




Touristification and studentification. New dialectics of urban segregation in historical university cities

María José Piñeira^a , Alfonso Fernández-Tabales^b , Carmen Mínguez^{c,*} 

^a Department of Geography, Faculty of Geography & History, University of Santiago de Compostela, 17572 Santiago de Compostela, Spain

^b Department of Physical Geography & Regional Geographical Analysis, Faculty of Geography & History, 41004 Seville, Spain

^c Department of Geography, Faculty of Geography & History, Complutense University of Madrid, 28040 Madrid, Spain

ARTICLE INFO

Keywords:

Gentrification
Housing
Platform economy
Rental
Short-term rental
Santiago de Compostela
Spain

ABSTRACT

Historical university cities are suffering from strong tourism pressure which affects part of their resident and student populations. The proliferation of properties dedicated to tourism diminishes the availability of traditional rental options, leading to escalated prices. The objectives of the article are to analyse whether historical university cities have different features with respect to the impacts of tourism and if students have the same perception as social and political actors of the impact of touristification on the property market. Studentification and touristification have been analyzed in numerous studies but never together. It is based on the case of Santiago de Compostela, an emblematic university city of Spain and Cultural World Heritage Site. The problem has been examined by a student survey and debates with experts using a Citizen Science approach. Santiago de Compostela constitutes an example that ratifies the theoretical concepts and shows different perceptions. Students are concerned about the quality and price of housing, without identifying tourism as a cause of the problem, while the social agents appreciate to a greater extent the negative impacts of touristification on the housing market, and there is consensus among them with respect to the need to apply policies for their mitigation.

1. Introduction

In recent years, urban real estate markets in Europe cities have experienced significant transformations, most notably the increase in sales prices, which has led to a growing number of people seeking rental housing. However, the insufficient supply of affordable housing has impeded accessibility, turning houses into an urgent economic, social, and environmental challenge in urban areas. The emergence of platforms like Airbnb in 2008 has exacerbated the issue, distorted the original philosophy of the sharing economy and lead to the widespread conversion of residential properties into tourist accommodations worldwide (Yrigoy, 2019). Within this broader context, historical university cities present a distinct set of challenges.

In these cities, students constitute a substantial portion of the transient population, cohabiting with traditional residents and playing a crucial role in the processes of urban, economic, and social revitalization. In Spain, a significant percentage of university students (30.27 % according to the 2021 Population and Housing Census) live away from home, in addition to over 135,000 international students who study at

Spanish universities annually (Ministerio de Universidades, 2023). Traditionally, both national and international students have opted to rent housing due to the insufficient supply of dormitories, with a ratio of 17 students per bed in Spain, much higher than in other European countries (4.2 in the United Kingdom, 8.2 in the Netherlands, 9.3 in Germany, or 6.5 in France), according to Atlas Real Estate Analytics (Atlas Real Estate Analytics, 2022). Furthermore, the historical and cultural heritage of these cities makes them attractive to tourists, leading to a mass influx of visitors that disrupts the balance between residential, university, and tourist functions. As a result, housing access in university and tourist cities presents significant challenges that have not yet been fully explored.

This article addresses the specific characteristics of the housing problem in historical university cities and argues that policies addressing these issues should be tailored to their unique contexts. The first section examines the relationships between the concepts of Studentification and Touristification. It then analyses the current situation in Santiago de Compostela, focusing on the perspectives of affected population: students and social agents. Santiago de Compostela is chosen as

* Corresponding author.

E-mail address: mcingue@ucm.es (C. Mínguez).

<https://doi.org/10.1016/j.cities.2025.105719>

Received 25 February 2024; Received in revised form 4 January 2025; Accepted 11 January 2025

Available online 21 January 2025

0264-2751/© 2025 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

a paradigmatic case due to its status as a leading historical university city in Europe, with over 25,500 students, and as a major pilgrimage site attracting hundreds of thousands of tourists annually, with numbers on the rise. Santiago has become a popular destination, boasting 160 hotels with over 7740 beds and experiencing high hotel occupancy rates, especially during the summer months. Additionally, nearly 1000 tourist rental properties have altered the real estate market generating disruptions in the city's dynamics.

To explore this issue and understand the perspectives of all stakeholders, a mixed-methods approach is employed. The perceptions of the students are captured through a survey, while property owners' and administrative agents' views are accessed via participation in expert debates using the Citizen Science approach. This comprehensive methodology allows for a thorough understanding of stakeholder's perceptions and provides a basis for evaluating and reflecting on the housing problem, as well as assessing initiatives aimed at mitigating the impact of tourist accommodations on traditional rentals.

Based on the highlighted aspects and in relation to the conceptual debates presented in the following sections, the essential research questions addressed in the article are: What are the relationships between the concepts of Touristification and Studentification in historic university cities? How are these relationships manifested in a case study, Santiago de Compostela? And how do the different agents perceive tourism and how do they react to it?

2. Studentification, and touristification: conflicting urban processes

For decades, historical university cities with a strong tourism footprint have had numerous functions and have maintained a level of cohabitation without excessive friction between the traditional residents, the students, and the tourists. This poly functionality has prevailed for decades, with university life and its cultural ambience constituting a further attraction of the historical city. However, this equilibrium has been broken due to the emergence of online tourist rental platforms (see, among many other examples Ioannides et al., 2018, for the case of Utrecht; or Chamusca et al., 2019, for Porto). They are considered as the true disruptive innovation of the last decade in urban environments and have hindered the relationships between residents, students and tourists, causing tension between them and the expulsion of the resident population and the loss of identity of the university city (Cócola-Gant & Malet, 2023, in the case of Lisbon; or, Carvalho, 2024, for several Portuguese cities).

With respect to the differential features of university cities, in 2007 Russo and Capel proposed a classification of university cities based on three main components of the students' daily routine which are education, residence and leisure, whose combination gives rise to different studentscapes. The interrelations between university and tourism will determine whether these urban spaces maintain their vitality as residential, commercial and tourist places or urban realities in which the population is being expelled, becoming a model with informal studentscape elements shifting to suburban student residential areas, while city-centre social activity will be progressively substituted by consumption landscapes increasingly populated by tourists and wealthy young professionals. According to Russo and Capel (Russo & Capel, 2007) this model is highly unstable and inefficient, both for students and for the local community.

Within this context, the gentrification, studentification and touristification processes are particularly important. The three processes represent socio-spatial segregation phenomena in urban spaces and the substitution of certain social groups with others, although they differ in terms of the groups affected and the agents involved.

Approaches can be found that have linked them together, but it can be pointed out that there is a gap in the scientific literature on the interrelationships between the latter two processes: studentification and touristification. This paper attempts to fill this gap by analysing their

relations and conflicts in historic university cities.

The term *studentification* was coined by Smith in 2002 to refer to the case of Leeds (UK) and was consolidated at the beginning of the 21st century. It is defined as the process through which certain neighbourhoods or cities are dominated by the residential occupation of students (Smith, 2002) with the concept becoming. Although authors such as Nakazawa (Nakazawa, 2017) or Russo & Capel (Russo & Capel, 2007) argue that students have been an important group of city inhabitants since at least the "democratization" of universities. To the point where they have acquired a recognition as agents of urban transformation and 'stakeholders' who are worth attracting and taking care of, rather than just being counted and regulated. Smith (Smith, 2004) establishes a theoretical framework of studentification as a factory or training ground for gentrification. Not so much because the students on an individual level or as an organised group consciously participated in a strategy of gentrification, but because they constituted the pioneers in the socio-spatial segregation process, pushing up the price of rent and displacing the original population. From then, over the last two decades, the concept has been expanded in studies on urban processes related to the housing market (Rugg et al., 2000) which have become more frequent over time.

In this sense, we see contributions on different cities or countries, such as South Africa (Gregory, 2020), Beijing (Gu & Smith, 2019), Australia (Holton & Mouat, 2020), Canada (Pillai et al., 2021), Chile (Prada-Trigo, 2019; Prada-Trigo et al., 2021), Dublin (Reynolds, 2022), Poland (Grabkowska & Frankowski, 2016; Murzyn-Kupisz & Szymkowska, 2015), United Kingdom (Lee, 2022; Wilkinson & Greenhalgh, 2024), and the United States (Revington et al., 2021; Sood & Vicino, 2024), (for a complete bibliographic review on the issue, see Nakazawa, 2017). It is noteworthy that almost none of these cases have dealt with the process in historic university cities, except Montpellier and Bologna (Manella et al., 2022). Also noteworthy is the analysis by Revington and other authors linking 'studentisation' to conventional gentrification in university towns from the 1980s onwards (Moos et al., 2019; Revington & August, 2020). Furthermore, they complement the contributions of other authors who have examined how student occupation is having a notable impact on the local disadvantaged population (Sage et al., 2012).

The process of touristification is the result of the accelerated increase in urban tourism derived from the emergence of online holiday rental platforms, which have almost monopolised the rental market in some urban sectors and are expelling the residual pre-existing local population, creative classes (previously gentrifiers) and students from the central parts of the city (Lopez et al., 2019). Several dimensions can be identified in the process of touristification (De la Calle, 2019; Gallagher, 2017), ranging from an increased presence of visitors and the increase in activities directly related to tourist consumption; to the reorientation of an ever wider range of businesses towards foreign clientele; the conversion of housing into a new tourist good; the creation of a landscape or urban environment in which tourist elements predominate; to the loss of culture and cohesion in the neighbourhood.

Part of the scientific community referred to this phenomenon as tourist gentrification at the beginning of the twenty-first century (Cócola-Gant, 2018; Gotham, 2005). However, subsequently it was subjected to a process of critical review, revealing that the original resident population is not replaced by another resident population, but by a group of tourists in permanent rotation. Other authors have sought to resolve this contradiction by coining new concepts such as "gentrification 4.0" (Sorando & Ardura, 2018); however, there seems to be a tendency towards a terminological differentiation between different processes, distinguishing between gentrification, transnational gentrification and touristification (Jover & Díaz-Parra, 2019).

Much of the literature focuses on the study of rising rents as a factor in shifting part of the housing stock from residential to tourist function, resulting in tenant displacement (Colomb & Novy, 2017) and its evolution in many cities around the world, such as Los Angeles (Lee, 2016),

New York (Dudas et al., 2017), Porto (Chamusca et al., 2019), several Chinese cities (Wu, 2019), Lisbon (Cócola-Gant & Gago, 2019), Dublin (Clancy, 2020), Croatia (Mikulić et al., 2021) or Hong Kong (Liang et al., 2021). In addition, several authors have addressed institutional responses to the problems found, in particular, land price increases and land price reductions for residential use (Cócola-Gant, 2018; Gravari-Barbas & Guinand, 2017). In general, it has become clear that most urban destinations express the need to regulate the growth of holiday rentals to balance the interests of the visitor with those of local residents (Gurran & Phibbs, 2017; Nieuwland & Van Melik, 2020; Von Briel & Dolnicar, 2020). This demonstrates a public interest in regulating the process of touristification, which has not been the case for gentrification and studentification.

However, and in response to the first question of this research, it is important to emphasize that, to date, there remains a notable gap in the literature on the comprehensive examination of the processes of touristification in university cities, particularly in relation to studentization. Despite the coexistence of these phenomena in certain urban contexts, where they give rise to dynamics that may either compete or conflict with one another, the intersection and interplay between touristification and studentification have yet to be thoroughly analyzed.

3. University, tourism and the housing market: Sources of tension in the city of Santiago de Compostela

The city of Santiago de Compostela has been selected as a case study to examine the issues. This city serves as a prominent example at the

European level, characterized by the presence of a historic university whose student population constitutes a significant proportion of the overall resident population, alongside a rapidly expanding tourism sector. These aspects will be elaborated upon in the following sections.

Historically, Santiago de Compostela has been characterized by two main functions: the university, since its university is >500 years old, and the religious function, due to the presence of the tomb of the apostle St. James, which has made it a place of pilgrimage and the end of the Camino de Santiago, declared a World Heritage Site in 1993, which has enhanced its tourist attraction (Fig. 1) (Lois, 1994). In recent decades, tensions have arisen due to the impact that tourist activity is having on vacation rentals, since they account for a large part of the supply that was previously rented by residents and students.

According to the 2021 register of inhabitants, in Santiago de Compostela, 97,858 inhabitants cohabitate with 25,532 students and a further 3294 make up the university staff. That is a total of >125,000 people who, overall, reside and/or consume in the city as the university is one of its principal economic drivers (Lois & Piñeira, 2009). To these, from the year 2010, we can add more than one million tourists each year (INE, 2023), particularly concentrated between April and October, because from 1993, Santiago de Compostela has positioned itself on a national and international level as an attractive tourist destination related to the slow movement.

According to the University of Santiago de Compostela, in recent years, although the number of students has remained constant at around 25,000 enrolments, the students have been finding it increasingly difficult to find rented accommodation at affordable prices.



Fig. 1. Examples of the historic centre of Santiago de Compostela: Cathedral, pilgrims, and tourists. Source: Own elaboration.

This is due to a dual phenomenon: the reduction in the supply of long-term rental housing and a significant increase in the prices of such housing. In the 2022–2023 academic year, a total of 3100 young people applied for a room out of the 910 rooms offered by the University of Santiago de Compostela. A circumstance that forces students to rent private accommodation, but the offer is reduced each year. An analysis of the evolution of the supply of rented accommodation in the city reveals that, according to the data provided by AGALIN (Real Estate Association of Galicia), from 2017, a reduction of 88 % has been recorded in the volume of flats advertised on the real estate websites (Fig. 2). This is related to two phenomena: i) an increase in rental prices, given that when the supply shrinks the prices shoot up. The rent prices, according to the data of the portal of the real estate agent, (Idealista, 2022) they reached 7.7€/m², 7.4 % more than in 2021. This circumstance has led students to search for better alternatives in the inner metropolitan ring (5.6€/m²) or the second ring (2.75€/m²) located 16–29 km from the city, which implies an increase in spending on transport and limitations on attending the university. ii) proliferation of properties for tourism. They represent a quarter of the >16,000 accommodation beds in the city. In the period 2011–2022, two thirds of the supply of traditional rental properties were lost. There are 7.6 Airbnb listings for every 1000 inhabitants, a figure like that of Berlin, London or Bologna (Ramil et al., 2018).

Tensions between residents and students and tourists are currently emerging and are expected to worsen. Despite the demand, the University does not plan to build more public residences because it does not have the financial resources. However, it has recently sold the old university hospital to the management company Bestinvert to house a 400place residence hall. To develop this operation, the city council has modified the General Municipal Development Plan, showing the concern of both institutions and their interest in mitigating the tensions generated by the lack of housing (Fig. 3 and Fig. 4).

4. Methodological and research design

To examine properties for tourism, use in depth, a mixed analysis method has been employed, using quantitative and qualitative techniques. On the one hand, a survey was conducted among the students of the University of Santiago de Compostela in order to determine their perception of the state of rented accommodation in the city. On the other

hand, the authors participated in different debates organised by the government on the impact of holiday rentals on residential properties for the permanent and student population. In the second part of the methodology, the research takes a citizen science approach, whereby the author participates in research projects in contact with the citizens (Vohland et al., 2021).

The survey was conducted over five weeks in 2021. The intention of the article is not to detect the effects of COVID-19, but to analyse the central problem (the relationship between touristification, studentification and the housing market) at a time of special interest in the Spanish case. The interest stems from the fact that the period with the fastest pace of intensification of tourism activity in cities, with its spill-over effects, took place between 2010 and 2020, as shown by numerous studies (Blanco & Blázquez, 2023). From the COVID-19 pandemic onwards, this process is interrupted, and the previous figures are only recovered in 2023. Consequently, at the time of the survey, the effects of both the rapid increase of the earlier decade and the abrupt end of that increase were still very much in evidence.

The questionnaire was sent by email to the students through the coordinators of the Degrees, Masters, and Doctorate programmes of the University of Santiago de Compostela and of the General Secretariat. Their opinions have been obtained through the online Microsoft Forms questionnaire (<https://forms.gle/BkJwxfGMWwpELh27A>). This was previously subjected to an inter-rater validation (Zapf et al., 2016) process in which four experts from the Social Science field participated, with direct or indirect experience in studies on the property market and urban processes.

Most of the questions provide a selection of multiple-choice answers in which the possible options are included, always leaving the possibility of an open answer in “other”. This is a non-probabilistic sampling, in which the selection of participants does not depend on chance but rather is adjusted to other criteria related to the characteristics of the research. In this case, the condition of being a student and residing outside the family home was the determining factor (Cohen et al., 2018). Within a period of five weeks (March–April 2021), the questionnaire received 615 responses, of which two were ruled out as they did not fulfil the participation requirements. The final sample was made up of 613 participants (Table 1). Based on an unknown universe and population, which tends to infinity, the sample is considered to be significant (>601) with a confidence interval of 95 % and a margin of error of 4 %.

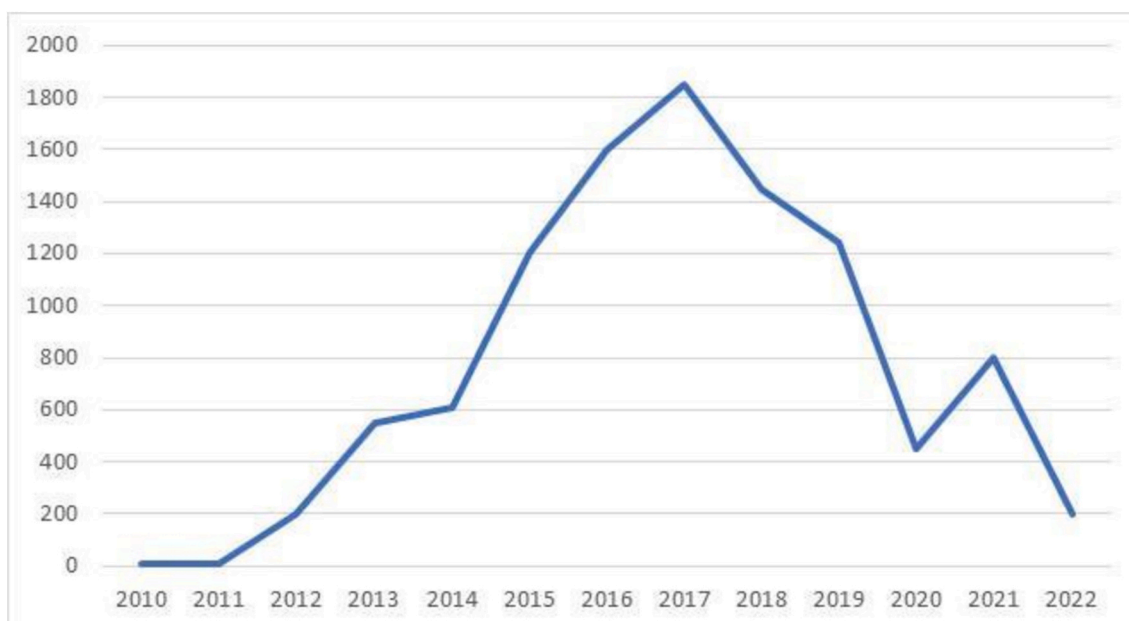


Fig. 2. Evolution of the supply of apartments for rent in Santiago de Compostela. Source: AGALIN-Real Estate Association of Galicia.

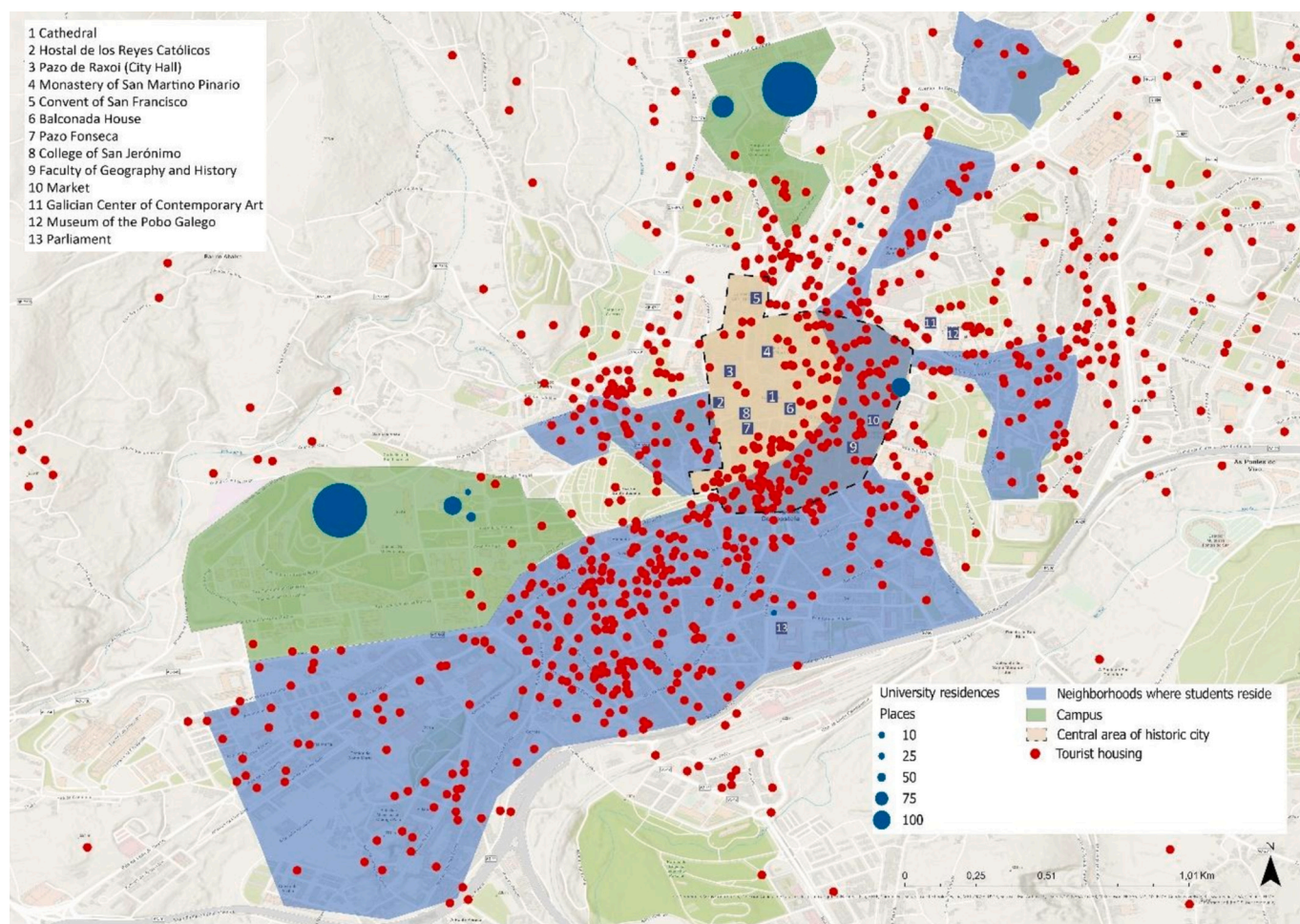


Fig. 3. Location map of tourist flats and student apartments in Santiago de Compostela. Source: Own elaboration.

It was a condition for being able to participate in the interview that none of the participants reside in their family home. The reasons for this decision have been revealed through the survey and are varied. In most cases, there is not one exclusive reason but a mixture of several, the most frequent being the lack of adequate transport for daily commuting (30 %) and the desire to live independently (30 %). Most of the students live or have lived in a rented apartment (96 %), either sharing or alone. A minority have resided only in residence hall, hostels or properties owned by their family. Therefore, they all have a knowledge of the rental market.

With respect to the debates, two were attended in Santiago de Compostela to contrast the results of the surveys (Table 2). The participation of the university members was via invitation, as part of a Citizen Science project. This type of project involves a collective participation approach that implies an opportunity to bring knowledge and scientific methods closer to society and improve science-society-policy interactions (Serrano et al., 2014; Universidad Autónoma de Chile, 2017). This approach, novel in tourism studies, is in line with Open Science policies and the principles advocated by the European Union. In this way, the information collected is collated with the stakeholders themselves, generating feedback that enriches the research.

5. Results

Based on the methodology described above for this purpose, the opinions of the different stakeholders are analyzed separately, in order to obtain a comprehensive understanding of the perspectives of all parties involved. And thus, to answer the following questions: How do

these relationships between studentization and touristification manifest themselves in a case study, Santiago de Compostela? And how do the different stakeholders perceive tourism and how do they react to it?

On one hand, the responses from students to the survey have provided valuable insights into their direct perceptions of the impact of short-term rentals on residents in traditional rental housing. Additionally, these responses have shed light on the strategies students have adopted regarding the rental market during the period of peak tourist activity (2010–2020), which was later mitigated by the COVID-19 pandemic. On the other hand, direct participation in discussions has vividly illustrated the perceptions of other stakeholders and the measures being implemented at the institutional level.

5.1. Perception of tourism by the students

The touristification process experienced in the city between 2017 and 2019 has resulted in more than half of the survey participants (60 %) facing an increase in their housing costs. Despite this, the participants' perception of tourism is not uniformly negative; they also acknowledge positive aspects, particularly in terms of the economic and personal opportunities it creates. Regarding the impact of tourists on their neighbourhoods, especially with respect to gentrification, the respondents highlighted the negative consequences more than the positive ones (Table 3).

These responses can be connected to those provided by students in other sections of the study. In these, they explain that if they need to move—which happens to 60 % of them—the reasons for relocating are varied and stem not from a single factor but rather a combination of



Fig. 4. Examples of residential buildings in the historic centre of Santiago de Compostela. Own elaboration.

Table 1

Distribution of the sample in accordance with the classification variables.

Academic situation	Degree student	481
	Master's student	57
	Doctorate student with a grant	36
	Doctorate student without a grant	26
	Post-doctoral	3
	Other	10

several. Among the most common reasons are the search for better living conditions and comfort (31 %), cost (24 %), and personal reasons (16 %). In contrast, reasons related to neighbourhood deterioration are scarcely significant (1 %), nor are the provision of basic services (1 %) or the presence of tourists (1 %). The findings indicate that students are more concerned with the characteristics of the housing itself and the quality-to-price ratio than with changes affecting the conditions of the

Table 2

Characteristics of the debates.

Date	Participants	Objective
26/03/2022	Departments of town planning and tourism of the City Council of Santiago, Real Estate Association of Galicia, Hotel Union of Santiago de Compostela, Hotel and Restaurant Association, Tourist Housing Association of Galicia, Association of Licensed Property Administrators, Consumers Union of Galicia, neighbourhood associations, researchers of the University of Santiago de Compostela	To analyse the reality of the properties for tourism use in Santiago and their influence on the accommodation supply for residents and students.
14/01/2022	City Council of Santiago de Compostela and Cádiz, Sindicat de Llogateres de Barcelona, Asociación Provienda, FRAVM, expert from the University of Uppsala, University of Santiago de Compostela, Universidad Autónoma de Barcelona, Universidad Politécnica de Madrid.	Analyse the housing problem and its relationship with urban policies to improve access to affordable housing and best practices.

surrounding area (neighbourhood or city).

5.2. Housing costs

As noted in the previous section, the majority of students (60 %) have experienced an increase in their housing costs. Among them, 236 (38,5 %) consider the increase to be affordable, while 377 students (61,5 %) deem it exorbitant relative to the quality of the accommodation. The increase in housing costs has led to several personal consequences, prompting students to develop various strategies to mitigate the impact. Among those who perceive the price hike as disproportionate and unaffordable, 73 % report that they are now paying a higher monthly rent to maintain their current accommodation. Others have adopted different strategies, with the most common being sharing their housing (9 %), seeking employment (6 %), moving to a cheaper residence within the city (5 %), or relocating to another municipality or area within the city (5 %). However, it is uncommon for students to rent out rooms to other

Table 3
Perception of tourism by the students.

	N°.	%
+ It is an opportunity to meet people.	80	24.46
+ It is an opportunity to rent out my apartment when I am away or to rent out rooms or beds...	10	3.06
+ I had more independence with tourist neighbours who I did not know.	22	6.73
+ My neighbourhood has changed and has become more cosmopolitan and modern. I like that.	40	12.23
POSITIVE ASPECTS	152	46.48
- My neighbourhood changed and it adapted to the tourists and not the residents. I did not like that.	138	42.20
- Insecurity.	60	18.35
- There were properties in my building that were rented to tourists who generated a lot of noise and dirt.	77	23.55
NEGATIVE ASPECTS	175	53.52

Source: questionnaire.

students (1 %), and none of them rent to tourists, following the original collaborative economy model associated with short-term rental platforms (Table 4).

The students reiterated this point and emphasized the rising cost of housing in the comments section of the questionnaire, thereby providing additional nuances to the issue.

“I earn a wage and I think it is an outrage that, if I want to live in minimum living conditions, I have to share an apartment and spend up to 30% of my wage on rent” respondent 200.

5.3. Student adaptive responses

Among the main adaptive responses from students are that students have been using in recent years is abandoning the property during the summer months at the risk of losing it when they return for the autumn term. This is now something that 15 % of the survey participants do through an agreement with the owners who are able to rent out the properties to tourists during these months. This arrangement benefits all parties involved: students do not have to pay rent for the summer months as a reservation fee, while property owners can achieve greater profitability during that period. In line with this, when students are asked about their views on the state of housing and the impact of tourists on student rentals, most focus on describing the poor condition of the housing and high prices. However, there are very few comments about tourists, and those that do exist often express leniency regarding their ability to affect the rental market. It is observed that the most critical views on tourism are held by students who have lived in Santiago for a longer period and have greater knowledge of housing price trends and city dynamics. Consequently, they are better able to relate the increase in tourists to the rise in housing prices.

Consistent with the ideas previously discussed, a selection of student comments is presented, showcasing a range of opinions from those more favorable towards tourism to the more critical perspectives This highlights the notion that there is no single view on tourists.

“The biggest problem of the housing in Santiago is not the price but

Table 4
Consequences derived from the increase in the price of housing.

	N°.
A greater monthly amount is paid than before	276
Sharing accommodation	35
Finding a job	22
Moving to another municipality or area of the city	19
Renting out rooms to other students	5
Renting out rooms to tourists	0
Other (changing to cheaper accommodation)	20
TOTAL	377

Source: questionnaire.

the quality-price ratio. With respect to the impact of tourists, I do not believe that it is particularly relevant, but it should be taken into account” respondent 44.

“The impact of holiday rentals is, undoubtedly, negative, but it is not the only reason why prices are higher” respondent 28.

“The affluence of tourists has led to an increase in rental prices due to the reduction in supply, as it is more profitable to rent to tourists who are willing to pay more” respondent 249.

COVID-19 brought about a major change which directly affected the housing market in Santiago de Compostela, due to the complete suspension of both tourism and academic activities. With these precedents and due to the uncertainty of how the academic year 2020–2021 would develop, the majority of the students (89 %) rented accommodation for the whole year, because the owners did not rent for short periods of time. Of these, 51 % rented the same property as always and almost always in the same economic conditions. A minority (2 %) obtained a reduction in price. The remaining 49 % changed accommodation. Of these, the majority took advantage of the situation to move because they were not satisfied (58 %) and the rest did so to find cheaper accommodation (42 %), and to do so, the majority used real estate agencies (49 %) (Table 5).

COVID-19 has clearly affected the rent prices and the number of people who share accommodation (Fig. 5 and Fig. 6). Within the pandemic context, for the 2021–2022 academic year, 70.98 % of the survey participants consider that the best option is to rent in the city centre. Other options are in the minority, such as remaining in the family home (7.52 %), renting in other municipalities (4.02 %) or in a university hall of residence (3.67 %).

5.4. The response expected by the municipal authorities

Considering this panorama of uncertainty and rising housing prices, the participants were asked whether they considered that the public administration should protect or control the price, and, in this case, which institution should be responsible for this. This is an issue that has recently been incorporated into the Spanish political agenda, generating an important debate. For the students, the problem seems clear, and the solution seems clear as well, since the 80 % considered that a cap should be set on prices and some even said that this limit should be at around €150. The majority (20 %) consider that the city council should undertake this task, alone or together with the regional government (13 %), the central government (5 %) or the university (2 %). A significant volume of participants consider that this regulation should be carried out only in the case of students and some consider that rather than regulation there should be a control of the living conditions. A lower percentage (20 %) consider that prices should not be fixed as the market should regulate them and they even considered that this action could be counterproductive as they believe that instead of fixing a price the supply should be increased. This last aspect, supply, is the key to the interpretation of the students’ opinions, since it is the lack of supply that drives up prices, without directly pointing to tourists as an essential part of the current demand that reduces supply.

Three types of comments are included that show the disparity of opinions in this regard, with a numerical majority in favor of regulation.

“Yes, and to guarantee a minimum quality for the apartments, as they

Table 5
Moving or remaining in the property during the post-pandemic phase.

	N°.
No, I took advantage of the moment and changed because I was not happy.	144
No, I moved to accommodation that offered a better quality-price ratio.	104
Rented another property	248
Yes, in the same economic conditions as before.	257
Yes, but at a lower price.	6
Rented the same property as always	263

Source: questionnaire.

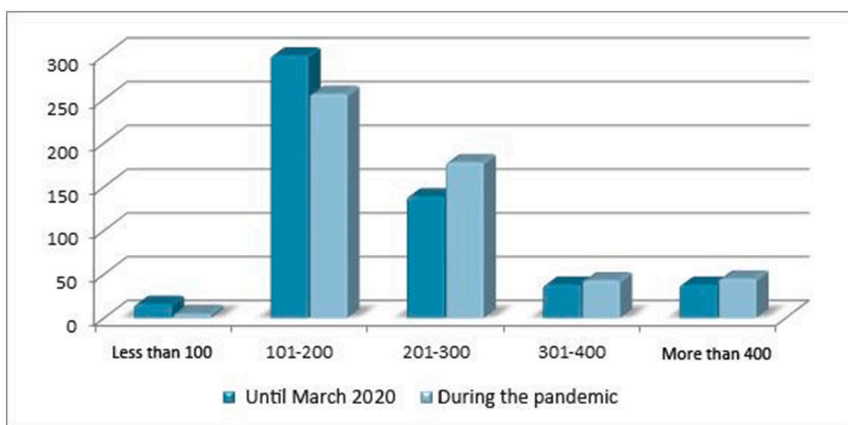


Fig. 5. Rental expenses before and during confinement.

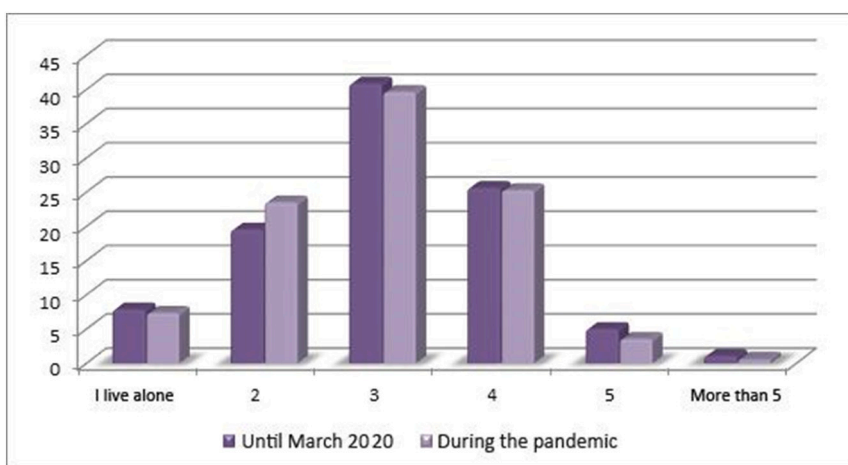


Fig. 6. Number of persons sharing housing.

are uninhabitable” respondent 6.

“Instead of capping the rent prices, the public authorities should focus on increasing the supply of rental properties” respondent 493.

“No, prices should fluctuate freely. Greater economic freedom implies greater development. It should not be regulated. The market self regulates” respondent 160.

5.5. Competing views of stakeholders. Conflicts of interest

When analysing the city’s problems and challenges, multiple actors converge in the debate. In this case, on the housing problem in Santiago, the dialogue is developed between i) public administrations; ii) citizens/students; iii) tourists; iv) associations and companies in the real estate and hotel and catering sectors; v) researchers who are experts in the field of housing and tourism; vi) holiday rental associations and owners.

Based on the debates among representatives of all of these groups, we can conclude that all of the agents recognise two facts: i) tourism activity is positive for the city; ii) the lack of affordable housing in the city for the population in general and for students in particular as a result of rising prices. However, when it comes to analysing the factors that determine this reality and the possible solutions, it is when divergences appear. While some stakeholders recognise tourism as the main cause of the housing problem, others consider that the key to the problem lies in the lack of interest on the part of universities and administrations for not having defined a public housing policy for decades. And finally, there is also no consensus on the solution to the problem of the proliferation of tourist accommodations, since while some demand strict regulation and

a limitation on its expansion, others see it as a business opportunity that can make up for the lack of affordable supply for tourists.

In Santiago there are 902 tourist flats, of which only 36 are legal. This is due to the lack of coordination between regional and local government. The regional government defends its role in defining the provisions for establishing, developing, and managing housing policy, while at the same time carrying out public promotion of social housing and complementary buildings and facilities. Although it promotes the registration of tourism businesses and activities, it does not recognise that the municipality has full competence in granting licences to start activity and manage properties for tourism use in the urban environment. The city council claims its capacity to define the model of the city as a university and pilgrimage destination. It is working in this direction. On the one hand, the problem of student housing shows the need for greater collaboration between the city council and the universities. On the other hand, it approves licences for the development of the activity and has declared the historic centre as a saturated area in terms of tourist accommodation, for which a moratorium has been approved.

The role of the local government has been reinforced, thanks to the ruling of the High Court of Justice of Galicia (00168/2022), which declared that the properties for tourism use do not have a merely residential use but are used for an activity that should be understood as tourism and, as such, this activity should be managed. The ruling takes into account the modification of the Special Plan for the protection and rehabilitation of the historical city, approved by the city council in 2018, which considers that the use of housing for tourism activity is incompatible, that is, any form of tourist or temporary short-term

accommodation (<30 days).

On the other hand, there is a platform of owners of tourist housing called the Galician Association of Tourist Housing (AVITURGA) and the Galician Platform for the Regulation of Tourist Rental (PREVITUGA). The first of these considers that the fact that there is a shortage of housing supply is not due to the fact that these are destined for tourist use, but to the lack of efficiency in housing policy, with 9000 empty homes in the city, representing 21 % of the housing stock. AVITURGA do not consider that it is necessary for the administration to design policies or regulate. The owners of tourist homes consider that the rents are a complement for fragile economies, and they pay tax based on their capital base. They respond to the tourist who prefers another type of accommodation to hotels. They blame inefficiency in the management of public resources, including housing, and consider that the increase in rental prices is due to the general increase in real estate prices.

Along the same line is the Tourist Rental Regulation Platform of Galicia (PREVITUGA) which defends the tourism activity and the existence of tourist housing. However, unlike the previous groups, it considers that these properties should be obliged to obtain municipal authorisation for exercising the economic activity that they develop and that it is not enough to understand that this activity can be legally undertaken with a mere inscription in the registry of the regional government.

Meanwhile, the university invests almost 700,000 euros each year in meal aid and the maintenance of the university residence infrastructures. This is one of the few Spanish universities with >900 places subsidised by the institution itself. For their part, the student organisation ANEGA has launched several campaigns calling for reasonable rents, and their demands are increasingly being reported in the newspapers. They are aware of their importance as actors of urban revitalisation and demand the situation be taken seriously, not only because of the lack of accommodation, but also because of the increase in prices and the poor living conditions of the flats that remain.

6. Discussion

The most recent scientific literature on university cities addresses the housing problem. This issue is primarily linked to the significant increase in the student population, its impact on the housing market, and the policies implemented in different cities (Sood & Vicino, 2024; Wilkinson & Greenhalgh, 2024). However, the cities analyzed so far are not tourist destinations and therefore do not experience the pressure that tourism exerts on the housing market, as is the case in Santiago de Compostela. Based on the previously cited references and housing availability data (Fig. 2), it seems evident that the emergence of online tourist accommodation platforms has had significant consequences on the rental market in the city, leading to an increase in prices due to growing demand and a reduction in housing supply (Ayoub et al., 2020; García-López et al., 2020; Valente et al., 2022).

This involves two complex urban processes—studentification and touristification—both of which entail the replacement of the population driven by the dynamics of the real estate market. However, these processes do not fit into simplistic models of resident substitution, where low-income populations are replaced by higher-income groups. The coexistence of these processes brings about specific changes, resulting in a scenario where traditional residents, new gentrifying residents, students, and tourists coexist, generating conflicts and mutually interrelated effects (De la Calle, 2019; Lopez et al., 2019). Moreover, the pressures stemming from these dynamics alter the multifunctionality that sustains the vitality of university cities. According to Russo and Capel, of the three possible landscapes of studentification, the most balanced is the one that integrates educational, residential, and leisure functions (Russo & Capel, 2007). However, the incorporation of mass tourism poses a challenge that could disrupt this balance. The degree of balance between the two functions (university and tourism) will determine whether we are dealing with urban spaces that maintain their

vitality as residential, commercial and touristic places; or whether we are dealing with urban realities in which the population is being expelled, drifting towards an urban model where the population is being pushed out of the city with informal studentscape elements shifting to suburban student residential areas, while city-centre social activity will be progressively substituted within consumption landscapes increasingly populated by tourists and wealthy young professionals (Russo & Capel, 2007).

Following the 2008 crisis, it became evident that in Santiago de Compostela the high cost of housing had been driving people for decades to neighbouring municipalities, where prices were lower for both purchasing and renting. However, these municipalities are now also saturated and face the issue of providing affordable housing for students. Under these circumstances, Santiago risks losing students to other university cities with less pressure on the rental market. This would result in the loss of one of the primary agents of urban regeneration and revitalization, as well as one of the key elements of its uniqueness. Consequently, the city risks becoming a banalized touristic space (De la Calle, 2019; Fernández Tabales & Santos Pavón, 2018).

In this sense, several experts have explained in various forums the importance of maintaining the multifunctionality of these cities, which requires a commitment between the city and the university. From their perspective, universities generate demand for services, infrastructure, housing, and urban spaces, and therefore should not be regarded by cities solely as an economic and social asset or as a tool for urban planning, but also as an active agent in the construction of urban life. Similarly, cities should not be perceived by universities exclusively as providers of goods and services, but as a medium and a society to engage with and serve for the benefit of the community (Nel-lo, 2024).

Consequently, it is necessary to (re)think the city model and the strategies to be followed to maintain the balance. The research findings indicate that the problem is significant, as evidenced by its inclusion in the local political debate and a real collaboration between institutions such as regional and local government and the university and the complementarity between their competences so that housing plans (dependent on regional government) go hand in hand with urban plans and the licensing premise for the implementation of tourist housing (dependent on the municipality) and the demand for housing and rooms in university residences on the part of students.

In recent years, the city council of Santiago has designed a tourism sustainability plan which includes, first of all, the need to regulate tourist accommodation, such as the imposition of fines on dwellings that do not meet the requirements for tourist rental activity, as has already been done in other cities (Nieuwland & Van Melik, 2020). However, the root of the problem remains unaddressed: the lack of available housing.

Also, our analysis has shown that while all urban stakeholders acknowledge the problem, their perceptions differ regarding the factors influencing housing affordability and the solutions that should be implemented. This divergence makes it challenging for stakeholders to reconcile opportunities, negatively impacting both the local population and students. Broadly, two opposing positions can be distinguished: (i) those stakeholders (particularly owners of tourist properties) who view the issue as merely a matter of supply and demand adjustment and believe that allowing market forces to operate freely will benefit society directly or indirectly; and (ii) other stakeholders who advocate for public intervention, including the regulation of tourist accommodations and the creation of affordable public rental housing.

In this context, we consider that the medium-term possible scenarios are: i) an increase in tourist rentals and a reduction in the supply of student accommodation, which would lead to the expulsion of students from the city; ii) the risk of turning the historic centre of Santiago into a monofunctional area where the residential function is totally residual; iii) an improvement in the situation through the design of a sustainable tourism plan and a plan to reactivate the real estate market. This last step requires the development of urban and university policies. Currently, the regional government is promoting regionally significant

plans for housing construction, collaborating with the city council to identify available land for development. Furthermore, the university has entered into agreements with the city council and private entities to expand the availability of student accommodation. In parallel, it is addressing the issue of tourist accommodations; however, a comprehensive strategy that considers both urban processes—studentification and touristification—jointly is still necessary.

7. Conclusion

In conclusion, revisiting the initial research questions, it can be stated that university

cities present different characteristics with respect to the impacts of touristification. Returning to the first of the initial research questions, it can be affirmed that university cities exhibit distinct characteristics regarding the impacts of touristification. The international scientific literature has extensively studied touristification and, in detail, studentification. Both concepts have recently begun to be studied together, as they represent urban transformation processes that affect the local housing market and are recognized as having a specific set of challenges. These challenges are centered on a particular segment of the population affected: university students. This relationship is even more pronounced in heritage cities of international recognition, although it remains an underdeveloped field of research.

Regarding the second and third research questions, in the specific case of Santiago de Compostela, an intensification of tourist activity in recent years can be observed, as reflected in the analysis. The findings confirm that touristification impacts the traditional university function by making student housing more difficult to secure.

Although students individually have not perceived the origin of the phenomenon, other stakeholders have clearly recognized it. These stakeholders attribute the issue to touristification, and more specifically to tourist accommodation, and have pointed out the direct causal relationship between the increase in tourist arrivals and the difficulty in accessing housing, particularly for students. The scale and consequences of the phenomenon are so significant that it has become central to the municipal political debate.

The research findings provide basic information for the stakeholders in the studied city. Moreover, beyond the specific case of the study, the methodology employed highlights the need to adopt a citizen science approach to address issues with divergent interests, in order to provide a comprehensive perspective while recognizing all stakeholders. Furthermore, this research is valuable in demonstrating the need for explicit public interventions in the housing market of historic university cities to prevent the displacement of students from the city. Such displacement would lead to numerous problems—stemming from mobility— but, most importantly, would result in the loss of one of the traditional functions of many cities, such as Oxford, Cambridge, Leuven, Bologna, or Heidelberg, among many others.

CRedit authorship contribution statement

María José Piñeira: Writing – review & editing, Writing – original draft, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Alfonso Fernández-Tabales:** Writing – review & editing, Writing – original draft, Validation, Investigation, Funding acquisition, Conceptualization. **Carmen Mínguez:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Funding

This article is the result of the projects: Grant PID2022-140734OB-I00; Grant TED2021-131577B/AEI/10.13039/501100011033/ Unión Europea NextGenerationEU/PRTR; and Grant PID2020-114186RB-C22 funded by MCIN-AEI/10.13039/501100011033.

Declaration of competing interest.

No potential conflict of interest was reported by the author(s).

Data availability

Data will be made available on request.

References

- AGALIN-Real Estate Association of Galicia. (2022). *Barómetro Inmobiliario de Galicia, 4º trimestre 2022*. Available in <https://www.agalin.es/wp-content/uploads/2023/02/Barometro-AGALIN-4to-Trimestre-2022.-Prensa.pdf>.
- Atlas Real Estate Analytics. (2022). *Estado actual del mercado de residencias de estudiantes. Nichos de mercado, porfolios y transacciones*. Available in [https://atlas-reanalytics.com/\(17-1-2023\)\(17-1-2023\)](https://atlas-reanalytics.com/(17-1-2023)(17-1-2023)).
- Ayouba, K., Breuillé, M. L., Grivault, C., & Le Gallo, J. (2020). Does Airbnb disrupt the private rental market? An empirical analysis for French cities. *International Regional Science Review*, 43(1–2), 76–104.
- Blanco, A. & Blázquez, M. (Coord.). 2023. *Spanish tourism geographies. Territorial diversity and different approaches* Ed. Springer, col. Geographies of Tourism and Global Change.
- Carvalho, L. (2024). Housing, real estate, and the economy in Portuguese cities. In R. C. Lois-González, & J. A. Rio Fernandes (Eds.), *Urban change in the Iberian Peninsula. The urban book series*. Cham: Springer. https://doi.org/10.1007/978-3-031-59679-7_9.
- Chamusca, P., Rio Fernandes, J., Carvalho, L., & Mendes, T. (2019). The role of Airbnb creating a “new”-old city Centre: Facts, problems and controversies in Porto. *Boletín de la Asociación de Geógrafos Españoles*, 83(2820), 1–30. <https://doi.org/10.21138/bage.282>
- Clancy, M. (2020). Tourism, financialization, and short-term rentals: The political economy of Dublin’s housing crisis. *Current Issues in Tourism*, 25(20), 3363–3380. <https://doi.org/10.1080/13683500.2020.1786027>
- Cócola-Gant, A. (2018). Tourism gentrification. In L. Lees, & M. y Phillips (Eds.), *Handbook of gentrification studies* (pp. 281–293). Cheltenham and Northampton: Edward Elgar Publishing.
- Cócola-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*, 53(7), 1671–1688. <https://doi.org/10.1177/0308518X19869012>
- Cócola-Gant, A., & Malet, D. (2023). The Platformization of student housing and the rise of mid-term rentals. The case of Uniplaces in Lisbon. *Tijdschrift voor Economische Sociale Geografie (Journal of Economic and Human Geography)*, 114(5), 431–445. <https://doi.org/10.1111/tesg.12560>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th edition). Routledge.
- Colomb, C., & Novy, J. (Eds.). (2017). *Protest and resistance in the Tourist City* (p. 344). London: Routledge.
- De la Calle, M. (2019). Turistificación de centros urbanos: clarificando el debate. *Boletín de la Asociación de Geógrafos Españoles*, 83, 1–40. <https://doi.org/10.21138/bage.2829>
- Dudas, G., Vida, G., Kovácsik, T., & Boros, L. (2017). A socio-economic analysis of Airbnb in new York City. *Regional Studies*, 7, 135–151.
- Fernández Tabales, A., & Santos Pavón, E. (2018). La difícil convivencia entre paisaje urbano y turismo: clasificación de conflictos y propuestas de regulación a partir del análisis comparativo de normativas locales. *Boletín de la Asociación de Geógrafos Españoles*, 78, 180–211. <https://doi.org/10.21138/bage.2715>.
- Gallagher, L. (2017). *The Airbnb story: How three ordinary guys disrupted an industry, made billions ... and created plenty of controversy* (p. 236). Boston: Houghton Mifflin Harcourt.
- García-López, M.À., Jofre-Monseny, J., Martínez-Mazza, R., & Segú, M. (2020). Do short-term rental platforms affect housing markets? Evidence from Airbnb in Barcelona. *Journal of Urban Economics*, 119, Article 103278. <https://doi.org/10.1016/j.jue.2020.103278>
- Gotham, K. F. (2005). Tourism gentrification: The case of New Orleans’ Vieux Carré (French quarter). *Urban Studies*, 42(7), 1099–1121.
- Grabkowska, M., & Frankowski, J. (2016). Close to the city Centre, close to the university’. Are there symptoms of studentification in Gdańsk. *Poland? Bulletin of Geography Socio-economic Series*, 32(32), 73–83. <https://doi.org/10.1515/bog-2016-0016>
- Gravari-Barbas, M., & Guinand, S. (Eds.). (2017). *Tourism and gentrification in contemporary metropolises: International perspectives* (p. 340). London: Routledge.
- Gregory, J. J. (2020). Studentification and urban change in South Africa. *Urban Geography in South Africa*, 225–238. https://doi.org/10.1007/978-3-030-25369-1_14
- Gu, H., & Smith, D. P. (2019). ‘Living off the campus’: Urban geographies of change and studentification in Beijing. *China, Urban Geography*, 41(2), 205–224. <https://doi.org/10.1080/02723638.2019.1659071>
- Gurran, N., & Phibbs, P. (2017). When tourists move in: How should urban planners respond to Airbnb? *Journal of the American Planning Association*, 83(1), 80–92. <https://doi.org/10.1080/01944363.2016.1249011>
- Holton, M., & Mouat, C. M. (2020). The rise (and rise) of vertical studentification: Exploring the drivers of studentification in Australia. *Urban Studies*, 58(9), 1866–1884. <https://doi.org/10.1177/0042098020925246>

- Idealista. (2022). *Evolución del precio de la vivienda en venta en España*. Available in <https://www.idealista.com/sala-de-prensa/informes-precio-vivienda/>.
- INE. (2023). *Datos de la Encuesta de Ocupación Hotelera*.
- Ioannides, D., Röslermaier, M., & Van der Zee, E. (2018). Airbnb as an instigator of 'tourism bubble' expansion in Utrecht's Lombok neighbourhood. *Tourism Geographies*, 21(5), 822–840.
- Jover, J., & Díaz-Parra, I. (2019). Gentrification, transnational gentrification and touristification in Seville. *Spain Urban Studies*, 57(15), 3044–3059. <https://doi.org/10.1177/00420980198575>
- Lee, C. (2022). The 'globalhood' as an urban district of the 21st-century city: The case of the St Vincent's quarter. *Sheffield Geography*, 107(2), 97–106. <https://doi.org/10.1080/00167487.2022.2068841>
- Lee, D. (2016). How Airbnb short-term rentals exacerbate Los Angeles's affordable housing crisis: Analysis and policy recommendations. *Harvard Law Policy Rev*, 10, 229–253.
- Liang, C., Yeung, M. C. H., & Au, A. K. M. (2021). The impact of Airbnb on housing affordability: Evidence from Hong Kong. *Environment and Planning*, 49(3), 1048–1066. <https://doi.org/10.1177/239198083211043123>
- Lois, R. C. (1994). *A Universidade (1960–1992)*. Vigo: Xerais.
- Lois, R. C., & Piñeira, M. J. (2009). A Universidade galega na segunda metade do século XX: do monopólio compostelán á descentralización. *Revista Galega do Ensino*, 57, 70–76.
- Lopez, L., Pazos Otón, M., Piñeiro Antelo, & de los Ángeles, M. A. (2019). ¿Existe overtourism en Santiago de Compostela? Contribuciones para un debate ya iniciado. *Boletín de La Asociación De Geógrafos Españoles*, 83. <https://doi.org/10.21138/bage.2825>
- Manella, G., Giordano, E., Rimondi, T., & Crozat, D. (2022). Tra consumo e rischio: l'ambivalenzadella vita di nattetragli studenti di Montpellier e di Bologna. *Sociologia Urbana e Rurale*, 126, 97–117. <https://doi.org/10.3280/SUR2021-126006>
- Mikulic, J., Vizek, M., Stojčić, N., Payne, J. E., Časni, A.Č., & Barbić, T. (2021). The effect of tourism activity on housing affordability. *Annals of Tourism Research*, 90, Article 103264. <https://doi.org/10.1016/j.annals.2021.103264>
- Ministerio de Universidades. (2023). *Estadística de Internacionalización Curso 2021-22*. Available in: <https://www.universidades.gob.es/wp-content/uploads/2022/11/Principales-resultados-2020-Final-b.pdf>.
- Moos, M., Revington, N., Wilkin, T., & Andrey, J. (2019). The knowledge Economy City: Gentrification, Studentification and Youthification, and their connections to universities. *Urban Studies*, 56(6), 1075–1092. <https://doi.org/10.1177/0042098017745235>
- Murzyn-Kupisz, M., & Szymkowska, M. (2015). Studentification in the postsocialist context: The case of Cracow and the Tri-City (Gdansk, Gdynia and Sopot). *Geografie*, 120(2), 188–209. <https://doi.org/10.37040/geografie2015120020188>
- Nakazawa, T. (2017). Expanding the scope of studentification studies. *Geography Compass*, 11(1). <https://doi.org/10.1111/gec3.12300>
- Nel-lo, O. (2021). Universitat i ciutat: els nous campus universitaris. Available in <https://oriolnello.blogspot.com/2024/10/universitat-i-ciutat-els-nous-campus.html?m=1>.
- Nieuwland, S., & Van Melik, R. (2020). Regulating Airbnb: How cities deal with perceived negative externalities of short-term rentals. *Current Issues in Tourism*, 23(7), 811–825. <https://doi.org/10.1080/13683500.2018.1504899>
- Pillai, A. K., Viet, M. A., & y Sotomayor, L. (2021). University student housing as business proposition and entrepreneurial activity: The Canadian case. *Housing Policy Debate*, 1-24. <https://doi.org/10.1080/10511482.2021.1883703>
- Prada-Trigo, J. (2019). Understanding studentification dynamics in low-income neighborhoods: Students as gentrifiers in Concepción (Chile). *Urban Studies*, 56(14), 2863–2879. <https://doi.org/10.1177/004209801880762>
- Prada-Trigo, J., Aravena-Solís, N., & Barra-Vieira, P. (2021). Temporary destudentification caused by COVID-19: Motivations and effects on social relations in a Chilean university city. *Population, Space and Place*, 28(4), Article e2529. <https://doi.org/10.1002/psp.2529>
- Ramil, F., Casado, C., Fernández, J., & Neira, C. (2018). *As vivendas de uso turístico nacidae histórica*. Santiago de Compostela: Concello de Santiago.
- Revington, N., & August, M. (2020). Making a market for itself: The emergent Financialization of student housing in Canada. *Environment and Planning A: Economy and Space*, 52(5), 856–877.
- Revington, N., Zwick, A., Hartt, M., & Schlosser, J. (2021). Universities and urban social structure: Gentrification, studentification, and youthification in five United States legacy cities. *Urban Geography*, 1-22. <https://doi.org/10.1080/02723638.2021.1985306>
- Reynolds, A. (2022). Contesting the financialization of student accommodation: Campaigns for the right to housing in Dublin. *Ireland Housing Studies*, 1-21. <https://doi.org/10.1080/02673037.2021.2023731>
- Rugg, J., Rhodes, D., & Jones, A. (2000). *The nature and impact of student demand on housing markets*. York: York Publishing Services for the Joseph Rowntree Foundation.
- Russo, A., & Capel, L. (2007). From cities of education to Cartier latins (and back?): The changing landscapes of student populations in European cities. *Geography Compass*, 1(5), 1160–1189.
- Sage, J., Smith, D., & Hubbard, P. (2012). The diverse geographies of Studentification: Living alongside people not like us. *Housing Studies*, 27(8), 1057–1078. https://www.researchgate.net/publication/263417997_The_Diverse_Geographies_of_Studentification_Living_Alongside_People_Not_Like_Us.
- Serrano, S. F., Holocher-Ertl, T., Kieslinger, B., Sanz, G. F., & Silva, C. G. (2014). White paper on citizen science for Europe. *Socientize consortium*. Available in http://www.socientize.eu/sites/default/files/white-paper_0.pdf. (Accessed January 2016).
- Smith, D. P. (2002). Patterns and processes of studentification in Leeds. *Regional Review*, 12(1), 14–16.
- Smith, D. P. (2004). "Studentification": The gentrification factory. In Atkinson, & Bridge (Eds.), *Gentrification in a global context. The new urban colonialism* (pp. 73–90). London: Routledge.
- Sood, A., & Vicino, T. J. (2024). The politics of studentification: An analysis of the student housing debate in Boston. *Housing Policy Debate*, 34(5), 620–643. <https://doi.org/10.1080/10511482.2023.2236078>
- Sorando, D., & Ardua, A. (2018). Procesos y dinámicas de gentrificación en las ciudades españolas. *Papers. Regió Metropolitana de Barcelona. Territori, estratègies, planejament*, 60, 35–47.
- Universidad Autónoma de Chile. (2017). *Guía para conocer la Ciencia Ciudadana*. Available in <https://ediciones.uaautonoma.cl/index.php/UA/catalog/book/29>.
- Valente, R., Russo, A. P., Vermeulen, S., & Milone, F. L. (2022). Tourism pressure as a driver of social inequalities: A BSEM estimation of housing instability in European urban areas. *European Urban and Regional Studies*, 23(3). <https://doi.org/10.1177/09697764221078729>
- Vohland, K., Land-Zandstra, A., Ceccaroni, L., Lemmens, R., Perelló, J., Ponti, M., & Wagenknecht, K. (2021). The science of citizen science evolves. Chapter 1. In K. Vohland, et al. (Eds.), *The science of citizen science*. Springer. <https://doi.org/10.1007/978-3-030-58278-4>.
- Von Briel, D., & Dolnicar, S. (2020). The evolution of Airbnb regulation. In *An international longitudinal investigation 2008–2020*. *Annals of Tourism: Research*. <https://doi.org/10.1016/j.annals.2020.102983>.
- Wilkinson, C., & Greenhalgh, P. (2024). Exploring student housing demand, supply side and planning policy responses in a small university city: Studentification in Durham. *UK Housing Policy Debate*, 34(5), 746–768. <https://doi.org/10.1080/10511482.2022.2137379>
- Wu, T. P. (2019). Does tourism affect house prices? Evidence from China. *Journal of China Tourism Research*, 15(4), 490–502. <https://doi.org/10.1080/19388160.2019.1582449>
- Yrigoy, I. (2019). Rent gap reloaded: Airbnb and the shift from residential to touristic rental housing in the Palma old quarter in Mallorca. *Spain Urban Studies*, 56(13), 2709–2726.
- Zapf, A., Castell, S., Morawietz, L., & Karch, A. (2016). Measuring inter-rater reliability for nominal data—whic coefficients and confidence intervals are appropriate? *BMC Medical Research Methodology*, 16(1), 1–10.