

Externalities of the Sharing Economy: effect on employment of holiday accommodation platforms. The case of Madrid.

Coello-Vilarino G¹, Morales-Alonso G², Carrasco-Gallego R³

Abstract: The rise of the Sharing Economy has made easier to match the high demand for holiday accommodation with the offer of private apartments. However, accommodation platforms such as Airbnb are not exempt from creating negative externalities. In this research, authors focus on the effect on employment. New work relations arise from platforms, both as particular or professional activities. Employment level in the tourism sector, especially low-skilled, is affected by the substitution of regulated offer for app-driven services. Demand of instant and easy access influences an increasing trend towards flexibilization of the labor market and the rise of self-work.

Keywords: Sharing Economy; Airbnb; externalities; side-effects; employment.

1 Introduction

The increasing impact of the Sharing Economy (SE) in many industries is transforming the way in which value is delivered, revolving companies' business models, and along with them, the labour frames for workers. In fact, the rise of digitalization has enabled the splitting of the work to be done into smaller sections that can be contracted to independent workers on a "power-by-the-hour" basis (Cook *et al.*, 2018). This is possible due to the lowering of the transaction costs and the reduction of friction in the markets (Rifkin, 2014; Stefano, 2016). Some of the activities contracted through SE platforms are not even referred to as work, being the terms gigs, tasks, favours, services and rides of frequent use (Stefano, 2016).

¹Gonzalo Coello-Vilarino (e-mail: g.coello@alumnos.upm.es)

²Gustavo Morales-Alonso

³Ruth Carrasco-Gallego
Dpto. de Ingeniería de Organización, Administración de Empresas y Estadística.
Universidad Politécnica de Madrid. Calle de José Gutiérrez Abascal, 2, 28006 Madrid (Spain).

The use of SE platforms has been estimated as growing at an interannual rate of 26% (Kässi and Lehdonvirta, 2018), being tourism one of the sectors more strongly affected by platforms activities and their externalities. Anchoring on the study of Fan, Ye, and Law (2016), which poses that Airbnb is taking over the role of low-end hotels, and according to the existing literature, authors' intention is to shed light on how the Sharing Economy affects the holiday accommodation industry. Therefore, this research aims at (i) exploring the possible labour relations flourished on the sector under the influence of the Sharing Economy, (ii) evaluating the immediate and middle-term effects on traditional holiday accommodation employment and (iii) applying the research and conclusions to the Spanish scene.

2 Theoretical Framework

The SE decreases the cost of labour outsourcing (Drahokoupil and Fabo, 2017), through an easier conjunction of offer and demand on the labour market (Askatas and Zimmermann, 2015). Besides acting as service intermediaries, platforms make it possible to access new employment opportunities, flexible work and new sources of income. This new paradigm challenges both employee and self-worker definitions and the existence of service sector professional profiles. Furthermore, extreme flexibilization of workforce could mean the loss of stable job relationships (European Commission, 2016; Sundararajan, 2016).

The non-existence of a formal job relationship between the platform and the providers generate several externalities, according to Drahokoupil and Fabo (2017) such as (i) transformation of activities that depended on a formal relation into self-work, (ii) facilitating the remote provision of services, (iii) increasing of competition, and (iv) extreme marketization of work.

Interviews from the study of De Groen and Maselli (2016) showed that most participants in the SE do not perceive associated tasks as work, as pointed out by Stefano (2016). Those participants are mainly motivated by a combination of control and flexibility, together with income (Teodoro *et al.*, 2014). The SE is not reflected in official employment statistics, it is not the main source of income for most participants and has not been thoroughly researched (Coyle, 2016).

Tourism is one of the four production-consumption regimes affected by platform activities (Martin, 2016; del Romero-Renau, 2018), as they provide value for both offer and supply sides of the market. On the one hand, value is provided to tourists by holiday accommodation platforms, such as Airbnb, which represent a cheaper alternative than hotels in the mid-price range (Zervas, Proserpio and Byers, 2015). On the other hand, offering a property through a platform in the high-demand season is up to 5 times more profitable than to do it in the traditional real estate market (del Romero-Renau, 2018). The saving in costs and the existence of profits in the industry has had a call-effect, leading to a professionalization

of the profile of providers in peer-to-peer platforms (Gil and Sequera, 2018), concentrating the power in a small number of users (Frenken and Schor, 2017).

According to Gil and Sequera, there are four types of hosts in peer-to-peer accommodation platforms, namely (i)sporadic: occasional hosting in their first residence, (ii) permanent: continuous hosting in their first residence, (iii) professional: room subletting of properties rented in the traditional real estate market, and (iv) investor: extracting properties from the traditional real estate market to offer them in the platforms.

Activities of professional and investor profiles are not compatible with stable residence use (Gil, 2018). Thus, they don't satisfy the definition of SE as they do not share idle capacity (Ranjbari, Morales-Alonso and Carrasco-Gallego, 2018). In the case of Madrid, 25% of Airbnb providers can be considered part of this commercial profile (Gil and Sequera, 2018).

As a result, additional companies arise under cover of holiday accommodation platforms, offering services to hosts and guests. These services range from the complete management of the host offer, to pet sitting services for travellers. Management services offered to hosts include price fixing, check-in and check-out and tourist accommodation licenses processing.

All these factors from the business models generate externalities that affect touristic cities, both in urban and employment development. Holiday accommodation platforms' activities affect the real estate market, retail activities, cultural offer, hostelry and additional services oriented to visitors, empowering the effects of touristification (Mendes, 2016).

The reduction of accommodation prices may have a positive effect on the rest of activities of the tourism sector, with new jobs arising from the increase of visitors. Nevertheless, the potential over-development of tourism due to the ease of access through digital platforms, makes it important to investigate about side-effects and externalities generated (Verboven and Vanherck, 2016). It is suggested that, up to a certain scale, the SE plays an important role in creating touristic employment. However, the effect decrease as platform offer grows and jobs from the traditional sector suffer the substitution (Fan, Ye and Law, 2016).

The absence of adequate estimations of jobs lost make it difficult to estimate the number of jobs created (De Groen and Maselli, 2016) and to determine the effect of SE on employment, in particular in the holiday accommodation sector.

3 Methodology

Anchoring on the studies of Zervas *et al.* (2015) and Fan, Ye and Law (2016), which pose that Airbnb is taking over the role of low-end hotels, authors' intention is to shed light on how the SE affects the holiday accommodation industry. A case study was conducted, taking the city of Madrid as a framework, to (i) explore the possible labor relations flourished on the sector under the influence of the Sharing

Economy, (ii) evaluate the immediate and middle-term effects on traditional holiday accommodation employment, and (iii) apply the research and conclusions to the Spanish scene.

Two methods of data collection were used. First, secondary data was chosen to investigate the state of the question in the city, benchmarking with other European cities. This data was collected from sources that were previously used in similar studies about Airbnb (del Romero-Renau, 2018; Gil and Sequera, 2018; Vázquez *et al.*, 2018). Estimations on Airbnb's activity were done according to previous studies (Marcussen and Zhang, 2016; Red2Red, 2017). Then, in-depth interviews were conducted with two different profiles of experts: a professional manager of tourist accommodation apartments and an individual who manages his own property. These two sources were used simultaneously to obtain the results, using cross-validation.

4 Results

The analysis of spare rooms and apartments offered through Airbnb shows that Madrid has the lowest offer among the European cities studied. However, the occupancy rate in Madrid is higher and the offer is cheaper than in the rest (apart from Berlin).

Following Gil and Sequera (2018), professional and investor profiles of hosts can be considered as commercial offer present on the platform. Figure 1 shows the data related to those profiles. In terms of data analysis, complete apartments with high availability (more than 90 days a year) were chosen, using data extracted from Inside Airbnb (2018).

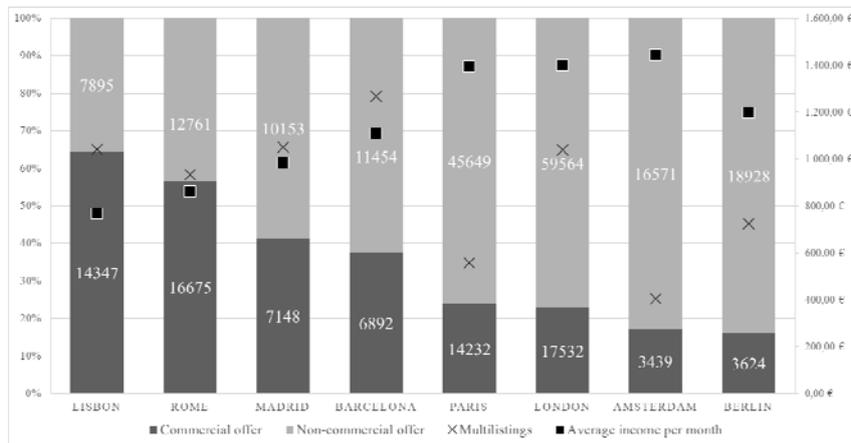


Fig. 1 European benchmarking of commercial offer characteristics. Source: author, using Inside Airbnb data.

More than 40% of Airbnb's offer in the city of Madrid is considered commercial, while 65% of it is managed by multilisting hosts (2 or more properties in the platform), which seems likely to be a professionalization of host activity. In comparison, Paris and Amsterdam scenes seem dominated by particular owners, even when considering the commercial offer, where multilisting hosts do not exceed a 30% of it.

Following the methodology proposed in the study of Marcussen and Zhang (2016) and the occupancy rate estimated by Vázquez *et al.* (2018), an estimation of the evolution of overnight stays in Madrid was done. The results suggest that Airbnb took part in over 2.5 million overnight stays in the city of Madrid in 2018, while annual growth turned up to be higher than 100% every year from 2010 to 2017.

Our interviews show that the increase of the professional profiles of users along with platforms growth, ensure new ways of income for particulars and new career profiles for high educated professionals in a more flexible labour market. Professionals value accommodation management through platforms as a high-growth career opportunity. On the other hand, individuals see it as an additional activity that allows them to make profit out of an idle asset, while keeping control over the property and dealing with maintenance tasks through outsourcing or self-work.

Our research focused on both hotels and hostels when examining the traditional offer. They represent 82% of beds offer in the city, while only half the regulated establishments. That means they are the largest offer and are more labour-intensive. As the studies of Zervas *et al.* (2015) and Fan *et al.* (2016) highlighted, Airbnb poses a risk for low-end hotel offer. Here, low-end category includes every category of hotels and hostels, except for 5 and 4-star hotels. Figure 2 shows the number of beds per category and growth of each category in the studied period. The contribution of 4-star hotels, is significantly higher than the rest, being responsible for up to 90% of the overall growth in the 2010-october 2018 period.

Low-end category offers 4 out of 10 beds in the city. While high-end category experimented a 17.44% growth, low-end offer grew 3.82% in the same period, 4.5 times less. At the same time, in the period 2010-2017, Madrid visitors increased by 19.53% and overnight stays up to 27.24%, a growth that it is somehow not reflected in the accommodation industry. Low-end category does not follow trend and both categories lost employees in the period, as it is shown in figure 3. The only exceptions are 4-star hotels and 1-star hostels that grow nearly 30%. The latter are similar to guesthouses and very low-level hostels (not covering the same customers as Airbnb offer) and only employ 6.4% of accommodation workforce. This trend in the low-end puts its workers at risk, more than 3000 jobs that represent 28% of the holiday accommodation workforce.

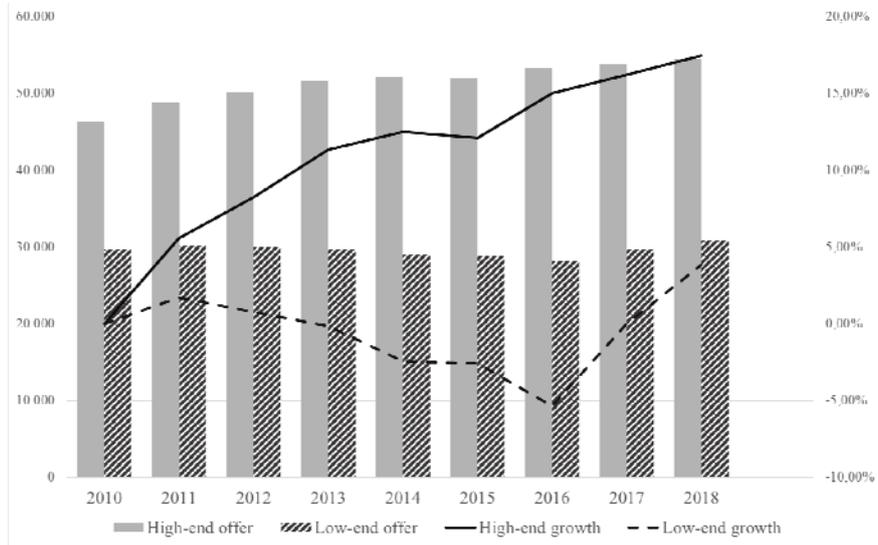


Fig. 2 Evolution of the number of beds per category in the city of Madrid. Source: author, using Madrid city council and INE data.

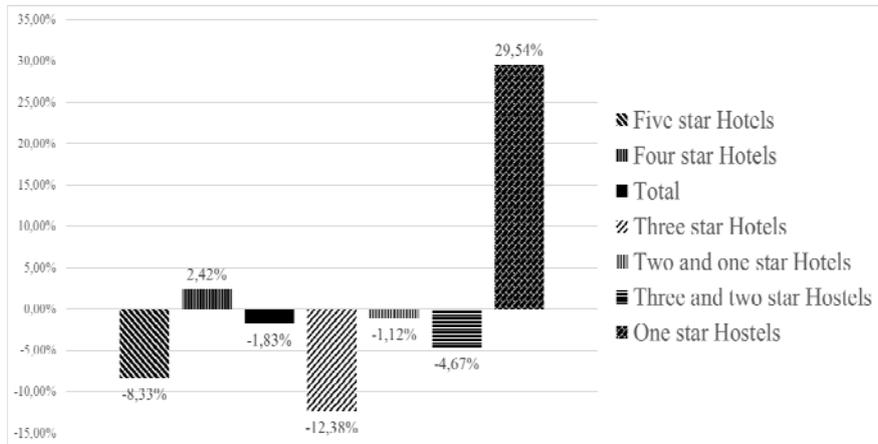


Fig. 3 Overall growth of employment in the period 2010-2017. Source: author, using data from Madrid city council and INE.

5 Conclusions

The demand for holiday accommodation through platforms in the city has had a call effect on investors and companies, who have entered the market, shifting towards a professionalized management of the offer. As shown, at least 40% Airbnb offer in Madrid does not match the definition of the SE, since the selected listings are not idle-capacity sharing (Ranjbari *et al.*, 2018). The high presence of commercial offer found in Madrid increase the effects of displacement, touristification and challenges the traditional sector (del Romero-Renau, 2018; Gil and Sequera, 2018). The large proportion on multilisting users suggest the participation of professional actors that adapt their traditional businesses to platforms, concentrating a large part of the offer (Martin, 2016; Frenken and Schor, 2017).

Platforms represent an alternative for both customers and providers on finding either a cheaper alternative or an extra income. These new profiles of actors in holiday accommodation do not meet the legal criteria and represent a challenge to regulation and stablished sectors, raising the question about labour conditions, self-work and false self-employment (Malhotra and Van Alstyne, 2014; De Groen and Maselli, 2016). However, the small size of the sample does not allow us to draw generalized conclusions, which should be explored via further research.

The low-end category does not show a significant growth as that of overnight stays, showing an absorption of demand by Airbnb that bears out the findings of Zervas *et al.* (2015) and Fan *et al.* (2016). The substitution of low-end category by holiday accommodation platforms could represent the loss of between 24 and 27% of the jobs on holiday accommodation. Moreover, the growth in the number of beds offered with less employees rises the pressure on current workers.

6 References

- Askitas, N. and Zimmermann, K. . (2015) 'The internet as a data source for advancement in social sciences', *International Journal of Manpower*, 1(36), pp. 2–12.
- Cook, C., Diamond, R., Hall, J., List, J. and Oyer, P. (2018) 'The Gender Earnings Gap in the Gig Economy: Evidence from over a Million Rideshare Drivers', *Working Paper No. 3637. Stanford Graduate School of Business*. doi: 10.3386/w24732.
- Coyle, D. (2016) *The Sharing Economy in the UK*. Available at: www.sharingeconomyuk.com/perch/resources/210116thesharingeconomyintheuktpdc.docx1111.docx-2.pdf. (Accessed: 12 December 2018).
- Drahokoupil, J. and Fabo, B. (2017) 'The platform economy and the disruption of the employment relationship', *ETUI Policy Brief*, (5), pp. 2–5. doi: 10.13140/RG.2.2.11554.63687.
- European Commission (2016) *A European agenda for the collaborative economy*.
- Fan, B., Ye, Q. and Law, R. (2016) 'Effect of sharing economy on tourism industry employment', *Annals of Tourism Research*, 57, pp. 264–267.

- Frenken, K. and Schor, J. (2017) 'Putting the sharing economy into perspective', *Environmental Innovation and Societal Transitions*. Elsevier B.V., 23, pp. 3–10. doi: 10.1016/j.eist.2017.01.003.
- Gil, J. (2018) '¿Cómo regular el hospedaje entre particulares?', in *Ana María de la Encarnación: LA regulación del alojamiento colaborativo. Viviendas de uso turístico y alquiler de corta estancia en el Derecho español*. Thompson-Reuters Aranzadi.
- Gil, J. and Sequera, J. (2018) 'Expansión de la ciudad turística y nuevas resistencias . El caso de Airbnb en Madrid', *Revista de Metodología de Ciencias Sociales*, (41), pp. 15–32.
- De Groen, W. P. and Maselli, I. (2016) *The Impact of the Collaborative Economy on the Labour Market*, CEPS Special Report. doi: 10.4135/9781452232560.n1.
- Inside Airbnb (2018) *Inside Airbnb: Madrid, insideairbnb.com*. Available at: <http://insideairbnb.com/index.html> (Accessed: 26 December 2018).
- Kässi, O. and Lehdonvirta, V. (2018) 'Online labour index: Measuring the online gig economy for policy and research', *Technological Forecasting and Social Change*, 137, pp. 241–248. doi: <https://doi.org/10.1016/j.techfore.2018.07.056>.
- Malhotra, A. and Van Alstyne, M. (2014) 'The Dark side of the Sharing Economy... and How to Lighen It', *Communications of the ACM*, 57(11).
- Marcussen, C. H. and Zhang, J. (2016) *Airbnb in Copenhagen and on Bornholm island*. Roskilde. Available at: http://www.crt.dk/media/69499/airbnb_in_copenhagen_and_bornholm_island.pdf.
- Martin, C. J. (2016) 'The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism?', *Ecological Economics*. Elsevier, 121, pp. 149–159. doi: 10.1016/J.ECOLECON.2015.11.027.
- Mendes, L. (2016) 'Tourism gentrification', *Tourism gentrification and city making*.
- Ranjbari, M., Morales-Alonso, G. and Carrasco-Gallego, R. (2018) 'Conceptualizing the sharing economy through presenting a comprehensive framework', *Sustainability (Switzerland)*, 10(7). doi: 10.3390/su10072336.
- Red2Red (2017) *Análisis del impacto de las Viviendas de Uso Turístico en el Distrito Centro*. Madrid.
- Rifkin, J. (2014) *Zero Marginal Cost Society. The Internet of Things, The Collaborative Commons, and the Eclipse of Capitalism*, Palgrave Macmillan. doi: 10.18559/ebr.2015.3.9.
- del Romero-Renau, L. (2018) 'Touristification, Sharing Economies and the New Geography of Urban Conflicts', *Urban Science*, 2(4), p. 104. doi: 10.3390/urbansci2040104.
- Stefano, V. De (2016) 'The Rise of the "Just-in-Time Workforce": On-Demand Work, Crowd Work and Labour Protection in the "Gig-Economy"', *Bocconi Legal Studies Research Paper No. 2682602*, pp. 2008–2015.
- Sundararajan, A. (2016) *The Sharing Economy: The End of Employment and the Rise of Crowd-based Capitalism*. MIT Press.
- Teodoro, R., Ozturk, P., Naaman, M., Mason, W. and Lindqvist, J. (2014) 'The motivations and experiences of the collaborative economy workforce', in *17th ACM conference on Computer supported cooperative work and social computing*, pp. 236–247.
- Vázquez, M., Hernando, L., Gutiérrez, G., Harrington, D. and Oskam, J. (2018) *Airbnb in Madrid*. Available at: http://www.colliers.com/-/media/files/emea/emea/research/hotels/airbnb_madrid_2018.pdf?la=en-gb.
- Verboven, H. and Vanherck, L. (2016) 'The sustainability paradox of the sharing economy', *uwf UmweltWirtschaftsForum*, 24(4), pp. 303–314. doi: 10.1007/s00550-016-0410-y.
- Zervas, G., Proserpio, D. and Byers, J. (2015) 'The Impact of the Sharing Economy on the Hotel Industry: Evidence from Airbnb's Entry Into the Texas Market', in *Proceedings of the Sixteenth ACM Conference on Economics and computation*, pp. 637–637.