The role of Airbnb creating
a "new"-old city centre:
facts, problems and controversies in Porto

El papel de Airbnb en la creación de un "nuevo" centro
de la ciudad vieja: hechos, problemas y controversias en Porto

Pedro Chamusca (iD)

pedrochamusca@ua.pt

Departamento de Ciências Sociais, Políticas e do Território
Universidade de Aveiro / CEGOT (Portugal)

José Rio Fernandes (iD)

jariofernandes@gmail.com

Faculdade de Letras da Universidade do Porto / CEGOT (Portugal)

Luís Carvalho (iD)

lcarvalho@fep.up.pt

Faculdade de Economia da Universidade do Porto (FEP) / CEGOT (Portugal)

Thiago Mendes (iD)

profthiagomonteiro@gmail.com

CEGOT (Portugal)

Abstract

Urban tourism growth, favoured by short term rental platforms like Airbnb, is changing the cities dramatically. All over Europe local governments have been facing unbridled growth of the so-called sharing economy and developed different regulatory approaches: full prohibition; laissez-faire; and different sorts of limitations. We take Porto as a case-study, considering the exponential growth of tourism, Airbnb and floating city users over the past decade. We make use of qualitative and quantitative methods and draw on the official AirDNA database to analyse the relation between Airbnb and urban transformation, and the governance context. We conclude that the growth of floating city-users —stimulated by Airbnb— has been the main driver of urban change. The case of Porto —which in many ways illustrates the fast growth of short-term, rental-driven urban tourism in southern Europe— demonstrates that Airbnb's global corporate narrative around property sharing, micro-entrepreneurship and tourism democratization hardly fits the urban reality of host professionalization, income concentration and growing massification. In this context, besides *laissez-faire*, urban sustainability concerns call for smarter regulatory approaches associated with more widely shared visions, and clear short, medium and long-term objectives.

Keywords: Airbnb; urban Tourism; floating city users; sharing economy; governance; short term rental.

Resumen

El crecimiento del turismo urbano, favorecido por plataformas como Airbnb, está cambiando drásticamente las ciudades. En toda Europa, los gobiernos locales se han enfrentado al crecimiento descontrolado de la llamada economía colaborativa y han desarrollado diferentes enfoques reglamentarios: una prohibición total; laissez-faire; y la limitación. Tomamos Porto como un caso-estudio, teniendo en cuenta el crecimiento significativo del turismo, de la Airbnb y de los usuarios flotantes en los últimos dos años de la ciudad. Utilizamos diferentes tipos de métodos cualitativos y cuantitativos (a saber, la base de datos oficial de Airdna) para analizar los principales cambios urbanos, el papel de Airbnb y el contexto de gobernanza. Llegamos a la conclusión de que el crecimiento de los usuarios flotantes de la ciudad, estimulado por Airbnb, parece ser el principal impulsor del cambio. Todavía, en Porto, la narrativa global de economía colaborativa y democratización del turismo de Airbnb resulta errónea, ya que su dinámica está más o menos relacionada con el crecimiento de la economía hotelera, los anfitriones profesionales y las concentraciones de renda y masificación. En este contexto, además de *laissez-faire*, las

preocupaciones de sostenibilidad urbana exigen enfoques regulatorios más inteligentes asociados con visiones más ampliamente compartidas, y objetivos claros a corto, medio y largo plazo.

Palabras clave: Airbnb; turismo; populación fluctuante; economía colaborativa; gobernanza; alquileres de corta duración.

1   Introduction

The speed and scale of urban tourism development raises new challenges to the contemporary city, especially in the so-called historical centres and downtown areas. The limits of tourism growth have been widely discussed in academia and society over the past decade, but it seems that a "no resident city" is becoming a reality in many European areas). In this process, the home-sharing platform Airbnb has become a major player, with a direct impact decreasing the costs and hightning tourist accommodation capacity and territorial dynamics of hundreds of cities all over the world.

From the perspective of the city, it is generally recognized that the growth of Airbnb and other short-term rental (STRs) platforms has positive effects, promoting (and benefiting from) the physical rehabilitation of buildings and the regeneration of local economies, while bringing income, jobs and overall economic dynamic into formerly decaying city centres. However, its growth has also been associated to real-estate speculation and gentrification processes, and the so-called touristification of cities (e.g. Carvalho et al., 2019; Cócola-Gant, 2016; Gentile et al., 2012; Gutiérrez et al., 2017; Pendlebury et al., 2009). The global corporate marketing message that Airbnb is part of the so-called "sharing economy" is also to be questioned, as the available data[1] shows that the majority of Airbnb listings, in different cities, are entire homes, many of which are rented all year round, turning into *de facto* hotels. As this happens, it becomes increasingly difficult to actually reside and live in some parts of an increasing number of cities, which fuels discontent and compels many local governments worldwide to act, however struggling to regulate an activity commanded by an internet platform.

In this paper, we look into the aforementioned dynamics for the perspective of the city of Porto, in Northern Portugal. In Porto, urban transformation has been hand-in-hand with a growing number of tourists and other sorts of short-term visitors and floating city users.[2] Closely intertwined with other

---

1   See the Inside Airbnb database, for example (http://insideairbnb.com/index.html).

2   In previous work we have explained this concept: "The notion of floating (vs. "temporary") city users intends to capture a new sense of speed, a semi-permanent state of flux and, consequently, lack of local embeddedness

on-going transformations and exogenous factors[3], we show how the significant growth of tourism and floating city users in Porto´s city centre has been linked with the real estate bonanza and short stay rental boom, mostly intermediated by online platforms such as Airbnb. Airbnb-listed properties in Porto diffused from a single property in 2009 to over 11,000 in May 2018, most of them fully occupied during most of the year; if all Airbnb properties were fully occupied with visitors, there would be less residents than persons sleeping on an Airbnb rented room at some parishes in the city centre of Porto (Fernandes et al., 2018b).

Our research is thus focused on key challenges that cities face when dealing with short term rental platforms and on the role Airbnb is playing in the creation of a "new" life in an old city centre. Looking at Porto, a mid-sized European city where change has been particularly significant in the aftermath of a severe economic crisis, we analyse and provide answers for three major questions:

1. Floating population (in general) and tourists (in particular), play a central role in urban and daily-life routines change in some cities. What is the role of platforms like Airbnb in this process? And what are the main changes cities like Porto face?

2. Airbnb´s corporate promotion mobilizes the narrative of micro-entrepreneurship and the social and geographical democratization of tourism. How does this global narrative fits Porto´s reality?

3. In a context globalization, metropolization and suburbanization, marked by the hollowing out of the "voting city" (replaced by temporary users), what public policies do we need in a world in which urban dynamics are increasing shaped by global, digital "sharing" platforms like Airbnb?

---

and a certain passivity vis-à-vis the city contexts and atmospheres they "consume", as well as the local civic life. Hence, it brings to the fore local democracy issues as the "voting city" is gradually hollowed out by — and yet planned for — floating city users." (Carvalho et al., 2019, p. 6)

3 Factors related with: i) heightened air connectivity, especially after the creation in 2009 of a Ryanair hub (with a 80% air passenger growth during 2012-17); ii) increased attractivity after being World Heritage Site (1996), European Cultural Capital (2001), and 2012, 2014 and 2017 European Best Destination; iii) relevant attraction of international university students (over the last decade-and-a-half, the number of enrolled international students at the University of Porto more than tripled, while the number of students in temporary exchange programmes increased five times); iv) physical rehabilitation of many historical houses and of streets (with more walking space); v) economic activity change (a 22% growth in the number of bars, coffee shops and restaurants was documented between 2012 and 2018 in the city centre, with diversification and increase of the quality of service and price, and vi) a growing number of suburbanites coming to the city centre, mingling with tourists, students and (few) residents at different hours of the day, for different purposes. (Fernandes et al., 2018a)

The paper is structured in four major chapters. In Chapter 2 we discuss the theoretical background of recent urban transformation and the role of Airbnb and the sharing-platform economy in the construction of tourism-oriented city centres. In Chapter 3 and Chapter 4 we explore methodological issues and look into the recent tourism and floating population dynamics in Porto. By analysing how Airbnb, platform-dependent short-term rental has increased the occupation of the city centre, we discuss, in Chapter 4, some of its direct and indirect impacts, issues and controversies, and the relevance of a new approach to urban planning and urban management.

2 Theoretical background

2.1 The globalized and consumer-oriented city centre

Different movements are converging to make economic generalization increasingly difficult, as several economic theories challenge the mantra of cyclical and "one-size-fits-all" development models. So much so that nowadays it is widely recognized that geographical conditions matter significantly (Pike et al., 2016; Rissola, 2017; OECD, 2018) and that societal development should be mainly the result of what people wish for a certain space and time. Another idea, also at odds with the idea of homogeneous global capitalism, calls for a closer look into some parts of the world, like Scandinavia, where people, politics and policies are increasing oriented towards happiness and sustainability goals, underplaying the idea of territorial competition and income maximization (Wiking, 2016). One may look at this as "post consumerist". However, such an approach brings to the for the relevance of culture and the capacity of each region or person to find its way towards more nuanced notions and conceptualizations of development and happiness.

That being said, globalization and several types of deregulation and institutional decomposition (Tylecote, 2009) have been rampant almost everywhere, promoting the growth of consumption and the evolution of capitalism, with finance and capital flows as an increasingly important drivers. As a consequence, in many parts of the world and for an increasing number of persons, namely in fast growing economies in the developing world, the aspiration to have objects, experiences and knowledge of other places exists. In this context, as many have noted (Bauman, 2004; Baudrillard, 2008), a consumption society becomes more and more present, because of the development of aggressive and seductive marketing strategies and credit access. The characteristics of this type of society rely on the fact that i) for most of the goods, its offer exceeds demand; ii) most of the products and services, notwithstanding increasing customization trends, are standard and its production methods are based on mass production; iii) consumption tends to be seen as a channels towards social integration.

In this so-called "consumption society" cities are increasingly seen (and used) as places of (and for) consumption —even if some of them more than others, and some parts of them particularly more than others. Thus, consuming "experiences" in cities has become almost mandatory for millions around the world, as Venice, central Paris, or El Gòtic in Barcelona illustrate. This trend has meant a new opportunity for several cities in Europe, after deindustrialization and suburbanization, as the case of Porto illustrates. Consequently, if supermarkets, department stores and shopping malls are very relevant for shopping purposes, the old city centre is capturing most of the attention in terms of leisure and recreation. That being the case for a fair proportion of urban residents, it is even more relevant for visitors, and as visitors increase in relation to residents, the city centre may be completely congested at some times, with a good part of it emerging as thematic spaces, namely for restoration, culture and evening shows.

Such recent changes in the "new life" of the "old centre" (Rio Fernandes & Sposito, 2013) are also expressed in the temporalities of the city, with spatially temporal complexification and diverse forms of coexistence of fast and slow times and rhythms. The individualization of schedules throughout the day, week and month, motivated by the specialization of careers (increasingly individual) and flexibility/precariousness of work, increased mobility and longer lifetime after retirement allows for a greater variation in the demand for goods, services and experiences, in opposition/complement to the still prevailing regular "working hours", extending and complexifying the uses of the city (Fernandes & Chamusca, 2014; Mareggi, 2002; Mückenberger, 2011).

However, we have to take tourism and consumption both as a problem —for the character of the city and speculative games in real estate, mainly— and as a "solution" for the urban and national economies of several countries that face much needed conservation action in the old urban fabric in a context of anaemic economic growth. That is the case of Portugal, that suffered a severe financial crisis and then severe austerity measures, but where the core urban debate moved from a focus on the decay of city centres to the risks associated to city-use growth and related phenomena of touristification, beautification or even a certain disneylandification (Paoli et al., 2017; Pendlebury et al., 2009)

2.2 Airbnb and the "new" gentrification

The globalized and consumer-oriented city brings to the fore the old (and contested) notion of gentrification, broadly defined as a process of urban change through the influx of more affluent residents and/or users to certain city areas (Glass, 1964; Zuk et al., 2018). On the one hand, the understanding of gentrification as a problem creates cultural and identity issues related with the

displacement of locals (inhabitants and economic activities) and to the radical transformation of cultural and historical sites. On the other hand, some identify gentrification as a solution, especially in some area-based initiatives of urban renewal in vacant or segregated areas. This is particularly evident in North American cities, where gentrification became part of a redevelopment strategy to deal with income inequality and class divisions in some neighbourhoods.

Processes of urban gentrification are not new —for instance, in Porto, gentrification as a process of urban change and displacement driven by international elites has been occurring for many centuries, in a somehow cyclical fashion (Carvalho et al., 2019). However, besides the textbook cases of high/middle-class takeover, many other forms of gentrification have been identified in different parts of the world (e.g. Lees et al., 2016), associated to different drivers and to important changes in the labour markets and the impact of fiscal crises, with central and local governments being forced to attract more high income taxpayers, even where local taxes are predominantly based on property assets.

If gentrification is not a new process, literature has been paying a special attention to it over the past years, proposing new (and better) definitions, trying to understand its drivers and evaluating its consequences, namely in terms of displacement, quality-of-life changes, impacts on economic development and social integration (Ghertner, 2015; Lees et al., 2016). Related to the main drivers, the economic models of neighbourhood change focus more on market forces and individual choices, while planning and geography models emphasize class and policies. In fact, some authors state that these "new" gentrification processes are driven by the State — when they create conditions for new rent gaps, e.g. through beautification, waterfront and city centre redevelopments, marketing strategies and other initiatives oriented to attract more affluent residents and economic activities — and by "Capital" or market players, namely investment funds, that promote city rehabilitation and speculation, while trying to get the highest profit out of it (Lees et al., 2016).

Other authors identified transnational drivers fuelling city centre transformations, linked to leisure and foreign capital investment (Wachsmuth & Weisler, 2018). In this sense, one of the most powerful gentrification drivers nowadays is linked to tourism and tourists as transnational gentrifiers, fuelled by short term rental platforms like Airbnb (Cócola-Gant & Gago, 2019; Carvalho et al., 2019; Fernandes et al., 2018b). It is argued that such a development, while reducing the risk/increasing returns of investments in redeveloping real estate and connecting

the city to international preferences and purchasing power, disconnects the local economy, real estate markets and urban activities from local demand (Wachsmuth & Weisler, 2018; Wachsmuth et al., 2017).

The often-observed result of such a process is direct, indirect and induced forms of tourism-driven gentrification (Bridge, et al., 2014; Cócola-Gant, 2016; Carvalho et al., 2019; Wachsmuth & Weisler, 2018), together with deep economic and social transformations in city centres. According with these studies, Airbnb has introduced a new potential investment flow into local housing markets which is geographically uneven and promotes a new form of rent gap in cities that are internationally attractive because of its cultural or natural amenities, associated with some new forms of gentrification. These new forms —that go deeper than the influx of affluent residents— grow hand-in-hand with Airbnb as it promotes the withdraw of rental housing from the market, with social impacts and displacement of some groups of residents; the transformation of everyday life in the cities where Airbnb is widespread; and the growth of social and economic conflicts that disrupt both the existing governance arrangements and the existing market structures (Leoni & Parker, 2018).

2.3 Governance and democracy issues

At the same time, the challenges resulting from the deep economic and social transformations of the last decades promoted the reorganization of the administration of most States, anchored in objectives and mechanisms oriented to deal with the effects of centralism, the opacity of political systems and excessive legislation and bureaucracy (Chamusca, 2012). In the context of this transformation, the spatiality of all types of power and authority gained importance (Ethington & McDaniel, 2007), stressing the increasing relevance of de-territorialisation of the state (Pugh et al., 2007) and the need to constitute mechanisms to represent collective action (Chamusca, 2012). So, over the last decades, the State has sought to reorganize and adapt to the new demands of an increasingly complex reality, which according to several authors (Brenner, 1999; Brenner, 2004; Gibbs et al., 2001; Vigar et al., 2005) involves three processes: decentralization, hollowing-out and devolution.

The process of decentralization is related with de-nationalization (Gibbs et al., 2001) or rescaling (Brenner, 1999) of the State, with scalar movements of power transfer in variable direction: on a global scale with "upward" power sharing, notably through a greater link of States to supranational entities such as the European Union, the International Monetary Fund or the World Bank; on a national scale with "lateral" power sharing, through the transfer of competences to governmental

agencies and bodies, but also "up" and "down"; and on a regional scale with "down" power sharing, i.e. for intermediate institutions that increase their relevance in the governance processes, notably in regulatory and management tasks.

The hollowing-out of the State (Wassenhoven, 2008) is associated with the much-mentioned European crisis of the Welfare State Model (Rhodes, 1996). Although national sovereignty and its capacity is kept for plan and action, the weakening of borders and the internationalization and flexibilization of production systems lead to progressive loss of autonomy and the growing demand for regional coordination mechanisms, as well as the development and transfer of competences for intermediate scales. The idea of State devolution is articulated with this perspective, but acknowledges that despite downscaling and upscaling processes, national institutions are often playing the most important roles in the formulation, implementation, coordination and supervision of initiatives, thus developing new and hybrid forms in multiple socio-spatial scales, and with the increasing relevance of private companies.

The changes in the models of political and economic organization and the restructuring processes of the State acquire multiple forms and intensities across Europe, motivating, in a general, the shift from a State centred model to a system of tripartite organization of power and authority. The advantages of the articulation between the State, civil society, and the market are highlighted (Swyngedouw, 2005), as well as the importance of networking/partnerships, innovative and interactive ways of making politics (Kokx et al., 2009), associated with the increasing value and dissemination of the concept of governance (Jessop, 2000; Rhodes, 1996; Stoker, 2004; Chamusca, 2012).

Recent developments associated to tourism growth —and especially to the boom of Airbnb and short term rental in cities— started to challenge the above-mentioned governance theories, emphasizing the importance of real articulation (public-private-society) and effective participation within the design and implementation of public policies and urban management strategies and actions. Yet, the regulation of this phenomena —in Portugal as in other countries— has been mainly within the local government sphere, much of it adopting market-friendly positions (heralding Airbnb's positive effects for local economy) or civil society-friendly attitudes (considering that Airbnb promotes the shortage of affordable housing and significant neighbourhood changes), looking at what is seen as an opportunity and not a process to integrate a strategic collectively constructed vision. After realising the scale and the sheer impact of platforms like Airbnb in cities, short term rentals became a hot political issue in urban governance spheres (sometimes as the

result of local resident protest). It is now possible to distinguish between three main options towards the phenomena: i) a full prohibition; ii) the laissez-faire approach; and iii) the limitation of it, with different degrees of restriction (Guttentag, 2015; Jefferson-Jones,2014; Nieuwland & van Melik, 2018).

Full prohibition implies banning short term rental altogether from the entire community (in Anaheim, for example) or in a certain area of the city, applying to the existing properties (in Anaheim those already listed started a phasing out process since January 2018) or only to new licenses (as it happens in Barcelona and parts of Lisbon). This approach seeks to solve some of the major problems generated by mass tourism, but it poses other problems, namely the loss on tax revenues and the risk of reinforced parallel and unregulated market for short term rental. On the opposite side, laissez-faire approaches mean, most of the times, that no concrete measures are taken by local governments, leaving to the market its self-regulation. In some cases, it means full confidence in companies as Airbnb that boasts to be "..democratizing capitalism by expanding the economic pie for ordinary people" (Airbnb, n.d.). In fact, even Airbnb recognizes that some sort of local management is necessary, playing an active role in public policies in several cities, with collaborative action on tax collection (Lines, 2015), automated limits on number of nights spent support, landlord-tenant cooperation or discrimination and scam prevention. This option is often associated with continuous growth of tourism and increased conflicts with civil society interests.

Finally, the limitation of Airbnb activity implies different types of restrictions to the short-term rental market. Nieuwland and van Melik (2018) identify four types of restrictions, namely i) quantitative, which include limiting the amount of accommodations (city or owner), allowed visitors and/or days rented or available for renting; ii) locational, confining short term rental to specific locations; iii) density restrictions, limiting the number of short term rental in certain neighbourhoods; and iv) qualitative, defining for example the type of accommodation, the relation with streets and inhabitants or some specific safety requirements. Yet, it is likely that the appropriateness of each type of regulatory option will vary widely according to each city, namely considering its political standing but also the ways through which short-term rental manifests itself and puts pressure in the urban fabric and city life.

3 Methodology

To understand the role of short-term rentals and Airbnb in the creation of a "new" old city centre in Porto, we have used different qualitative and quantitative methods. To have a broad outline of the major dynamics linking Airbnb, city centre transformation and urban management, we first

conducted a qualitative content analysis of relevant policy documents and scientific research in different cities on diverse territorial contexts. Secondly, we focused on the city of Porto as case study. To do so we collected quantitative data on the economic and social dynamics of the city, including access to official database for all the Metropolitan Area of Porto.

Moreover, we explored the dataset of Airdna (https://www.airdna.co), the company responsible for the production and management of information associated with local accommodation through Airbnb, on a global scale. The information used relates to the period 2009-2018 and considers all Airbnb properties in the Metropolitan Area of Porto, identifying i) ownership (ii) tagline of the announcement; iii) type of property; iv) date of first listing; v) date of the last update; vi) location; vii) income; viii) guest reviews; ix) booking and occupancy rate; x) response time; xi) cancellation policy; xii) additional fees; xiii) additional links and descriptions. The relevant data for our analyses was georeferenced and analysed in ArcGIS software together with other variables, as those made available by INE (Portuguese National Institute for Statistics), namely official data on demographics, tourism, real estate and passengers landed at the Francisco Sá Carneiro airport; the University of Porto provided additional data on national and foreign students. Moreover, we also report on data and information on land use in Porto city centre, collected from a semi-annual survey and georeferentiation of all shops, restaurants and other activities installed on the ground floor of every building in the city centre of Porto, conducted by two of the authors over the last five years. In addition, we also mobilise data from interviews with inhabitants and retailers in Porto´s city centre, conducted by the four authors during august 2018. The focus of the paper is the city and municipality of Porto, with some data referring to its central area normally considered in two parts: the historical centre and downtown (Figure 1).

Figure 1. Porto municipality
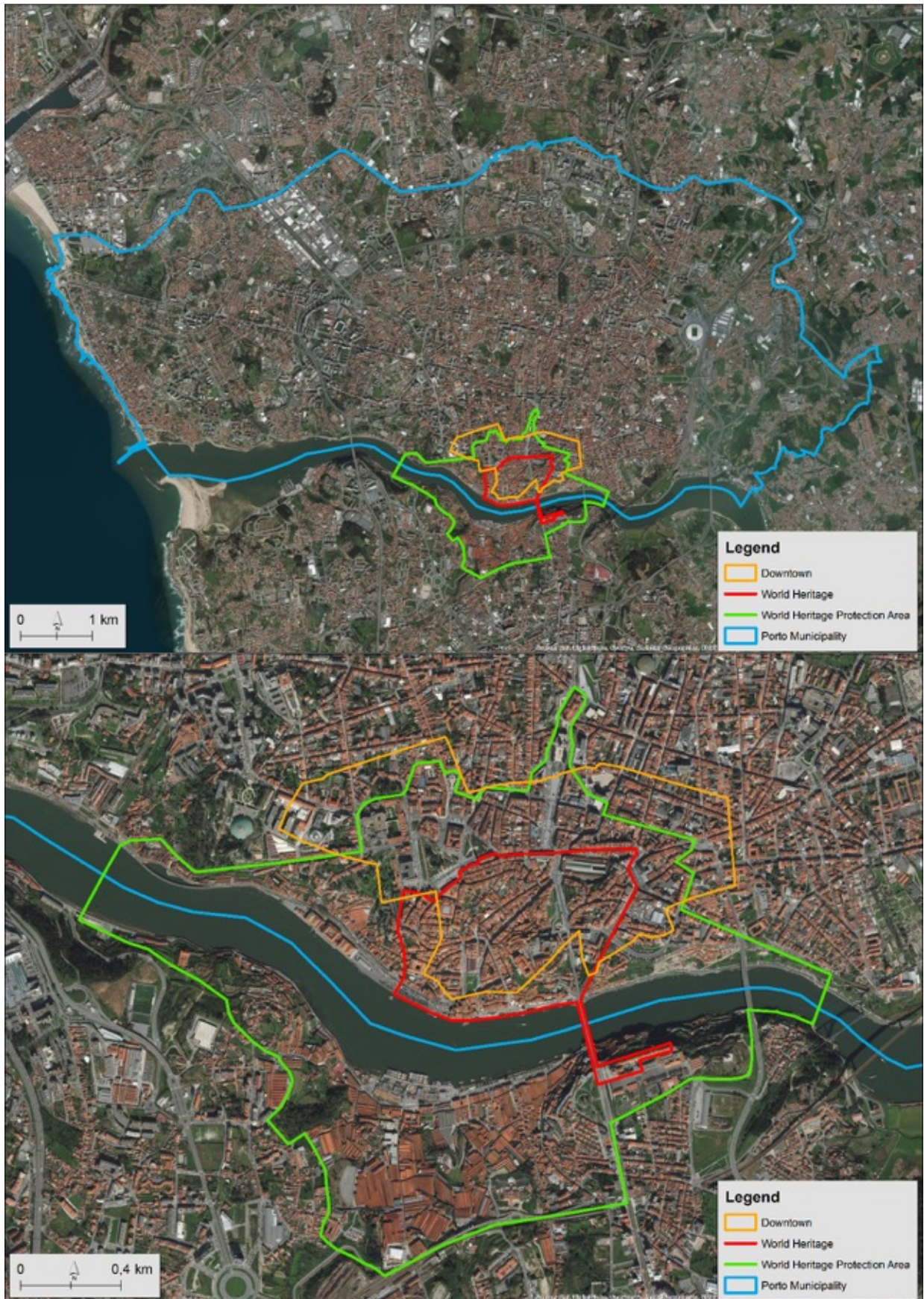
Source: authors' own elaboration based on data from DGT and UNESCO

4   Analyses
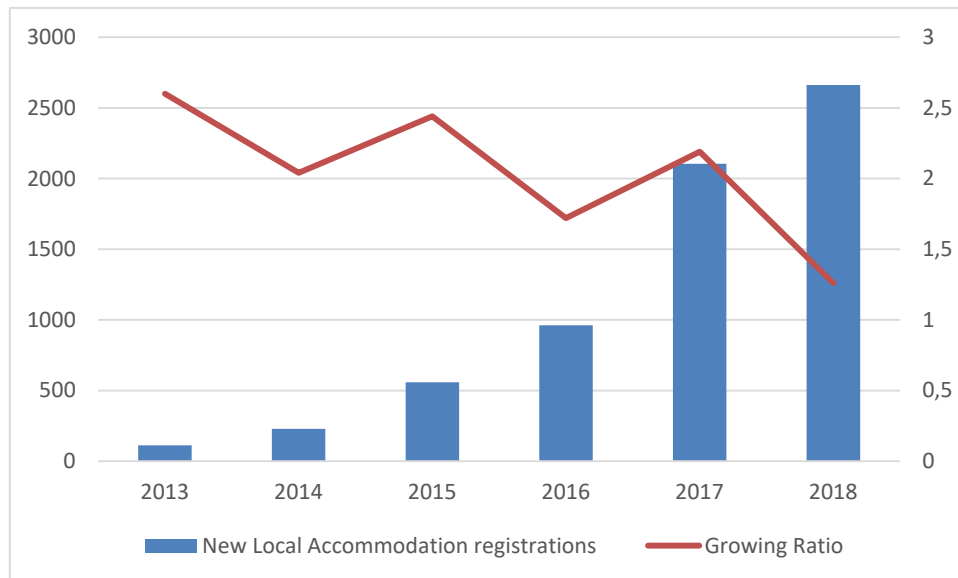
4.1 The growth of Airbnb

Airbnb's first listing in Porto dates from 2009 and, since then, its growth has been exponential. This development is part and parcel of the overall growth of tourism in Porto and the investment opportunity opened to put derelict (and not so derelict) housing stock into new profitable uses. The first years were of significant growth, although overall figures remained low. In 2010, Porto had just eight listed properties, in 2011 they were 94, and 324 in 2012, reaching 684 in 2013, largely concentred in the historical part of the city and downtown area. By 2014, there were 1436 units listed on the Airbnb system, with more than 86% (1240 units) located in the central area. This growth was continuous, becoming more intense in the following years. In 2015, there were already 3388 units, in 2016 were 6499 units, in 2017 they exceeded 10 thousand (10337) reaching 11583 listed units in May 2018 (Figure 2). Following this fast diffusion process, growth rates of new Airbnb listings are slowing down (Figure 3), suggesting that such a market is a stage of maturity, with the associated profit rates also stabilising.

Figure 2. The growth of Airbnb in Porto (2009–2018)
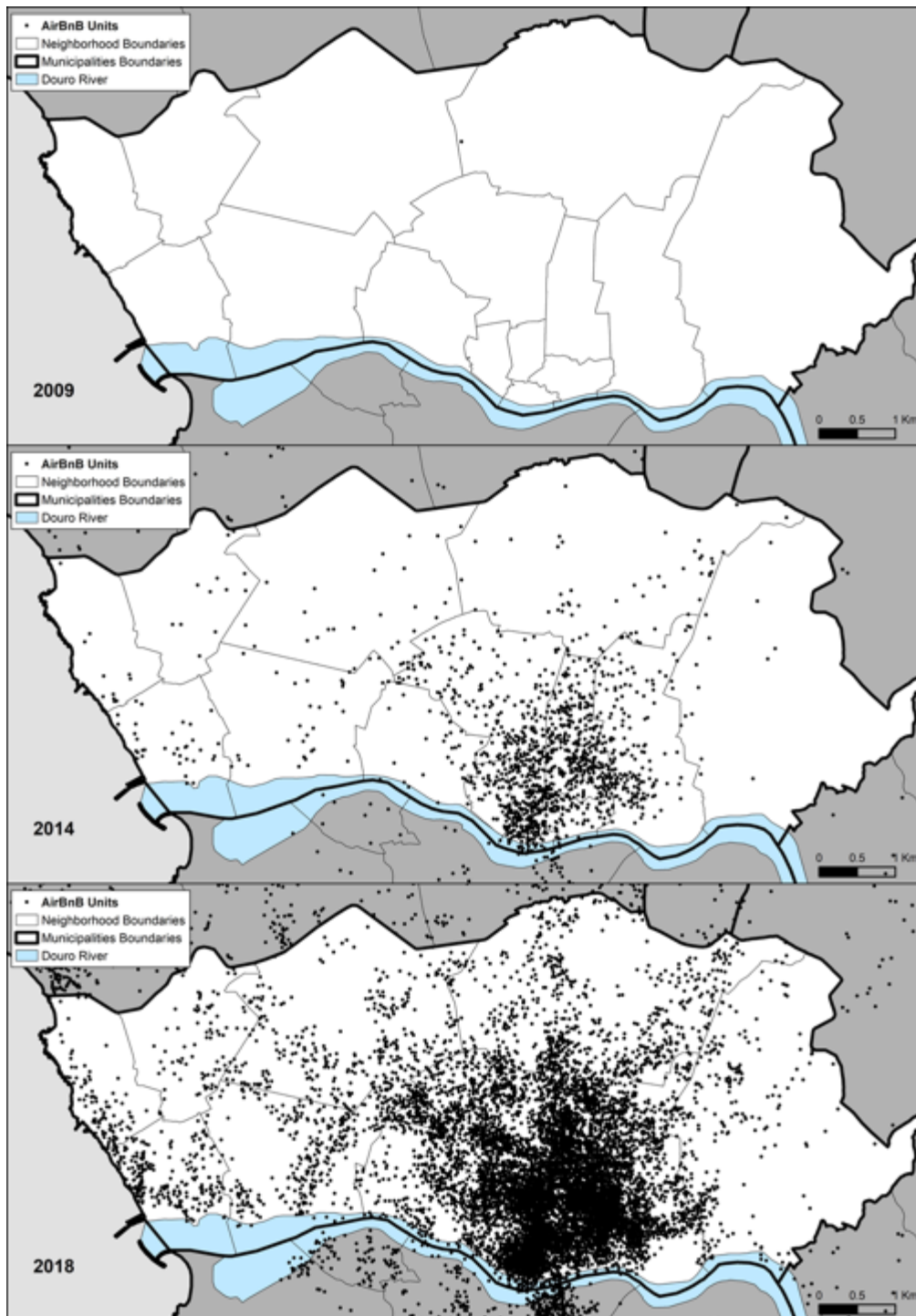
Source: authors' own elaboration, based on data from Airdna (2018)

Figure 3. The growth of local accommodation (2013—2018)

Source: authors' own elaboration, based on data from RNAL (2019)

## 4.2 Economical dynamics: shared economy, professional hosts and income concentrations

Besides the exponential growth of Airbnb listings, one may also look at some figures related with its impact in Porto to understand the new economical dynamics in Porto. Firstly, and looking for "sharing economy" evidence, we are able to say that is not the case in Porto as data shows that only less than 29 % of the Airbnb listings are actually shared properties (vs. full apartments of houses) (figure 4), representing less than 9 % of the overall income generated annually, which puts Airbnb closer to the traditional hotel industry.

Secondly, we see a significant rise of professional hosts. In May 2018, more than 15000 Airbnb listings were owned by about 7,500 owners, with 20 of them exploiting more than 30 Airbnb listings each (the largest owner has 83 properties listed in the platform), representing a total of 954 local accommodation units (more than 6 % of the total). They own mainly whole houses or apartments (87 %) and 88 % of the proprieties are located in the municipality of Porto. In other words, if it is true that some Airbnb listings do belong to micro-entrepreneurs closed to the concept of the "sharing economy", the concentration of listings is also noticeable, with the 20 bigger owners exploiting nearly 1000 properties (6 % of the total) and accounting for more than 8 % of the total Airbnb income generated in the metropolitan area of Porto (more than € 6.8 Million annually).

Thirdly, the directly generated revenue is more than € 67 million, with most listing in the historical centre generating more than € 12,000 per year, and some of them much more. This means a

whole new economic engine in the city, linked to with medium-high income and high ownership concentration —200 properties only (1.2 % of the total) generated 10 % of the total Airbnb revenue in the metropolitan area, with 171 of these properties located in the municipality of Porto (Figure 5), excluding all sorts of associated multiplier effects, such as the creation of property management, cleaning, maintenance, monitoring, fundraising businesses, among many others.

Figure 4. Type of Airbnb properties in Porto Metropolitan Area
and its municipalities (May, 2018)
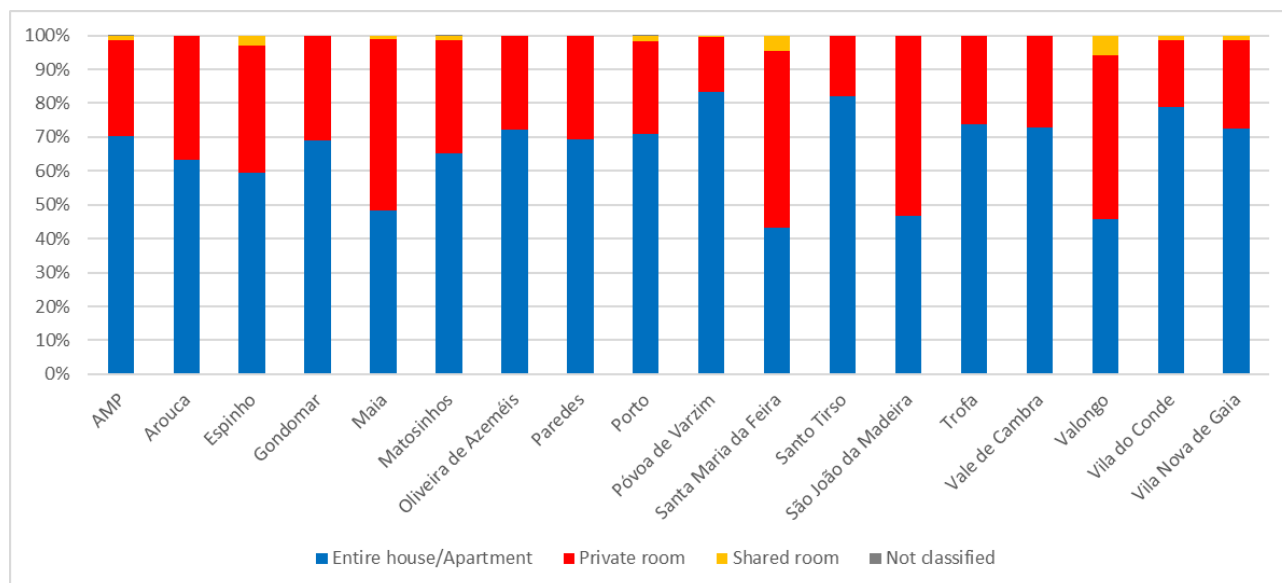
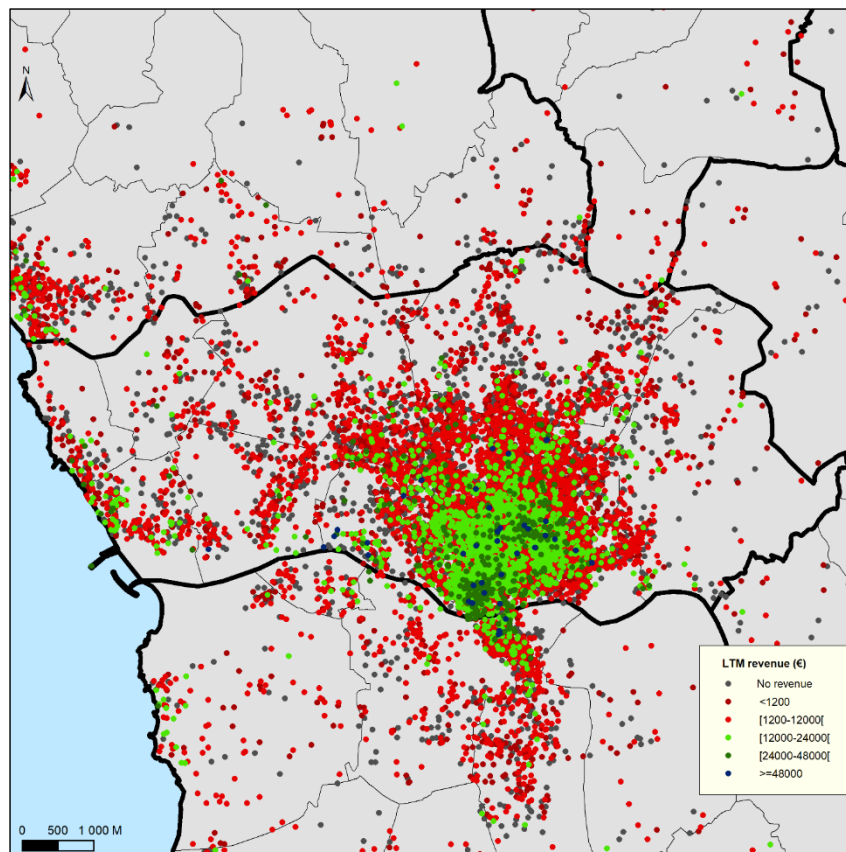Source: authors' own elaboration, based on data from Airdna (2018)

Finally, it is also relevant to see that a substantial amount of the housing stock for permanent use is disappearing from the market, as it is fully or in part occupied for temporary use. And the few left in the market are inaccessible for most, as the average housing prices in the city of Porto rose 129.3 % between 2000 and 2018 (according to INE, 2018a). With Airbnb expanding and residents decreasing, also the economic activities are changing with residential-oriented services and facilities replaced by hipster solutions, trendy restaurants and souvenir shops. On this respect, data recorded for the whole downtown between 2012 and 2018[4] is revealing: there was an increase of 39 % in accommodation units, 8.6 % in cafes and restaurants, 16.1% in hybrid establishments (that combine more than one activity) and 2.2 % in paces of non-specialized trade, especially souvenir shops. At the same time, transport and fuel-related establishments have disappeared and there was a decrease of 18.4 % units selling construction and metal tools, 14,1%

---

4   The authors conducted functional surveys and georeferentiation every 6 months in Porto´s downtown area.

in units directed to hygiene, health and beauty products, and 13.4% in units selling various items of personal use, including cloth, shoes and jewellery.

All said we may conclude that Porto is consolidating a new urban economy, where tourism, real estate, rental intermediation, low paid maintenance and new types of "local", visitor-driven businesses are essential.

Figure 5. Airbnb annual revenue (June 2017—May 2018)

Source: authors' own elaboration, based on data from Airdna (2018)

4.3 Social dynamics: touristic gentrification

Several European medium and big size cities are facing new social dynamics, associated to the growth of floating population, to conflicts between tourists and inhabitants and to different types of gentrification, which may endanger city diversity and territorial identity, raising several implications for urban development policy. In this context, although Airbnb claims to benefit the large community, with the generation of tourism-related jobs, the revitalization of depopulated or abandoned neighbourhoods, and the opportunity for residents to earn extra income by renting out part of their homes, the fact is that complaints about increasing rents, neighbourhood changes,

liveability and housing availability, gentrification and touristification are widespread (Cocola-Gant, 2016; Füller & Michel, 2014).

As a result, Porto is facing intense transformations associated to a so-called touristification process and tourism-led gentrification, with severe functional and social consequences. Although gentrification is not a broadly accepted notion in city politics (Fernandes et al., 2018a), as depicted in previous studies, evidence shows that since the mid-late 2000s,

> Porto has been facing] the rise of new economic-cultural activity, driven by a number of pioneers that stimulated the attraction of related activities, such as early-mover art galleries, new co-working spaces (e.g. for free lancers in the creative industries) and the emergence of new bars, clubs and nightlife atmospheres in the city centre" suggesting that "these businesses and their "creative" workers (from the region) infused new demands for cafes, bars, restaurants and other services in their proximity, feeding incumbent cafes and grocery stores, but also more sophisticated concepts (Fernandes et al., 2018a, p. 189).

This suggests that Porto is going through a residential and functional gentrification process (Fernandes et al., 2018a), or more specifically a "touristic gentrification process" (Mendes, 2017), resulting especially from the touristification of the city, the growth of floating population, housing availability and real estate investment great interest.

Regarding touristification, Porto transformation with economic revitalization and build up rehabilitation (and renovation), was accompanied by the classification of its Historical Centre as World Heritage site (1996), with the growth of the airport Francisco Sá Carneiro and a significant increase of the frequency and routes of the low-cost companies, as well as with the election of the city as the European Best destination (in 2012, 2014 and 2017). That altogether had a great impact on the increase of tourism, leading to major changes, especially in the city centre, with accommodation capacity raising from 35.8 per 1000 inhabitants in 2004 to 85.4 in 2017 (INE, 2018a), and an explosive growth of the local accommodation, in particular of properties managed through digital platforms such as Airbnb (see section 4.1).

Secondly, the growth of floating population more than compensated a continuing loss of residents. Most of these new city users are related to tourism, with the number of guests in a hotel establishment (traditional, without counting the various forms of local accommodation) increasing 70 % between 2012 and 2015, going from 560,777 to 1,876,720 (INE, 2018a), 74.4 % of which coming from abroad. Also relevant was the influx of post-secondary students, related with the

diffusion of international exchange programs (especially Erasmus) and the homogenisation of graduate and post-graduate education in Europe (linked to the Bologna higher education reform): over the last decade-and-a-half, and only within the University of Porto (the biggest of the five largest higher education institutions of the city), the number of enrolled international students more than tripled, while the number of students in temporary exchange programs increasing five times (University of Porto, 2017).

While floating population was raising, the city lost already 18.37% of its inhabitants in the 21st century (INE, 2018b), at the same time that all the neighbouring municipalities registered population growth. It is true that the recent years showed an inversion, according to official estimations that admit a gaining "net" in-migration for the first time in many years (1706 inhabitants from 2017 to 2018), although the number of new births is still inferior to death: in 1008 persons, in 2018 alone (INE, 2018b). But what is more relevant is that during 2013—2017 there was a strong increase of "floating" population (Figure 6), with a diversification of city users (visitors, tourists, students), parallel to a spatial compression and temporal acceleration of space, contemporary to increased mobility and the capacity of each one to use various spaces, of distinct type, at different times of the day or different days in the week (Fernandes & Chamusca, 2014).

Figure 6. Population (inhabitants + floating city users) variation
between 2013 and 2017 in Porto
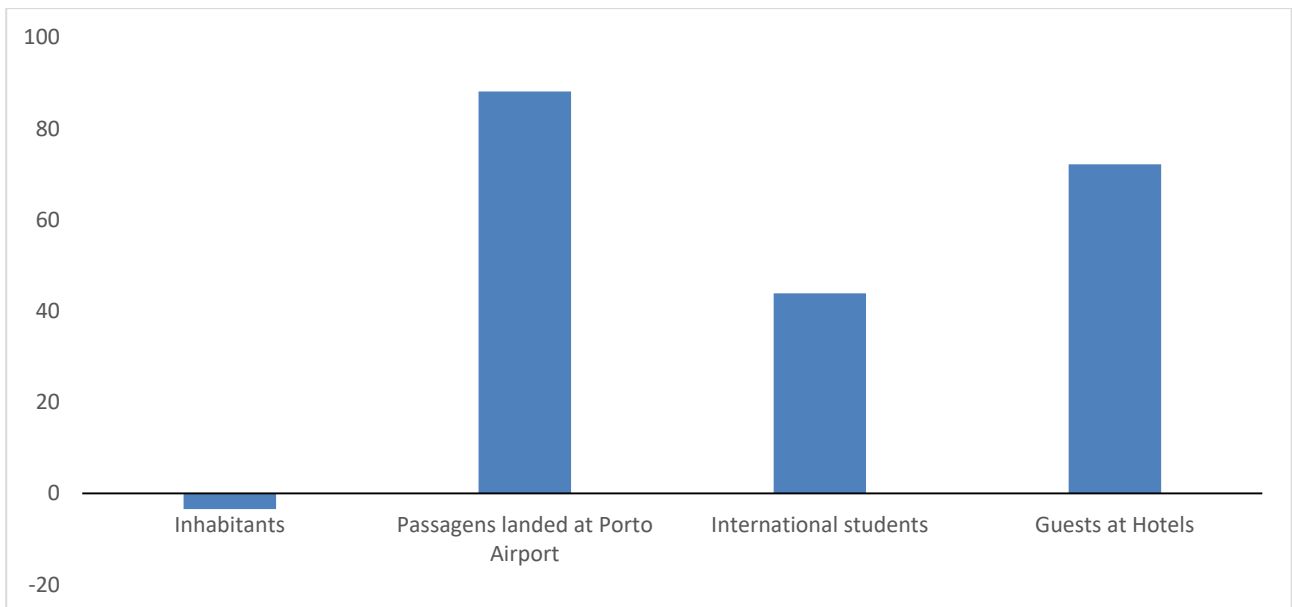
Source: authors' own elaboration, based on data from INE (2018) and Porto University (2018)

Thirdly, regarding availability and affordability, the growth of floating population demands for new and more diverse accommodation offer, which results in the reconfiguration of the housing (and hospitality) market, with the loss of permanent accommodations, as the owners look at tourism — and particularly on intermediation facilitators as Airbnb— as an opportunity for greater income. This happened very fast that in some areas of the central city of Porto, with evidence of residents were being forced to rapidly leave their homes, whether because their contracts were not renewed, a financial compensation was accepted or simply could not resist physical and psychological bullying from real estate agents. This process affects not only the availability but also the affordability of housing, as temporary residents contribute to a sharp increase on demand, increasing prices for rent and houses. In the historical centre (see Figure 1) the growth is especially intense, with the average housing price increasing 14.6% per year since 2009, while the cost of buying/renting a commercial shop almost doubled between 2011 and 2016 (Confidencial Imobiliário, 2018).

If the growth of tourism may not be the main cause of depopulation in the historical centre (as it existed for decades), it is playing a key role in the on-going changes in the physical, social and economic life in the city centre. Moreover, a transition towards a tourist monoculture that accelerates further residential exodus of resisting inhabitants leads to the disappearance of traditional businesses (Alves, 2017; Fernandes et al., 2018a). Consequently, we may not say that there's simply a substitution of lower for higher class residents, but especially a great pressure to turn residential units into touristic facilities, directly and indirectly steered by short term rental opportunities opened by platforms like Airbnb.

5 Discussion

5.1 Airbnb, floating city users and the "new" old city

Floating city-users, in general, and tourists, in particular, increasingly play a central role in urban and daily-life routine change in many cities. The case of Porto shows that globalized platforms like Airbnb can play a decisive role in this process, as it has been happening already for some years in cities like Barcelona, for example (Gutiérrez et al., 2017). In Porto, the contemporary combination of traditional tourists, excursionists and university students have been promoting a "new life" of the old city centre. The fact that there is more people, more economic activity, and more tourism may be seen as positive or negative depending on how one sees the future of the urban area and the way change affecting different social groups. We highlight five major effects and tensions that would deserve careful attention in Porto, arguing that they should not be seen as side effects of the urban renewal dynamics, but as the "beat of the heart" of that very same process.

1. Real estate rehabilitation. The attractiveness of the city and the profitability resulting from tourism creates a favourable context for private investment, promoting physical rehabilitation and private buildings´ renovation, as well as city "beautification" operations. This happens at a pace without parallel as the current urban dynamics provide rapid return on investments, topped by a multiple tax exemptions on rehabilitation and city centre housing ownership;

2. Prices increase. Beyond visitors, several residents in the metropolitan area "use" the city centre, contributing to heightened consumption in restaurants and shops, parallel to the expansion of accommodation. This process has been triggering a surge real estate valuation in the centre (also expanding geographically the effect), with individuals or economic groups (some of them globalized investors) seeking investment opportunities at a time when more conventional financial applications have low return;

3. Gentrification. The rehabilitation of buildings and price surges became incompatible with the maintenance of former residents in city centre The transfer of property ownership and the multiplication of short term rentals through Airbnb are therefore associated with changes in the social and economic profile of the residents, with evictions (after rents are open to change) and the lower classes and elderly leaving to peripheral locations;

4. Touristification. Given the importance of visitors, the transformation of the city centre responds mainly to their (apparent) preferences, with the multiplication of houses with bright colours and other beautification interventions (most of them preserving or recreating façades and demolishing interiors), as well as the multiplication of coffee terraces, "hop-on-hop-off" buses, Tuk Tuk, bycicle and segway tours.

5. Spatial compression and temporal acceleration. Airbnb-driven renewal is characterized by increased mobility and the ability of visitors to appropriate several spaces in a different way on the same day; diversification and penetration of global brands as well as banalization and massification of "typical" products and housing environments; and the creation of thematic spaces, often associated with revivalism or a certain recreation of tradition.

5.2 Sharing economy and tourism democratization? Or just mass tourism?

Airbnb, as other short-term rental platforms that appropriate under the banner of the sharing economy (Frenken & Schor, 2017, is associated to a micro-entrepreneurship narrative, the idea of geographical democratization of tourism and the promotion of cultural exchange between visitors and local communities (Airbnb, n.d.) —as opposed to corporate, "distant" and somehow inauthentic models of the traditional hospitality business. However, in more colloquial terms, it

should be noted that it is just a digital platform that connects travellers to owners interested in making their homes or rooms available for temporary accommodation for a price.

However, as seen, this narrative hardly fits local realities. Airbnb diffusion dynamics are pretty much related with the growth of the hospitality sector, the formation of professional hosts and income concentration. In many cities, as in Porto, the absence of regulation of Airbnb has increased the profitability gap between renting a property on a temporary basis against the permanent housing market, contributing to an uncontrolled growth of short-term rental and to the removal/soaring long-term rents. Thus, the profile of users and economic activities in the urban areas that more attractive to tourists has changed dramatically, with the price of real estate responding to a growing international demand, instead of reporting to the regional social, economic and demographic dynamics. In this context, alongside microentrepreneurs who actually share their habitation occasionally, the number of "professional hosts" has been growing (i.e. they hold and rent multiple full-time properties), representing today about one third of the company's overall revenue and decisively influencing the directions and impacts of this platform in most cities. In Porto, the more than 11500 Airbnb properties listed in May 2018 were associated to less than 5100 owners, resulting in a ratio of 2.28 properties listed by owner (vs. 1.36 in 2011).

5.3 What types of public policy are needed?

Airbnb, as a company, is naturally governed on the interest of its shareholders. However, given its profound impact on the transformation of cities, it has been linking with local authorities in order to maintain its "licence to operate" and avoid harsh measures. In this context, in some cases, the company has been supporting the development of city regulation, including the definition of limits on the number of days of property "sharing", the official registration of properties in the Municipality, the support to authorities in the collection and return of tourist fees, and helping to control the fulfilment of the owners' tax obligations (Ferreri & Sanyal, 2018).

However, it is now known that most of the strategies and measures of regulation that have become a common place (e.g. renting the house only for a determined number of days per year) have proved innocuous or difficult to implement. This is, in particular, because most strategies rely on "sharing economy" assumptions that do not actually exist —as also demonstrated by Cócola-Gant and Gago (2019) for Lisbon— ignoring the context of professionalization and a number of "creative" strategies to escape surveillance, as demonstrated in Westminster, London (Holman et al., 2018). The example we bring here from Porto, suggests that at least a very representative

segment of this activity is a hospitality business, that is, it is an economic activity, and that should be assumed within the regulatory strategies for the sector, not for residence.

The transformations observed in the past couple of years, have motivated an intense debate in the academic, political and civil society context which usually opposes two antagonistic visions: between good and bad; between the need to prohibit everything and the desire for policies that favour the market. On the one hand, some —including the current city administration— assume that gentrification and the transformation associated with tourists/visitors, in its various expressions, have always existed, is positive and will continue existing as part of the changing character of cities; on the other hand, the transformation, in its the current form, may be seen as an "urban evil" that must be fought by public policies, with prohibitive mechanisms and urgency. This perspective is present in the concerns of entities such as ICOMOS (the International Council of Monuments and Sites) which highlighted that, for the case of Porto, "the process is known, it is the maximum use of the value of cultural heritage as an economic resource, and in this case the most effective form of exploitation. This is how to make it impossible for the settlement of locals, creating the sensation of a space without history" (ICOMOS Portugal, 2016).

Facing this duality, and in the context of globalization, metropolization and suburbanization processes that have largely been hollowing out the "voting city", the major governance challenge is to decide what society want as a collective in a globally connected city centre. In fact, the growth of floating city users and local economy revitalization, being globally positive, demands more efficient action from public stakeholders, including the regulation of short time rental activities, in view of its negative impacts on residence and the type of physical transformation that has been associated to the objective of assured rentability of more and more significant real estate investment.

It is important to notice that ten cities asked EU for help to fight Airbnb expansion, stating that short-term holiday markets are contributing to soaring long-term rents, while admitting that "The cities are not against this type of holiday rental" as "Tourism provides a city with income and jobs. They do think they should be able to set rules" (Henley, 2019, June 20). Porto's experience supports the idea that the development of regulatory strategies for Airbnb's activity should be associated with the construction of a vision —and a plan— for the city, built in a shared way and with short, medium- and long-term objectives. It is important to involve everyone —politicians, the market, civil society and the floating population— in the construction of a strategic definition of the city also considering

a probable structural political problem: with the replacement of "voters" by floating residents, who evaluates governments and public policies?

Regulatory policies could and should contribute to promote diversity and social mix, providing opportunities both for the floating users (growing) and inhabitants (diminishing), developing more democratic and accountable legitimacy processes, also controlling conflicts and stimulating heritage protection. Both political extremes —"laissez faire", as in Porto, or prohibition as in Barcelona— seem to create more problems that advantages. Managing short term rental market proliferating in relation to urban development dynamics should thus consider i) changes on taxing models; ii) communication strategies and participatory systems that expand awareness of the costs and benefits of the current model of growth; iii) monitorization and evaluation of public policies on the social and economic transformation; iv) a space based planning approach that considers the maintenance or reinforcement of residential occupation and the protection of the most vulnerable groups; and v) the metropolitan/regional articulation of city-centre management.

Overall, more information and debate are needed about the recent changes occurring in cities in general and in Porto in particular, in the view of the intensity of recent, short-term rental-driven urban change. Public policies should favour counter-cyclical approaches, while opposing the emergence of mono-functional urban areas and urban economies overly reliant on tourism specializations. Not to mention the disaster that may occur when a pro-active attitude may lead to tourism autophagy.

Authorship statement: The authors declare no conflict of interest. Pedro Chamusca has coordinated the writing of this paper. All the authors were involved in the theoretical discussion. Cartography and data analysis were elaborated by Thiago Mendes and Pedro Chamusca. José Alberto Rio Fernandes focused on the globalized and consumer-oriented city centre as well as gentrification dynamics; Luís Carvalho on the new economical dynamics and growth of floating

population; Thiago Monteiro on the growth of Airbnb; and Pedro Chamusca on the governance and democracy issues.

References

Airbnb (2019). Fast Facts. In *Airbnb*. Retrieved from https://press.atAirbnb.com/fast-facts/

Alves, S. (2017). Requalificação e rehabilitação do centro histórico do Porto. *Scripta Nova, XXI*(557). https://doi.org/10.1344/sn2017.21.17921

Baudrillard, J. (2008). *A Sociedade de Consumo*. Portugal: Edições 70.

Bauman, Z. (2004). A cultura do lixo. Em: Vidas Desperdiçadas. In *Vidas Desperdiçadas* (pp. 117—164). Rio de Janeiro: Jorge Zahar.

Brenner, N. (1999). Globalisation as Reterritorialisation: The Re-scaling of Urban Governance in the European Union. *Urban Studies, 36*(3), 431—451. http://dx.doi.org/10.1080/0042098993466

Brenner, N. (2004). Urban governance and the production of new state spaces in western Europe, 1960—2000. *Review of International Political Economy, 11*(3), 447—488. http://dx.doi.org/10.1080/0969229042000282864

Bridge, G., Butler, T., & Le Galès, P. (2014). Power Relations and Social Mix in Metropolitan Neighbourhoods in North America and Europe: Moving Beyond Gentrification? *, 38*(4), 1133—1141. http://dx.doi.org/10.1111/1468-2427.12125

Carvalho, L., Chamusca, P., Fernandes, J., & Pinto, J. (2019). Gentrification in Porto: floating city users and internationally-driven urban change. *Urban Geography, 40*(4), 565—572. http://dx.doi.org/10.1080/02723638.2019.1585139

Chamusca, P. (2012). *Governança e regeneração urbana: entre a teoria e algumas práticas* (Doctoral dissertation, Universidade do Porto, Portugal). Retrieved from https://repositorio-aberto.up.pt/handle/10216/67273

Cocola-Gant, A. (2016). Holiday Rentals: The New Gentrification Battlefront. *Sociological Research Online, 21*(3), 1—9. http://dx.doi.org/10.5153/sro.4071

Cocola-Gant, A., & Gago, A. (2019). Airbnb, buy-to-let investment and tourism-driven displacement: A case study in Lisbon. *Environment and Planning A: Economy and Space.* https://doi.org/10.1177/0308518X19869012

Confidencial_Imobiliário (2018). *Housing sales market.* Retrieved from https://confidencialimobiliario.com/en/#indicadores

Ethington, P. J., & McDaniel, J. A. (2007). Political Places and Institutional Spaces: The Intersection of Political Science and Political Geography. *Annual Review of Political Science, 10*(1), 127–142. http://dx.doi.org/10.1146/annurev.polisci.10.080505.100522

Fernandes, J., Carvalho, L., Chamusca, P., & Pinto, J. (2018a). Gentrification in Porto: problems and opportunities in the past and in the future of an internationally open city. GOT - Journal of Geography and Spatial Planning, *15,* 177–198. http://dx.doi.org/10.17127/got/2018.15.008

Fernandes, J., Chamusca, P., Mendes, T., & Carvalho, L. (2018b). *O Porto e a Airbnb.* Portugal: Book Cover Editora.

Fernandes, J. R., & Chamusca, P. (2014). Urban policies, planning and retail resilience. *Cities, 36,* 170–177. https://doi.org/10.1016/j.cities.2012.11.006

Ferreri, M., & Sanyal, R. (2018). Platform economies and urban planning: Airbnb and regulated deregulation in London. *Urban Studies, 55*(15), 3353–3368. http://dx.doi.org/10.1177/0042098017751982

Frenken, K., & Schor, J. (2017). Putting the sharing economy into perspective. *Environmental Innovation and Societal Transitions, 23*, 3–10. https://doi.org/10.1016/j.eist.2017.01.003

Füller, H., & Michel, B. (2014). 'Stop Being a Tourist!' New Dynamics of Urban Tourism in Berlin-Kreuzberg. *International Journal of Urban and Regional Research, 38*(4), 1304–1318. http://dx.doi.org/10.1111/1468-2427.12124

Gentile, M., Tammaru, T., & van Kempen, R. (2012). Heteropolitanization: Social and spatial change in Central and East European Cities. *Cities, 29*(5), 291–299. https://doi.org/10.1016/j.cities.2012.05.005

Ghertner, D. A. (2015). Why gentrification theory fails in 'much of the world'. *City, 19*(4), 552–563. http://dx.doi.org/10.1080/13604813.2015.1051745

Gibbs, D. C., Jonas, A. E. G., Reimer, S., & Spooner, D. J. (2001). Governance, institutional capacity and partnerships in local economic development: theoretical issues and empirical evidence from the Humber Sub-region. *Transactions of the Institute of British Geographers, 26*(1), 103–119. http://dx.doi.org/10.1111/1475-5661.00008

Glass, R. (1964). *London: aspects of change.* London: MacGibbon & Kee.

Gutiérrez, J., García-Palomares, J. C., Romanillos, G., & Salas-Olmedo, M. H. (2017). The eruption of Airbnb in tourist cities: Comparing spatial patterns of hotels and peer-to-peer

accommodation in Barcelona. *Tourism Management, 62,* 278–291. https://doi.org/10.1016/j.tourman.2017.05.003

Guttentag, D. (2015). Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector. *Current Issues in Tourism, 18*(12), 1192–1217. http://dx.doi.org/10.1080/13683500.2013.827159

Henley, J. (2019, June 20). Ten cities ask EU for help to fight Airbnb expansion. Retrieved from https://www.theguardian.com/cities/2019/jun/20/ten-cities-ask-eu-for-help-to-fight-airbnb-expansion?CMP=fb_gu&utm_medium=Social&utm_source=Facebook&fbclid=IwAR2YLX8kh4EHbeUc41j_XPbRvOt9e5DHbOlGmPTZvQ7bagpmj6q6EZFCaX4#Echobox=1561039539

Holman, N., Mossa, A., & Pani, E. (2018). Planning, value(s) and the market: An analytic for "what comes next?". *Environment and Planning A: Economy and Space, 50*(3), 608–626. http://dx.doi.org/10.1177/0308518x17749730

ICOMOS-Portugal (2016) Comissão Nacional Portuguesa do Conselho Internacional dos Monumentos e Sítios. In *Technical Evaluation Report on the Conservation State of UNESCO.* Lisboa, Portugal: Historical Centre of Oporto, Luiz I Bridge and Monastery of Serra do Pilar.

INE (2018a). *Séries estatísticas: Turismo.* Instituto Nacional de Estatística, Lisboa. Retrieved from https://www.ine.pt/xportal/xmain?xpgid=ine_tema&xpid=INE&tema_cod=1713

INE (2018b). *Séries estatísticas: População.* Instituto Nacional de Estatística, Lisboa. Retrieved from https://www.ine.pt/xportal/xmain?xpgid=ine_tema&xpid=INE&tema_cod=1115

InsideAirbnb. (2019). Get the data. Retrieved from http://insideairbnb.com/get-the-data.html

Jefferson-Jones, J. (2015). Airbnb and the Housing Segment of the Modern Sharing Economy: Are Short-Term Rental Restrictions an Unconstitutional Taking. *Hastings Constitutional Law Quarterly, 42*(3), 557.

Jessop, B. (2000). Governance Failure. In G. Stoker (Ed.), *The New Politics of British Local Governance* (pp. 11–32). Basingstoke: Macmillan.

Kokx, A., Spit, T., & van Beckhoven, E. (2009). Trial and error in urban restructuring processes: learning from Dutch experiences. *Urban Research & Practice, 2*(2), 169–188. http://dx.doi.org/10.1080/17535060902979071

Lees, L., Shin, H. B., & López-Morales, E. (2016). Planetary Gentrification. Cambridge: Polity Press.

Leoni, G., & Parker, L. D. (2018). Governance and control of sharing economy platforms: Hosting on Airbnb. *The British Accounting Review*, 100814. https://doi.org/10.1016/j.bar.2018.12.001

Lines, G. E. (2015). Hej, not hej då: Regulating Airbnb in the new age of Arizona vacation rentals. *Arizona Law Review, 57*(4), 1163–1182.

Mareggi, M. (2002). Innovation in Urban Policy: The Experience of Italian Urban Time Policies. *Planning Theory & Practice, 3*(2), 173–194. https://doi.org/10.1080/14649350220150053

Mendes, L. (2017). Gentrificação turística em Lisboa: neoliberalismo, financeirização e urbanismo austeritário em tempos de pós-crise capitalista 2008–2009. *Cadernos Metrópole, 19*(39), 479–512.

Mückenberger, U. (2011). Local time policies in Europe. *Time & Society, 20*(2), 241–273. http://dx.doi.org/10.1177/0961463x11405579

Nieuwland, S., & van Melik, R. (2018). Regulating Airbnb: how cities deal with perceived negative externalities of short-term rentals. *Current Issues in Tourism*. http://dx.doi.org/10.1080/13683500.2018.1504899

OECD (2018). *Reshaping Decentralised Development Co-operation*: *The Key Role of Cities and Regions for the 2030 Agenda*. Paris: OECD Publishing. https://doi.org/10.1787/9789264302914-en

Paoli, C., Vassallo, P., Dapueto, G., Fanciulli, G., Massa, F., Venturini, S., & Povero, P. (2017). The economic revenues and the emergy costs of cruise tourism. *Journal of Cleaner Production, 166*, 1462–1478. https://doi.org/10.1016/j.jclepro.2017.08.130

Pendlebury, J., Short, M., & While, A. (2009). Urban World Heritage Sites and the problem of authenticity. *Cities, 26*(6), 349–358. https://doi.org/10.1016/j.cities.2009.09.003

Pike, A., Rodríguez-Pose, A., & Tomaney, J. (2017). Shifting horizons in local and regional development. *Regional studies, 51*(1), 46–57. http://dx.doi.org/10.1080/00343404.2016.1158802

Pugh, J., Hewett, C., & Chandler, D. (2007). Debating (de)territorial governance. *Area, 39*(1), 107–109. http://dx.doi.org/10.1111/j.1475-4762.2007.00720a.x

Rhodes, R. A. W. (1996). The New Governance: Governing without Government. *Political Studies, 44*(4), 652—667. http://dx.doi.org/10.1111/j.1467-9248.1996.tb01747.x

Rio Fernandes, J., & Sposito, M. E. (2013). *A nova vida do velho centro, nas cidades portuguesas e brasileiras*. Porto: Universidade do Porto-CEGOT.

Rissola, G., Hervás, F., Slavcheva, M., & Jonkers, K. (2017). *Place-based innovation ecosystems*. Luxembourg: Publications Office of the European Union.

RNAL (2019). Consulta ao registo - Alojamento Local. In *Turismo de Portugal*. Retrieved from https://rnt.turismodeportugal.pt/RNAL/ConsultaRegisto.aspx?Origem=CP&FiltroVisivel=True

Stoker, G. (2004). *Transforming local governance*. Houndmills, Basingstoke: Palgrave-Macmillan.

Swyngedouw, E. (2005). Governance Innovation and the Citizen: The Janus Face of Governance-beyond-the-State. *Urban Studies, 42*(11), 1991—2006. http://dx.doi.org/10.1080/00420980500279869

Tylecote, A. (2019). Biotechnology as a new techno-economic paradigm that will help drive the world economy and mitigate climate change. *Research Policy, 48*(4), 858—868.

University of Porto (2017). *The university in numbers*. Retrieved from https://sigarra.up.pt/up/pt/web_base.gera_pagina?p_pagina=recursos%20e%20servi%c3%a7os%20da%20u.porto%20-%20recursos%20informacionais:%20factos%20e%20n%c3%bameros

Vigar, G. (2009). Towards an Integrated Spatial Planning? *European Planning Studies, 17*(11), 1571—1590. http://dx.doi.org/10.1080/09654310903226499

Wachsmuth, D., Kerrigan, D., Chaney, D., & Shillolo, A. (2017). *Short-term Cities: Airbnb's Impact on Canadian Housing Markets*. Retrieved from http://upgo.lab.mcgill.ca/airbnb/

Wachsmuth, D., & Weisler, A. (2018). Airbnb and the rent gap: Gentrification through the sharing economy. *Environment and Planning A: Economy and Space, 50*(6), 1147—1170. http://dx.doi.org/10.1177/0308518x18778038

Wassenhoven, L. (2008). Territorial governance, participation, cooperation and partnership: a matter of national culture? *Boletín de la Asociación de Geógrafos Españoles, 46*, 53—76. Retrieved from https://bage.age-geografia.es/ojs/index.php/bage/article/view/678

Wiking, M. (2017*). The Little Book of Lykke: The Danish Search for the World's Happiest People.* London: Penguin Random House.

Zuk, M., Bierbaum, A. H., Chapple, K., Gorska, K., & Loukaitou-Sideris, A. (2018). Gentrification, Displacement, and the Role of Public Investment. *Journal of Planning Literature, 33*(1), 31–44. http://dx.doi.org/10.1177/0885412217716439