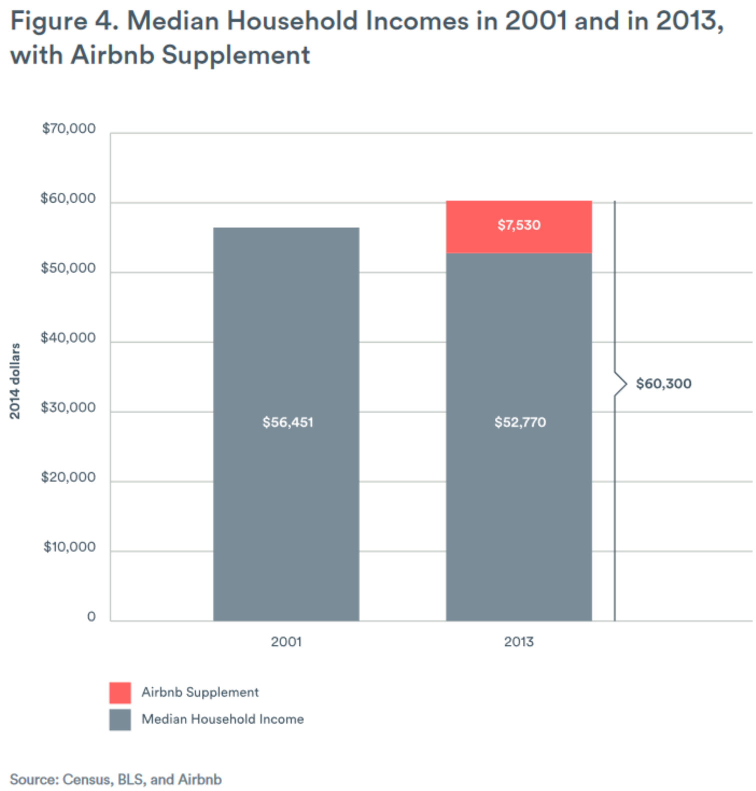


FIGURE 26 – REPORT PUBLISHED BY AIRBNB, SUGGESTING THAT AIRBNB HELPS TO "COMBAT MIDDLE CLASS STATGNATION".

Source: http://www.cedarcityutah.com/wp-content/uploads/2015/07/MiddleClassReport-MT-061915_r1.pdf (last checked: January 2019).

Yet, on the other hand, some scholars and urban activists suggest that the rapid expansion of short-term rentals is a significant factor exacerbating, indeed triggering, those tensions on local housing markets in tourism cities. Short-term rentals can indeed disrupt real estate markets: the fact that Airbnb is 'only' an intermediation platform means that the American company does not develop its own physical supply but unfolds on a pre-existing housing stock. Therefore, short-term rentals largely overlap the residential housing stock initially dedicated to local inhabitants. Several papers have indeed demonstrated that, in tourism cities such as Barcelona or Palma de Majorca, Airbnb has significantly increased the pressure on local real estate markets, fuelling gentrification trends (Cócola Gant, 2016; Sans & Quaglieri, 2016; Yrigoy, 2016).

Nevertheless, both arguments suffer from a significant lack of empirical evidence. Thus, the actual impact of Airbnb on local communities therefore still remains unclear.

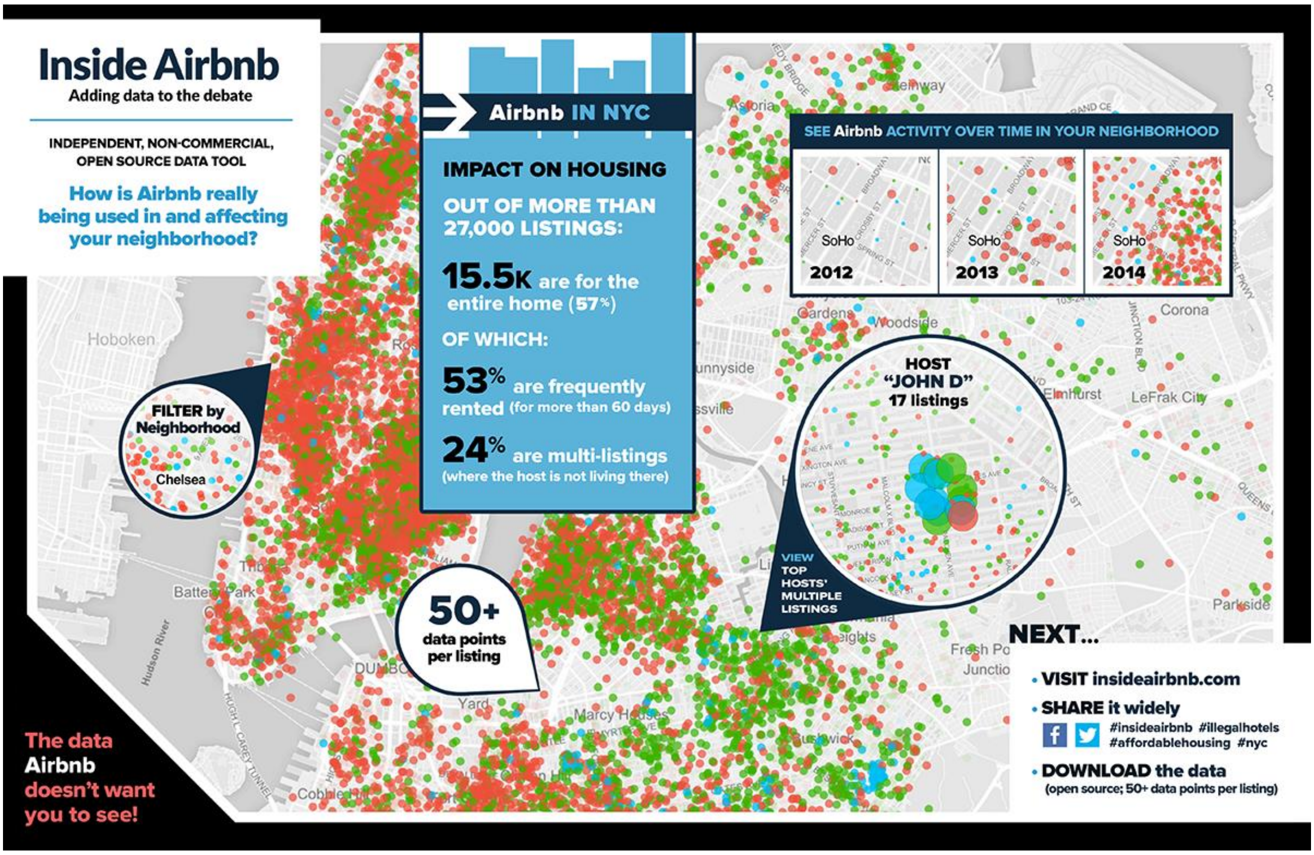


FIGURE 27 – THE INSIDE AIRBNB PROJECT

Source: http://insideairbnb.com/about.html (last checked: January 2019)

Actually, the fact that Airbnb is a form of collaborative consumption, whose most ground-breaking feature is to put individual people at the heart of its business model, is the main cornerstone of the problem. Indeed, **Airbnb puts local people both in the position of being able to take advantage of this new opportunity if they can, and of suffering from its consequences in their own "housing trajectories"**. This makes it very delicate to give an objective and satisfying account of the real impact of Airbnb on the situation of local people on the housing market.

Figuring out who are the Airbnb hosts is nevertheless absolutely necessary to assess whether the platform tends to smooth or to exacerbate social inequalities. Therefore, this report aims shed some light on the following questions:

(1) **Who are the Airbnb hosts in terms of level of income?** Are they, as argued by Airbnb, mainly middle-class households undergoing difficulties to make ends meet? To what extent is Airbnb helping local people to ensure their own financial situation, and, thus, to stay put? And, at the other end of the spectrum, to what extent is Airbnb seized as an investment opportunity for people who have the means to invest in this market? It is therefore necessary to identify the socio-demographic and employment profiles of the hosts to assess whether Airbnb benefits the wealthiest segments of the population or whether it actually benefits middle class households (main purpose of section 2).

(2) **What are the reasons that push local people on this market, and is it possible to draw up different types of hosts depending on the impact of their own strategies on the global housing market, in order to assess what part of the Airbnb listings is actually having a negative impact on the housing market?** An interview campaign with a sample of Airbnb hosts has been held in order to gain a deeper insight on the variegated strategies that are implemented by the Airbnb hosts and identify different paradigmatic types of hosts (main purpose of section 3).

(3) **To what extent is a real estate investment targeting the short-term rental market more profitable than a one targeting the more usual long-term rental market?** To answer this question, it is necessary to assess the 'rent gap' (Smith, 1979) between short-term and long-term rental profitability and to explore the consequences of this rent gap for local people who are not Airbnb hosts on the housing market, and especially what part of the population is suffering the most from the expansion of short-term rentals at the expense of long-term rentals (main purpose of section 4).

2.2 | WHO ARE THE AIRBNB HOSTS IN REYKJAVÍK? A QUANTITATIVE OVERVIEW

This section aims to answer the first question presented in introduction: **Who are the Airbnb hosts in terms of level of income? Are they, as argued by Airbnb, mainly middle-class households undergoing difficulties to make ends meet?** To what extent is Airbnb helping local people to stay put and to ensure their own financial situation? And, at the other end of the spectrum, to what extent is Airbnb seized as an investment opportunity for people who have the means to invest in this market?

Methods: the Airbnb hosts database

How to get data on Airbnb hosts?

A quantitative strategy aiming at getting a general overview of who the Airbnb host are, from the profiles of the Airbnb hosts on the online platform, was implemented.

All the members of the Airbnb community, and especially the hosts, are encouraged to write a short self-presentation, available on the website (https://www.airbnb.fr/users/show/ + host ID number[13]). It is therefore possible to apply the same scraping strategy as the one implemented for the database of the Airbnb listings in Reykjavík (see report n°1) to **get information not on the listings but on the hosts behind**.

This database has been compiled in **January 2018** through the scraping and crawling of the Airbnb platform (software used: R, Rvest package[14]) and is provided in the deliverables attached to the project. It gathers information about **2918 hosts** in the Reykjavík area, and includes their ID on the platform, since when they are members of the Airbnb community, the number of listings they advertise (which allows me to measure the magnitude of the "multi-listing host" phenomenon – see the dedicated section, p. 50) but also, and most importantly, their presentation text (see Figure 28). While this information is not structured on this page (and, therefore, its availably entirely depends on what information the host has decided to share with the platform), it turned out to provide insightful information regarding the general profile of the hosts (age, family status, job, transnational experience…) but also sometimes regarding the reasons that pushed them on this market. It is to my knowledge the first existing database displaying data on the Airbnb hosts and not on listings.

Available variables

The collected data are structured according to 4 variables:

[13] See for example: https://fr.airbnb.com/users/show/38353978 (last checked: January 2019).
[14] See: https://cran.r-project.org/web/packages/rvest/README.html (last checked: January 2019).

TABLE 18 – STRUCTURED VARIABLES IN THE AIRBNB HOSTS DATABASE

Structured available information	Variable	Number of data available	% of data available
	Host ID	2918	100
	Member since…	2577	88,3
	Number of listings	2577	88,3
	Presentation	*1396*	*47,8*

Coding and analysing unstructured data

The main interest of the database lies in the information available in the presentation text. The standard host presentation indeed very often includes recurrent information on host's age, family status or job (Figure 28).

FIGURE 28 – SCREENSHOT OF A TYPICAL HOST PRESENTATION TEXT PROVIDING AGE, FAMILY STATUS AND JOB INFORMATION

In order to fully make use of these unstructured variables, I have used a qualitative data analysis package embedded in R (RQDA Package[15]). Each information regarding the host's age, family status or job has been coded in RQDA, to be able to eventually give a statistical account of this data. Due to the unstructured nature of the information provided in the presentation text written by each Airbnb host, these new variables are less complete than the structured ones:

- 1522 hosts (52%) have not written any presentation
- 320 presentation text were not usable (11%) due to errors occurring during the scraping/crawling process

The analysis regarding these new variables is therefore based on 1202 presentation texts (41% of the hosts). Nevertheless, the quantity of information is still big enough to be considered as a statistical representative sample according to the central limit theorem.

[15] See: http://rqda.r-forge.r-project.org/ (last checked: January 2019).

TABLE 19 – UNSTRUCTURED VARIABLES IN THE AIRBNB HOSTS DATABASE

Untructured available information	Variable	Number of data available	% of data available
	Age	165	13,5%
	Family status	469	39%
	Job	644	53,6%
	Transnational experience	298	24,8%
	Why do they participate in this market?	99	8,2%
	Total	1202	100%

Age, family status and experience of the Airbnb hosts in Reykjavík

Age

The Airbnb host population is fairly young. **The median age amounts to 35 years old** and **most of the hosts are between 25 and 35 years old**, with a significant gap after 35 years old. Thus, there are two categories of Airbnb hosts.

(1) Young people, who are probably just entering the job market as well as the housing market and founding a family. They are therefore quite likely to have to have high expenses for their housing and family.

(2) Older people, who are more likely to have a more stable social situation, and whose situation on the housing is probably far more secure.

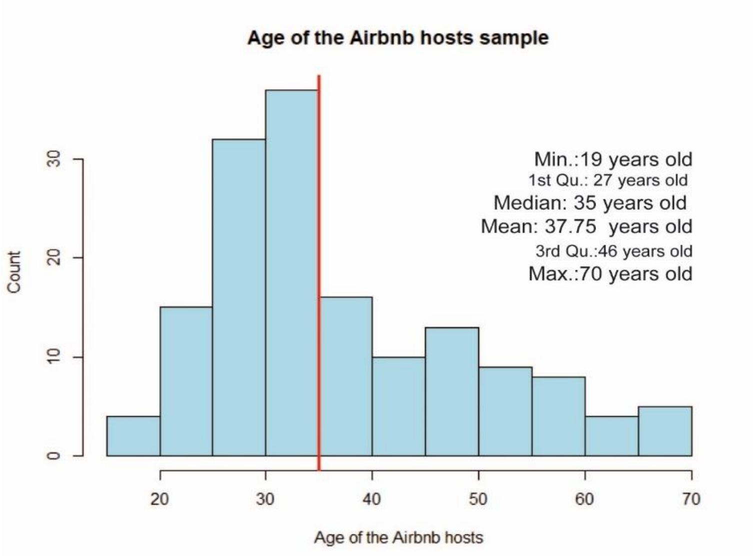


FIGURE 29 – AGE OF THE AIRBNB

Family status

Consistently with the above-mentioned hypothesis, most of the Airbnb who disclosed their family status in their introduction text have a **family** (80%), 8% are couple and 7% are single (including single parents).

	Count	%
Couple	30	13%
Family	196	80%
Single	18	7%

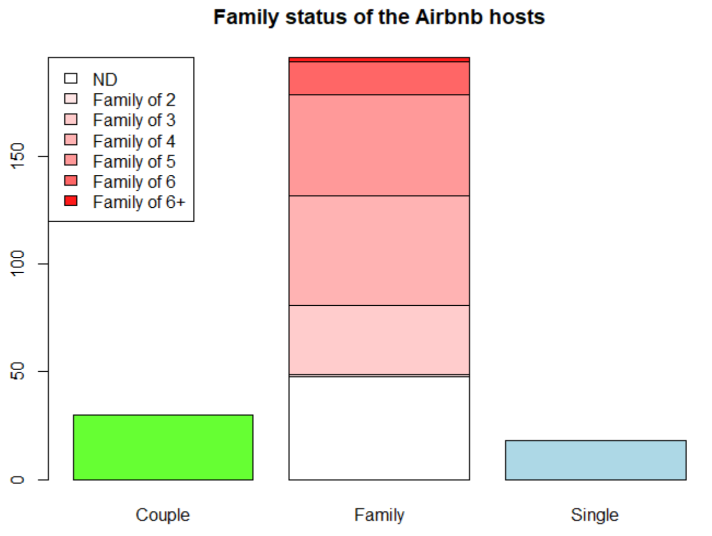


FIGURE 30 – FAMILY STATUS OF THE AIRBNB HOSTS

Experience of the hosts on the platform

Most of the hosts have joined the Airbnb community pretty recently. What is interesting on this barplot is that after having followed a steady growth from 2009 (Airbnb was founded in 2008) to 2016, the growth of arrival of new hosts has significantly slowed down in 2017, indicating **a probable saturation of the market**.

(Data having been extracted in January 2018, data for 2018 on this graph only takes into account the first month of the year).

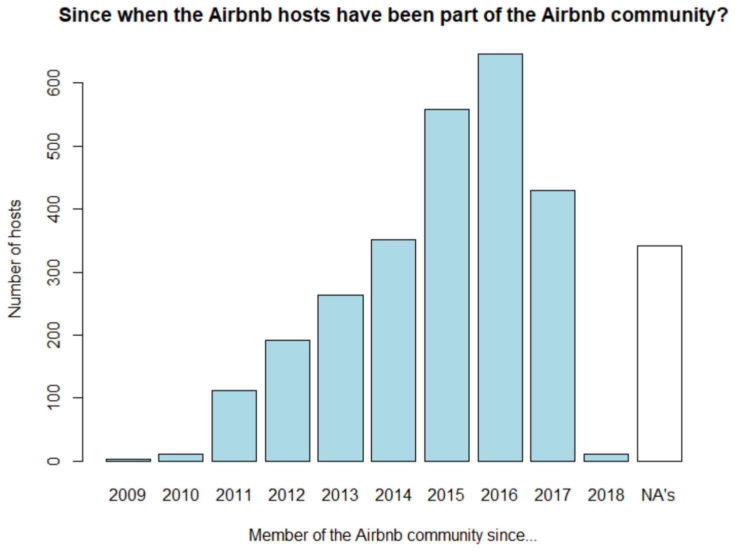


FIGURE 31 – EXPERIENCE OF THE AIRBNB HOSTS

A market that mostly benefits to highly qualified individuals

This section aims to disentangle the Airbnb **hosts' employment profile**.

As we have seen, Airbnb narratives invariably stress the fact that hosts are mostly part of the middle class and that the platform provides them with an opportunity to "combat middle class stagnation"(Sperling, 2015)[16] in a general context of austerity. The company also claims that "Airbnb helps middle class families to afford their homes" (Airbnb & David Binder Research, 2016). Nevertheless, several journalists and researchers have cast doubt on the reliability and the trustworthiness of the very few data released by Airbnb on the social profile of the hosts[17].

The actual social impact of Airbnb thus remains unclear. Does Airbnb help to reduce income inequalities or, on the contrary, does it exacerbate them? Does it actually benefit the most financially unsecure segments of the population (*i.e.* students, unemployed, self-employed, and employees with a low level of qualification) or does it increase income inequalities by providing already well-off households with an opportunity to earn more money? Having a look at the Airbnb hosts' profession is probably the most insightful indicator to assess to what social categories of the population Airbnb is the most profitable. Indeed, the standard of living and the purchase power of households is strongly correlated to the type and level of qualification of the job they have. One can legitimately assume that the more qualified the job practiced by the host, the more secure her/his financial situation.

Overview on the methodology

First, all the portions of the presentation texts that included the hosts' jobs have been coded and this overall information has thereafter been transferred into a database compiling all the jobs that were mentioned, which provides an already interesting raw material (see Figure 33 and Figure 34).

Nevertheless, to be the subject of a statistical analysis, this information needed to be coded according to a rigorous classification in order to assess the proportion of low, middle and high level of income households among this population. To this end, data have been coded according to a job classification (see Figure 32) largely inspired by the National Statistics Socio-economic classification (NS-SEC), used by the UK official statistics (Rose & Pevalin, 2001) and secondary by the "Socio-professional categories" used by the French Institute of statistics[18]. The main interest of the NS-SEC hierarchical classification lies in the fact that its first level of classification, which firstly distinguishes between employers, self-employed, employees and "excluded", suits very well to the objectives of this section. Moreover, it allows us to measure the extent to which Airbnb is related to new forms of self-employed jobs which are so strongly spotlighted in this "platform capitalism" (Srnicek, 2017) or "crowd-based capitalism" (Sundararajan, 2016). The French classification is a bit thinner and more detailed in terms of job classification. I have merged these two classifications to code the Airbnb hosts' job according to the hierarchical categories presented

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[16] See also: https://www.airbnbcitizen.com/report-the-impact-of-airbnb-on-middle-class-income-stagnation/ (last checked: January 2019).
[17] See this paper for instance: https://www.theguardian.com/technology/2016/jul/27/airbnb-panel-democratic-national-convention-survey (last checked: January 2019).
[18] See: https://www.insee.fr/fr/information/2406153 (last checked: January 2019).

in Figure 32. **The classification used for this study firstly includes 3 main categories (employers, self-employed workers, employees and people excluded from the work market).**

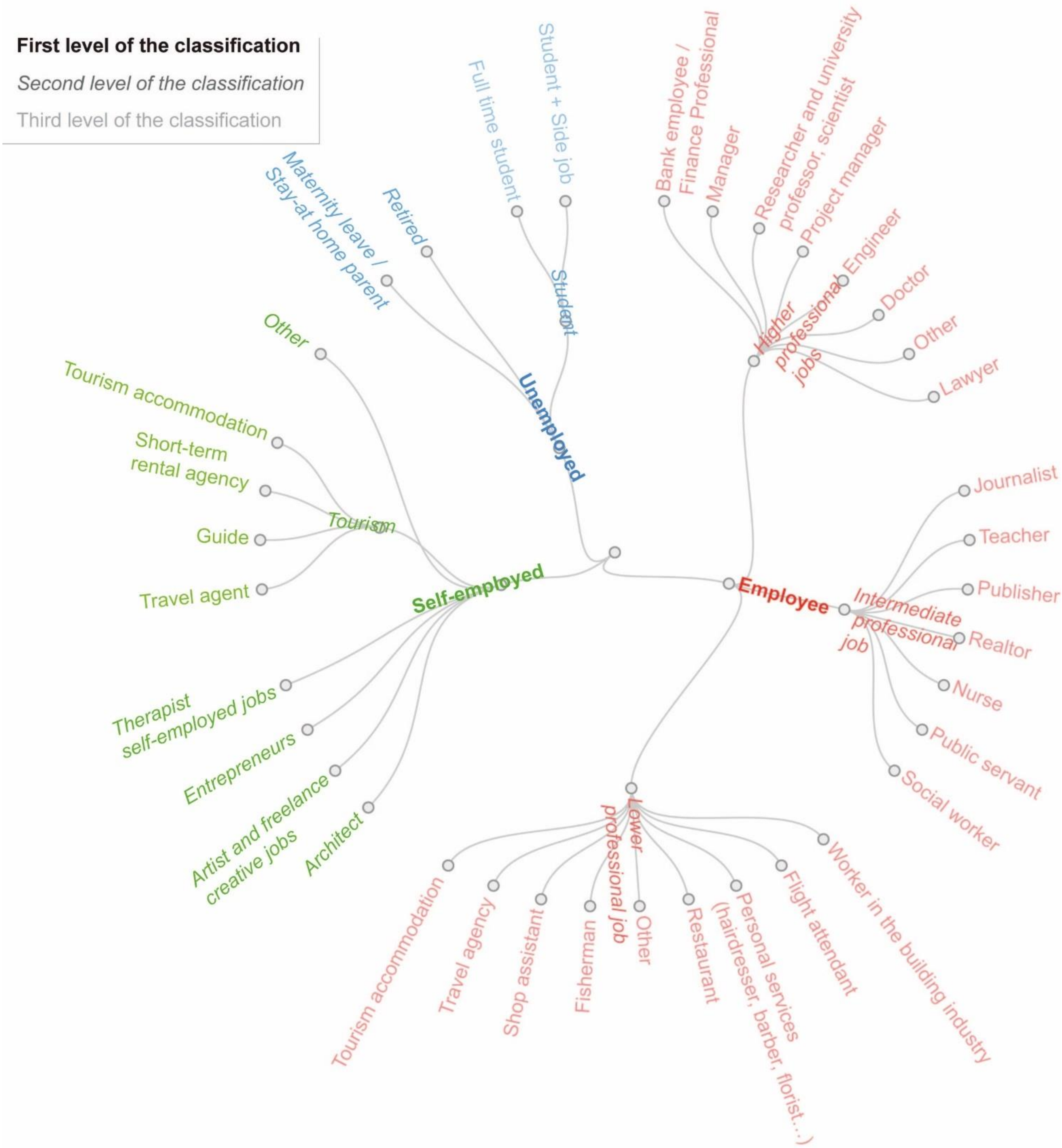


FIGURE 32 – CLASSIFICATION OF JOBS

Results

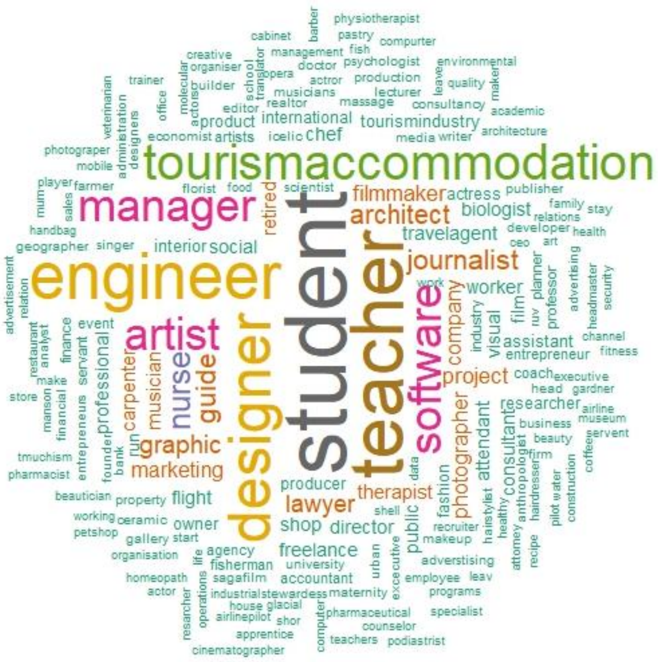


FIGURE 33 – WORD CLOUD OF THE MOST FREQUENT JOBS IN HOSTS PRESENTATION TEXTS

A first level of analysis can be built on the raw data coming directly from the presentation texts, before the implementation of the classification coding procedure, by measuring the word frequency in the database (Figure 33 and Figure 34).

From this un-coded data, the most represented jobs in the Airbnb hosts' presentation belong to five categories:

- Students
- Medium income professions, such as teachers and nurses
- Highly qualified jobs, such as engineer, software industry, manger or lawyer
- Artistic, of more generally creative jobs (artists, designers, photographers, etc.)
- People working in the tourism industry

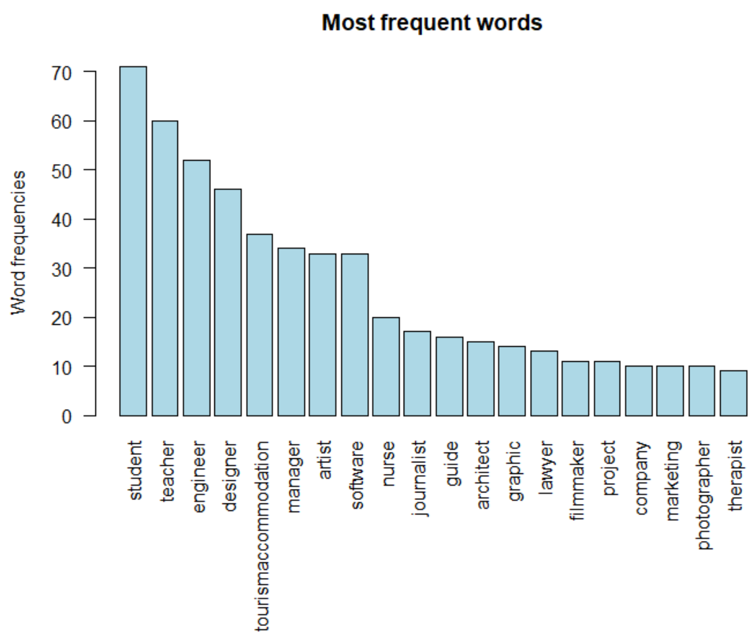


FIGURE 34 – MOST USED JOB NAMES IN THE HOSTS PRESENTATION TEXTS

The first level of classification (measuring the share of self-employed, employees and unemployed Airbnb hosts – see the table in the centre of Figure 35) shows that the majority (52%) of the hosts are very likely to have a stable employee job. 35% are self-employed, and only 12% are unemployed. The second level of the classification (see Figure 35 and Figure 36) is even more interesting since it shows that **a significant part of the hosts are actually employees with a pretty high level of qualification** (engineers, managers, researchers): they represent roughly 25% of the Airbnb hosts in the sample. Intermediate employees whose level of income is less high are also well represented in the sample with 58 teachers, 23 nurses for instance. It is also worth noting that, apart from the students, lower qualified as well as unemployed people represent a small proportion in the sample.

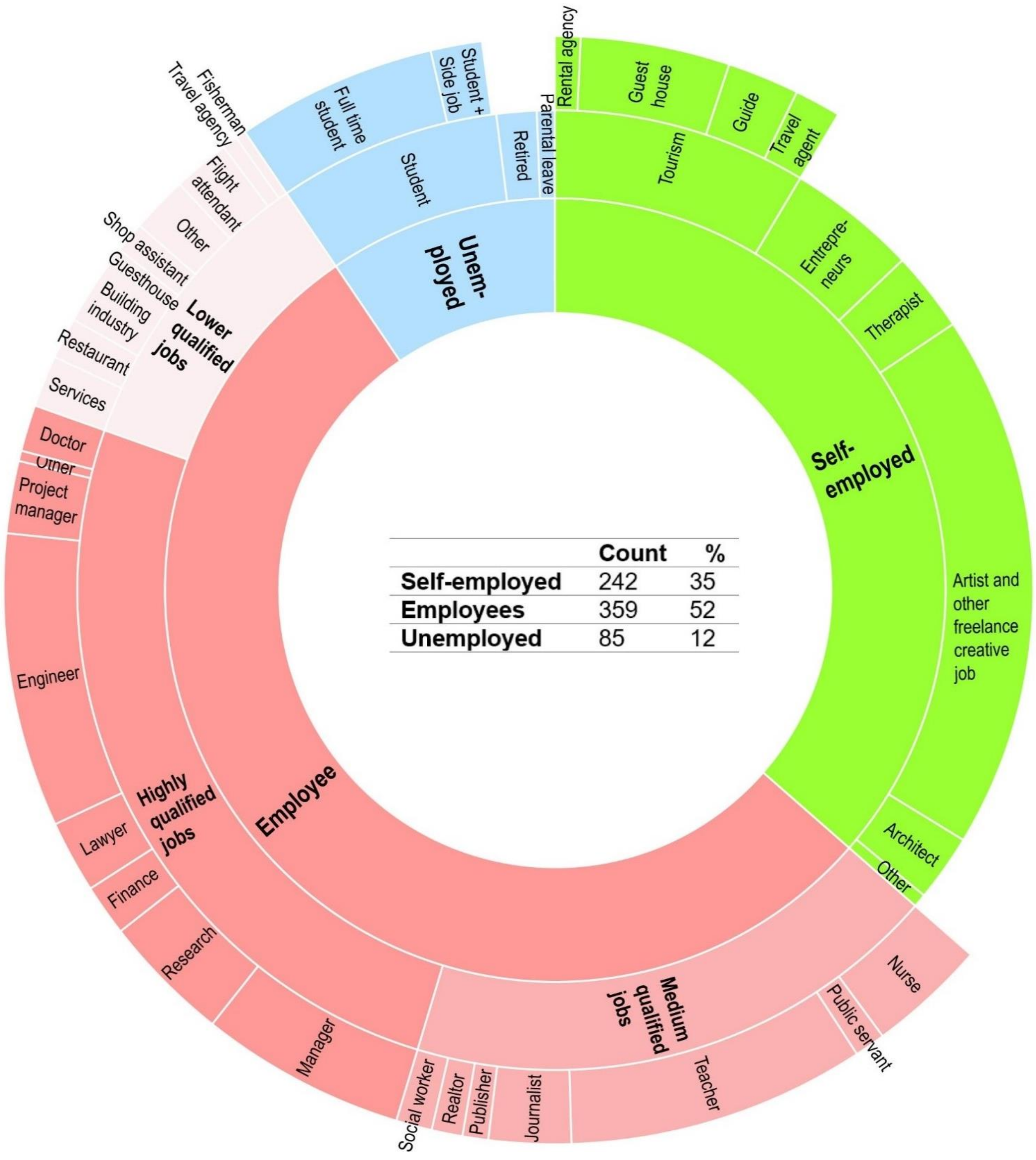


FIGURE 35 – SUNBURST OF THE JOBS OF THE AIRBNB HOSTS IN THE DATABASE

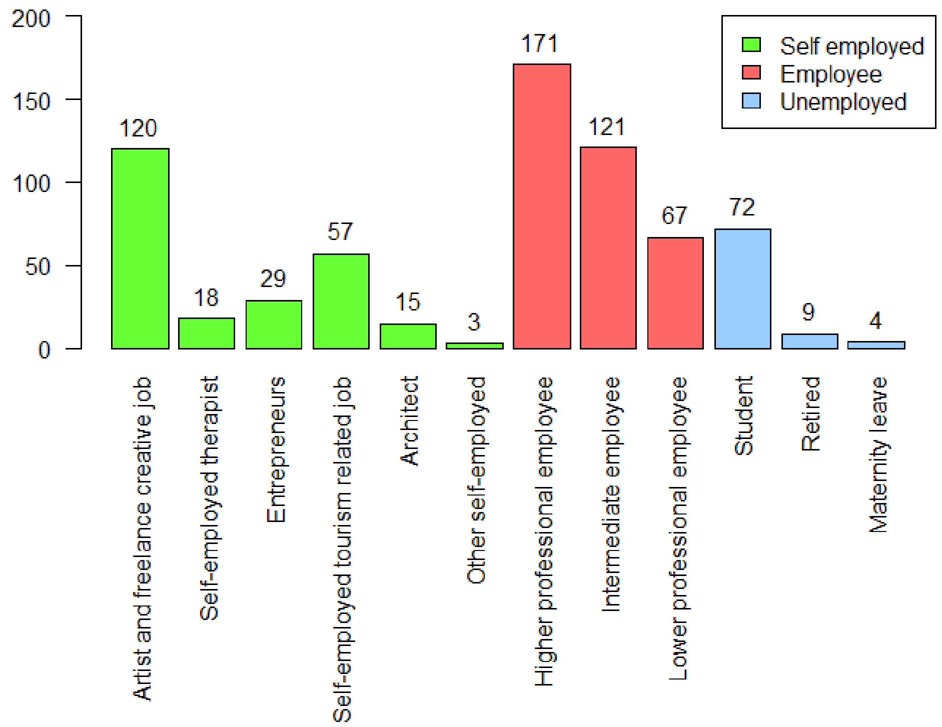


FIGURE 36 – SECOND LEVEL OF THE JOB LEVEL CLASSIFICATION, BARPLOT

Overall, as shown by Figure 36, the most represented job categories among the Airbnb hosts who mentioned their profession in their presentation texts are:

1. Higher professional employees (especially engineers, managers, researchers)
2. Intermediate professional employees (especially teachers and nurses)
3. Artist and other freelance creative jobs (designer, photographers, etc.)
4. Students

These results contradict significantly Airbnb's assumption according to which Airbnb hosts mostly belong to the middle class and that they use the platform as a way to secure their financial situation. The situation seems to be much more balanced than that. Airbnb seems to firstly benefit well-off households, with highly qualified (and therefore well-paid) jobs, which makes sense since it is the category of population who is the most likely to have an under-utilised asset to let out, especially full-time or to invest in a new apartment to make profits thanks to short-term rentals. Nevertheless, more fragile categories of population are also using the platform, such as professions that are known to have relatively low (teachers, nurses) or irregular (artists and other freelance creative activities) income or who have not entered the working market yet (students). **These results call for a very balanced appraisal of the social impact of Airbnb** and indicate that there are **two categories of hosts**:

- **Well-off hosts**, with a stable and solid financial situation, who probably take advantage of their economic capital to invest in the short-term rental markets
- **Hosts with a less secure professional situation (low or irregular income / students)**, who probably use Airbnb as a way to indeed get some supplemental income in order to cope with their financial needs.

The issue of multi-listing hosts

The professionalisation of Airbnb hosts is another crucial issue in the current debate on Airbnb, with some Airbnb hosts making a career of their activity on the platform. Scholars and data activists agree to consider the number of multi-listing hosts as a major indicator to assess the degree of professionalisation of the sector (Ferreri & Sanyal, 2018; Horn & Merante, 2017; Ioannides, Röslmaier, & Zee, 2018; Wachsmuth & Weisler, 2018). This section therefore aims to give an account of the number of multi-listings hosts in the Reykjavík capital area, in order to assess to what extent the Airbnb supply is held by individual people renting a room or an apartment to get a temporary supplemental income or by entrepreneurs who are turning what was initially presented as a form of "peer-to-peer economy" to a usual business.

The multi-listings hosts in Reykjavík

This analysis is based on the database of Airbnb listings that have been presented in report n°1.

Table 20 clearly shows that most of the hosts in the Reykjavík capital area have a unique listing (83%). 2,4% of the hosts have at least 4 listings. Even if, as mentioned in the first report, one needs to be cautious with the interpretation of this data (since a same person can have different host ID, leading to an underestimation of the phenomenon), it indicates that the Airbnb market is mostly led by amateur hosts who have not turned Airbnb into a full-time job.

Nevertheless, the comparison of data from 2016 and 2017 shows **an increasing professionalisation of the sector**, with the apparition of stakeholders who advertise more than 10 listings on the platform. Managing such a number of listings supposes a significant degree of professionalisation to take care of the management of the listing, booking, cleaning, check-in and check-out. While they were still quite anecdotical in 2016, with only 3 hosts having more than 10 listings, data indicate than an increasing number or hosts are doing this activity professionally, with 50 hosts having more than 10 listings in 2018.

TABLE 20 – AN ASSESSMENT OF THE MULTI-LISTINGS PHENOMENON (2016-18)

Range	2016		2017		2018	
	Count	Percentage	Count	Percentage	Count	Percentage
(0,1]	955	79,7	1964	82,8	2449	83,4
(1,2]	132	11	215	9,1	274	9,3
(2,3]	64	5,3	91	3,8	108	3,7
(3,4]	22	1,8	45	1,9	34	1,2
(4,5]	9	0,8	21	0,9	21	0,7
(5,10]	13	1,1	26	1,1	33	1,1
(10,15]	3	0,3	7	0,3	6	0,2
(15,20]	0	0	2	0,1	5	0,2
(20,40]	0	0	1	0	6	0,2

Who are the multi-listings hosts in Reykjavík?

What kind of stakeholders is hiding behind this professional hosts?

A survey based on the Airbnb host database led to the identification of the companies that are behind 47 of the 72 hosts who have more than 5 listings in Reykjavík.

As shown in Table 21, most of them are actually **classic tourism accommodation** who are using Airbnb as a new way to advertise their listings and reach new customers. Some of them are very likely to have been created quite recently, which suggest that Airbnb could have somehow encouraged the creation of new guesthouses. 14 falls into the category 'Holiday homes' (*i.e.* regular apartments turned into tourism accommodation and led by a company working as a guesthouse). 3 others have specialised in some niche markets (car or tent rentals). The most interesting point of this table is the **emergence of new companies whose business model entirely relies on this new platform capitalism** allowed by digital stakeholders such as Airbnb, in the form of **service provider** companies who are basically intermediaries between the hosts and the platforms by providing hosts with all the services that running a listing requires (see the dedicated section p. 61).

TABLE 21 – IDENTIFICATION OF THE STAKEHOLDERS BEHIND MULTI-LISTING HOSTS

Type of company	Count
Car rental	2
Classic tourism accommodation	24
Holiday homes	14
Service provider	6
Tent rental	1
Total général	47

In terms of professional occupation, logically, multi-listings hosts are more professionally involved in tourism business, since 43% of the hosts advertising at least 4 listings are self-employed professionals in the fields of tourism, and especially in tourism accommodation (Figure 37), indicating a trend towards a professionalization of the sector. On the contrary, hosts who advertise from 1 and 3 listings are more likely to be employees with a high or medium qualification level or freelance artists (Figure 38).

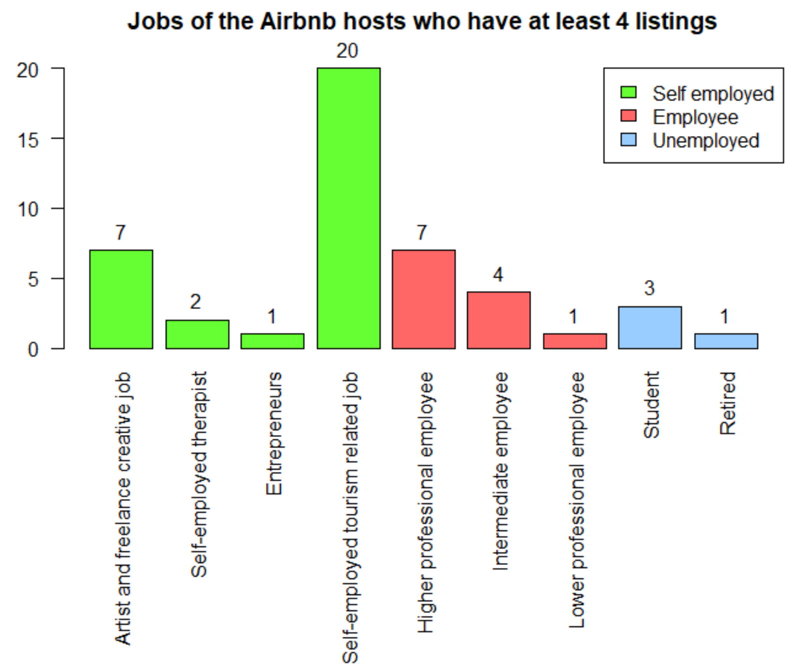


FIGURE 37 – PROFESSIONAL OCCUPATION OF THE MULTI-LISTING HOSTS (MORE THAN 4 LISTINGS)

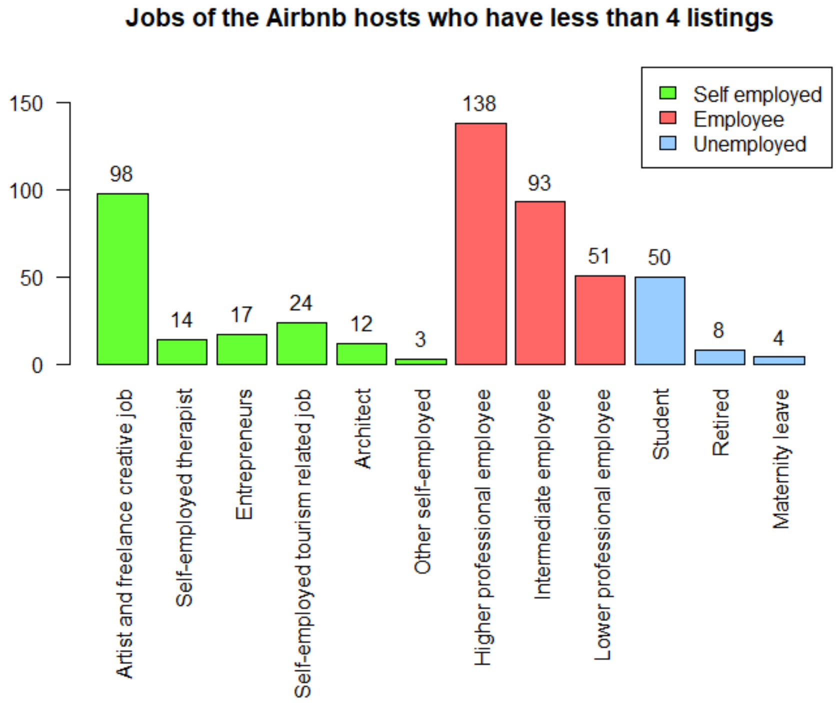


FIGURE 38 – PROFESSIONAL OCCUPATION OF THE HOSTS WITH LESS THAN 4 LISTINGS

Where are the multi-listings hosts in Reykjavík?

It is not surprising to notice that most of the listings belonging to those multi-listing hosts are very centrally located, mainly in 101 (see Figure 39). Figure 39 shows that while hostels, guesthouses and even tent and car rentals listings tend to be very clustered, listings belonging to service providers and, more interestingly, to home holidays company are more scattered throughout the city centre.

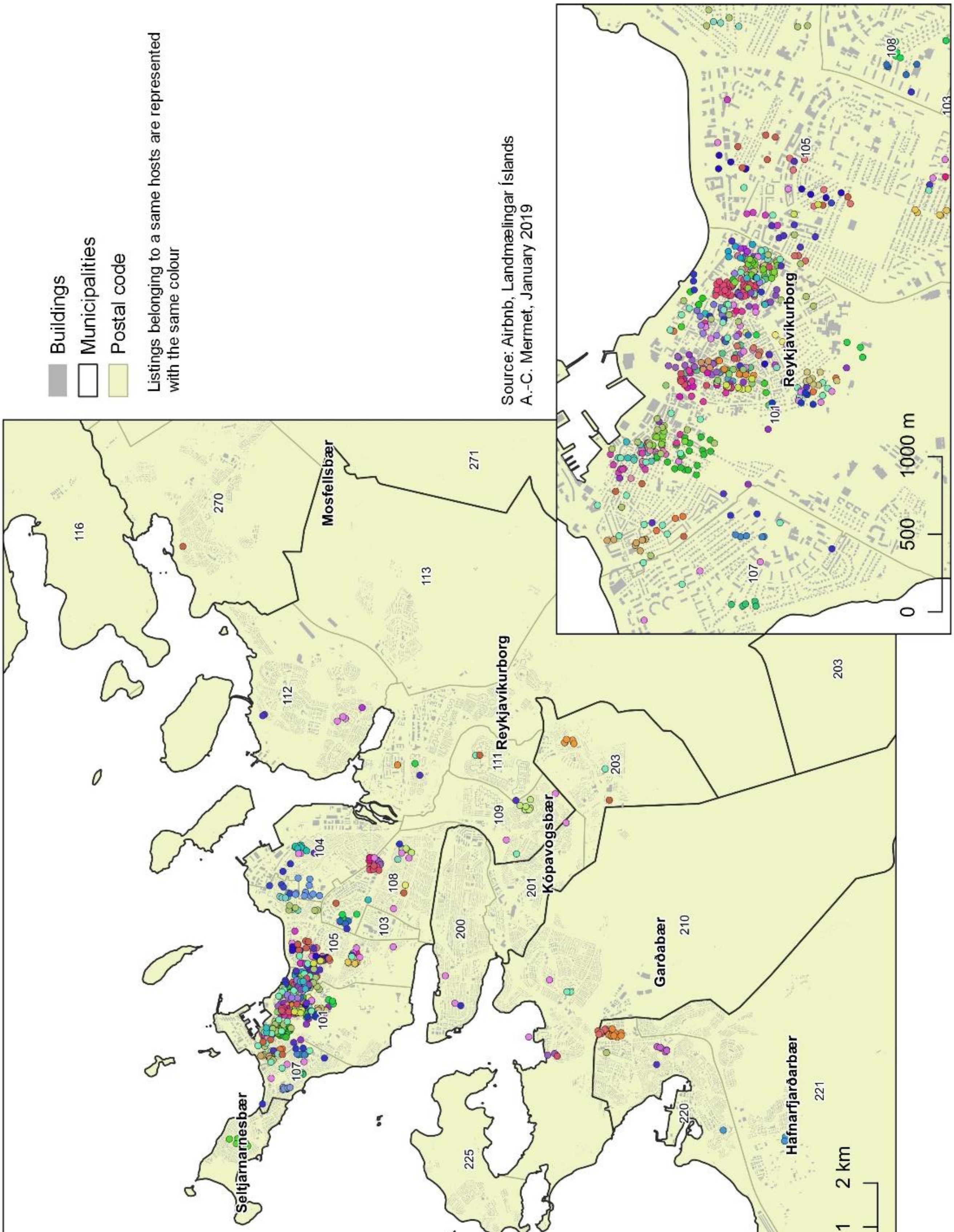


FIGURE 39 – DISTRIBUTION OF THE LISTINGS BELONGING TO MULTI-LISTING HOSTS IN REYKJAVÍK

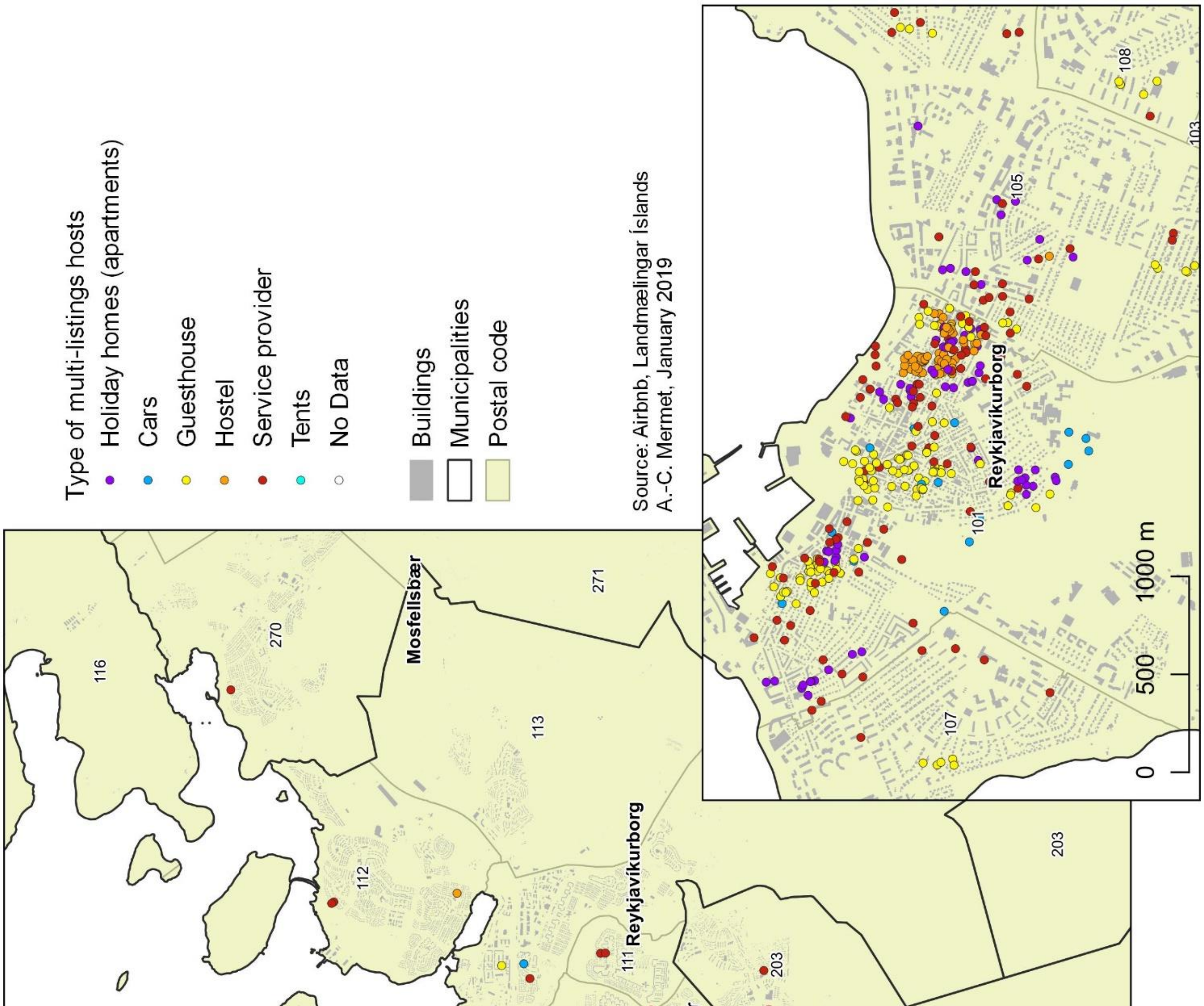


FIGURE 40 – THE GEOGRAPHY OF THE DIFFERENT CATEGORIES OF AIRBNB HOSTS IN REYKJAVÍK

Conclusion of the section: individual vs professional hosts

This section thus allowed us to distinguish **different categories of Airbnb hosts**:

- **The individual hosts**, who have one, indeed two, listings and who are not professionally participating in the Airbnb business but rather as amateurs, and who are the substantial majority of the hosts. **But this category actually conceals a significant variety of profiles with two main polarities:**
  - First, **people with a high level of qualification**, practicing well-paid jobs, and who are all supposed to be in a comfortable situation. They represent around **25% of the hosts** in Reykjavík (and 26% of the hosts who advertise 1 to 3 listings). One can assume that this category of hosts does not *need* the supplemental income from Airbnb to cope with their household expenditure. On the contrary, it is possible to formulate the hypothesis according to which they are using **Airbnb as a profitable real estate investment**, since short-term rents are much more profitable than long-term ones (see the section on the "rent gap" in the next section of the report, p. 80).
  - Second, people with a **low or irregular source of income** (teachers, nurses, artists, freelance in a creative field) who are also well represented (36% of the hosts). One can assume that this category of the population is using Airbnb **as a way to cope with a difficult situation by gaining a supplemental income thanks to short-term rentals**.
  - Finally, people from middle-class, with a medium level of qualification and income (37% of the hosts), who can participate in this market for various reasons that remain to be uncover (see section 5).
- **The professional hosts**, in the form of multi-listing hosts having at least 4 listings (2,4% of the hosts). This professional host category also conceals a variety of profiles:
  - **Classic stakeholders of tourism accommodation using Airbnb simply as a new way to advertise their rooms** and, therefore, to reach new customers, sometimes around a niche market (tent or van renting)
  - New companies whose business model is based on Airbnb by providing all the services that running and Airbnb accommodation involves ("**service providers**")
  - Well-off people buying up regular apartments to turn them into tourism accommodation ("**holiday homes**").

2.3 | THE AIRBNB HOSTS AND THE HOUSING MARKET: A QUALITATIVE OVERVIEW

Introduction

As suggested before, since Airbnb is *only* an intermediation platform, its business model relies *only* on its powerful ability to connect a worldwide demand from tourists looking for an alternative form of accommodation to a local supply mainly made of local regular housings. As a form of the so-called "collaborative consumption", Airbnb puts individual people, and their individual strategies, at the heart of its model. The development of this new market relies strongly on the active and voluntary participation of local people.

Section 2 has built on a quantitative survey of the host's profiles to draw up a first classification of Airbnb hosts, basically distinguishing between professional hosts, and very different forms of individual hosts in terms of social class, ranging from well-off hosts to hosts with unstable and/or low level of income. Complementarily, this section aims to go deeper in our understanding of who are the Airbnb hosts in Reykjavík by focusing on the following questions:

- **What are the reasons that push local people to actively participate in this market?**
- **What are the strategies implemented by local when they realise short-term rental can be an opportunity for them to earn supplemental income?**

This section aims to answer these questions by refining more qualitatively the different types of Airbnb hosts identified at the end of section.

Methodology

Interview campaign and main features of the sample of interviewees

An interview campaign was carried out with a sample of 33 Airbnb hosts between November 2016 and February 2018 in order to gather some qualitative material on the reasons that push local people to participate in this market. My only criterion to select the hosts was that they had a listing in the centre advertised on the Airbnb platform, because it is the neighbourhood that is the most impacted by the development on short-term rentals (cf. section 3, see also report n°1).

The hosts have been contacted through two channels:

- Most of them (23) have been contacted directly through the Airbnb platform (**randomly selected**). This way of contacting hosts produced a pretty satisfying result since I got a 20% positive answer rate. Some of them refused to meet me because of the sensitive nature of the topic. This positive answer rate was pretty surprising, since the new regulation regarding Airbnb was being implemented during my fieldwork.
- I got in touch with 7 other hosts through my own local networks, in order to have a wider variety of interviewees (especially tenants).
- Complementary, I have also interviewed 3 service provider companies founders, which provided a more general overview on the Airbnb hosts' strategies.

The **interview guidelines** focused on the story of the hosts with Airbnb, on the “trigger” that pushed them on this market, on their “housing trajectory”, on the way they have been impacted by the economic crisis and the changes in their life since they have begun their activity on Airbnb. All the interviews have been recorded and transcribed (thanks to the software Sonal). All the interviews have been anonymized and the interviewees’ first name have been changed. Transcriptions have also the subject of a content analysis in RQDA in order to refine the types of the Airbnb hosts by identifying different categories of hosts depending on the way Airbnb changed their own situation on the housing market.

Presentation of the sample

THE HOSTS

This sample of Airbnb hosts gathers 33 hosts[19] with quite different profiles since I have met individual (19 hosts with only one listing) as well as professional hosts (a guesthouse and a hostel advertising their listing mostly on Airbnb and three service providers[20]) who advertise up to 32 listings with the same Host ID. The hosts I interviewed are slightly older than average, since 34% were in their forties at the time of the interview (see Table 22, and compare with Figure 29, p. 43). The sample is also quite various in terms of jobs practiced by the hosts, with a slight over-representation of artists and freelance creative professionals, and of unemployed (for different reasons: retirement and maternity leave). This can be explained by the fact that these categories of the population were more likely to have time to meet me for an interview than the ones being full-time employees. 28 of them are homeowners, 2 are tenants and 3 are service providers (whose customers are allegedly homeowners). It seems that tenants are in minority among Airbnb hosts in Reykjavík).

TABLE 22 – AGE OF THE INTERVIEWEES

Age range	Count	Percentage
20-30	4	12
30-40	6	18
40-50	11	34
50-60	4	12
60+	8	24

TABLE 23 – HOW MANY LISTINGS DO THE INTERTVIEWEES ADVERTISE?

Multi-listing hosts in the sample	Number of interviewed hosts
1 listing	19
2 listings	5
3 listings	1
4 listings	1
7 listings	1
8 listings	1
10 listings	1
12 listings	1
23 listings	1
32 listings	1

TABLE 24 – SHARE OF HOMEOWNER/TENANT AMONG THE SAMPLE OF INTERVIEWEES

Status	Count	Percentage
Homeowner	28	85%
Tenant	2	6%
Service provider	3	9%

[19] For further details regarding the interviewees, see Table 32 in annex.
[20] Isleiga, Greenkey, Heimaleiga.

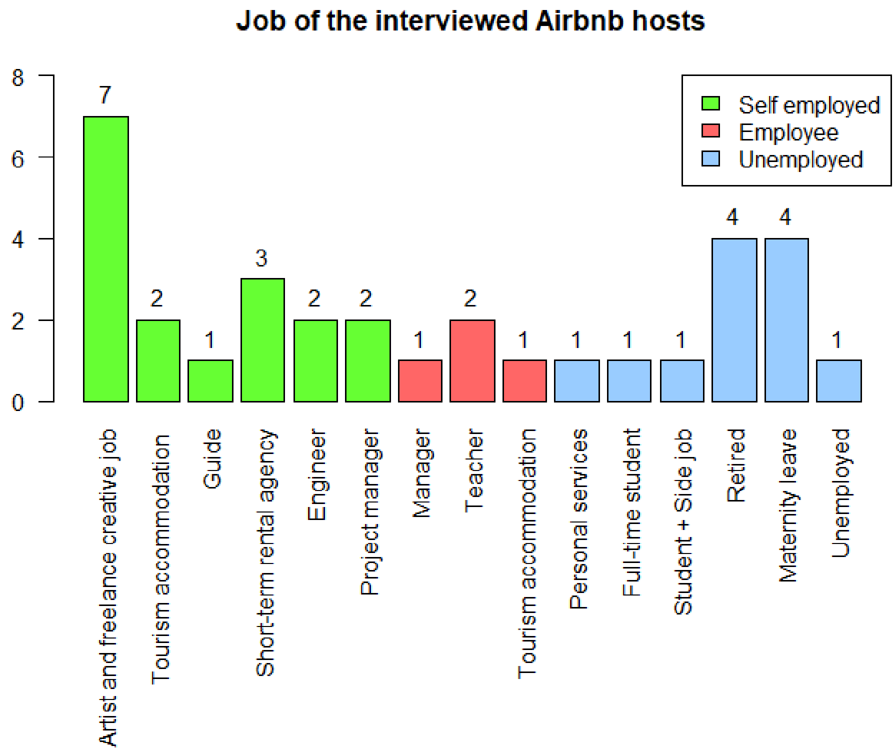


FIGURE 41 – JOB OF THE INTERVIEWED AIRBNB HOSTS

THE LISTINGS

The sample of interviewed hosts covers 149 listings in total[21]:

FIGURE 42 – PRESENTATION OF THE SAMPLE (LISTINGS)

	Number of listings
Service provider	63
Hostel & guesthouse	34
Individual hosts	52
Total	149

Table 25 compares the main features of the 140 listings covered by the sample with the features of the overall Airbnb supply (63 listings advertised directly by Airbnb hosts + 77 advertised by the service providers, the hostel and the guesthouse included in the sample). On average, the listings of the sample are cheaper and have more reviews than the overall supply. They are quite representative of the whole supply in terms of size and capacity. The main difference between the sample and the overall supply is the share of entire homes which is much lower in the sample than in the overall supply, but this percentage is widely biased by the presence of a guesthouse and of a hostel in the sample.

[21] For further details on the listings covered by the interviews, see Table 33 in annex.

TABLE 25 – MAIN FEATURES OF THE LISTINGS ADVERTISED BY THE INTERVIEWED HOSTS

Variable	Sample	Total
Price (€)	109	149
Number comments	60	27
Number rooms	2	2
Capacity	4	4
Entire home %	44	76
Private room %	56	23

50 of the 63 listings advertised by hosts who are not service providers[22] are let out full-time on Airbnb.

As Figure 43 shows, before being dedicated to the short-term rental market, a significant part of these apartments used to be let out on the long-term rental market (21 out of 63), mostly to students or young households, which can be explained by the small size of these housings (studio or one-bedroom apartments for the vast majority). 21 other apartments were occupied by the former owner of the housing, before selling it to the Airbnb hosts I have interviewed, and 1 is a new-built apartment.

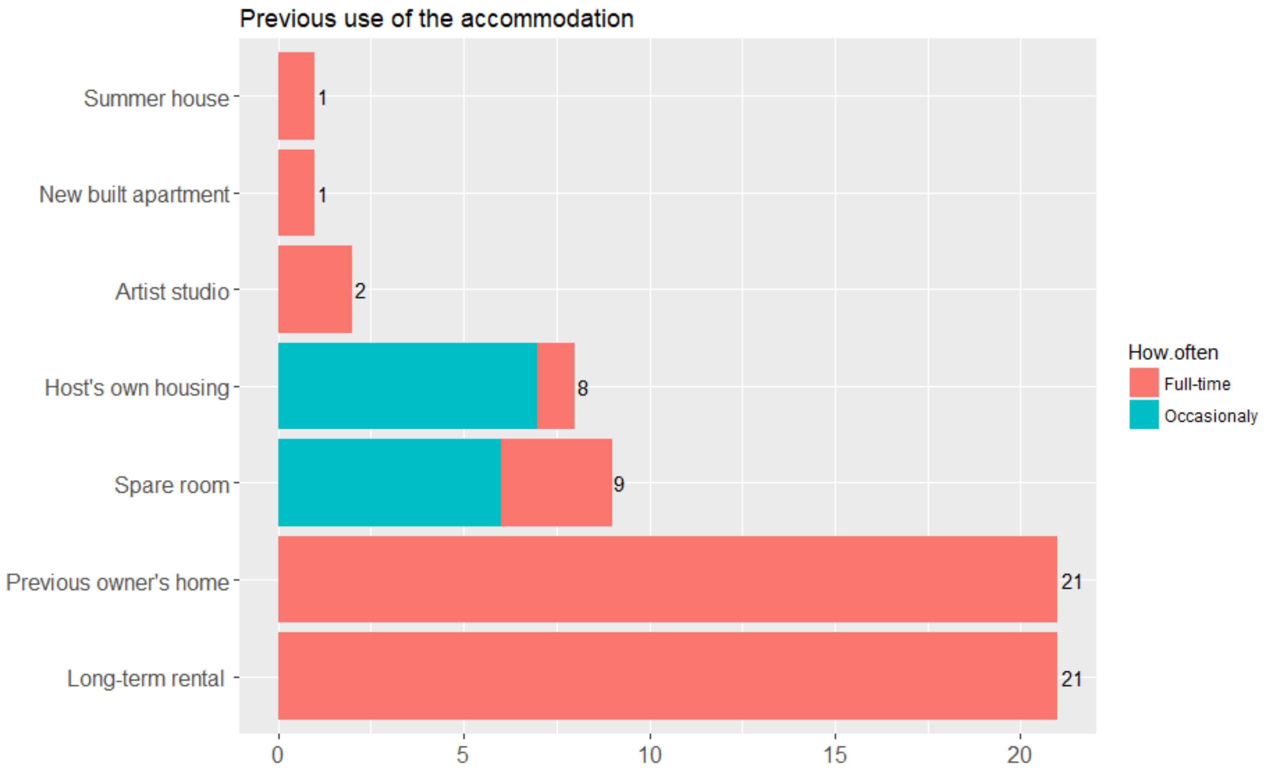


FIGURE 43 – PREVIOUS USE OF THE ACCOMMODATION ADVERTISED ON AIRBNB BY THE INTERVIEWED HOSTS

[22] Those listings haven not been taken into account due to numerous missing data.

This means that 43 out of the 63 listings covered by the survey are actually housings that have been withdrawn from the ordinary housing market, which supports the hypothesis according to which the development of short-term rentals occurred at the expense of regular housings for locals. This hypothesis is also supported by the fact that all these listings corresponding to housings that used to be dedicated to local inhabitants before the tourism boom are let out on Airbnb full-time, and not occasionally. But it is also noteworthy to notice that a sizeable (20 interviewees) part of the interviewees just took advantage of an underutilized asset (a spare room for example after a grown-up child has left, an artist studio, or their own home while they are away) to turn it into a source of income.

Towards a classification of Airbnb hosts

Interviews with this sample of Airbnb hosts allowed me to inductively draw **five paradigmatic types of hosts** depending on 3 criteria:

- **The number of listings advertised by the hosts**. If a host advertises more than 5 listings on a full-time basis, I considered her/him as an *entrepreneurial host* since managing such a number of listings can be considered as a job on itself (it corresponds to the "professional host" category from section 2). This category gathers all the hosts who made a profession of hosting: service providers companies, a guesthouse and a hostel (5 interviews). If the host advertises less than 5 listings, then I checked the following criteria:
- **Have the hosts purpose-bought the apartment that is advertised on Airbnb for short-term rentals or did they already own it before the boom of tourism rentals?** If the host bought the property specifically for the purpose of letting it to tourists and to benefit of the very high profitability of this kind of investment (cf.Figure 51), he/her falls under the "*investor host*" category (5 interviewees).
- If the host has owned the property for a long time, before the tourism boom, then I checked **whether (s)he rents the listing full-time or occasionally to tourists?** The classification then distinguishes:
    - *The pragmatic hosts*, *i.e.* hosts who don't need the supplemental income provided by Airbnb to make ends meet, but who pragmatically decide to take advantage of the rent gap triggered by the boom of short-term rentals either on a regular ("*The pragmatic host A*", 9 interviewees) or on a more occasional basis ("*The pragmatic host B*", 8 interviewees).
    - The host who tries to let as much as possible (so it can full time for certain periods, and more occasionally when more is impossible) because the supplemental income provided by this activity is necessary for the host to make a living (5 interviewees).

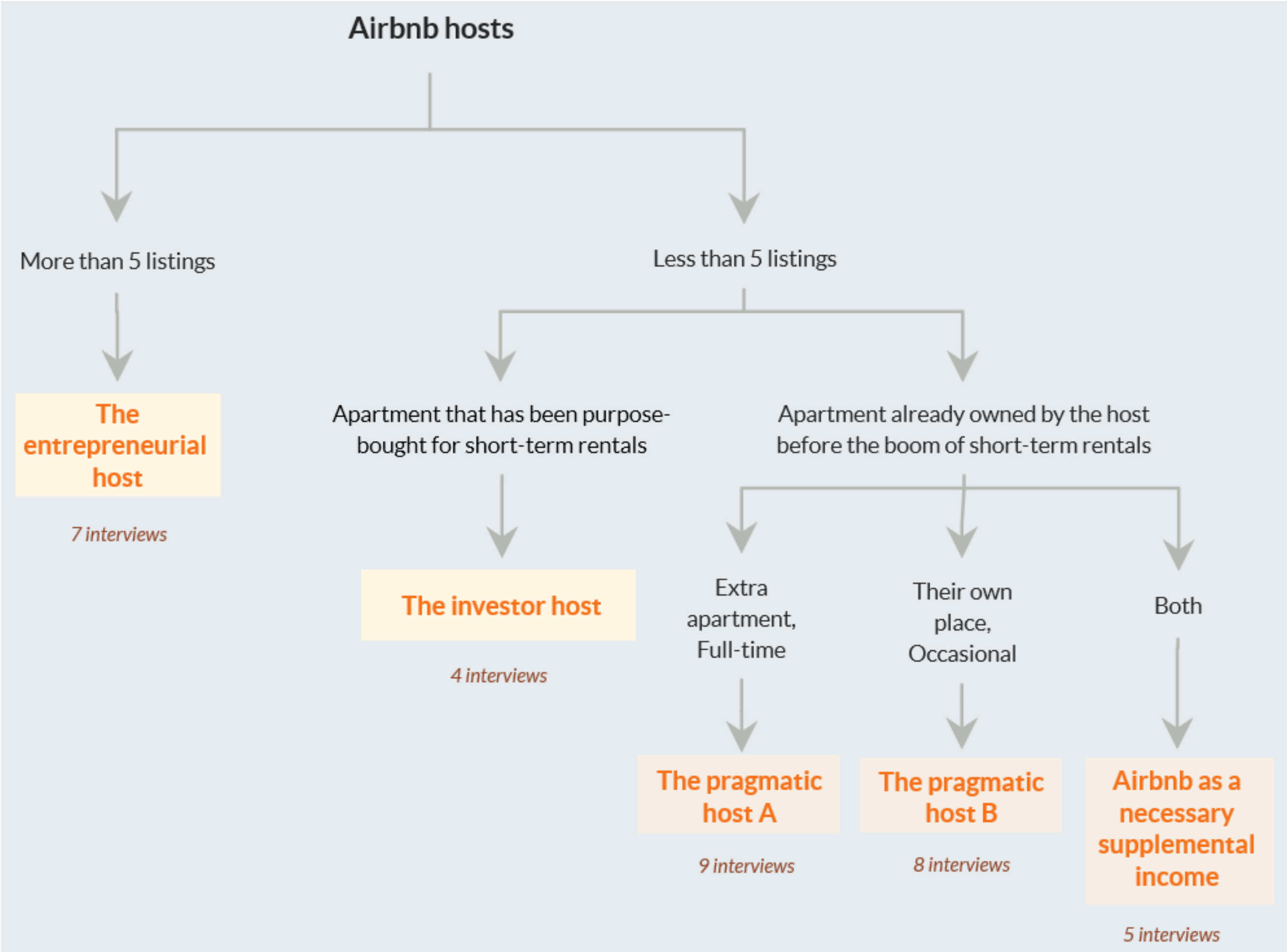


FIGURE 44 – FIVE PARADIGMATIC TYPES OF AIRBNB HOSTS

The entrepreneurial host

The entrepreneurial host is a host who advertises at least 5 listings advertised on Airbnb and who makes a job of this activity (6 interviewees in my sample). It gathers quite various kind of stakeholders/companies: service-provider companies (who do not own the place they let out to tourists but who just provide a wide range of services to homeowners who want to let out their place on Airbnb without having to take care of all the work it involves), classic forms of tourism accommodation who use Airbnb to advertise their rooms and holiday homes companies. Most of them have a license to operate full time.

Service providers

The development of short-term rentals gave rise to the emergence of a thriving economic ecosystem, with the creation of a wide range of companies related to this business, among which companies whose main purpose is to provide all kind of services for hosts who would like to be part of the Airbnb experience, without having to take care of the extra work it requires (creating and managing the listing, cleaning, taking care of the check-in and check-out process etc.). Those companies therefore propose Airbnb hosts to take charge of all these tasks in exchange for a commission.

Data from January 2018 allowed me to identify 6 companies providing such services[23] and I met the founders of 3 of them.

TABLE 26 – PRESENTATION OF THE INTERVIEWED SERVICE PROVIDERS

ID Survey	ABB31	ABB32	ABB33
Anonymization	Service provider 1	Service provider 2	Service provider 3
Age range	20-30	20-30	20-30
Job	Short-term rental agency	Short-term rental agency	Short-term rental agency
Nb listings according to the database	32	23	ND
Nb comments	3374	467	ND
Superhost	Yes	Yes	ND

They have all been founded in 2017, at a time where Airbnb was witnessing very high growth rate. They had not had to spent much money on advertisement since they were all meeting an increasing demand. The interviewees' companies manage from 40 to 80 listings (one of them manages an apartment hotel with 37 apartments). They have between 3 and 10 employees (depending on the season: they provide mainly summer jobs) but work also a lot with contractors[24]. They provide all the services related to the management of an Airbnb accommodation: creating the listings (pictures, texts), managing the booking, answering guest's requests, providing bed linen and towels, check-in and check-out, writing instruction regarding the operation of the housing, cleaning the apartment between different guests, etc.

Their customers are quite various, but the 3 representatives I met agree to say that 1/3 or their customers are professional hosts (who would fall in the "investor host" category of this study, see below), *i.e.,* hosts who have bought an apartment in the purpose of taking advantage of the profitability of short-term rentals, and the remaining 2/3 would fall into the "pragmatic host" category (1/3 already had an extra apartment that they used to let out on the long term rental market, and decided to take advantage of the rent gap in favour of short-term rentals (see next section) and 1/3 who are letting out their own apartment for variegated reasons).

This interview excerpt is quite insightful to this regard:

> […] We have two clients with 3 apartments, and then the rest has just one or two apartments. Most of them just one. So, we have about 35 owners probably.
>
> *[>Question?]: What kind of people is it?*
>
> [>R1]: It is everything... I would say like 1/3 are doing it completely as a business.
>
> *[>Question?]: So, they have an extra apartment and they are renting out sometimes.*
>
> [>R1]: Yes, it is a pure pure pure business. And many of them have a permission. Not all, but many of them. 1/3 is just people who just randomly got into it.
>
> *[>Question?]: What do you mean?*

[23] The leader on the Icelandic market seems to be Dekura: https://dekura.is/ (last checked: January 2019).
[24] Which raises the issue of the precarity of work within this "platform capitalism", as shown by the debates raised by the "Uberisation of economy" (Slee, 2017).

[>R1]: They just had the apartment, some had bad experiences with long-term rentals, with drug addicts, and it was hard to kick them out […]. More than one customer has had bad experiences with that. And then 1/3 is people that are... Like a few football professionals who live abroad, they are relatively well-off, in the national team, but they are not super wealthy. So, they want to have a home in Iceland, they come home regularly for family, for Christmas, for practices, for the national team. So, they want to have a home, but they can't really afford to have it empty all year. We have a professor who was working in East of Iceland, and had an apartment here. So, he temporarily moved to the countryside. So, he wants to spend the summer here or... So, he is living out of Reykjavík but wants a home in Reykjavík. We have 3 people living abroad too. One of them basically just... they had a temporarily contract to start with, a one-year contract in Canada. And they were not sure... 'Are we going to pack everything, are we going to... take all the furniture's with us, can we rent it long term with furniture', which is very complicated. So, their solution was, 'ok let's rent it out short-term', then they can come back for holidays, etc. Now, they've been abroad for 9 months, I don't know how long is will last. So, 1/3 is completely professionally, 1/3 is... Part of them are people who have already a big house, and they have a basement apartment. And they have kids living abroad so when their kids come to Iceland, they want to let them stay with them. All of these are illegal, but everyone agrees that there is something wrong with the law. A good part of this 1/3 are illegal.

The following sections aims to shed more light on these different categories of hosts.

Holiday homes

Even more interesting is Emilia's story with Airbnb.

TABLE 27 – PRESENTATION OF EMILIA

ID Survey	ABB28
Anonymization	Emilia
Age range	50-60
Job	She: takes care of the Airbnb / He: CEO of a major Icelandic company
Nb listings	8
Status	Owner
Nb comments	2303
Superhost?	Yes
License?	Yes
License >90 days?	Yes

Emilia is a 50 years old woman. Her husband has a well-paid job as the CEO of a prominent Icelandic company, and their financial situation is therefore secure enough to make new real estate investments. They have been living in the same 3-rooms apartment close to the centre for more than a decade, and they have several children. Emilia's sister has been letting out a spare room in her own apartment in Reykjavík to tourists on an occasional basis since 2013, this is how she has found out about the possibility of getting a supplemental income from short-term rentals, how profitable it could be, and how high the current demand for holiday homes is.

The children left the house in 2015. Following Emilia's sister's advice, Emilia and her husband decided to let out their henceforth empty bedrooms to tourists as of 2015. The success of this initiative was so tremendous that they decided to expand this business by applying for a full-time license (Flokkur 2). At the same time, their upstairs neighbours put their apartment on the market (divorce) and they decided to apply for a new mortgage to buy this apartment and completely redesign it by dividing the third floor into two apartments in order to turn them into full-time holiday rentals. The following year (2017), their downstairs neighbours also offered their apartment for sale, and they also bought it up thanks to the close contacts Emilia's husband has with banks on account of his job. As a result, since 2017, the family has owned the whole building which has been turned into several tourism accommodation, and they employ one person. Thus, two ordinary apartments have been turned into tourism accommodation and two families have been replaced by tourists.

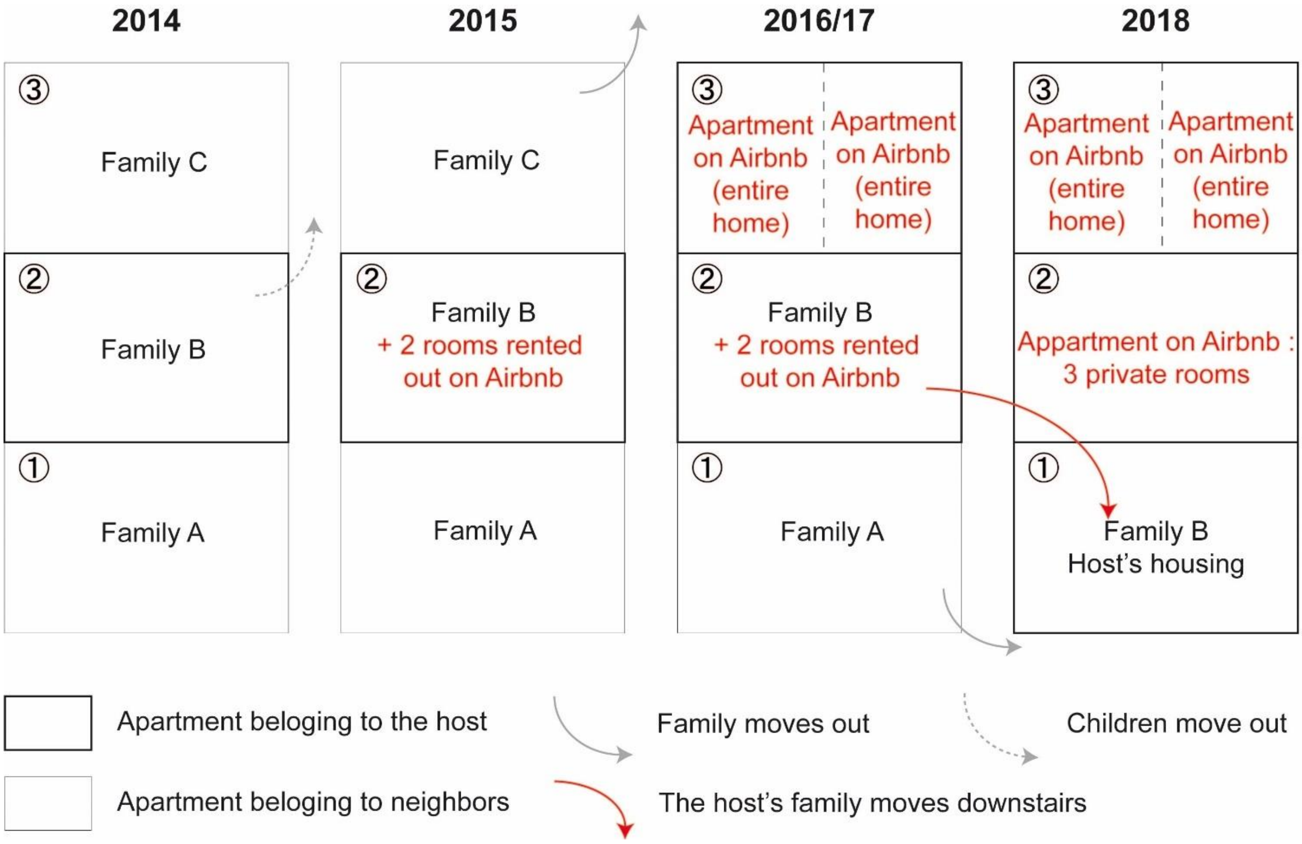


FIGURE 45 – HOW HAS A RESIDENTIAL BUILDING OF VESTURBÆR BEEN TURNED INTO A TOURISM ACCOMMODATION BUILDING? THE EXAMPLE OF EMILIA

It is noteworthy that Emilia and her husband have been able to launch this holiday homes business only because their financial situation was *already* very secure, which allowed them to get money to invest in this business, as Emilia puts it:

> *[>Question?]: And when you bought the first floor, weren't the banks a bit reluctant to lend you money because you already had a mortgage [for the two other apartments]...*
>
> [>R1]: Actually, **my husband runs a huge company** and he has a lot of contacts in the banks, he is always paying, so they know him. I have always been working with the same bank and they trust him. And we are talking about very very very big amount of money. So, they know him**. If it was me, they would never lend me anything.** And also, because, for our apartment on the second floor, we almost own it, almost...
>
> *[>Question?]: What do you mean?*

[>R1]: Where we live before, in the 2nd floor, we bought it 17 years ago. And our debt is little there, so the bank took it, you know, like for security. We wouldn't be able to do this if my husband wouldn't be so in business, you know. He knows how things work, you know.

The entrepreneur host is therefore a person who had already a quite solid financial situation and who decided to use Airbnb to dive into the tourism accommodation business by creating his/her own company. They mostly expand on regular housings that are, as a consequence, withdrawn from the ordinary housing market to be turned into tourist accommodation.

The investor host

The investor host is a host who bought an apartment (usually in the 101 district), with the primary purpose to take advantage of the very high profitability of short-term rentals in this sector[25], and they sometimes also let out their own home while they are away. They are represented by 4 interviewees in my sample. Their households all have a quite secure personal financial situation, and do not need the income provided by Airbnb to make a living. They see Airbnb as a way to easily increase their capital (Hjálmar describes it as “a very well-paid cleaning job”), as well as, sometimes, (for Sara and Sólveig), as a temporary and flexible job during a maternity or a sick leave. One lives in the city centre and the three others live in the suburbs.

TABLE 28 – PRESENTATION OF THE INTERVIEWED INVESTOR HOSTS

ID Survey	ABB3	ABB8	ABB12	ABB14
Anonymization	Gunnar	Hjálmar	Sara	Sólveig
Age range	40-50	50-60	30-40	40-50
Job	Engineer	Engineer	Sick leave	Maternity leave
Nb listings	1	2	2	1
Status	Owner	Owner	Owner	Owner
Nb comments	114	700	113	113
Superhost?	No	No	Yes	Yes
License?	Yes	No	No	Yes
License >90 days?	Yes	No	No	Yes

Sara’s story is quite representative of this category of hosts. Sara is a woman in her forties. She has owned an apartment in Kópavogur for several years and has a very suburban lifestyle. She hasn’t been hit too much by the crisis and at least does not suffer anymore from its consequences. Her father is an local entrepreneur who owns a local food company which has 3 outlets throughout the Reykjavík capital area. Their financial situation is therefore secure. She used to work in this family company before she had a serious accident two years ago and couldn’t work anymore afterwards. In April 2016, her father and she decided to invest in a small apartment in the city centre of Reykjavík to run a small “Airbnb business” that they intend to expand soon, as she explains:

[>Question?]: Can you tell me about your story with Airbnb, since when have you been doing this, what are the...

[25] For an assessment of the difference of profitability beween short-term and lonf-term rental prices, see next section.

> [>R1]: I started in **April 2016**. So, almost a year ago. And I was not working, and I had to find something to do. **So, my father bought the apartment.** He owns it and I do everything, you know. He just bought it to do this, yes [*i.e.* to rent it out on Airbnb]. So, I just like it... It is really nice for me because... I didn't have any work, because I had an accident two years ago and I was just healing from that. So, I was just looking for something to do. And then my father bought the apartment. […] I think it is a good job for me. So, and I do everything, I go and clean. And I talk to people... You know... But he owns the apartment. But **we are planning to buy another apartment, we are just looking** […].

Here, Airbnb is clearly seen as an investment strategy which can generate profits while providing a flexible and easy job to Sara. The apartment they bought used to be let out to a young person. I have interviewed at least 4 other similar kind of Airbnb hosts, who all had official license to operate as a guesthouse. **Here too, we have cases of conversion of a housing stock dedicated to inhabitants to tourist accommodation**.

Sólveig's story is very similar. She used to work in a travel agency and her husband has a position of responsibility in the financial sector. When they got married in 2011, they sold their two apartments in the city centre to buy a bigger one a bit further from the centre, and they decided to buy a brand new one-bedroom apartment in the centre, as a rental investment. Due to the much higher profitability offered by short-term rentals, they quickly decided to turn the apartment into a tourist accommodation:

> [>R1]: […] When the older one was 1 year old, between them, we were thinking, what could I do and we wanted to have another baby anyway. And **I didn't want just to go to work and leave her at day care 8 hours a day**. And go into that, because my husband works a lot and... So, yes, we decided, since we both have flats before we met...
>
> *[>Question?]: Ok, so you bought your own apartment both of you…*
>
> [>R1]: Yes, like when we were in our twenties or something. And we are both over 40 now, so, **we had flats when we met, and it was at the time when flats in Reykjavík cost like 8 million and we both sold them for over 20. So, it was a big rise.** We sold them and bought where we live**. So, we had some money and we just thought ok, we can invest and buy a small apartment** and we live in a different apartment, it's not where we live, that's an Airbnb. We bought it two years ago. We rented it out for two months just to a guy who was going to the university. And then we decide to take a chance and put it on Airbnb. **And instead of me having a normal job and being stuck if the girl was going to day care** and we were expecting her to be sick as all children can be, it didn't really happen often, but... So, we just decided to try it. So, we started in November 2015, like one and a half year ago […]. And then I was pregnant again, and we just continued […]. **It is almost full every month**. There are only one, two or three nights a month that are not booked... So**, it is just being going very well**, and I don't know if we are gonna do it forever[26]. […]

Short-term rentals are therefore first and foremost seen as an investment strategy, and secondary, as a way to provide a member of a family with an easy and flexible job.

The pragmatic host

The pragmatic host is by far the most frequent profile among the Airbnb hosts of the sample (17 interviewees, more than half of the sample). These hosts already had an under-utilized property before the tourism boom (so, they did not buy it on the purpose of investing in the short-term market), but the rent gap in the favour of short-term rentals led them to implement opportunistic strategies in order to make the most out of their under-utilised asset. Their listing can be either an extra apartment they inherited or bought before the tourism boom for instance, a spare room in their own home or their own

[26] Sólveig's listing is still active at the time of writing.

home that they rent out while they are away. In most cases, they don't have a license to operate full-time. Some of them registered to be able to let out the place less than 90 nights a year, but it is not the majority.

This category has been split into two sub-categories depending on two highly correlated criteria:

- Whether their listing is located in their own home or in an extra apartment
- Whether the listing is let out to tourist on a full-time or occasional basis

The pragmatic host A

The first sub-category of pragmatic hosts corresponds to hosts who already had an extra apartment, which used to be let out on a long-term basis before the tourism boom. When they found out about the rent gap between short-term and long-term rental values, they opportunistically decided to turn this extra flat into a tourism accommodation in order to make more money, which allows them to work less, to pay off their mortgage faster, or to fund other personal projects.

TABLE 29 – PRESENTATION OF THE INTERVIEWED PRAGMATIC HOSTS (SUB-CATEGORY A)

ID	Anonymization	Age range	Job	Nb listings	Status	Nb comments	Superhost	License	License >90 days
ABB1	Bjarni	40-50	Writer	2	Owner	134	No	No	No
ABB5	Hildur	60+	Artist and art teacher	4	Owner	226	Yes	No	No
ABB10	Elísabet	60+	Retired	1	Owner	59	Yes	Yes	Yes
ABB15	Sveinn	50-60	Free lance filmmaker	2	Owner	304	Yes	No	No
ABB16	Sigrún & Rúnar	60+	Retired	1	Owner	334	Yes	Yes	Yes
ABB17	Sigurður	60+	Retired	1	Owner	124	Yes	Yes	No
ABB22	Emil	40-50	Manager	1	Owner	81	No	No	No
ABB24	Elín	30-40	Free lance filmmaker	1	Owner	100	Yes	Yes	No
ABB25	Sóley	30-40	Housewife	3	Owner	174	Yes	No	No

WORKING LESS THANKS TO THE AIRBNB INCOME

Hildur is a woman in her 60s, she is an artist and she also teaches arts part-time to have a reliable source of income since her husband is also involved in artistic activities. She has owned an apartment in the city centre since the 1980s and has inherited from her parents a second similar one in the same building since the 1990s. In November 2015, she decided to rent this extra apartment out on Airbnb as she explained:

> *[>Question?]: Why did you decide to do that?*
>
> [>R1]: Actually, I have quite a lot of friends doing Airbnb in Reykjavík. Many of them are people who are active in the culture. **Like me, I have the possibility to earn some income with flexible time**, that is an important positive side. **I can earn some income by this, and then I don't have to teach as much as I used to, and I can have more time for my studio work. I'm an artist.** I think this is interesting for you, because, you know, basically all my friends have done something like this, offering one room or two or the whole apartment when they are somewhere else, maybe exhibiting, or in a residency or something and they can earn a little bit of money to cover the costs of this cultural work. […]
>
> *[>Question?]: And before doing Airbnb, what...*

[>R1]: We rented it out on the long-term basis.

[>Question?]: To students or...

[>R1]: Yes, to students... we had student for some years, and then we had a family for some years. Yes, different groups of people. […] We had long-term contracts, like two years. And then we renewed if people wanted to renew and we were also happy with it. We just renewed for one year or two years, according to circumstances […].

[>Question?]: Ok, so, compared to what you did before, renting on the long-term market and now renting on Airbnb, what was the positive and negative sides of each options?

[>R1]: Of course, there is no work on long-term rental. People are just there, and they take care of the apartment. But of course, when the term in finished, and we will rent it again to somebody else and make an announce to find a new tenant, there is usually a lot of work to... you know repair and paint and make it nice again because it is used. Nothing damaged or thing like that, but it is just, after maybe 5 years, it is time to make some repairs. And it usually takes maybe a month, with other jobs, to do this. But of course, when you are having it as an Airbnb, to make it worthwhile... so that we get something for the work... we can rent the apartment for a certain amount of money. But when you are renting it for Airbnb, we need to have a little more than just that, because otherwise we are not getting paid for daily work. So, it has to be quite well booked to make it work out.

*[>Question?]: **And financially, I think it is more interesting to rent it on a short-term basis...***

[>R1]: Yes. A lot. that's what we have experienced.

So, here, Airbnb is not clearly used as an investment strategy but as a way to increase their income in order to fund personal projects, in this case artistic projects. In my sample, I have 3 other similar cases and other cases of people using Airbnb to help them funding different kind of projects, especially artistic ones.

USING AIRBNB TO PAY OFF A MORTGAGE

Some of the 'pragmatic hosts A' uses Airbnb as a way to make ends meet in a post-crisis context. These households have been, in general, badly hit by the crisis which had a big impact on their mortgage, as Sveinn explains:

[>Question?]: So, can you tell me your story with Airbnb, since when you have been doing this, and how you decided to be on this market...

[>R1]: Ok. Since we have a house downtown in Reykjavík. And it's been like quite a struggle to keep this house, you know. I don't know if you've heard about the different types of loans in Iceland. Like we have the insurance... the inflation insurance […]. And it is sort of funny, you know, me and my wife and my family, we bought this house in 2005…

[>Question?]: So, before the crisis.

[>R1]: Yes. And then it was like... We bought it for 37.5 million kronas. And we had 10 million krona that we could put into it as a deposit. So, the loan was 27.5. And those 10 years, we've paid like 12 million. But now we owe like 50 million. Yes, more than 50 million kronas. That's crazy. […] You know, **I work as a free-lance, like a film director**, and I've done you know like commercial work and stuff like that, and the pay you are getting is very similar to how it was 15 years ago in a way. **But the prices for rent and housing have skyrocketed**. And when the crisis hit, in 2008, the amount of the mortgage kind of doubled in a way. So, it went from 100 thousand something to 200 thousand something every month. **But we had an extra apartment like downstairs that we are renting out**.

[>Question?]: In the same house?

[>R1]: In the same house yes. But we never wanted to charge too much to rent.

[>Question?]: Because before you used to rent it on a long-term basis?

[>R1]: Yes. **It was like a long-term rent.**

[>Question?]: It was to students?

[>R1]: No... **it was just like different people, families, you know**, there were a couple from Poland who stayed there for the longest time. But when the crisis hit, they came to us to ask "can we please lower the rent". And we decided to do that even though our payment for the house was twice as it was before. And then, we saw the impact of Airbnb and like the kind of... How do you call it...? Like **tourism was increasing. A lot of demand for accommodation.** And there were like a single mother living with her daughter in the apartment, but when she decided to move out, **I decided to rent it out on a short-term basis, instead of having a new long-term tenant.**

[>Question?]: Why?

[>R1]: **Because I could make much much more money out of it, you know.**

[>Question?]: And it helped you to pay off the loan, the fact of changing long-term to short-term?

[>R1]: Yes, in a way. **And it is helping us just to make our ends meet**, you know. It doesn't mean that I have been able to pay off the loan or anything like that. We still have this loan over us, you know. **But now, we are making, for the first times, a little money out of the property. And it helps us make ends meet.** And the thing is that both me and my wife, we are working […] both in creative activities.

The "pragmatic host A' is the trickiest category of Airbnb host to interpret. On the one hand the supplemental income provided by Airbnb significantly improves hosts' quality of life, by allowing the host to fund and spend more time on personal project, or to worry less about paying off his/her mortgage. However, on the other hand, it also leads to the removal of a certain amount of housings from the ordinary housing market, thus participating in the shortage of housing on the rental market. Indeed, all the listings of this category of hosts used to be apartments let out on the long-term rental market.

The pragmatic host B

This second sub-category of pragmatic host corresponds to hosts who let out a part of their own home on an occasional basis, in order to fund a personal project, such as the renovation of a kitchen or a trip for example. As the previous sub-category, these hosts opportunistically decided to take advantage of the tremendous demand for tourism accommodation in Reykjavík to make money, but on an occasional basis. They either let out a spare room (for instance, a child's bedroom of a divorced person with shared custody, the bedroom of a child who left the house, a guest room or the host's own apartment while (s)he is away). They mostly open their listing for booking for the summer months because these months are the most profitable ones. Most of them did not have a 90-days permit but where considering applying for it (one has to take into account the fact that the survey has been carried out between 2016 and 2018, *i.e.* during the implementation of the new law of January 2017). It corresponds to 8 interviewees in the sample.

TABLE 30 – PRESENTATION OF THE INTERVIEWED PRAGMATIC HOSTS (SUB-CATEGORY B)

ID	Anonymization	Age range	Job	Nb listings	Status	Nb comments	Superhost?	License?	License >90 days?
ABB2	Jean-Marc	30-40	Hotel manager	1	Tenant		No	No	No
ABB4	Xavier	30-40	Student	1	Owner		ND	No	No
ABB6	Élodie	30-40	Unemployed	1	Tenant		No	No	No
ABB7	Alexander	40-50	Writer	1	Owner	78	No	No	No
ABB13	Katrín	40-50	Dressmaker + sewing teacher	1	Owner	8	No	Yes	No
ABB21	Ragnhildur	60+	Jewel designer	1	Owner		No	No	No
ABB23	Páll	40-50	Work for the goverment	1	Owner	43	Yes	Yes	No
ABB27	Edda	40-50	Urban planner	1	Owner	61	Yes	Yes	No

Xavier is a French student with a side job in the tourism industry. He has lived in Reykjavík for several years with his girlfriend with whom he bought an apartment in Vesturbær in 2013. They let on an occasional basis their bedroom or the entire apartment on Airbnb where they are away. He explains the reasons that pushed them on this market:

> *[>Question?]: I have been told that sometimes you rent your place on Airbnb… Is it the entire apartment ?*
>
> [>R1]: Actually it depends. Most of the time we only rent a room.
>
> *[>Question?]: Because you have a spare room?*
>
> [>R1]: Yes… actually it is a split-level apartment, a duplex. And, in general, we rent the bedroom that is in the ground floor, and we sleep upstairs in the meantime.
>
> *[>Question?]: So, you share the kitchen and the bathroom with the guests?*
>
> [>R1]: Yes. Or sometimes we rent out the entire apartment, if we go on vacation, or abroad […]. **But there is obviously a financial interest, we mustn't kid ourselves**. But there is also the fact of meeting people. And in 90%, indeed 95% of the cases, they were very interesting people, we shared nice moments with them […].
>
> *[>Question?]: So, you said it was also financially interesting… when you bought the apartment, have you taken into account the fact of having the possibility to rent a room to tourists…*
>
> [>R1]: .... not really… we haven't though that way at that time**. It just happened, because we had to fix stuff in the apartments, and it was very expensive renovation, so, finally, we realized that Airbnb could represent an appreciable supplemental income…**
>
> *[>Question?]: So, finally, this supplemental income provided by Airbnb allowed you to improve your housing?*
>
> [>R1]: Yes, definitely. It allowed us to renovate it, to improve our quality of life […]. **We could have done the renovation without Airbnb, but we would have had to wait much longer before doing it**… Airbnb allowed us to do it earlier.

Some hosts even leave their own housing and go back to their parents or any other cheap housing, in order to take advantage of the very high demand for tourism accommodation, especially during the summer months, as the founder of one of the service-provider company explains:

[>Question?]: What kind of people come to you to rent their home?

[>R1]: Well, we get contacted by all sorts of people. Both young couples, maybe they are buying their first property. Like last year we had a young couple with a new baby. They were buying a new home and wanted to rent it out for 90 days. And they didn't want to use their own time, they just wanted to spend time with the baby. And so we just took over, helped them, and it went so well that... At first, they signed only for 50 days, so they have raised enough money to get the down payment for the house. […] They were staying at one of the... I don't remember if it was the girl or the man's parents. It gives a lot of opportunity for young people. It was in the city centre. […] But it is expensive for young people to buy an apartment. They have to pay for the loans etc. This is an opportunity for them to use Airbnb to rent out their own. And they are going to their mum and dad for a week or 2 months.

[>Question?]: Does it happen often?

[>R1]: This kind is primarily in the summer time because you can get the highest prices.

[>Question?]: Do you have a lot of people in that case?

[>R1]: Yes, we always get a lot in the spring and the summertime... They know that they have friend who are doing this, make some money... It is word of mouth.

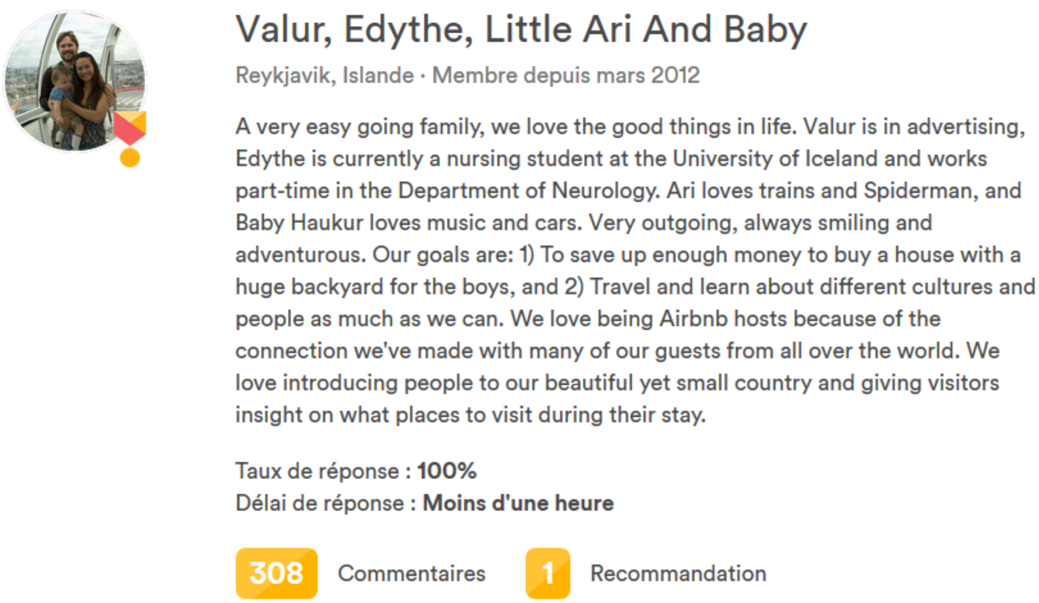


FIGURE 46 – EXAMPLE OF LISTING OF PEOPLE USING AIRBB TO "SAVE UP ENOUGH MONEY TO BUY A HOUSE"

Source: Airbnb, 2016

In this case, Airbnb clearly helped this young couple to get their own housing. Contrary to the previous category, whose interpretation is particularly tricky and who led to a reduction of available housing for local people, **the "pragmatic host B", who lets her/his own place on an occasional basis, is actually far less problematic. In this case Airbnb makes it a bit easier for local to access to housing.**

Using Airbnb to cope with a difficult financial situation

The last category is made of hosts who *need* the supplemental income provided by short-term rentals to cope with a difficult financial situation, often inherited from the crisis, and make ends meet. 5 interviewees fall into this category. They all have either irregular or pretty low income and are all homeowners, but they all struggle to pay off their mortgage for various reasons: effects of the crisis on the amount of their mortgage, sickness, accident.

TABLE 31 – PRESENTATION OF THE HOSTS WHO HAVE TO COPE WITH A DIFFICULT FINANCIAL SITUATION

ID Survey	**ABB9**	**ABB11**	**ABB20**	**ABB26**	**ABB29**
Anonymization	Lilja Björk	Alda	Ásta	Júlíanna	Brynjólfur
Age range	20-30	40-50	50-60	60+	40-50
Job	Student	Free lance photographer + Kinderkarten	Free lance film director	Retired	Guide
Nb listings	1	2	1	1	1
Status	Owner	Owner	Owner	Owner	Owner
Nb comments	12	95	26	91	
Superhost?	No	Yes	No	No	Yes
License?	No	No	No	Yes	No
License >90 days?	No	No	Yes	No	No

Alda is for instance a woman in her forties. With her husband she bought up her family house in the city centre. She has a part-time job at a school and she is also a free-lance artist. Her husband works in the building industry, but, as she explains on the interview excerpt, he got serious medical problems just before the crisis in 2008, and therefore he had to stop working for many years. He has been able to get back to work part time only recently. Many years ago, they converted their garage into an artist studio, which were turned into their oldest son's room for one year and happened to be empty after he left his parent's home. At that moment, she decided to renovate the studio, to set up a shower and a little kitchen, and to rent it on Airbnb. In the interview, she explains the reasons that motivated this decision:

> "I started in **October 2016. So, four, five months ago**. I was thinking doing it for a while because **everybody was doing it** and then we decided to do it […]
>
> *What was the trigger which decided you to rent the garage on Airbnb?*
>
> **Oh... money! Because my husband, he got sick in 2008, he had a [serious disease], so he didn't work for a long time** […] and Airbnb, it was mainly because of money […]. **Now, I am thinking about renting the house. I am just going to find another apartment to rent...**
>
> ***Because you will earn more money by renting an apartment for you and renting the whole house on Airbnb?***
>
> **Yes. I am trying to get the finance right**, after what happened. […]
>
> *And have you been affected by the crisis?*

Yes, a lot. **Our loan doubled…**

Because you are still paying a mortgage for the house?

Yes, we had a foreign currency loan, and then with the crisis it doubled. And then because he got sick, we had to freeze it for years, and then we have to pay that. So, it is a lot to pay. That is helping us with the mortgage […]. **Yes, we wouldn't be able to live now in this house if I wasn't doing the Airbnb. Financially, you know. If we haven't decided to rent the garage out on Airbnb, we would have to sell the house to buy a small apartment**, so… […]. And I hope it will help us more this summer. If I rent the house."

Júlíanna as a similar story:

I tried to sell the apartment last year because the mortgage raised in the bank crisis like a rocket to the sky. It almost doubled. And to add another big trouble to me I fell on a black ice on my way to work in the hospital in January 2010. I have worked for almost 35 years in the health care and after that accident I had to stop working. My pension is just a 60 % of what I normally earned. So, this is my way to survive. But it was difficult. I decided to try to rent out [my daughter's] room to manage. And I started.

I have at least 4 other similar cases in my sample. They are all people who have been badly hit by the crisis and who are still struggling with its consequences. **In this case, there are no housing removed from the local housing stock, on the contrary, it helped these households to stay put.**

Conclusion of the section

Combining the results of the previous quantitative approach with the results of this more qualitative investigation allows us to refine the initial identification of different Airbnb host profiles proposed in the conclusion of section 2 (see p. 55) and to sketch some hypotheses regarding the proportion of each host profiles.

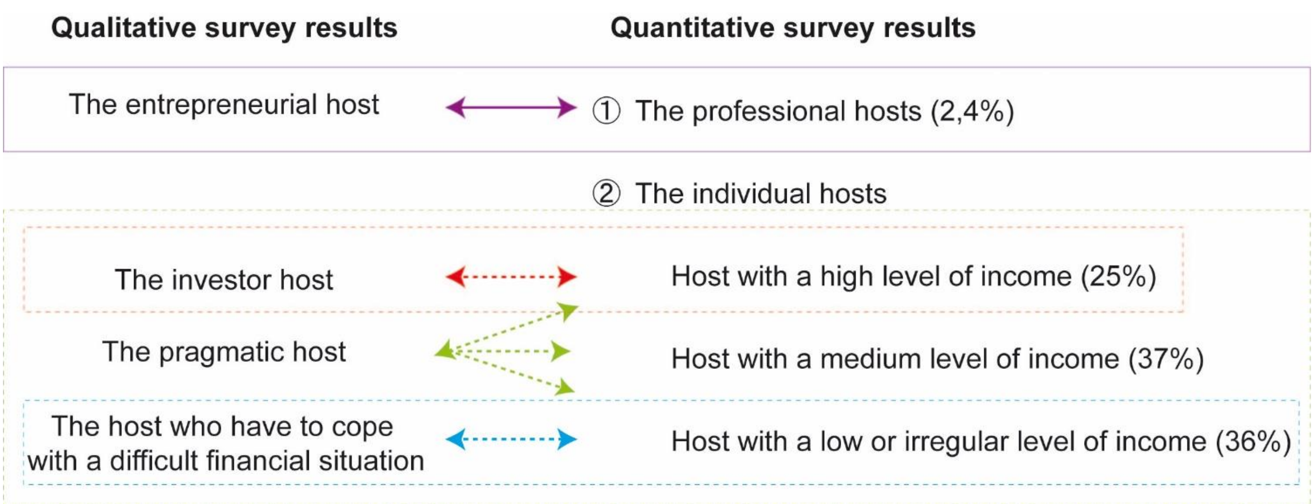


FIGURE 47 – COMBINING THE RESULTS OF QUANTITATIVE AND QUALITATIVE APPROACHES

The "entrepreneur host" perfectly corresponds to the professional hosts described in section 2, and we can assess without doubt that this type of hosts, who is making a career of an Airbnb host represent **around 2,5 %** of the hosts. Although it is a relatively low percentage, one needs to take into account that those are by definition multi-listing hosts, who have at least 4 listings, indeed much more.

Nevertheless, it is more delicate to try to assess the share of the 4 other hosts types. The investor hosts correspond for sure to hosts having high level of income and of qualification. Likewise, the hosts who have to deal with a difficult financial situation are very likely to have low or irregular income. But hosts belonging to the pragmatic host category, whether it is A or B, could actually correspond to households with high, medium or low level of income. It is therefore very complicated to try to quantify the repartition of these categories of hosts. **We can nevertheless say that the investor host share is below 25%, the host having to cope with a difficult financial situation share is below 36%**.

Even if the sample of interviewed Airbnb hosts is not statistically representative, the analysis of its composition tends to confirm this conclusion:

- 4 interviewees (*i.e.* 15% of the interviewed "individual hosts") fall in the category "the investor hosts"
- 17 interviewees (*i.e.* 65% of the interviewed "individual hosts") fall in the category "the pragmatic host"
- 5 interviewees (*i.e.* 19% of the interviewed "individual hosts") fall in the category "the host who has to deal with a difficult financial situation"

2.4 | EXPLORING THE AIRBNB DATA AGAINST THE BACKDROP OF THE LOCAL HOUSING MARKET

In the following two sections, I will focus on the intimate but also intricate link between the development of short-term rental digital platforms such as Airbnb and the intensification of gentrification trends in Reykjavík. This section aims to answer the following question: **To what extent is a real estate investment targeting the short-term rental market more profitable than a one targeting the more usual long-term rental market? And what are the consequences, for local inhabitants, of the development of short-term rentals?**

Gentrification is today defined as "the commodification of space accompanying land use changes in such way that it produces indirect/direct/physical/symbolic displacement of existing users and owners by more affluent groups" (Lees et al., 2016). Current literature on gentrification increasingly identify tourism as a dynamic that can trigger gentrification, through the concept of "tourism gentrification"(Bures & Cain, 2008; Gladstone & Preau, 2008; Gotham, 2005; Herrera, Smith, & Vera, 2007; Liang & Bao, 2015; Vives Miró, 2011; Wilson & Tallon, 2011). Most of the papers on the topic analyse how tourism-oriented urban projects enhance urban environments, provide amenities and produce consumption spaces which are also highly sought-after by gentrifying populations (Füller & Michel, 2014, p. 1310; Herrera et al., 2007, p. 277; Maitland, 2010, p. 178), which can raise some displacement issues (Gladstone & Preau, 2008; Herrera et al., 2007, p. 140). More recent papers more specifically identify the development of short-term rental as a new force triggering gentrification and displacement of local people, driven by the highest profitability of short-term rentals (Cócola Gant, 2016; Mermet, 2017; Wachsmuth & Weisler, 2018; Yrigoy, 2016). Some research carried out in Iceland indeed confirms that Airbnb has considerable effects on house prices, especially in Reykjavík:

> "Direct effects of the growth in Airbnb apartments on the real price of housing are estimated at about 2% per year from the fourth quarter of 2014 through 2017, or 6% accumulated. This is 15% of the total rise in real house prices in that period. This is significantly more than found e.g. by Barron et al. (2017) for the United States were Airbnb was found to explain 0.5% annual growth in house prices." (Elíasson & Ragnarsson, 2018, p. 17)

This section aims to identify to what extent the expansion of short-term rentals participates in the gentrification of the city centre, namely leads to some forms of displacement of local households.

Comparing the Airbnb supply with the housing supply

As said in the introduction of this report, contrary to other kinds of tourism accommodation such as hotels which are a completely different and separate segment of the real estate market, Airbnb rentals developed on a housing stock which used to be mostly dedicated to local inhabitants. The 4154 listings that were advertised on the Airbnb website in January 2018 have not been built overnight for this purpose. Most of them are actually housing that have been built primarily with a residential purpose. Thus, it is important to assess the ratio of ordinary housing that is being turned into tourism accommodation, instead of providing housing for local people.

Methods and data

Former research statistically estimated that “1676 apartment from the residential housing stock had been taken over by Airbnb activity by the end of 2017, 1214 thereof in the capital region” (Elíasson & Ragnarsson, 2018, p. 17). Yet, as shown in the first report, the Airbnb supply is far from being regularly distributed in space. On the contrary, the geography of Airbnb listings is highly concentrated in the centre. It is therefore very important to identify what parts of the Reykjavík capital area are the most impacted by the transformation of residential housing into tourism accommodation.

To answer this question, the following sections intends to map the Airbnb supply against the backdrop of the overall distribution of residential housing in the Reykjavík capital area. Therefore, I used two sets of data:

- The Airbnb listings database presented in the first report. In order to have the most rigorous measure and to avoid, as much as possible, to include cases where a homeowner just rent an empty room to tourists in his/her own home, only the listings advertised as “entire home” on the platform have been taken into account
- Data on the number of housing per districts in Reykjavík provided by LUKR (“Fjoldi Ibuda” shapefile)[27]

I measured and mapped the ratio between the number of Airbnb listing advertised in a lot and the total number of residential housing listed in the same lot, in 2016, 2017 and 2018.

Results

The results show that, in the city centre, the number of Airbnb listings represents today around 20% of the total number of housings, indeed more than 50% in some very central districts, and the comparison of the three following maps confirms the increase of the process over the past years. Consistently with the results of the first report, the districts that are the most affected are the ones along and close to the main shopping streets (Laugavegur, Austurstræti) and close to the old harbour, where the rate can go beyond 50%, which is considerable. Streets such as Grettisgata or Hverfisgata are also considerably affected. The maps also show that Airbnb affects the housing supply mostly in the centre of the city – where the competition for real estate is already very tense – while its impact is much more negligible for the rest of the city, since the ratio amounts only to 5% in the rest of the city.

However, this does not mean that 20 to 50% of the housings have been removed from the ordinary housing market of the city centre, since some of them may be let only occasionally to tourists, but it allows me to raise the hypothesis according to which this new market has a disruptive effect on the more general housing market, by removing a significant number from the residential housing stock in areas that are already under a considerable pressure.

[27] See: http://lukr.rvk.is/gjaldfrjals_gogn/index.htm (last checked: January 2019).

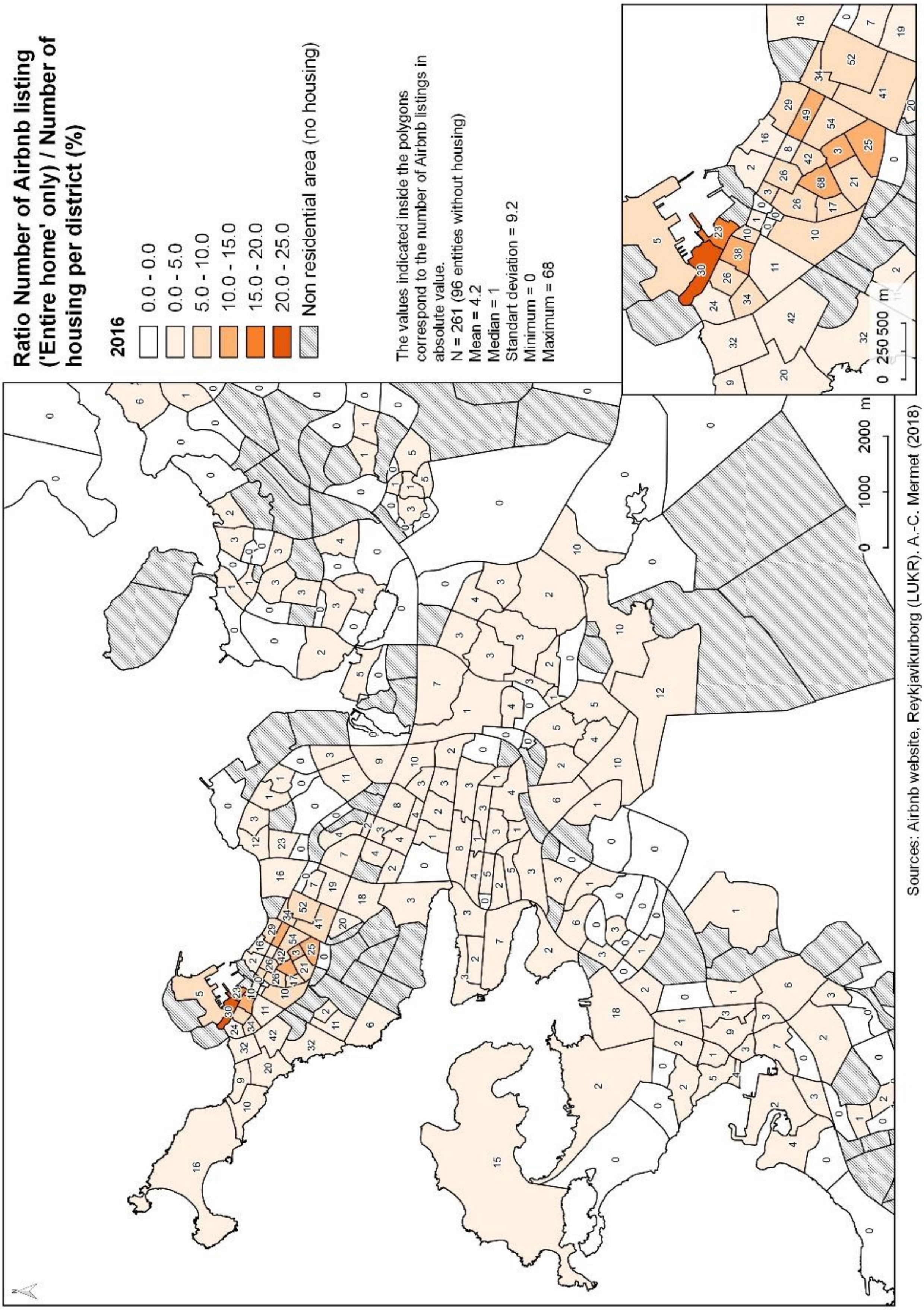


FIGURE 48 – RATIO BETWEEN THE NUMBER OF AIRBNB LISTINGS (ENTIRE HOME ONLY) AND THE NUMBER OF HOUSINGS PER DISTRICTS (2016)

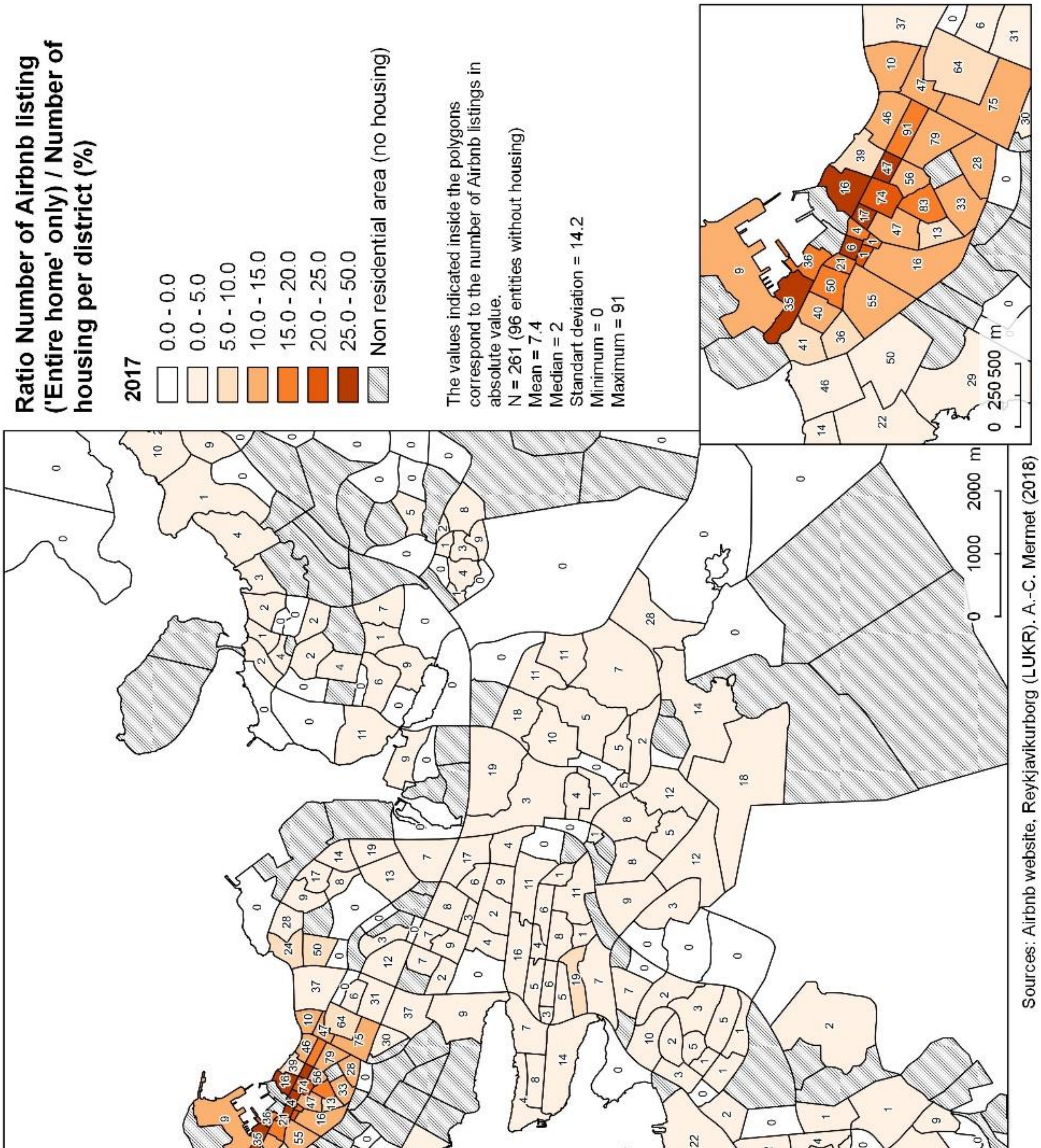


FIGURE 49 – RATIO BETWEEN THE NUMBER OF AIRBNB LISTINGS (ENTIRE HOME ONLY) AND THE NUMBER OF HOUSINGS PER DISTRICTS (2017)

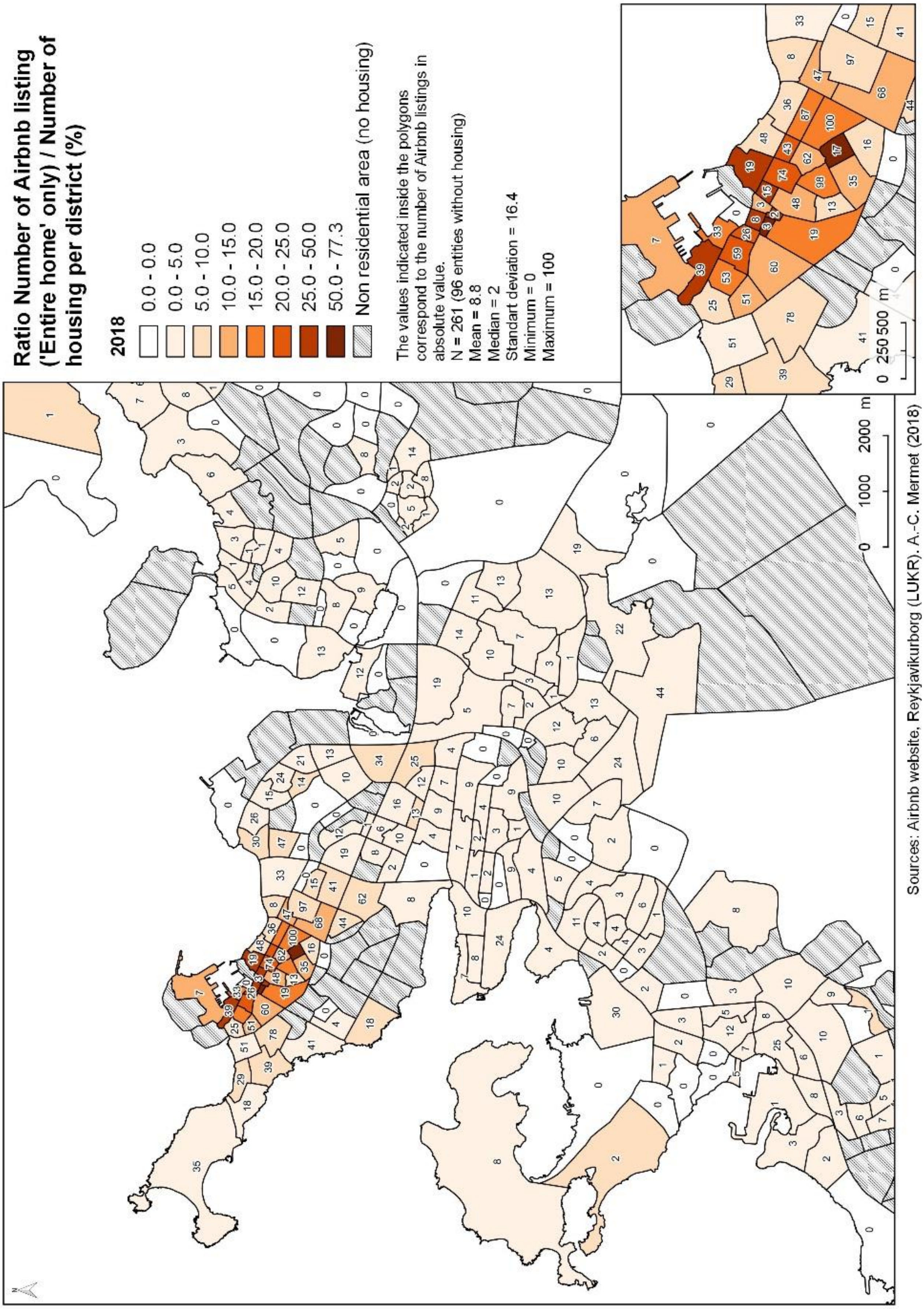


FIGURE 50 – RATIO BETWEEN THE NUMBER OF AIRBNB LISTINGS (ENTIRE HOME ONLY) AND THE NUMBER OF HOUSINGS PER DISTRICTS (2018)

An assessment of the Airbnb rent gap

The most striking disruptive effect of Airbnb comes from the fact that the expansion of short-term rentals gives rise to two rentals market running in parallel: one targeting long-term inhabitants who pay a monthly rent, and one targeting tourists, who rent the place only for a few days and who have a significantly higher purchase power (at least for the time of their stay). Landlords have henceforth the choice between long-term and short-term rentals when it comes to make a decision regarding what to do with their apartment. This creates a completely new form of rent gap. This section aims to quantify the extent to which short-term rentals are more profitable than long-term ones in the centre of Reykjavík.

Sources of the data

Data on Airbnb come from the Airbnb listings database (presented in report n°1). The Airbnb average rental values have been computed only from the prices of entire housings (which are available in euro currency). I have used the monthly prices or multiplied by 4 the weekly prices when the data was available. Otherwise, I have multiplied the price per night by 30, in order to give an account of how much a landlord could expect. It of course provides only a theoretical rental value since the listings are not necessary booked all nights, but the qualitative material gathered through the interview campaign (see section 4 for further details) tends to show that the listings that are advertised full time on Airbnb tend to have a very high booking rate.

Data on the rental market have been provided by Þjóðskrá Íslands. Data on rental prices is aggregated at a mega-district level (several "matssvæði" merged into a bigger one). It displays several variables for each categories of housing (from studio to more than 6 rooms), such as the average size, the average price, the standard deviation of the price etc. Prices have been converted in Euros (currency rate of August 2017) for sake of comparison.

Results

Figure 51 shows that in the city centre, the landlord of a small apartment (one to three rooms) could earn at least three times more money by renting it out on Airbnb rather than on a long-term basis with an ordinary lease. **It thus gives rise to an unfair competition between locals who want to live or stay in the centre and tourists who are able to pay much higher rent** (since they are only staying in the city for a few nights).

All the ingredients of gentrification are thus gathered here:

- The existence of a new potential rent gap, between short-term and long-term rental values
- The arrival of a new population (even if temporary) who can afford much higher rents than local inhabitants and that allows landlord to take advantage of this rent gap

If we use the definition of gentrification recently proposed by Lees, Shin and Lopez-Morales, "as a concept refer[ing] to the commodification of space accompanying land use changes in such a way that it produces indirect/direct/physical/symbolic displacement of existing users and owners by more affluent groups" (Shin, Lees, & López-Morales, 2016), the question now become: **does this situation produce forms of indirect/direct, physical/symbolic displacements?**

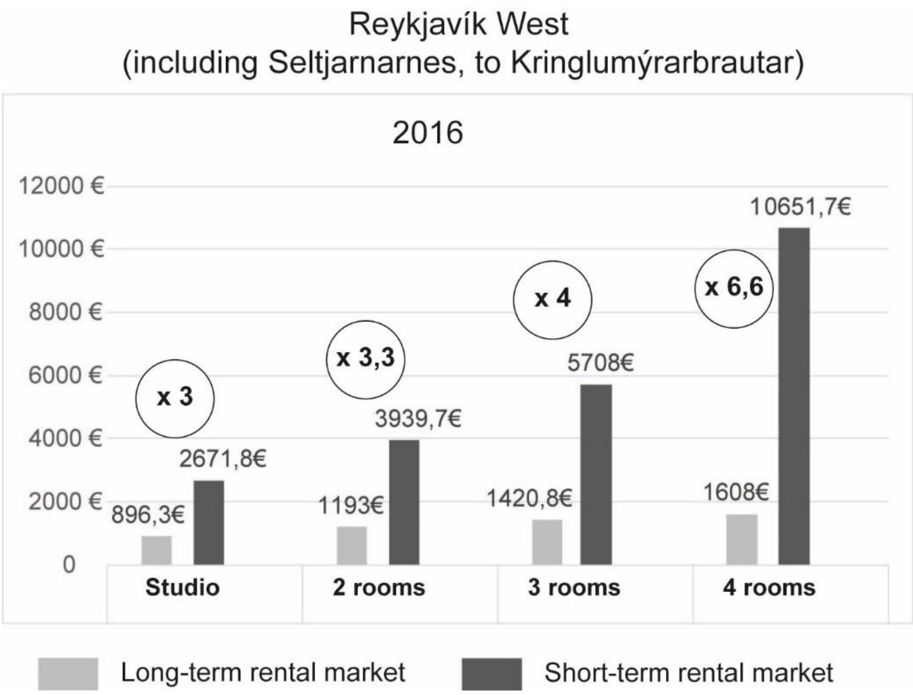


FIGURE 51 – COMPARISON BETWEEN THE ACTUAL MONTHLY AVERAGE VALUES FOR LONG-TERM RENTALS AND THE THEORETICAL MONTHLY AVERAGE VALUES FOR SHORT-TERM RENTAL (IN €).

Sources: Airbnb website (January 2017), Registers Iceland (2016).

Different forms of displacement induced by Airbnb

It now remains to uncover whether this significant rent gap between short-term and long-term rental values actually leads to forms of displacement of local people.

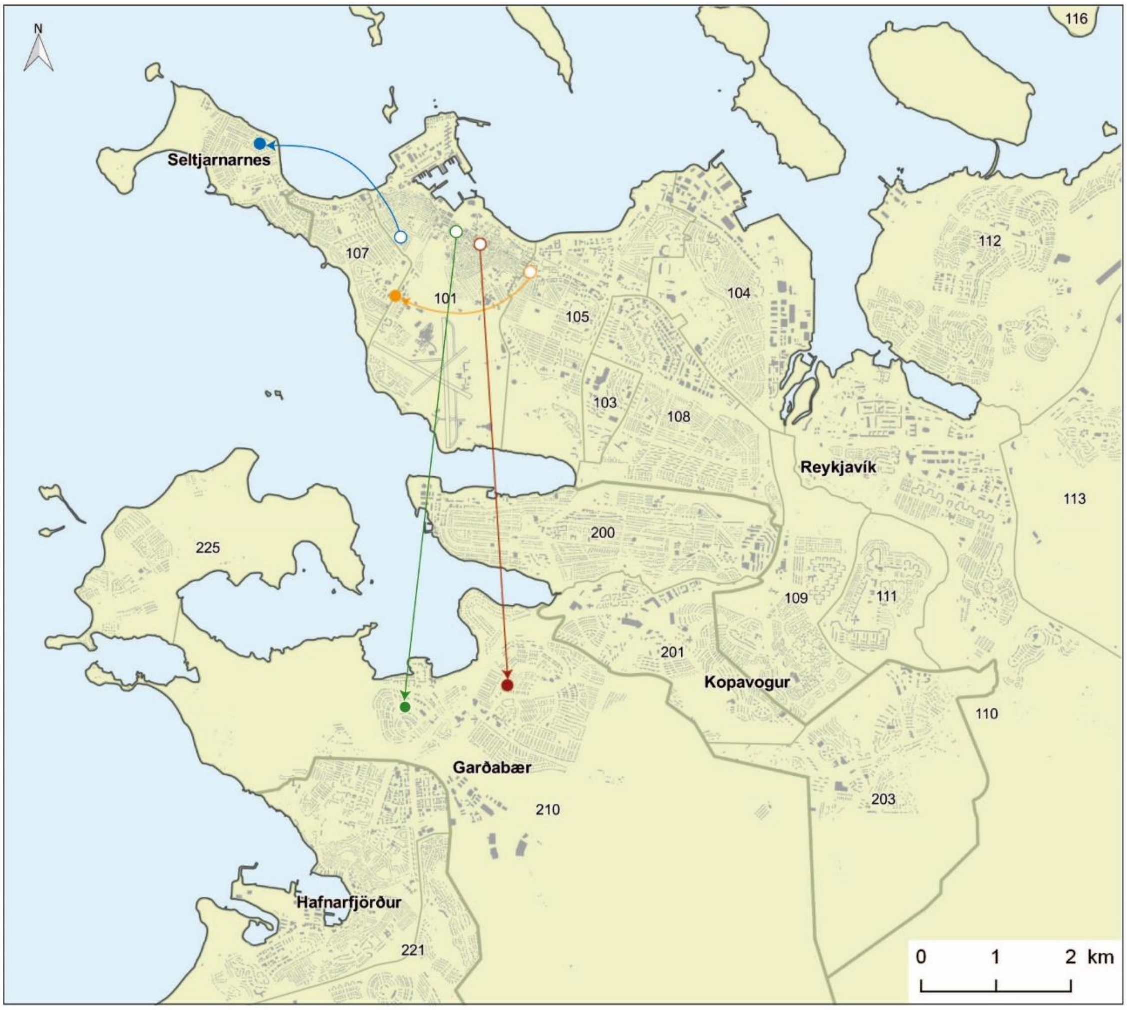
Methods: an interview campaign with displaced people

This project was part of a biggest research on tourism gentrification in Reykjavík. In this context, I have also carried out interviews with local people who have undergone displacement for reasons that are connected to boom of tourism in the city, and therefore, more or less connected to the development of short-term rentals. I managed to interview 24 displaced people, that I have identified and contacted thanks to my own network.

Interviews guidelines included questions regarding the “housing trajectory” of the person, the reason why he moved, the process of having a new place to stay, the impact of soaring rental prices on their daily life.

Results

Interviews with displaced inhabitants confirm the existence of displacement phenomena due to the transformation of housings into short-term rentals. Mirroring what Marcuse highlighted regarding residential gentrification (Marcuse, 1985), I identified different 4 forms of displacement more or less triggered by the expansion of short-term rentals.



Source : Interviews, Landmaelingar Islands. A.-C. Mermet, 2017

- Initial housing
- Housing after displacement
- Patrick (Eviction)
- Maryam 4 month lease, November-April)
- Ada (indirect displacement, shortage of housing)
- Helga (indirect displacement, neighborhood change)

FIGURE 52 - FOUR FORMS OF DISPLACEMENT

The first form, which is the most violent but also the rarest, takes the shape of **direct displacement**, *i.e.* tenants that are asked to live the housing because their landlord wants to turn it into a full-time Airbnb apartment. This situation is closely linked to the fact that a significant number of rentals in Reykjavík does not rely on an official lease that could protect the tenant in such cases. Without this kind of contract, the landlord can ask the tenant to live overnight. For instance, in April 2016, Patrick[28] an American arrived in Reykjavík to work in a game company, has been asked to leave is two-rooms apartment in 101 Reykjavík because his landlord realised he would have made more money by renting it out to tourists on Airbnb (blue arrow on the map) as he explained me:

[28] Names of all the interviewees have been changed.

[>Question?]: And can you tell me how it happened?

[>R1]: So basically, they came and they said... My contract was already up, and we were just doing like... monthly kind of thing, anyway, and they basically said... I think it might have been April and May [...]. Yes, and they basically said yes, you know, we wanna give you 4 months to move out. I asked why and they we... The story that I got was... that he has lost his job and he wanted to make more money, so he would make a lot more money by renting it out on Airbnb, which is true, and he would make what I was paying in rent in about.... 2 to 3 days with Airbnb.

The second form of displacement is very specific to the "Airbnbfication"[29] process in the form of **temporary displacement**, occurring during the tourism peak season (from May to September). In this case, tenants are asked to leave the place during three of four months to rent the place to tourists, and have the possibility to come back in September, which can be convenient for students but far more stressful for other cases. In this case, the lease lasts only for a few months, usually from October to April, so that the landlord can take advantage of the higher profitability of short-term rental in the months were the occupancy rate is the highest. In my sample, it was the case of Maryam, a PhD student from Middle-East who, after weeks of struggling to find a place to live in Reykjavík, finally found a room in a flat-share close to Hlemmur for 99 000 ISK a month[30]. She shared the apartment with 2 other couples, also from other countries. Her landlord owns 11 buildings in the same street, and rent the apartment on Airbnb from April to October, and to local people from November to early April. Therefore, she only had a 6 months lease (Figure 53), and knew she would have to find another place for the summer months. Fortunately, she has been granted a student housing in the meantime. This situation is very common in my sample.

Article 3
Rental period
Lease for a definite period

1. The rental period begins 8th of November 2016 (day, month, year) and the rental period ends 30th of April 2017 (day, month year).
2. A lease for a definite period shall expire on the agreed date without any special notice or announcement being given by the parties. A lease for definite period may not be dissolved by termination during the agreed rental period. It may, however, be agreed that such a lease may be terminated due to special grounds, events or circumstances which are not covered in the Rent Act, in which case they shall then be stated in the lease. Termination of this type shall be made in

FIGURE 53 – EXCERPT FROM A LEASE

Indirect forms of displacement seem to be also very common. Indirect displacement occurs when a household looks for a bigger apartment (following the birth of a child for example). The fact that the number of property assets on the market is currently very low drives price higher and higher. For example, Ada and her husband used to live on a very central street for years. When she gave birth to their second child, they began to consider buying a bigger place in the city centre, which turned out to be impossible due to the lack of available assets and of their budget. They finally bought an apartment in Garðabær.

[29] This concept has been coined for a workshop on "Airbnb-driven gentrification" in Salzbourg in November 2017.
[30] I met her in March 2017.

At last, I identified cases of **voluntary displacement** from people who used to live in the city centre but could not bear anymore the burden induced by the rise of tourism and the fact that most of their neighbours have been replaced by tourists (green arrow on the map).

Conclusion of the section

The considerable development of short-term rentals leads to the coexistence of two rental markets running in parallel with substantially different average rental values favouring short-term rentals. As shown from interviews with Airbnb hosts in section 3, a significant part of the listings advertised in the platform used to be rented on the long-term rental market before the boom of tourism and the arrival of peer-to-peer platforms such as Airbnb. A significant proportion of landlords indeed turned their property into a tourism accommodation, due to the significant rent gap between these two markets, which has led to various forms of direct and indirect displacements.

GENERAL CONCLUSION: THE GOOD AND THE BAD AIRBNB

Part 1 showed that short-term rentals have witnessed an unprecedented expansion in the Reykjavík capital area since 2012. This development is tightly bound to the development of digital intermediation platforms such as Airbnb, whose business model is based on two radical innovation: (1) as intermediation platforms, they don't develop their own material supply, but unfold on a pre-existing residential stock and (2) their model is based on the voluntary participation of local inhabitants to this market. As a result, this new tourism accommodation supply largely overlaps the residential housing stock and disrupt the local dynamics of the housing market. Furthermore, by involving so much local people, it puts local inhabitants both in the position of taking advantage of this new opportunity to get supplemental income if they can *and* of suffering from its consequences on their own "housing trajectories".

Part 2 first aimed to disentangle the Airbnb hosts' strategies in order to have a better insight of who they are and what are their strategies regarding this new market. The research has identified five types of hosts: (1) the entrepreneurial (professional) hosts, who makes a career of its activity on the platform (which represent a minority of the hosts), (2) the investor host, who are mostly well-off households, who sees short-term rentals as a profitable investment to increase his/her personal capital, (3) the pragmatic host A, who had an extra apartment before the tourism boom and who opportunistically decided to switch from long-term to short-term rental in order to take advantage of the higher profitability of short-term rentals compared to long-term ones, (4), the pragmatic host B who occasionally let out a part of his/her own home in order to fund some personal projects and, (5) the hosts who use the supplemental incomes provided by Airbnb to cope with a difficult financial situation and make ends meet.

These different kinds of strategies have radically different impacts on the housing market. The three first host categories (the entrepreneurial host, the investor host and the pragmatic host A) all lead to the transformation of ordinary housing dedicated to local people into tourism accommodation, which participates in the current shortage of housing in the Reykjavík capital, and therefore, to the increase of the rental prices in the city. Moreover, section 4 has demonstrated that these hosts' strategies are leading to different forms of displacement of households who have to find another place to live when their landlord decides to turn their apartment into a tourism accommodation, often further from the centre, which is a significant social issue. On the contrary, the two last categories of hosts use Airbnb to have a better quality of life, indeed to be able to buy or to keep their housing. In these cases, the supplemental income provided by Airbnb helped them to stay put.

Overall, this report shows that the development of short-term rentals tends to increase social inequalities. Indeed, it provides people whose situation on the housing market is already secure (to various degrees: from people who have already had several properties to people who are just buying their first apartment) with an opportunity of increasing their economic capital and/or reassuring their own situation on the housing market. But it makes the situation even tenser for people entering the housing market (young households, migrants) or being on the rental market by removing a significant number of residential units from the housing stock and by participating in the rise of property prices.

These results can have impacts in terms of regulation policy. It shows that, in order to alleviate the impact of Airbnb on the housing market, public policies should mainly target the activities of the three first categories of hosts (the entrepreneur, but above all the investor and pragmatic A hosts) since their activity leads to the reduction of the number of available housings for long-term rentals. On the contrary, the two other kinds of hosts, who are mostly letting out their own property on an occasional basis, are not having major social effects and the current regulation implementing a registration number and allowing people to rent their home for 90 days a year seem quite suitable for their situations.

From a more academic point of view, these results indicate that the link between the development of Airbnb in tourism metropolises and the local housing market is not as straightforward as it is generally presented in the contemporary debate on the "Airbnb syndrome". The "Airbnbfication process" challenges the classical explanations of gentrification that usually oppose the winners and the losers (*i.e.* displaced people) of the process and requires a more pragmatic approach of the process, as suggested by Gary Bridge's theoretical papers (Bridge, 2005, 2014).So, what is the role of the development of Airbnb in the process of contemporary gentrification?

- The two first categories of hosts (the entrepreneurial and the investor host) perfectly fit the classic gentrification framework. Here, the combination of new investment strategies from economically powerful stakeholders and of a new demand from tourists results in (1) the direct or indirect displacement of previous tenants and (2) the loss of one unit on the long-term rental market.
- The second configuration is trickier to interpret since the existing user of the apartment clearly takes advantage of this new opportunity but it also involves the withdrawal of one housing which used to be dedicated to local tenants.
- The last configuration does not fit the gentrification pattern at all. On the contrary, the supplemental income provided by Airbnb help this household to stay put.

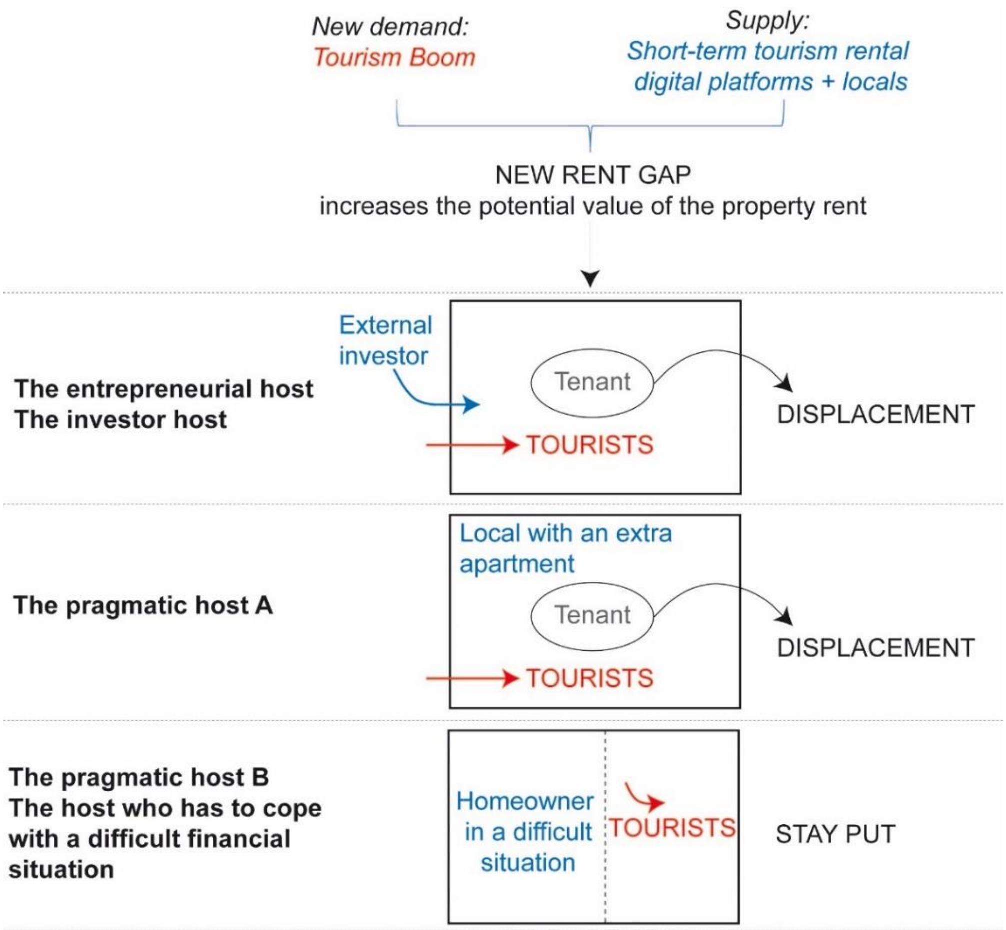


FIGURE 54 – THE VARIEGATED IMPACTS OF AIRBNB ON THE SITUATION OF LOCALS HOUSEHOLDS ON THE HOUSING MARKET

ANNEXE

Table of the interviewed hosts

TABLE 32 – TABLE OF THE INTERVIEWS WITH AIRBNB HOSTS

ID	Name[31]	Gender	Job	Nb listings	Status	Reviews	Flok-kur	Regis-tration	Contact	Date of the interview
ABB1	Bjarni	M	Writer	2	Owner	134	No	No	ABB website	2016-11-21
ABB2	Jean-Marc	M	Manager hotel	1	Tenant		No	No	Own network	2016-11-23
ABB3	Gunnar	M	Engineer	1	Owner	114	Yes	Yes	Own network	2016-11-25
ABB4	Xavier	M	Student	1	Owner		No	No	Own network	2016-11-25
ABB5	Hildur	W	Painter and visual art teacher	4	Owner	226	No	No	ABB website	2016-11-27
ABB6	Elodie	W	Unemployed	1	Tenant		No	No	Own network	2017-02-16
ABB7	Alexander	M	Writer	1	Owner	78	No	No	ABB website	2017-02-19
ABB8	Hjálmar	M	Engineer	2	Owner	700	No	No	ABB website	2017-02-20
ABB9	Lilja Björk	W	Student	1	Owner	12	No	No	ABB website	2017-02-21
ABB10	Elísabet	W	Retired	1	Owner	59	Yes	Yes	Own network	2017-02-25
ABB11	Alda	W	Free lance photographer + Kindenkarten	2	Owner	95	No	No	ABB website	2017-03-03
ABB12	Sara	W	Sick leave	2	Owner	113	No	No	ABB website	2017-03-06
ABB13	Katrín	W	Couturière + sewing teacher	1	Owner	8	Yes	No	ABB website	2017-03-06
ABB14	Sólveig	W	Maternity leave	1	Owner	113	Yes	Yes	ABB website	2017-03-08
ABB15	Sveinn	M	Free lance réalisateur vidéo	2	Owner	304	No	No	ABB website	2017-03-08
ABB16	Sigrún & Rúnar	W	Retired	1	Owner	334	Yes	Yes	ABB website	2017-03-09
ABB17	Sigurður	M	Retired	1	Owner	124	Yes	No	ABB website	2017-03-10
ABB18	Auður	W	Housewife	12	Owner	1204	Yes	Yes	ABB website	2017-03-10
ABB19	Helga	W	Unemployed	7	Owner	249	No	No	ABB website	2017-03-13
ABB20	Ásta	W	Free lance film director	1	Owner	26	No	Yes	ABB website	2017-03-14
ABB21	Ragnhildur	W	Jewel designer	1	Owner		No	No	Own network	2017-03-15
ABB22	Emil	M	Manager	1	Owner	81	No	No	ABB website	2017-03-16
ABB23	Páll	M	Work for the goverment	1	Owner	43	Yes	No	ABB website	2017-03-21
ABB24	Elín	W	Free lance filmmaker	1	Owner	100	Yes	No	ABB website	2017-03-21

[31] All the names of the hosts have been changed.

ID	Name[31]	Gender	Job	Nb listings	Status	Reviews	Flok-kur	Regis-tration	Contact	Date of the interview
ABB25	Sóley	W	Housewife	3	Owner	174	No	No	ABB website	2017-03-22
ABB26	Júlíanna	W	Retired	1	Owner	91	Yes	No	ABB website	2017-03-23
ABB27	Edda	W	Urban planner	1	Owner	61	Yes	No	ABB website	2018-01-25
ABB28	Emilia	W	Day care	8	Owner	2303	Yes	Yes	ABB website	2018-01-30
ABB29	Brynjólfur	W	Guide	1	Owner		No	No	Own network	2018-02-28
ABB30	Ingvar	M	Manager hotel	22	Owner	458	Yes	Yes	ABB website	2018-02-24
ABB31	Service provider 1	M	Entrepreneur	32	Service provider	3374			Their website	2018-02-05
ABB32	Service provider 2	M	Entrepreneur	23	Service provider	467			Their website	2018-02-02
ABB33	Service provider 3	M	Entrepreneur	ND	Service provider				Their website	2017-03-21

Table of the listings of the interviewed hosts

TABLE 33 – TABLE OF THE LISTINGS COVERED BY THE INTERVIEWS WITH AIRBNB HOSTS

ID	Title	Host ID	Name[32]	Type	Capa-city	Nb room	Price (€)	Reviews	Previous use	How often
ABB1.1	Great apartment/Central location	ABB1	Bjarni	Entire home	6	3	210	7	Host's own housing	Occasionaly
ABB1.2	Bright and comfortable room close to the center	ABB1	Bjarni	Entire home	2	1	102	124	Long-term rental	Full-time
ABB2		ABB2	Jean-Marc	Private room	2	1			Spare room	Occasionaly
ABB3	Marina Apartment Reykjavík	ABB3	Gunnar	Entire home	5	1	129	113	Long-term rental	Full-time
ABB4	Cozy place - "Heart of Reykjavík"	ABB4	Xavier	Private room	2	1	155	34	Spare room	Occasionaly
ABB5.1	Spacious room, city centre 1	ABB5	Hildur	Private room	2	1	77	70	Long-term rental	Full-time
ABB5.2	Spacious room, city centre 2	ABB5	Hildur	Private room	2	1	75	59	Long-term rental	Full-time
ABB5.3	Spacious room, city centre 3	ABB5	Hildur	Private room	2	1	70	81	Long-term rental	Full-time
ABB6		ABB6	Elodie	Entire home	4	1			Host's own housing	Occasionaly
ABB7	Cozy and close to the centre	ABB7	Alexander	Private room	2	1	88	74	Spare room	Occasionaly
ABB8.1	Bright and Warm Apartment - Great Location!	ABB8	Hjálmar	Entire home	2	1	100	80	Long-term rental	Full-time
ABB8.2	Studio Apartment in City Center	ABB8	Hjálmar	Entire home	2	1	100	166	Long-term rental	Full-time
ABB9		ABB9	Lilja Björk	Private room	2	1	88	1	Spare room	Occasionaly
ABB10	Bright cozy centrally located	ABB10	Elísabet	Entire home	5	2	93	59	Long-term rental	Full-time

[32] All the names of the hosts have been changed.

ID	Title	Host ID	Name[32]	Type	Capa-city	Nb room	Price (€)	Reviews	Previous use	How often
ABB11.1	Downtown Backyard Cottage	ABB11	Alda	Entire home	2	1	90	81	Artist studio	Full-time
ABB11.2	Location - Private house 101 Reykjavík	ABB11	Alda	Entire home	6	3	370	14	Host's own housing	Full-time
ABB12.1	Beautiful 3 bedroom ap. 15 min drive to Downtown.	ABB12	Sara	Entire home	6	3	155	12	Host's own housing	Occasionaly
ABB12.2	Cozy studio ap. downtown Reykjavík	ABB12	Sara	Entire home	2	1	124	101	Long-term rental	Full-time
ABB13	Private entrance apartment, perfect location	ABB13	Katrín	Entire home	2	1	185	8	Host's own housing	Occasionaly
ABB14	Central Rvk apt, free parking+wifi	ABB14	Sólveig	Entire home	2	1	100	106	New built apartment	Full-time
ABB15.1	Cheerful downtown designer's apartment	ABB15	Sveinn	Entire home	5	2	160	90	Long-term rental	Full-time
ABB15.2	Great little downtown studio	ABB15	Sveinn	Entire home	3	1	93	211	Long-term rental	Full-time
ABB16	Spacious and lovely flat by the sea	ABB16	Sigrún & Rúnar	Entire home	4	2	134	333	Long-term rental	Full-time
ABB17	Cosy compact studioapartment	ABB17	Sigurður	Entire home	2	1	87	122	Long-term rental	Full-time
ABB18.1	Lakeside cottage near Reykjavík	ABB18	Auður	Entire home	6	3	159	45	Summer house	Full-time
ABB18.2	Reykjavík city centre apartment	ABB18	Auður	Entire home	6	2	159	130	Previous owner's home	Full-time
ABB18.3	"Eva's Room" - Single	ABB18	Auður	Private room	1	1	88	33	Previous owner's home	Full-time
ABB18.4	"Clare's Room" - Single	ABB18	Auður	Private room	1	1	62	54	Previous owner's home	Full-time
ABB18.5	Chambre double - 'Chambre de Niel'	ABB18	Auður	Private room	2	1	79	50	Previous owner's home	Full-time
ABB18.6	"Little Room"- Small Single	ABB18	Auður	Private room	1	1	49	85	Previous owner's home	Full-time
ABB18.7	"Katie's Room"- Double/Twin	ABB18	Auður	Private room	2	1	106	67	Previous owner's home	Full-time
ABB18.8	Chambre double - 'La Cuisine Chambre'	ABB18	Auður	Private room	2	1	79	55	Previous owner's home	Full-time
ABB18.9	"Becky's Room"- Double/Twin	ABB18	Auður	Private room	2	1	79	20	Previous owner's home	Full-time
ABB18.10	"Thor's room"- Small Single	ABB18	Auður	Private room	1	1	66	49	Previous owner's home	Full-time
ABB18.11	"Sylvie's Room" - Single	ABB18	Auður	Private room	1	1	88	36	Previous owner's home	Full-time
ABB18.12	"Peter's Room"- Double/Twin	ABB18	Auður	Private room	2	1	106	65	Previous owner's home	Full-time
ABB19.1	Single room w/ no sharing bathroom	ABB19	Helga	Private room	4	1	50	59	Long-term rental	Full-time
ABB19.2	My cosy attic	ABB19	Helga	Private room	3	1	59	52	Long-term rental	Full-time
ABB19.3	Small room in shared appartment	ABB19	Helga	Private room	2	1	40	3	Previous owner's home	Full-time

ID	Title	Host ID	Name[32]	Type	Capa-city	Nb room	Price (€)	Reviews	Previous use	How often
ABB19.4	A very Small room on á third floor	ABB19	Helga	Private room	1	1	49	61	Long-term rental	Full-time
ABB19.5	Room at 105 Reykjavík	ABB19	Helga	Private room	2	1	62	26	Previous owner's home	Full-time
ABB19.6	large room downtown Reykjavík	ABB19	Helga	Private room	2	1	72	29	Long-term rental	Full-time
ABB19.7	Great view down town	ABB19	Helga	Entire home	6	2	195	3	Host's own housing	Occasionaly
ABB20	A little room in the midtown of Reykjavík	ABB20	Ásta	Private room	1	1	62	26	Spare room	Occasionaly
ABB21		ABB21	Ragnhildur	Entire home	4	2			Spare room	Full-time
ABB22	Private apartment	ABB22	Emil	Entire home	2	1	110	80	Long-term rental	Full-time
ABB23	Room in luxury central Reykjavík apartment	ABB23	Páll	Private room	2	1	75	43	Spare room	Full-time
ABB24	A cozy studio apartment, as central as it gets.	ABB24	Elín	Entire home	2	1	98	97	Artist studio	Full-time
ABB25.1	Double Room by Reykjavík Marina, great location 1	ABB25	Sóley	Private room	2	1	85	59	Long-term rental	Full-time
ABB25.2	Double Room by Reykjavík Marina, great location 2	ABB25	Sóley	Private room	2	1	85	42	Long-term rental	Full-time
ABB25.3	Double/Twin Room by Marina great location 3	ABB25	Sóley	Private room	2	1	85	73	Long-term rental	Full-time
ABB26	Beautiful apartment close to center and sea	ABB26	Júlíanna	Private room	2	1	71	75	Spare room	Full-time
ABB27.1	Small cozy room for solo travelers #HG-657	ABB27	Edda	Private room	1	1	65	56	Spare room	Occasionaly
ABB27.2	Registration #HG-657	ABB27	Edda	Entire home	2	1	161	3	Host's own housing	Occasionaly
ABB28.1	Downtown New 2x2 Design Apartment	ABB28	Emilia	Entire home	4	1	124	289	Previous owner's home	Full-time
ABB28.2	Downtown-Luxury-Large-Warm cozy room	ABB28	Emilia	Private room	2	1	75	166	Previous owner's home	Full-time
ABB28.3	Downtown-Large-Luxury-Comfort-room	ABB28	Emilia	Private room	2	1	80	163	Previous owner's home	Full-time
ABB28.4	Downtown-Fully-Equipped 2X2 Apartment"free parking	ABB28	Emilia	Entire home	4	1	120	298	Previous owner's home	Full-time
ABB28.5	Downtown-Spacious-Comfortable room	ABB28	Emilia	Private room	2	1	63	308	Previous owner's home	Full-time
ABB28.6	Downtown-Beautiful-Design 3x2 Penthause-Apartment	ABB28	Emilia	Entire home	6	2	158	275	Previous owner's home	Full-time
ABB28.7	Downtown New Design Studio Apartment	ABB28	Emilia	Entire home	3	1	128		Previous owner's home	Full-time

ID	Title	Host ID	Name[32]	Type	Capa-city	Nb room	Price (€)	Reviews	Previous use	How often
ABB28.8	Downtown-Bright-Comfortable room -	ABB28	Emilia	Private room	2	1	65	327	Previous owner's home	Full-time
ABB29		ABB29	Brynjólfur	Entire home	6	3			Host's own housing	Occasionaly
ABB30.1	Studio in a Great Location Centre City	ABB30	Ingvo	Shared room	8	1	41	NA	ND	Full-time
ABB30.2	Cute Studio in a Great Location. Stopover Iceland.	ABB30	Ingvo	Entire home	2	0	81	149	ND	Full-time
ABB30.3	Studio in a Great Location City! Stopover Iceland!	ABB30	Ingvo	Entire home	2	0	92	71	ND	Full-time
ABB30.4	Studio in a Great Location Centre City!	ABB30	Ingvo	Shared room	8	1	41	NA	ND	Full-time
ABB30.5	Studio in a Great Location Centre City	ABB30	Ingvo	Private room	4	3	41	NA	ND	Full-time
ABB30.6	Cute Studio in a Great Location Private Entire	ABB30	Ingvo	Entire home	2	0	92	NA	ND	Full-time
ABB30.7	Beautifully Renovated & Private Entire Centre City	ABB30	Ingvo	Entire home	1	0	92	NA	ND	Full-time
ABB30.8	Beautifully Renovated & Private Entire Centre City	ABB30	Ingvo	Entire home	2	0	92	31	ND	Full-time
ABB30.9	"Studio in a Great Location Centre City"	ABB30	Ingvo	Private room	6	3	41	NA	ND	Full-time
ABB30.10	"Studio in a Great Location Centre City"	ABB30	Ingvo	Private room	4	3	41	NA	ND	Full-time
ABB30.11	Charming Newly Renovated & Private Entire Centre!	ABB30	Ingvo	Entire home	2	0	100	8	ND	Full-time
ABB30.12	Studio in a Great Location Centre City	ABB30	Ingvo	Shared room	8	1	41	NA	ND	Full-time
ABB30.13	Studio in a Great Location Centre City	ABB30	Ingvo	Private room	6	3	41	NA	ND	Full-time
ABB30.14	"Studio in a Great Location Centre City"	ABB30	Ingvo	Private room	6	3	41	3	ND	Full-time
ABB30.15	Studio in a Great Location Centre City	ABB30	Ingvo	Private room	4	3	41	NA	ND	Full-time
ABB30.16	“Studio in a Great Location Centre City”	ABB30	Ingvo	Shared room	4	1	41	NA	ND	Full-time
ABB30.17	Studio In A Great Location down town city/centre!!	ABB30	Ingvo	Entire home	4	0	106	23	ND	Full-time
ABB30.18	“Studio in a Great Location Centre City”	ABB30	Ingvo	Private room	4	3	41	3	ND	Full-time
ABB30.19	New Entire Studio in Downtown1-4 guests	ABB30	Ingvo	Entire home	4	0	126	NA	ND	Full-time
ABB30.20	Charming Privat Entire Center of city	ABB30	Ingvo	Entire home	2	0	92	NA	ND	Full-time
ABB30.21	Cute in Studio in a Great Location!!!	ABB30	Ingvo	Entire home	2	0	81	5	ND	Full-time
ABB30.22	Beautiful Private Entire Studio DownTown!	ABB30	Ingvo	Entire home	2	0	100	8	ND	Full-time

TABLES

FIGURES

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