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# The Usage of Collaborative Economy in Tourism: Overview and Trends for European Countries

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## Abstract

Collaborative economy (CE) is the marketplace where individuals trade goods and services. With disruptive innovations as a key factor, CE has reformulated strategies and methods of traditional global commerce and created new opportunities. Tourism and hospitality are the industries in which CE is used the most, especially at arranging accommodation and transportation. The purpose of this paper is to distinguish the state and trends of CE usage in tourism for European countries by comparing data obtained on Eurostat. In addition, results for accommodation and transport arrangement have been compared. CE usage in tourism has been compared to the frequency of internet usage of individuals in European countries to extract knowledge on factors which may influence on CE usage in European countries. In most countries, the percentage of CE usage in tourism is extensively increasing, which indicates that European travellers have recognised the benefits of CE practices such as more personalised offer and diversification. Results showed a correlation between CE usage in tourism frequency of internet usage and the level of digital skills for individuals from European. That could suggest that the biggest issue for CE development in European countries is poverty and infrastructure. Future research should focus on the empirical testing the correlation of the variables as well as extracting themes for CE usage in order to identify the factor of success in a specific country.

**Keywords:** collaborative economy, disruptive technologies, tourism, European countries

**JEL classification:** O32

## Introduction

The term „collaborative economy“ is often difficult to define because of its pervasion with terms “collaborative consumption,” „shared economy“ and „peer-to-peer economy“ (Dredge et al., 2015). However, few authors aspired to clarify the definition: Frenken et al. (2015) described the collaborative economy as the economy in which consumers provide other consumers temporary access to under-utilized assets (possibly for money). A year later, authors De Groen et al. (2016) expanded the definition by scrapping the temporary access and by introducing the concept of provision of services via auctions, which advanced the traditional concept of only counting the trade in under-utilized assets (Botsman et al., 2011). Nowadays, most authors agree that the collaborative economy can be defined as a marketplace

where, instead of big companies, consumers rely on each other to distribute goods and services (Celata et al., 2017).

Botsman (2015) established the main criteria to distinguish collaborative economy: (i) Purpose of the business model is to extract value from sharing and trading goods and services in terms of financial or non-financial benefits. (ii) The main principle of collaborative economy lays in substantial values such as transparency, authenticity, and respect between providers on the supply side and costumers on the demand side (iii) The CE is the concept that provides customers access instead of ownership should bring more efficient benefit to both sides. (iv) Decentralised networks and distributed markets should make a sense of "community, collective accountability and mutual benefit (Petropoulos, 2017).

There are two prevalent factors in collaborative economy practices: First, the non-ownership model with the ability of temporary access, sharing and borrowing consumer goods and services. Second, the extensive role of the internet. Information, communication technology and disruptive technology are the fundamental elements of CE processes, which provide us access to a world market from our homes, phones, and offices (Londoño et al., 2018).

### *Collaborative economy and ICT*

The importance of the role of information and communication technologies in a collaborative economy is twofold: The Internet represents the fundamental source of information, so the marketing and attracting customers to buy or use their product is facilitated (Hamari et al., 2016). Furthermore, accessible data about costumers and competition enable creating personalized marketing and sale programs. ICT platforms coordinate transactions and have become globally dominant intermediaries and process a significant share of the (Day, 1994).

Vast amounts of benefits are produced by the collaborative economy: It changes costumer behaviour, simplifies trade and transaction processes, administer employment, and encourages micro-entrepreneurship and disruptive innovation (Katsoni, 2019). Nonetheless, if it is not well regulated, CE is creating uncertainties. The collaborative economy models raise questions from safety, social inequality, employment law perspective, and from the rights and obligations perspective (Stokes et al., 2014). Therefore, regulations should be addressed in both international and local level primarily regarding employment, taxation, and data and privacy regulation. For instance, European Union legal systems have provided a classification for employment (self-employment and salaried employment) for collaborative employment, anyhow the definition of criteria vary for every EU member country based on the development of the given country (Nerinckx, 2016). Likewise, General Data protection Regulation for all individual citizens of the EU seeks to address the issue of data and privacy regulation (Gössling et al., 2019). Still, more regulations and laws on the global and local level should be developed in order to regulate, moderate, and organize collaborative economy practices to achieve even better results and development.

The authors (Petropoulos, 2017; Vaughan et al., 2016) established four sectors that surfaced with the most powerful presence of collaborative economy models: (i) Accommodation: travellers can rent out properties or parts of properties through platforms. House swapping is a form of collaborative economy exchange as well. Examples are Airbnb, HomeAway, FlipKey, HomeStay, HomeSuite, Roomorama, Wimdu, and Stop Sleep Go (Frenken et al., 2017). (ii) Transportation: two categories of collaborative usage can be distinguished in terms of transportation: First platform concentrates on hiring vehicles such as cars, motorbikes, and bicycles (similar as rent-

a-car). Examples are ZipCar, EasyCar, car2go, Autolib, and Velib. The second group hires labor and human capital alongside vehicles. Examples are BlaBla Car, Uber, Bolt, Lyft. (iii) Online labor market: practice micro-tasking by matching human capital and employers. Examples: Amazon Mechanical Tusk, Adtriboo, TaskRabbit, Oltret- ata, Freelancer, Crowdsource, Crowdfunder, and Clickworker. (iv) Finance: practice matching entrepreneurial projects with funders. Examples are Kickstarter and IndieGoGo.

### *Collaborative economy in the tourism industry*

The sector in which collaborative economy models and platforms have seen the most significant growth is tourism and hospitality (González et al., 2019). The collaborative economy is becoming a more and more relevant source of new products and activities for the hospitality industry, especially for tourist who wish to avoid a uniform, mass-generated traveling experience and demand a more authentic and unique experience (Decrop et al., 2018).

The rise of the collaborative economy in tourism appeared as a response to traditional tourism and hospitality system problems. For instance, dead capital and redundancy, which occur in the existing tourism system, can be monetized (Gyimóthy et al., 2017). Travelers can use empty apartments and assets, and locals can work as travel guides. Locals who were previously excluded from the tourism economy now have the entrepreneurial fuel and have the opportunity to generate economic benefits (Koopman et al., 2014). Moreover, traveller satisfaction can be enhanced by collaborative economy usage by paying lower transactional costs and information flow (Clemons et al., 1993). Bureaucratic quality control systems can overregulate products by insurance, accreditation, and costs can be passed onto consumers (Pitanatri, 2017). Additionally, the personalized approach as a pivotal feature help to preserve the authenticity of experience and increase traveller's satisfaction (Lu et al., 2015).

Within the tourism and hospitality industry, sharing or peer-to-peer accommodation is the form of collaborative economy used by far the most (Eisner, 2007). In sharing accommodation, guest communicate directly to hosts (Chen et al., 2017). Platforms like Airbnb, HomeAway, and others have become continuously popular to the point their names are recognised by guest as much as intermediaries such as Booking com and Expedia (Bulchand-Gidumal et al., 2019).

They expanded their market share, amount of transactions, and became the new internationally prevailing distribution channel. Airbnb today operates in more than 81 000 cities and 191 countries of the world and is now 10 billion dollars' worth company (Airbnb, 2019) who continuously meet and surpass the market desires and constantly improving. In June 2019. Airbnb expanded its rental options and included the most luxurious private homes to their offer in order to provide even more personalised and distinguished offer (The Verge, 2019).

Although there are some concerns to the rapid development of collaborative economy in tourism and hospitality sector (such as previously indicated taxations and regulations) collaborative economy enabled to surpass the strategies of the traditional distribution channels, and reformulate structure of tourism and hospitality industry (Marshall, 2015; Miller, 2015). Personalized offer and diversification not only increased travellers experience, but it also pressured hotels and intermediaries to revise their prices, schemes and shifted them to more innovative and digital-oriented practices.

The purpose of this paper is to clarify the several aspects of CE usage in tourism for European countries. In this paper, we will analyse the current state of CE usage in

tourism in European countries, and we try to examine if there is a positive trend in CE usage in tourism in European countries. Alongside, compared values for CE usage to arrange accommodation and transport to determine whereas correlation within output data and do individuals use CE in arranging accommodation and transport the same way. Finally, aimed to establish is there any connection between CE usage and frequency of internet usage in European countries in order to explore the reasons for percentages of CE usage per country.

The paper is organized as follows. The first part presented an overview of Collaborative Economy, Collaborative Economy, and ICT and Collaborative Economy in tourism. In the second part, data and methodology have been disclosed and interpreted. Results are presented in the third part, followed by the conclusion where limitations and future directions are outlined.

## Methodology

Data on collaborative economy usage in tourism were obtained from the European Statistics Database-Eurostat for the years 2017. and in 2018. Data were collected for 29 European countries (25 EU countries, Iceland, Montenegro, North Macedonia, and Serbia). Other European countries were excluded from the analysis because of the missing data for the selected variables or for the selected years.

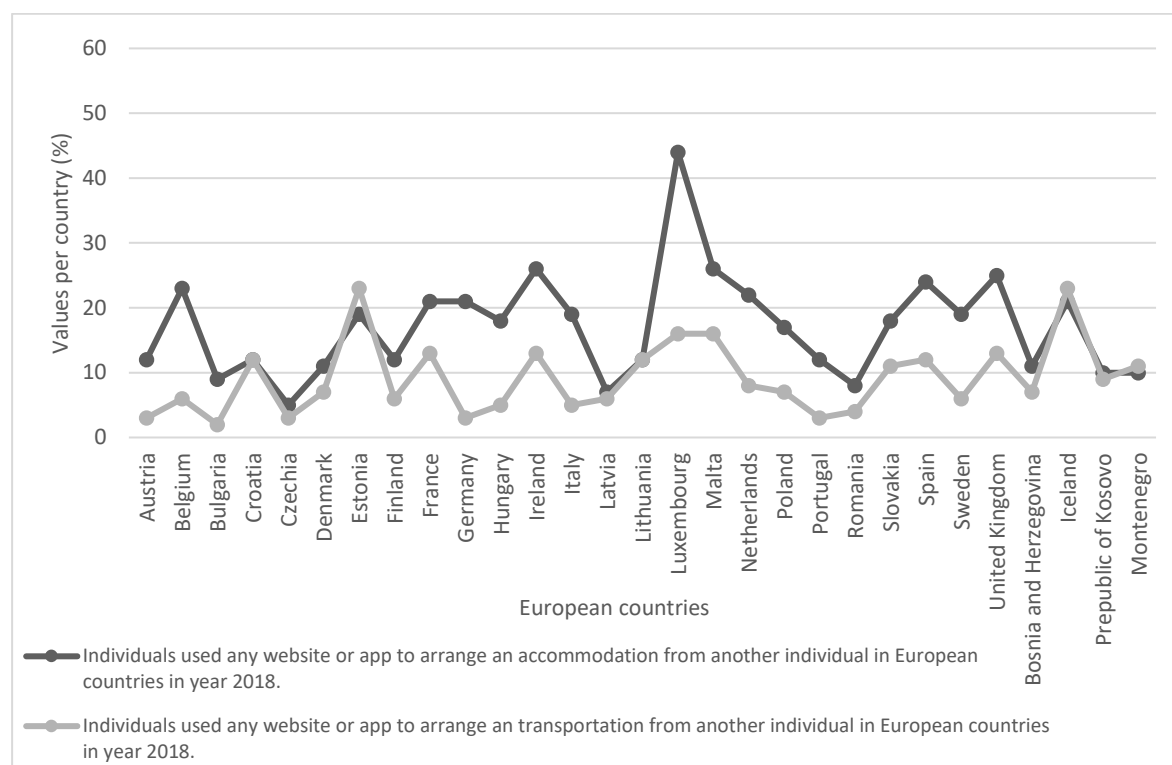
Figure 1. presents the percentage of CE usage by individuals in European countries for arranging accommodation and transport in the year 2018.

The figure shows that individuals use collaborative economy for accommodation arrangements more than for transport arrangements in all 29 selected European countries. The distribution of collaborative usage is similar for accommodation and transportation arrangements: European countries which use the collaborative economy the most and the least are the same countries both for accommodation and transportation arrangement.

The highest percentage for accommodation arrangement is 44% in Luxembourg and for transportation arrangement 23% in both Estonia and Iceland. The lowest percentage for CE usage for accommodation arrangement by European individuals is 5% in Czechia for accommodation arrangement and 2% in Bulgaria for transportation arrangement.

Figure 1

The Usage of Collaborative Economy in European Countries for the Year 2018



Source: Authors' work based on data found on Eurostat (2019a)

In this paper, we investigate state and trends for collaborative economy usage in tourism for European countries. We aim to establish are there positive changes in collaborative economy usage within a time period. In order to disclose, we compare changes for collaborative economy usage for accommodation and transport arrangement within a year (2017. to 2018.). Hence, we analyse the origin of CE arrangement usage by reviewing arrangements using dedicated websites and apps and other websites and apps in order to explore the possible reason for accomplishing higher results within the industry. Finally, a comparison between the frequency of Internet usage and usage of CE is presented in order to attempt to determine if there is a positive correlation between these two outlooks.

## Results

Table 1 display percentages of collaborative economy usage for accommodation and transport arrangement in European countries in the years 2017. and in 2018. Column 1 presents values for individuals accommodation arrangement in the year 2017., and Column 2 presents values for individuals accommodation arrangement in the year 2018, Column 3 shows a change of values for the years 2017. and 2018. of individuals accommodation arrangement. Column 4 presents individuals transport arrangement for the year 2017, Column 5 presents individuals transport arrangement in the year 2018., and finally, column 6 displays a change of values for the years 2017. and in 2018. Individuals transportation arrangement.



Table 1

The Usage of CE for Accommodation and Transportation of Individuals in European Countries

| GEO/TIME        | Individual used any website or app to arrange an accommodation from another individual (2017) (in %) | Individual used any website or app to arrange an accommodation from another individual (2018) (in %) | change 2017 to 2018 | Individuals used any website or app to arrange a transport service from another individual (2017) (in %) | Individuals used any website or app to arrange a transport service from another individual (2018) (in %) | change 2017 to 2018 |
|-----------------|--|--|---------------------|--|--|---------------------|
| Austria         | 8  | 12   | 50%                 | 2  | 3  | 50%                 |
| Belgium         | 19   | 23   | 21%                 | 6  | 6  | 0%                  |
| Bulgaria        | 8  | 9  | 13%                 | 3  | 2  | -33%                |
| Croatia         | 7  | 12   | 71%                 | 6  | 12   | 100%                |
| Czechia         | 5  | 5  | 0%                  | 2  | 3  | 50%                 |
| Denmark         | 10   | 11   | 10%                 | 7  | 7  | 0%                  |
| Estonia         | 15   | 19   | 27%                 | 20   | 23   | 15%                 |
| Finland         | 9  | 12   | 33%                 | 6  | 6  | 0%                  |
| France          | 16   | 21   | 31%                 | 12   | 13   | 8%                  |
| Germany         | 19   | 21   | 11%                 | 3  | 3  | 0%                  |
| Hungary         | 13   | 18   | 38%                 | 3  | 5  | 67%                 |
| Ireland         | 21   | 26   | 24%                 | 17   | 13   | -24%                |
| Italy           | 17   | 19   | 12%                 | 4  | 5  | 25%                 |
| Latvia          | 9  | 7  | -22%                | 7  | 6  | -14%                |
| Lithuania       | 9  | 12   | 33%                 | 7  | 12   | 71%                 |
| Luxembourg      | 22   | 44   | 100%                | 7  | 16   | 129%                |
| Malta           | 20   | 26   | 30%                 | 12   | 16   | 33%                 |
| Netherlands     | 20   | 22   | 10%                 | 5  | 8  | 60%                 |
| Poland          | 15   | 17   | 13%                 | 6  | 7  | 17%                 |
| Portugal        | 6  | 12   | 100%                | 2  | 3  | 50%                 |
| Romania         | 6  | 8  | 33%                 | 2  | 4  | 100%                |
| Slovakia        | 16   | 18   | 13%                 | 8  | 11   | 38%                 |
| Spain           | 18   | 24   | 33%                 | 8  | 12   | 50%                 |
| Sweden          | 16   | 19   | 19%                 | 7  | 6  | -14%                |
| United Kingdom  | 34   | 25   | -26%                | 27   | 13   | -52%                |
| Iceland         | 17   | 21   | 24%                 | 17   | 23   | 35%                 |
| Montenegro      | 15   | 10   | -33%                | 4  | 11   | 175%                |
| North Macedonia | 8  | 10   | 25%                 | 3  | 6  | 100%                |
| Serbia          | 12   | 12   | 0%                  | 6  | 7  | 17%                 |

Source: Authors' work based on data found on Eurostat (2019a)

Luxembourg (44%), Ireland and Malta (26%), and UK (25%) are European countries which individuals use collaborative economy the most are for arranging accommodation. Luxembourg has by far the highest percentage of collaborative economy users for accommodation arrangement and increase of usage by 100% from the year 2017. to 2018. The reason for that could be that the Luxembourg government created a project named Luxinnovation where in 2018. they actively implemented disruptive innovation in the economy, within which they encourage collaborative economy (Luxinnovation, 2017). Furthermore, Luxembourg is ranked as the first country with individuals who have above basic digital skills (55%) in European countries, second-ranked country by Internet usage (98%), and the last country in Europe with individuals who have low overall digital skills (12%) (Eurostat, 2018).

Although the UK is within the top 5 European countries for collaborative economy usage, it recorded the massive decrease of users from 2017. to 2018. year. A possible explanation for this could be that many enterprises which started as a collaborative economy, changed their business model, or they have not achieved profit and they

shut down their businesses. Moreover, there has been recorded a few assaults in Airbnb properties, so the level of trust is diminished (Independent, 2017).

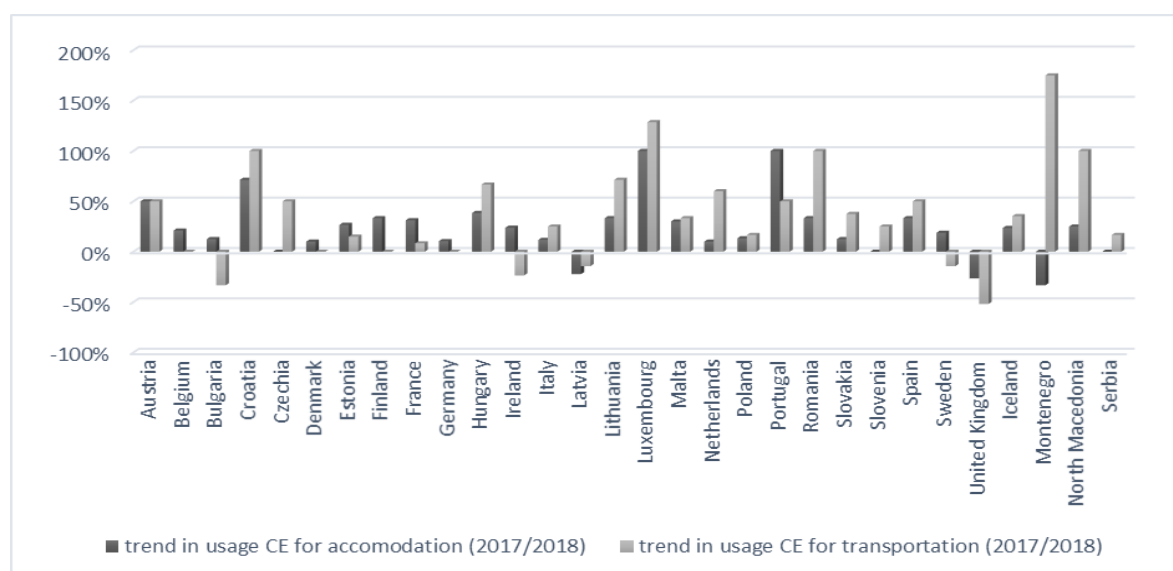
Countries which use collaborative economy for arranging accommodation the least are Czechia (5%), Latvia (7%) and Romania (8%). Czechia is the country where individuals use the internet the least in all European countries, and Romania has the most individuals with low digital skills among European countries (35%) (Eurostat, 2018). Therefore, results suggest that digital skills and internet usage correlate to collaborative economy usage.

European countries where individuals use collaborative economy for transport arrangements the most are Iceland (23%), Estonia (23%), Luxembourg (16%), and Malta (16%). Although the numbers are lower for transportation arrangements, the countries that use the collaborative economy are the same as for accommodation arrangements. All countries where individuals use the collaborative economy the most are ranked in top five by overall Internet usage and above basic digital skills so the results confirm that Internet usage and digital skills are correlated to collaborative economy usage.

For transport arrangement, individuals from Bulgaria (2%), Czechia, Austria and Portugal (3%) use the collaborative economy the least. All countries except Austria are ranked in the top five for low digital skills or internet usage. As for Austria, there are government and Uber drivers' problems recorded, so the Uber and similar companies are banned from Austria, which could explain the low number of users. Again, the same countries are recorded low for collaborative economy usage both for transportation and accommodation usage.

Figure 2

Trends for European Individuals CE Usage in Arranging Accommodations and Transport



Source: Authors' work based on data found on Eurostat (2019a)

Results presented in Figure 2 disclose a positive trend for collaborative economy usage in tourism in almost all observed European countries. About 90% of European countries show a positive trend in CE usage for arranging accommodation, 83% for arranging transport, and 85% in tourism overall. Only three countries have a negative trend for accommodation arrangement (UK, Latvia, and Montenegro), and five European countries have negative trend for transportation arrangement (UK, Latvia,

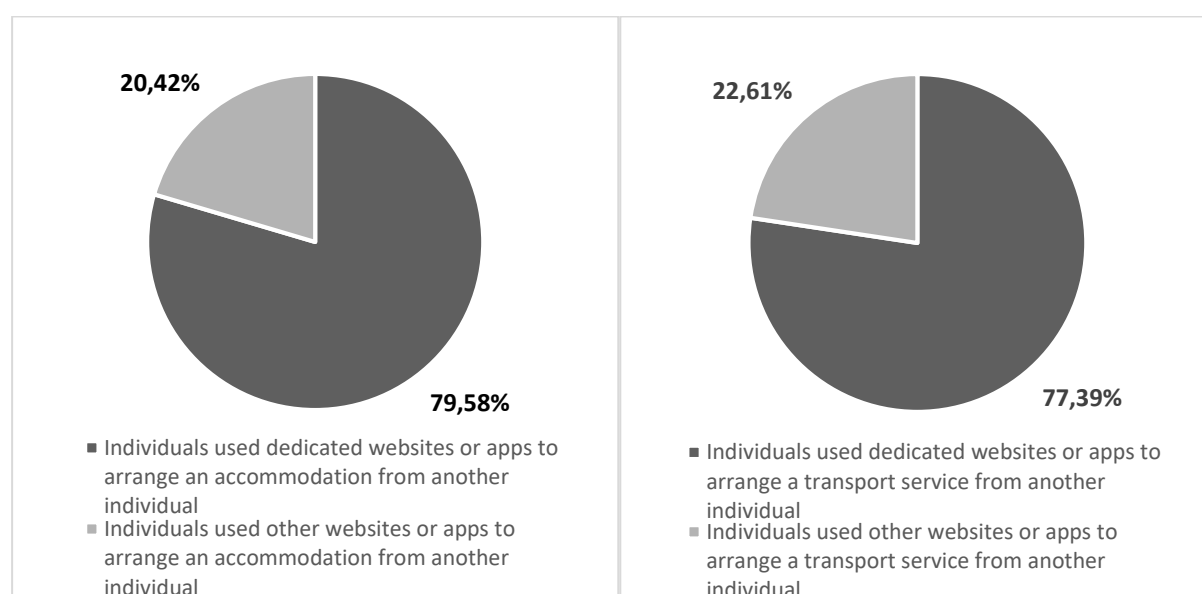


Sweden, Bulgaria and Ireland). Two countries which have a negative trend in CE usage intercept for accommodation arrangement and transport arrangement (UK and Latvia). Therefore, we can conclude that given countries have a negative trend in CE usage in the whole tourism industry.

There are 15 European countries which use CE for accommodation arrangements and 4 for transportation arrangements which have more than 15% of individuals who uses collaborative economy usage in 2018. The findings indicate that European individuals use CE for arranging accommodations more than for arranging transport. However, four countries displayed growth of 50% or more for accommodation arrangement, and eleven for transport arrangement so we can conclude that CE for transfer arrangement has more extensive growth within a year.

Figure 3

Individuals Used Dedicated Websites and Apps to Other Websites or Apps to Arrange Accommodation or Transport in European Countries ratio for the Year 2018

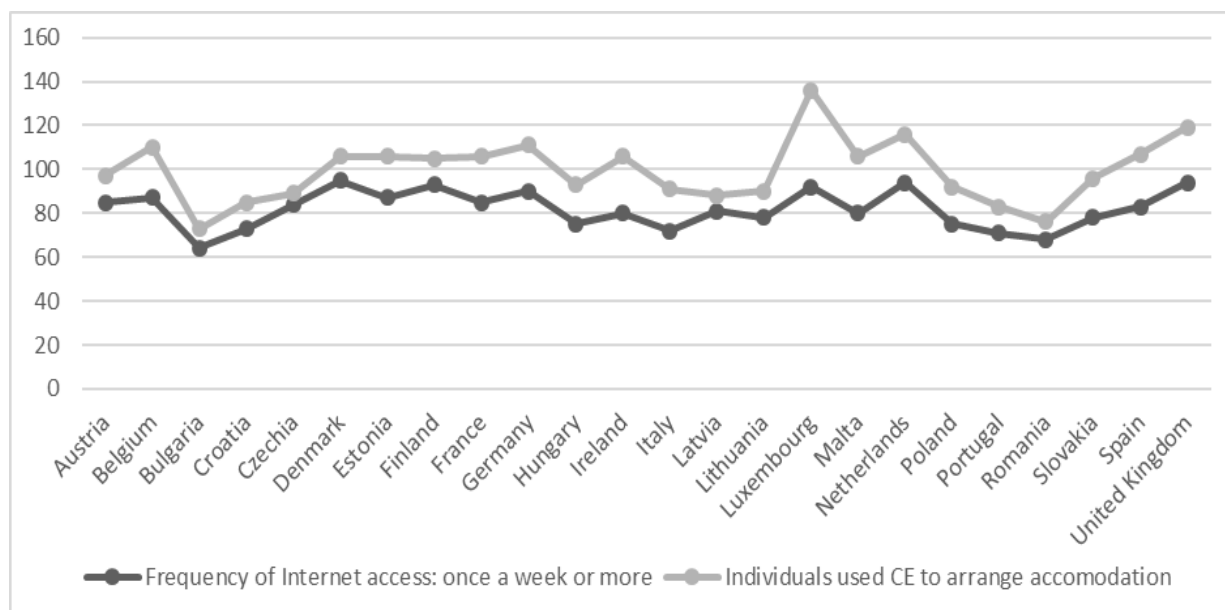


Source: Authors' work based on data found on Eurostat (2019b)

Figure 3 shows which tools individuals use to arrange accommodation and transport in European countries. The first chart presents the ratio of individuals who arranged their accommodation on dedicated websites and other websites or apps. The second chart presents the ratio of individuals which arranged their transportation on dedicated websites, and other websites or apps. Charts results identify that both for accommodation and for transport, individuals use mostly the dedicated websites and apps (more than 75%). Values also show that ratios are nearly identical for both types of arrangements. Transport arrangement has a slightly higher number for other websites and apps arrangements (nearly 2%).

Figure 4

Frequency of Internet Access and Percentage of Individuals Used CE to Arrange Accommodation in European Countries for the Year 2018



Source: Authors' work based on data found on Eurostat (2019b)

Figure 4 present percentages for the frequency of Internet access and a number of individuals used CE to arrange accommodation in European countries in the year 2018. The figure shows the correlation between the values of the majority of European countries. Countries which individuals frequently use the internet, obtain high percentage collaborative economy usage and vice versa. The same rule occurs for European countries where individuals use the internet least frequent, they have a low percentage of CE usage in tourism.

## Conclusion

The purpose of this paper was to explore the state and to ascertain trends for collaborative economy usage in tourism for European countries. Furthermore, the research paper tried to determine patterns behind CE usage for accommodation and transport arrangement compare them and extract new knowledge on the topic.

All 29 observed European countries used a collaborative economy in tourism. More individuals use CE for arranging accommodations than transport. Investigation showed that the distribution of CE usage in accommodation and transport arrangement corresponds with a high percentage of CE usage in the same countries, and low in the same countries. Moreover, results indicate that countries with a higher percentage of collaborative economy usage are European countries who have individuals with a higher level of digital skills, and they use the internet more frequent. Consequently, we can conclude that countries that concentrate on innovation and digitalization usually use CE more often.

On the other hand, countries that use collaborative economy the least for both transportation and accommodation are countries where individuals have low overall digital skills and have the lowest frequency of internet usage. The outcome indicates that the main limitation of CE usage is the lack of internet infrastructure and education. However, there are some outliers such as the UK where individuals have a high level of digital skills, and they access internet frequency, and yet, falling trend of CE usage.

Enterprise structure changes and negative public opinion due to incidents within accommodations could result with a decreasing number. That can lead us to identify the two more important factors in CE usage in tourism: trust and business structures.

Most individuals use dedicated websites applications for all arrangements opposed to other websites and apps. No significant difference between accommodation arrangement and transportation arrangement was shown. Nearly 80% of all CE users use dedicated websites which confirm a high level of ICT development and quality of apps and websites within the CE, which represent comparative advantage thru other intermediaries and hotels.

CE usage benefits in the tourism industry in terms of a more personalised experience and diversification are recognized in majority of European countries which record extensive growth in CE usage (nearly 85% for the whole industry). CE became a serious distribution channel, and its redefined strategy of the tourism industry. Its co-dependency on ICT and disruptive innovation pushes the whole industry forward and toughens the competition. Besides their own offer, CE force hotels and transport companies to redefine and reinforce their strategies.

This investigation is not without limitations. For better understanding of CE trends, more years should be taken into account. Furthermore, more countries could be involved in research, including diverse markets included such as USA or Asia. Although the connections between CE usage and digital skills and frequency of internet usage have been recognised, they should be statistically confirmed.

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