



UNIVERSITAT JAUME I

The Collaborative Economy and new business models

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DEGREE IN BUSINESS ADMINISTRATION

AE1049 – FINAL GRADE WORK

COURSE 2020/2021

Abstract

The collaborative economy has meant a change in the economic, social, labour and legal paradigm, where for the first time consumers are the protagonists in the exchange of goods and services. Factors such as the Internet, new technologies and the financial crisis have led to the emergence of a global movement based on cooperative and collaborative initiatives.

At the same time, the rapid development of this phenomenon has posed a major challenge for both institutions and traditional economic operators and regulators. A new economic and social reality that has called into question the current regulations, forcing these organisations to develop new, specific, fair and efficient regulations, aimed at optimising the numerous advantages for the economy and society.

Sectors such as housing, transport and finance are some of the sectors that have most experienced the advance of the collaborative economy, where in just a few years it has driven new forms of production and consumption of goods and services.

This study will analyse the different economic, social and legal factors posed by the new business models based on the collaborative economy raise, showing as an illustrative example the case of the transport sector in Spain.

Key Words

Sharing economy, collaborative platforms, business model, social innovation, Internet, economic crisis, regulation, new technologies, transport sector, VTC sector, taxi sector, unfair competition, proletarianization of the self-employed.

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1. INTRODUCTION

In this study we will try to address the concept of the collaborative economy, which has undoubtedly made a strong impact on traditional economic standards. A new business model, also known as "Sharing economy" or "peer to peer economy", which has made it possible to place consumers as the protagonists of the exchange of goods and services, generating sustainable, efficient and inclusive economic development, allowing a social interaction never seen before.

Despite lacking a solid theoretical framework given the number of definitions that the phenomenon has acquired (Hinojo & Sobrino, 2017) over the years, and in order to contribute to future research, this paper seeks to explain what the concept of the collaborative economy truly represents, its origins and its evolution to the present day, being integrated by societies in countries around the world and perpetrating an economic-social change.

Next, we will review the current European regulatory framework. We will look at the main uncertainties surrounding collaborative economy markets, the main imminent challenges for legislators and what are the recommendations from the European Commission in order to adapt regulation to the new paradigm.

Next, we will study the advantages and disadvantages of this social innovation and analyse the main factors of its success. Later, to build on all of the above, we will focus on a practical case. Specifically, we will analyse the passenger transport sector in Spain. We will look at its economic and social impact, the most relevant collaborative platforms and the controversy surrounding the current regulation, where VTC licences have been the focus of criticism from the national press and the traditional sectors, especially the taxi sector.

Finally, after carrying out the research, we will show the main conclusions drawn, as well as the major and the major challenges and uncertainties it presents in terms of economics and regulation, both at a general level and in the transport sector in particular.

1.1. Objectives

The general objective of this work will focus on building the conceptual foundations on which to explain the phenomenon of the collaborative economy and to analyse its economic and social impact on one of the most conflictive sectors in our country, the

transport sector. With the aim of going into more detail and depth in our study, other more specific objectives arise from this general objective, namely:

- To raise awareness of the concept of the collaborative economy, the actors involved and their relationships, the types that exist and the elements that have driven this phenomenon worldwide.
- Identify the existing regulations regarding this business model, which is shrouded in a controversy characterised by uncertainty and legality, where in many cases it generates inequality of opportunities between companies in the sector.
- Determine the advantages and disadvantages of this phenomenon, in order to understand how it is influencing societies and changing traditional patterns.
- To analyse the current situation of the transport sector, to know which are the most relevant companies that implement this business model and how they influence this sector, to analyse the characteristics of the taxi sector and to reveal the main causes, social and legal, with the VTC sector.

1.2. Methodology

For the development of this research work we will use a deductive approach, where we will rely on the review of the current literature on the phenomenon of collaborative economy or collaborative consumption.

In order to reflect the topicality of the subject in question, from a transparent and totally objective perspective, an in-depth review of academic and research works, books by authors specialising in the subject, economic reports, press articles, specialised websites and other sources of information will be carried out. Furthermore, after carrying out the research, we will try to elucidate the most relevant aspects of the work for a better understanding.

1.3. Structure

The paper will be structured in three main parts: the conceptual framework, the regulatory framework and the analysis of an illustrative case, namely the case of the transport sector in Spain.

First of all, a detailed description will be given of the concept of the collaborative economy, its origins up to the present day and those distinctive aspects that define it.

We will also look at the main actors involved, their roles and the relationships between them. To conclude this part, the types of collaborative economy currently present in the economy, their main characteristics and examples will be described.

Secondly, we will analyse everything related to the regulatory framework of the subject in question. We will look at the regulatory bases governing the collaborative economy, how governments are operating in this regard, and we will highlight the limitations and legal needs posed by these business models.

Prior to the third section of this work, and once the concepts and existing regulation of the collaborative economy have been defined, the advantages and disadvantages of this new economic model will be determined, as well as the elements that have driven it at a global level.

Thirdly, we will analyse the transport sector in Spain. We will look at the main collaborative economy platforms within the sector, and we will study their characteristics, success factors and the controversy surrounding them. At the same time, we will try to expose the characteristics of the taxi sector in order to have a general perspective to better understand the recent conflict of this sector with the VTC sector. We will analyse the regulatory limitations and failures that make the transport sector in Spain a very restrictive and inefficient sector.

To conclude this research work, the conclusions and recommendations of this study will be presented.

2. CONCEPTUAL FRAMEWORK

2.1. Concept of collaborative economy

The term was first coined by Ray Algar in the article "Collaborative Consumption" published in the Leisure Report newsletter in April 2007 (Algar, 2007), but it was not popularised until a few years later, in 2010, when Botsman and Rogers published the book "What's mine is yours".

Currently, at a global level, this concept can adopt different terms such as "sharing economy", "collaborative consumption", "collaborative economy", "peer to peer", "on-demand economy", among others. In Spain, the term "collaborative economy" or "Sharing Economy" is the most commonly used.

There is a lack of academic work and research that provides a generic and commonly accepted definition (NCCM, 2014), which is why the main aspects that should be taken

into account when defining this model, as well as the causal elements of its emergence and the various repercussions it generates in society, are always under debate.

Algar (2007) defines this phenomenon as a growing global social-economic movement where, supported by new technologies and the Internet, we observe how consumers organise and collaborate in groups to exchange goods and services, to share experiences and become co-owners.

The National Commission for Markets and Competition (NCMC) defines the collaborative economy as the "exchange between individuals of goods and services that remained idle or underutilised in exchange for compensation agreed between the parties" (NCMC, 2014, p.2). In many cases, these exchanges were already taking place in their traditional form in society, but due to social factors and technological advances, they have given rise to this new business model as a form of disruptive innovation.

The European Economic and Social Committee's own-initiative opinion on collaborative consumption refers to this new phenomenon as a solution or escape route for those affected by the economic and financial crisis. The emergence of resilient economies shows the dissatisfaction that has grown over the years with the current economic system, which has been unable to meet society's increasingly demanding and changing needs. A new economic model full of opportunities for sustainable development, from an economic, social and environmental point of view, which is in line with the EU's wishes and strategies for the future (Hernández, 2014).

Being aware of the diversity of definitions, for the purposes of this paper we will base ourselves on the definition provided by Botsman and Rogers (2010), the authors who pioneered the popularisation of this phenomenon, and whose definition is still the most widely accepted. Thus, these authors conclude that collaborative consumption involves "the reinvention of traditional market behaviours such as lending, renting, sharing, exchanging and gifting, through new technologies and communities on a scale that could not be achieved before the Internet" (Botsman, 2015).

A new economic model that explains its success by taking advantage of new technologies and the Internet, where supply and demand meet without the need for the service provider to be a company, placing consumers at the centre of the exchange of goods and services. A new cultural and economic wave that will not only reinvent what we consume but how we consume (Botsman, 2010).

However, as mentioned above, we lack a solid and generalised definition (NCMC, 2014) that allows us to differentiate and identify those companies that are implementing a collaborative economy model from those that are not.

At the same time, we observe that in many cases this concept is not applied correctly, as it is not enough to have only a digital platform that connects supply and demand, but it also requires a space where users interact, collaborate and share.

In order to better understand this difference in concepts, we will give a clear example. Amazon is a pioneer and leader in the e-commerce sector, offering an excellent platform where a large number of companies and consumers meet and where an efficient exchange of goods and services takes place, however, users neither share nor collaborate with each other through it.

Another example is the company BlaBlaCar. This company has a platform that connects people who want to travel to the same place at the same time, so that, through a shared vehicle, they can share expenses while at the same time collaborating with the environment by emitting less greenhouse gases. This would be an example of a collaborative platform that implements a collaborative consumption model, matching supply with demand and promoting the exchange of information, where people collaborate and share.

This is something that Botsman realised in her article for Fast Company (2015), where she explained the need to establish clear criteria to detect those companies that were within the framework of a collaborative economy. In particular, the writer talks about the following five ingredients (Botsman, 2015):

1. The main pillar of the company's activity revolves around the use of underutilised or idle assets, the objective being the creation of value rather than monetary profit.
2. A clear mission, based on values driven by transparency, humanity and authenticity.
3. Establish a relationship with suppliers (providers) based on respect, empowerment and mutual value creation, committing to their economic and social development.
4. Customers (demanders) will be able to benefit from access to goods and services in a more efficient way.

5. The company's activity should be built on decentralised networks and, through the communities that are created on the platforms, generate a sense of belonging, collective responsibility and mutual benefit.

2.2. Evolution

The collaborative economy is characterised by its rapid evolution over the years, thanks to the emergence of the Internet era and the development of Information and Communication Technologies (ICT). This economic model was first mentioned in 2007, when Ray Algar used Wikipedia as an example to explain the great potential of this phenomenon. At that time, the company was already 15 times bigger than the British encyclopaedia (García, 2019).

Later, after the publication of "What's mine is yours" by the authors Botsman and Rogers in 2010, the phenomenon would definitely become popular. Only a year later, Time magazine considered the collaborative economy phenomenon as one of the ten ideas that would change the world (Cañigueral, 2011).

According to a PwC study by Vaughan and Daverio (2016), Vaughan and Daverio estimate that the collaborative economy generated around €4 billion and a total of €28 billion in transactions in 2015 in Europe. Of the above total figures, 72% of the revenue and 80% of the value of the transactions carried out corresponds to the transport sector and the accommodation sector.

Exceeding expectations from the previous study conducted in 2014, PwC estimates that since 2013 the growth in revenue and value of transactions in the collaborative economy in Europe has doubled.

The consultancy already foresaw a thriving scenario for emerging collaborative platforms within Europe, estimating that by 2025 revenues would reach €335 billion globally (Llorente & Cuenca, 2016). The sharing economy phenomenon continued to grow globally and more and more people were carrying out business activities related to the sharing economy.

In 2017, the economic impact on global GDP was around 1.5% (García, 2019), estimating growth of around 2.9% by 2025, in line with PwC forecasts (Llorente & Cuenca, 2016).

As we can see, the collaborative economy is an economic model that has gradually become a serious economic alternative in the main global economic sectors (Sastre-

Centeno & Inglada-Galiana, 2018). All this under the watchful eye of traditional operators who observe how society is proposing a change towards more environmentally sustainable initiatives and where the "culture of community" is promoted (Diaz-Leante, 2019), placing people as protagonists.

2.3. Identifying features

Taking up Botsman's (2015) concern, there is currently a debate about the differences between those organisations that are correctly implementing a participatory system based on the collaborative economy and those that, through a platform that connects people with others, monetise and charge commissions for this service. The latter, whose system is called "collaborative washing" (Rosen, 2016), behave differently in terms of their purpose in participating in a collaborative economy system.

This term is used for companies that try to illegitimately profit from these new trends, promoting collaboration and participation as a corporate feature or applicable to a product or service, without actually producing any collaboration (Rosen, 2016), often compared to the term "greenwashing"¹ or "bluewashing"² (Sarvahitey, 2018). With a rather intrusive or stowaway behaviour, these organisations appear to fulfil the 5 ingredients (Botsman, 2015) of the collaborative economy model, but what they are really about is a marketing strategy.

For all practical purposes, these organisations are implementing a model that is the complete opposite of a collaborative economy. It is a model based on centralised control and decision-making, rather than on decentralised networks that generate a sense of ownership, collective responsibility, especially for the environment, and mutual benefit.

Therefore, in addition to the main ingredients necessary to place an organisation within the framework of a collaborative economy, we also find characteristic elements that define it. As Montero Pascual (2017) explains, we can distinguish the following set of identifying elements of collaborative economies:

- **New information technologies:** the use of new Information and Communication Technologies (ICT), especially the Internet, has undoubtedly become the main identifying element of these models.

¹ Greenwashing, also known as "greenwashing", is based on misleadingly promoting products or corporate values based on concern and care for the environment.

² Bluewashing is the practice of engaging in collaborations and partnerships with UN agencies to give the false appearance of commitment to the principles of the UN Global Compact.

Through the unification and integration of computing and telecommunications, today's society can communicate more quickly and efficiently. In addition, this has enabled companies to reduce the time and costs involved in processing information, allowing them to better reconcile with their environment.

- **Bilateral or multilateral markets:** a concept that emerged in 2003 from the economists Rochet and Tirole (2003). These markets are based on the presence of two or more groups of people who interact with each other through an intermediary platform that allows them to meet.

The main difference between these markets and traditional markets lies in the values and behaviours that each of them implicate. While the latter seek to maximise the benefits for each group individually, bilateral or multilateral markets are governed by values based on the common benefit and exchange of goods or services.

- **Collaborative or collaborative online platforms:** these online platforms enable a virtual space, which allows interaction between two or more groups of people, matching supply and demand.

Despite not being an indispensable aspect for the existence and evolution of the collaborative economy, according to Montero Pascual (2017), the emergence of ICT has enabled its development at an extraordinary speed, while reducing transaction costs. All of this has made online collaborative platforms the ideal formula for reaching the largest possible number of users.

- **Real-time contracting:** the development of ICTs has enabled faster, real-time interaction between supply and demand, giving rise to so-called "on demand" services, which aim to satisfy a consumer demand at the required moment and for a short period of time.
- **Peer to peer (P2P) business model:** the reduction of transaction costs thanks to these platforms has allowed the reconciliation between large companies, small companies and individuals. The latter would previously have been classified as mere consumers and can now act as suppliers of goods and services, forming part of the market and competition.
- **Use of underutilised or idle resources:** this is the main ingredient recognised by Bostman (2015) for a company to be within the framework of a collaborative economy. The unquestionable efficiency obtained from the use of goods and services, in addition to the owner, by other people is evident (Sastre-Centeno & Inglada-Galiana, 2018). Firstly, the use of goods and services is optimised to the

maximum, exhausting their actual useful life. Secondly, the costs of use decrease and, therefore, their production needs decrease. Finally, the negative consequences of production on the environment are reduced as a result of the decrease in production.

- **Complacency or altruistic relationships:** as with the general acceptance of the concepts of collaborative economy and collaborative consumption, there is also some controversy as to whether or not there should be an altruistic relationship between supply and demand.

Botsman (2013), in her early work, used the word "humanity" when trying to define the meaning of this new economic and social phenomenon. She based this relationship on the willingness of both parties to fulfil this collaboration without the need for monetary exchange.

Although this approach remains the main pillar in the conceptual framework, due to the enormous growth of this phenomenon, it is inevitable that variants will emerge depending on the degree of altruism. Thus, at present, we will differentiate the following actors within a collaborative economy according to their original purpose (One Earth, 2015): "for-profit" (Airbnb, Wallapop, Ebay, etc), "social enterprise" (Time Bank Association, Ecrowd, etc), "not-for-profit" (Shared gardens, NoLoTiro. org, Goteo, etc), "community" (SocialToy, 1010 ways to buy without money, etc), "public sector" (Municipal libraries, Public bicycle service, etc).

2.4. Actors involved

This section will try to elucidate the main actors involved in the exchange of goods and services in a market that implements a collaborative economy system.

In terms of the actors involved in the collaborative economy, the European Commission distinguishes the following three categories: service providers, users of these services and intermediaries (European Commission, 2016).

2.4.1. Service providers

In the context of the collaborative economy we observe two types of service providers depending on the frequency with which they offer services. We find professional service providers and peer-to-peer service providers.

We refer to professional service providers to define those small and micro-enterprises that offer their services through collaborative platforms, this being their main economic activity. This type of service provider has been increasing over the years due to the success of the collaborative economy and collaborative platforms.

On the other hand, we speak of peer-to-peer service providers when services are offered by individuals and on an occasional basis, this not being their main source of income or economic activity. This type of service provider corresponds to the purpose for which collaborative platforms and their P2P model were created, matching supply and demand, turning individuals, previously considered as mere consumers, into suppliers of goods and services who occasionally intervene in the market and its competition.

2.4.2. Users

Until now, traditional economic models have clearly differentiated between the activities carried out by companies, which are responsible for the supply of goods and services, and consumers, who demand these goods and services.

With the emergence of this new economic model, the boundary between the two has been blurred. Multilateral markets (Rochet and Tirole, 2003), typical of collaborative economies, have enabled interaction between numerous groups of people, to the point where it has become difficult to identify those users who act in the market as consumers from those who do so as businesses.

Today, within the context of a collaborative economy, we differentiate between two types of users, traders and consumers.

A trader is a natural or legal person who acts for a purpose related to his or her economic activity. In the case of professional service providers, they would be considered as traders, as it is understood that they carry out commercial practices related to their economic activity.

A consumer is a person who acts for a purpose unrelated to his economic activity. Peer-to-peer service providers, i.e. involved in the exchange of goods and services between consumers, would not be considered as traders.

However, the European Commission (2016) sets out some general conditions under which a peer-to-peer service provider could be considered a trader.

- The first condition for a provider to be considered as a trader would be the frequency with which he provides his services. The higher the frequency, the easier it is to determine that the provider is acting for a purpose related to his business activity and, therefore, this would be an indication to consider him as a trader.
- The turnover generated by a provider would also be an important indicator for being considered as a trader. The higher the level of turnover, the more likely it is that the provider will be considered as a trader. In addition, it will be necessary that the activity carried out by the provider derives from the same economic activity. Therefore, providers whose turnover is derived from several types of activities will not necessarily be considered as traders.
- Finally, the European Commission (2016) considers the profit motive as a necessary condition to consider a peer-to-peer service provider as a trader. This means that providers who, in addition to offsetting costs, obtain remuneration for the exchange of goods or services, may be considered as traders.

2.4.3. Intermediaries

We refer to collaborative platforms as intermediary agents in the context of the collaborative economy. Collaborative platforms are in charge of connecting service providers and users.

Depending on the nature of the activity, collaborative platforms will or will not establish a series of market access requirements. This is because certain platforms offer, in addition to information society services³, other services in which they act as intermediaries between providers and users. For these platforms, also referred to as the "underlying service provider", the European Commission has established three key criteria to facilitate the degree of influence or control they impose on providers.

³ Services provided at a distance, by electronic means, at the individual request of the recipient and for remuneration.

Firstly, whether the platform is the price-setter. If the platform only recommends or considers providers for pricing, this would indicate that the platform is not acting as a provider of the underlying service.

Secondly, be aware whether the platform sets terms and conditions, in addition to the price, that determine the future relationship between the provider and the user. An example would be the obligation imposed by the platform on providers to comply with a set of guidelines for the provision of the underlying service.

Finally, whether the platform owns key assets necessary for the provision of the underlying service.

The fulfilment of these three criteria by the collaborative platform would reflect an indication that it exercises some degree of influence or control over the service providers. Therefore, in addition to the information society services it provides, the collaborative platform should also be considered as a provider of the underlying service on the basis that it has control and influence over pricing, setting terms and conditions, and owning key assets for the provision of the service.

However, there are certain activities carried out by collaborative platforms, which are not considered as underlying services. These are activities, ancillary to the service of the information society, where the collaborative platform, solely as an intermediary, provides assistance to the underlying service provider. Some of these activities include: after-sales services, payment methods, insurance coverage, etc. Therefore, these types of activities, as well as offering mechanisms to evaluate or rate the services provided, do not represent significant evidence of control and influence to consider the platform as an underlying service provider.

Generally speaking, the greater the influence on the management and control of the selection process of the underlying service providers and the way in which the platform organises the provision of services, the more evidence there is to consider that the collaborative platform also acts as a service provider.

2.5. Types of collaborative economy

As this phenomenon has evolved, so have the different business models. Thus, distinctions or variations in the collaborative economies have been generated according to the products offered and the needs required by people. In this section we will show the types of collaborative economy that we can currently find. According to Irigaray

(2020) we can currently find four different types of collaborative economy: a) collaborative consumption, b) collaborative production, c) collaborative financing and d) open knowledge.

2.5.1. Collaborative consumption

Collaborative consumption is the most commonly used and best-known type of collaborative economy in society, characterised by the traditional way in which people exchange goods and services, share, lend, rent or give away.

In the past, these initiatives already existed, but they were limited to a certain geographical area, for example, when you borrowed a car or when you went to an acquaintance's house to spend the night. However, nowadays, thanks to the use of information and communication technologies, these behaviours, previously framed within a familiar or close environment, acquire a global scale and unprecedented development (Cañigüeral, 2014).

Collaborative platforms and the Internet have made it possible to reinterpret the traditional market, matching supply and demand and facilitating interaction between strangers. At the same time, they have been able to provide the necessary mechanisms to generate an optimal level of trust for these exchanges to take place.

Within collaborative consumption we can identify three variants, ranging from relationships based on cooperation and altruistic collaboration to actions with a profit motive; a) Product-based systems; b) Redistribution markets; and c) Collaborative lifestyles.

Product-based systems

These are systems that group together those initiatives that encourage payment as a method of justification for the use of a good or service, but not for its ownership. This idea of shared consumption makes it possible to optimise the useful life of any exchanged good.

A nearby example would be "Valenbisi", a public initiative of individualised urban transport that is environmentally friendly and healthy. The city of Valencia makes a total of 2,750 bicycles available to its citizens and visitors every day, distributed among its 275 stations throughout the city, 24 hours a day, 365 days a year (Valenbisi, n.d.).

Redistribution markets

Systems based on the use of products that people do not use. It consists of a process of reuse, where these people give or hand over the products that they no longer need, do not use or do not appreciate, to those who do.

There are three types of markets that implement this system. Altruistic markets, barter-based markets and for-profit markets (Cabello, 2016).

Firstly, *altruistic redistribution markets* are those where people give their goods to others for free and disinterestedly. An example of this is the website "SinDinero.org". A Spanish platform founded with the aim of fighting against consumerism and capitalism, and which promotes collaboration and access to free resources and information. Here we can find national leisure and culture, training courses, travel, all free of charge.

Secondly, there are the *redistribution markets through barter* where goods are exchanged by means of barter. This is characterised by the predominance, as the value of the transaction, of the interest in possessing the product of the other party and not the exchange of money. It does not require that the goods are of equal monetary value, but that both parties are satisfied with the agreed deal, seeing that their needs are covered. "Love Home Swap" is an online platform that integrates this barter system. The website connects a large number of people from all over the world who exchange their homes for a few days.

Thirdly, *for-profit redistribution markets*, which are based on the exchange of goods between users for money. This would be the case of eBay, where the e-commerce and auction platform connect users from all over the world to offer their unused products in exchange for money.

Collaborative lifestyles

These types of systems include initiatives that go beyond merely establishing an altruistic exchange of goods, but rather encourage the exchange or sharing of less tangible goods such as knowledge, skills, space, money and even time (Cabello, 2016).

Among the many examples, we can highlight "shared gardens", a platform that connects users who want to grow their own food but do not have land, with users who do have land but no time, so they give up their land on the sole condition that they share the

harvest. A community, collaborative and ecological farming initiative that helps to recover vegetable gardens, promotes self-sufficiency and local produce (EcoInventos, 2020).

2.5.2. Collaborative production

The term was first coined by law professor, Yochai Benkler, who in his book "Wealth in Networks" defines peer-to-peer production as "a system of production, distribution and consumption of information goods that increases the factors of freedom and autonomy and redistributes the balance of power between market, state and society" (Benkler, 2006).

A type of collaborative economy based on the creation of collaborative networks and digital interaction that encourage the creation of sustainable projects. This new model of collaborative work is based on the commons and learning through experience based on decentralised individual initiatives to design, produce and distribute.

Since 2006, when Benkler published his book, economic, technological and ecological factors have emerged, which have reinforced the arguments for which the author attaches great importance to the need to find new alternative models to the current neoliberal economic models, based on social production (Cabello & Andoni, 2013).

Firstly, the 2008 financial crisis challenged the current ideological framework, which was dominated by neoliberal economic thinking. This situation only increased the interest of society and markets in new organisational models that would adapt to the demands and needs of the new economic and social situation.

Secondly, the irruption of new information and communication technologies has enabled the creation and dissemination of online collaboration platforms which, in line with the "Do it yourself"⁴ movement, help to remove barriers to participation, research and innovation for a large part of society which until now had no access to them. movement, help to remove barriers to participation, research and innovation for a large part of society that until now had no access to them.

Finally, traditional economic and social models, based on capitalism and consumerism, have accentuated the growing climate crisis. Models such as peer-to-peer production,

⁴ The "Do it yourself" (DIY) culture is an anti-capitalist movement that rejects consumerism and encourages self-sufficiency practices. It advocates the idea that you should take responsibility for your own life by doing what you need to do, rather than relying on someone else. The movement stems from the Punk Rock scene of the 1970s, when bands wanted to break into the music market without having to rely on music industries. Today, this philosophy encompasses all areas of life.

characterised by a collaborative and sustainable culture, have gained ground over the years thanks to policy initiatives for sustainable development and reduced resource consumption.

In conclusion, these three factors have placed society as the main actor in the achievement of new organisational models, raising it to the same level as the state and the market, as Benkler already foresaw in 2006.

Within collaborative production (P2P) we find the following types of relationships: coworking, crowdsourcing and open source.

Coworking

This phenomenon is an alternative way of working that allows independent professionals, entrepreneurs and SMEs without the need to belong to the same sector, and with the flexibility to travel, to share the same workspace in order to carry out their projects (Coworking Community, 2017).

The origin of this movement is generally attributed to Brad Neuberg, when in 2005 he organised the first coworking space, called "San Francisco Coworking Space", in Spiralmuse⁵, in San Francisco, USA.

At the time, the space was set up with a few desks a couple of days a week and had free and shared services such as: meditation rooms, bike rides, wifi or catering. Later, in 2007, the phenomenon started trending on Google, linking coworking to terms such as "shared offices" or "shared workspaces", placing the United States as the epicentre of this new model. It was not until 2010, mainly due to the financial crisis and the need for new forms of business, that the phenomenon resounded strongly in Europe, and especially in Spain (Uda, 2013).

Currently, this new philosophy and way of working has more than 14,000 coworking spaces around the world (Coworkingspain, 2020). Currently in Spain, around 2.300 coworking and flex office spaces are registered, most of them concentrated in the cities of Madrid and Barcelona, with 290 and 353, respectively (Coworkingspain, 2020).

The turnover of the coworking industry in Spain recorded an increase of 7% in 2019 compared to the previous year, representing a total industry value of €88 million. In terms

⁵ A cultural association that through its online platform helps artists to sell their art and make themselves known. Spiralmuse offers self-learning courses for the art business, trainings, blog posts, podcasts and a community where thousands of artists help and support each other.

of jobs, the industry has a total of 41.000 direct jobs, with 28.000 permanent jobs and 13.000 flexible jobs. This was an increase of 9% over the previous year, with a total of 37.697 jobs, of which 26.354 were permanent and 11.343 flexible (Coworkingspain, 2020).

With the exception of the pandemic months, when interest in coworking space dropped by 40%, as indicated in Coworkingspain's annual report (2020), coworking square metres in Spain have continued to grow. In 2020, a total of 980.000 m² of coworking space were registered, 20% more than the previous year, with a total of 818.000 m².

In terms of the average price of fixed monthly desk, Spain is currently below the European average, with a price of €170/month per person. The highest price is found in London, the benchmark for this alternative work modality, with an average price of between €344 and €492/month per person (Coworkingspain, 2020).

Coworkings are spaces known as "casual accelerators" (Coworkingspain, 2018), designed to facilitate collaborative meetings between creative, extroverted and entrepreneurial people. Among their main advantages are: the economic savings derived from the reduction of work space, the breaking of work isolation, the improvement of coexistence and collaboration, and the development of greater intellectual and creative capital.

Crowdsourcing

Crowdsourcing is a phenomenon based on the use of communities, whether professional or not, to outsource tasks that were normally carried out by a company's employees, and thus undertake projects based on collaboration (Magdaleno & García, 2014).

Through an open call, a certain group of people, qualified for the project, is selected to develop specific tasks, provide solutions to complex problems or contribute new and creative ideas.

The term was first coined in 2006 by Jeff Howe in his article "The Rise of Crowdsourcing" for Wired magazine. Howe defines crowdsourcing as an opportunity to get direct feedback from a company's target and potential customers. It also allows for surveys, brainstorming or the development of ideas for new products.

Countries such as the USA are pioneers in the implementation of this type of model in professional projects, however, in Spain we can observe that the crowdsourcing phenomenon is not yet as developed (Rodríguez, 2017).

Open Source

Originally, open source comes from OSS (Open Source Software), software that has a source code designed and published under an open source licence, allowing it to become public domain and accessible by anyone, granting the rights to view, use, study, modify and distribute it freely (Open Source Initiative, 2021).

Therefore, open source represents a movement and a new way of working based on the values and decentralised production model of OSS, so that, through the collaboration of communities, new ways of solving problems can be achieved. This movement was born in the 1950s and 1960s, when the early development of the Internet and telecommunications networks was booming. Such projects, such as ARPANET⁶, which were a huge challenge for the technology of the time, required the collaboration of the best minds in the field. Users from all over the world shared the source code, i.e. their progress on the project, under an open source licence for others to build on, creating the first open source communities (Red Hat, s.f).

Among the most popular examples of open source projects are Linux or Wikipedia, where users from all over the world can actively participate in development projects through their open source communities.

2.5.3. Crowdfunding

Crowdfunding is an alternative financing model based on collective investment, in which companies can finance themselves and where there is a process of exchange of resources typical of the collaborative economy. This method allows individuals and companies to publish their projects on different collaborative platforms in order to obtain potential financial resources for their initiatives. At the same time, this model of collective cooperation makes it possible to take advantage of the benefits of communities to test products and carry out market research (González & Ramos, 2020).

The Internet has been a key factor in the development and success of this new financing model. The emergence of online platforms has made possible the contact between the

⁶ ARPANET (Advanced Research Projects Agency Network) was the precursor computer network to what we know today as the Internet. It came into being in 1969, as a commission from the United States Department of Defence to establish communication links between its government bases. The first node, which would later become the mainstay of the Internet until 1990, was created at UCLA (University of California) in Los Angeles.

project entrepreneur, with capital and resource needs, and the investor interested in financing the project, both negotiating in the same virtual space, no matter where in the world they are located.

Another determining factor in the rise of this phenomenon was the economic outlook after the 2008 financial crisis. Traditional financing methods, such as banking institutions, were called into question as they became fragile after the economic collapse caused by the subprime debt. This situation gave way to the emergence of new ways to solve the needs of society and companies to obtain resources.

Among the main advantages offered by the financial phenomenon of crowdfunding, González and Ramos (2020) highlight the following:

- Financial alternative to the traditional method, more economical and efficient.
- Greater adaptation to the wide variety of current projects and initiatives, both in the digital and traditional spheres. This makes it possible to reduce the intrinsic risk involved in investments.
- Eliminates traditional intermediaries, reducing the cost of operations.
- Attractive method for non-professional investors of those unfamiliar with the sector of the project offered on the platform.
- It allows market research and product testing to be carried out before launching them on the market.

Since its origins, crowdfunding has evolved into a wide variety of funding methods, ranging from for-profit business projects to cultural and social initiatives (Petruzzelli, Natalicchio, Panniello & Roma, 2019). Currently, depending on the way in which project investors are rewarded, we can differentiate the following types of crowdfunding: donation, reward, lending or crowdlending, investment or crowdequity and crowd factoring.

Donation

It emerged with the first beginnings of the collaborative economy. This model is based on an altruistic financing system, where the investor participates in the project in a disinterested way and does not expect to receive any type of consideration. This type of participation in the form of a donation is recurrent in social and humanitarian aid projects carried out by non-profit organisations (Hernández, 2015). Donor contributions can

range from €1 to thousands of euros and are generally determined by the individual donor (Petruzzelli, Natalicchio, Panniello & Roma, 2019).

In some cases, the platforms list the project promoters as a “General Interest Organisation”. This informs altruistic investors that by participating in this type of project they are eligible for tax relief (González & Ramos, 2020).

Reward

Commonly referred to as “classic crowdfunding”, this model offers an alternative to traditional banking for projects that are difficult or risky to finance, such as music, publishing of film projects (Quispe, 2021).

In this Crowdfunding model, investors participate in the project with the aim of receiving a consideration. Generally, this consideration is collected in the form of a reward, which is usually a product, a service or an experience, always subject to taxation (González & Ramos, 2020). Investors in this type of crowdfunding are called micro-sponsors or sponsors.

Reward crowdfunding is very useful for entrepreneurs because, by offering products, services or experiences, it allows them to carry out a small-scale market study, being able to observe the factors of success and failure in the design and conceptualisation, before finally launching them on the market. It is also an advantage for investors, as they receive a reward commensurate with their investment and, in many cases, with a value higher than its market price.

Crowdlending

In loan crowdfunding, the investors in the project receive a sum of interest plus the return on the investment contributed to the project as consideration. The interest rate is set by the platform, which carries out a prior study on the characteristics of the loan applicant, granting him a level of risk and an amount of interest that he will have to pay once the project is completed (González & Ramos, 2020).

This method is beneficial for both entrepreneurs and investors. The former obtains faster and more flexible financing than through traditional financing mechanisms (Hernández, 2015), and the latter because they achieve higher and more attractive returns and can diversify their investments.

Crowdequity

In this alternative financing method, investors receive as consideration the shares in the share capital of the company in which they invest, becoming active partners in the project. Therefore, depending on their contribution, they will be owners, or at least part owners, of the project (Rodríguez, 2017).

Equity crowdfunding requires a precise and exhaustive analysis of the company being financed, since the dividends and capital appreciation that investors receive will depend on the company's capacity to generate profits.

Similar to what happens with the purchase of shares on the stock exchange, investors are looking to invest in companies with a promising future in which they can earn a high return, such as start-ups or fintech companies⁷.

Crowdequity currently represents an “empowerment for citizens and a democratisation of private property” (González & Ramos, 2020), with platforms offering the possibility of acquiring shares in companies from as little as €10.

Crowd factoring

Crowd factoring is a more efficient alternative to note discounting and factoring operations, where the entrepreneurial company grants investors the collection rights to the invoices it issues to its customers. Therefore, companies can obtain an advance on their promissory notes, in exchange for the investors receiving previously agreed interest in return (Quispe, 2021).

In this way, with crowd factoring, companies, especially small businesses and the self-employed, can have greater liquidity and not depend so much on banks, thanks to the diversification of their sources of financing.

⁷ It is an acronym for "finance" and "technology". It refers to companies that offer financial and investment services based on new technologies and market innovations. They operate in sectors such as mobile banking, big data and cryptocurrencies.

2.5.4. Open knowledge

The concept of open knowledge comprises a set of initiatives with the aim of contributing to the free access to sources of information, research and collaborative production.

This phenomenon has many similarities with the open source movement, explained above. Both concepts, open source and open knowledge, rely on new information and communication technologies and community collaboration to allow the rest of society to use, reuse and redistribute any content, information or data freely and universally, without any legal, technological or social restrictions (Open Knowledge Foundation, n.d.).

The breakthrough that the collaborative economy has experienced would not have been possible without the participation of open communities, which have fostered the creation of more collaborative and sustainable societies (García-Peñalvo, García de Figuerola & Merlo, 2010).

Among the benefits of open knowledge, we can find that: it improves governance, thanks to practices that promote participation and transparency; it boosts culture and initiatives in research projects, facilitating the development of new products and services; and it encourages the economy and sustainable consumption.

According to the authors García-Peñalvo, García de Figuerola, & Merlo (2010), there are three main aspects that characterise the open knowledge movement.

Firstly, any publication of a scientific nature must be freely accessible in order for others to carry out the scientific method. This means that publications can be reviewed and reused at any time, with enormous benefits both for the people who access them, being able to incorporate the advances in their respective projects, and for the project being accessed, benefiting from the contribution of other people.

Secondly, the movement is characterised by its use of free software. The use of programmes with a source code under an open source licence allows anyone to use, view, study, develop and distribute them freely, without restrictions of any kind.

Ultimately, all teaching, learning or research materials should be in digital format and in the public domain, so that educators and learners have access to them for free and open use, adaptation and distribution. Also known as Open Educational Resources (OER), whose main advocate is UNESCO, they contribute to more egalitarian and sustainable social, economic and intercultural development (UNESCO, n.d.).

3. REGULATORY FRAMEWORK

In the following section, we will analyse the main uncertainties posed by the rapid progress and development of the collaborative economy with respect to the current regulatory environment, which make the need for specific regulation visible. We will then detail the regulatory challenges presented by collaborative platforms, which are the result of operating in markets with an unsuitable regulatory framework and which pose a challenge for institutions. Finally, we will learn about the basic principles of economic regulation applied to the collaborative economy. All of this with the aim of subsequently making the specific case of the transport sector in Spain visible and offering a series of recommendations on the regulatory principles that should govern this sector.

3.1. Uncertainty problem

The European Commission (2016) refers to this business model as a new source of opportunities for consumers and entrepreneurs where, if promoted and developed responsibly, it can contribute to increased competitiveness and growth in the European Union. By bringing citizens closer to a model where they themselves can act as service providers, it allows for the promotion of new employment opportunities, flexible contract modalities and new sources of income. At the same time, consumers can benefit from new services, a wider and more diversified offer and lower prices as a result of increased competitiveness.

In turn, the same European Commission (2016) recognises the need to draw up an agenda that facilitates a clear and concise regulatory environment that eradicates the uncertainty generated by this model, adapting it to the new economic reality. The application of the current legal frameworks is called into question as the limits that until now delimited the figures of consumer and supplier of goods and services, employee or self-employed worker, or the professional and non-professional provision of services, are dissipating (Riscos, García & Palma, 2017).

However, the main problem lies in the slow progress of regulation in relation to the growth of this phenomenon (Espinosa, 2018). Regulators, overwhelmed by the pace at which sharing economy systems are developing, are unable to develop a legal framework in time. As a result, national and local authorities have been addressing each of the issues individually, generating greater uncertainty among operators of traditional and non-traditional systems.

It is this uncertainty posed by the current regulation that increases the risk of contradictory and unequal administrative and judicial decisions, affecting the parties involved in different ways. Another negative consequence of this problem is that certain actors may take advantage of loopholes in the law to evade or profit at the expense of the public interest. The opposite may also be the case where, as a result of an unsuitable regulatory framework, the development of collaborative economy systems that are beneficial to the general interest of society is discouraged (Doménech, 2015).

As can be seen, as with the scientific definition of this phenomenon, there is no specific and inclusive regulatory framework for the collaborative economy that objectively regulates each of the particularities and present and future eventualities of these non-traditional systems.

The future regulation, according to the Commission (2016), should ensure the proper functioning of the labour market, taking into account innovations in terms of the different forms of employment, and the protection of consumer rights in collaborative platforms. At the same time, European and national institutions should actively promote new development opportunities, innovation activities and competition, with the aim of benefiting from the new business models that collaborative economy systems can bring to social welfare.

3.2. A regulatory agenda for the collaborative economy

The CNMC (2016), in its study on the new models of service provision and the collaborative economy, proposes the need for state intervention in order to alleviate the regulatory tensions resulting from an incorrect adaptation to the new paradigm.

In turn, Pegado Liz (2016), in her exploratory opinion for the European Economic and Social Committee on the collaborative economy and self-regulation, recognises the parallel existence of self-regulation and co-regulation mechanisms that establish voluntary compliance standards in their respective sectors. The standardisation process would consist of a set of requirements on environmental protection, quality, safety and interchangeability of goods.

Understanding the collaborative economy as a new business model that, through collaborative platforms, promotes activities in an open and free environment where users are the protagonists, it is reasonable to believe that they should operate in a "self-managed economy" (Rodríguez-Piñero, 2017).

Another perspective that defends a self-regulated environment is free access to the market, where the non-existence of a regulatory basis does not limit free competition and where the private and individual initiative of users is encouraged, within the new technological environment.

With the advancement of the collaborative economy phenomenon and with the increasing emergence of more collaborative platforms operating in different sectors, the debate has arisen regarding such a "regulatory utopia" (Rodríguez-Piñero, 2017). The experience of the markets has made the option of a regulatory framework the most appropriate way forward given the problems and risks posed by voluntary regulatory initiatives for users' and consumers' rights.

Therefore, these practices of self-limitation or self-control, although they reflect the maturity of certain sectors, which freely accept a set of additional rules to regulation, should always be treated as limited and complementary initiatives to existing regulation (Laguna De Paz, 2017).

These are some of the reasons, as stated by the author Laguna De Paz (2016), that make visible the weaknesses of self-regulation practices and why they should not be an alternative to state intervention, but rather "an accessory instrument of regulation within the legal system" (Pegado Liz, 2016).

- Self-regulation promotes the defence of the interests of the regulated parties, abandoning the interest of users and consumers.
- Standards end up being imposed by private bodies backed by industry professionals, with the risk of a lack of objectivity and a bias in favour of certain industry interests.
- In most cases, the credibility and trust provided by the state-imposed regulatory framework ultimately trumps the "voluntary standards" implemented by private sector bodies.
- Markets perceive little incentive to self-regulate and self-limit, as they would be undermining their ability to generate new opportunities and reduce costs.

As can be seen, these particularities mean that it is not viable to consider the option of self-regulation as predominant in the functioning of collaborative economy markets (Laguna De Paz, 2017), making state regulation the majority option.

Rodríguez-Piñero (2017) points out the importance of the legislator in the new regulation and the objectives it aims to achieve. The first objective would refer to the legal

uncertainty currently generated by self-regulated markets and under the inefficient regulatory framework. The regulator's objective will be to adapt or elaborate a new regulation for the different sectors and also concerning the new collaborative labour market. The second objective is based on the intentionality of this new regulation with the initiatives of this new model. The debate arises as to whether the legislator should encourage the development of these activities, or whether it should limit itself to regulating their operation.

In pursuit of a regulatory agenda for the collaborative economy, as reported by the European Commission in its communication for the new European agenda (2016), public institutions should consistently apply legislation with the aim of both guaranteeing the rights and obligations of users and actively promoting its development.

3.3. Key regulatory challenges

Collaborative platforms, as we have seen, being in an environment of constant innovation and evolution, pose a series of regulatory challenges for institutions, which in many cases are overwhelmed and find it difficult to provide answers to all the controversies that arise in these markets.

3.3.1. Taxation

Sharing economy operators, like other operators in the traditional economy, are subject to tax regulations, in this case, personal income tax (IRPF), corporate income tax (IS) and value added tax (VAT).

As mentioned above, the new collaborative economy models pose difficulties in terms of identifying the taxpayer and taxable income as the boundaries between the consumer, the supplier and the provider of goods and services are dissipating (European Commission, 2016).

The difficulties that have arisen mean that the traditional tax system generates unequal tax collection between traditional operators and those that adopt the collaborative economy. This means that certain collaborative platforms do not contribute equally and fairly to the development and general interest of society through taxes as their competitors do in a traditional environment (Espinosa, 2018).

Authorities in this respect should apply taxation on the basis of companies providing comparable services (European Commission, 2016). To do so, they will need to adopt

technological improvements to match collaborative platforms. This will allow authorities to better identify the parties involved and the basis on which to apply tax obligations, as well as to collect more information on online operators (profits, users, transactions, etc.).

The European Commission in its regulatory agenda (2016) insists that for proper compliance with tax obligations there must be active cooperation between authorities and collaborative platforms.

3.3.2. Unfair competition

As with unequal tax collection, collaborative platforms, being in a largely digitised environment, benefit from higher revenues due to fewer physical assets. According to Espinosa (2018), this means that collaborative economy operators can offer goods and services at a lower price than traditional operators.

Unfair competition, in most cases, is a perception rather than a reality. Technological advances make markets evolve, which inevitably leads to the emergence of resistance to change and even inability to adapt (Martínez, 2018).

Those incumbent operators in markets currently involved in a process of change and evolution towards a collaborative economy environment, as in so many other cases over time, will have to adapt as well as the current regulation (Espinosa, 2018). Otherwise, they would be missing out on all the opportunities that these new business models bring for both society and traditional companies.

3.3.3. Precarious employment

The precariousness of employment is another of the major concerns raised by these business models, specifically in terms of the conditions and quality of workers.

Most collaborative platforms tend to promote employment that leads to the "proletarianization of the self-employed" (Cobacho, 2017), completely modifying the conditions and benefits provided until now by the traditional labour market with its bilateral relationship (employee-employer).

Another aspect of precariousness and worsening working conditions is the irregularity and uncertainty of income given the nature of the conception of work within collaborative platforms.

The platforms base their operation on "on demand" services, which are intended to satisfy a specific consumption demand quickly and in a short period of time. Online platforms only maintain an employment and commitment relationship with dependent freelancers when on-demand services are generated, which is exhausted at the end of the service and is not resumed until another service is initiated.

This is why this business model entails serious economic instability for the worker who depends on these services, often irregular and insufficient, to ensure an optimal income for their household economy (Rodríguez-piñero, 2017).

Finally, and in relation to the previous aspect, the irregularity and uncertainty of income added to the self-employed regime, where you earn what you produce, puts pressure on workers to maintain long working hours, while accepting a greater number of assignments. Although this is not a particularly negative aspect of collaborative platforms, it is true that the type of demand for services does not fit in with the traditional time modules included in workers' rights (Rodríguez-Piñero, 2017).

For all these reasons, regulatory institutions will have to watch over the economic and working conditions of these workers, trying to prevent this type of employee-employer relationship from becoming the predominant form in which these new technology-based sectors operate. Otherwise, as Rodríguez-Piñero (2017) points out, this situation will lead to the emergence of pockets of workers excluded from any regulatory framework, with terrible working, economic and personal conditions.

4. DRIVING FORCES

In previous sections, we have observed various aspects of the collaborative economy that reveal the success factors that have enabled the emergence of this phenomenon. Firstly, the direct link between collaborative platforms and new technologies, where they base their functioning on facilitating the exchange of goods and services between users. Secondly, the creation of a social movement in the form of a community (Diaz-Leante, 2019) that promotes sustainable development initiatives through the use of underutilised resources. Finally, the emergence of new alternatives for doing business that have provided an escape route for the discontent caused by the deterioration of labour, economic and social conditions generated by the economic and financial crisis.

In the following section, we will compile and analyse in detail each of the key elements that have driven the collaborative economy. These are: a) New technologies; b) Economic crisis; c) Society; d) Environment.

4.1. New technologies

The main factor driving the emergence and exponential growth of this phenomenon has undoubtedly been the development of new Information and Communication Technologies (ICT). The present era of digitisation has enabled important technological advances that would explain the success of its reach and acceptance (Diaz-Leante, 2019).

- The Internet has made it possible for thousands of people from any geographical area around the world to meet, eliminating many of the barriers to offer or demand a particular good or service, reducing the number of intermediaries and reducing transaction costs. GPS⁸ has also made it possible to locate the people involved in the exchange of goods and services with greater precision and immediacy.
- The emergence of e-commerce in traditional markets has brought with it a new business model, allowing the proliferation of easy and secure digital payment systems.
- Advances in the performance of mobile devices, whether smartphones or tablets, which allow greater mobility and accessibility to the Internet and continuous contact with thousands of users on online platforms.
- Finally, the emergence of social networks has also enabled more people to share and discover information about this new economic model and those companies that implement it. It has also allowed, in turn, those businesses that do not represent the values of a collaborative economy to become known.

4.2. Economic crisis

The economic and financial crisis since 2008 has deteriorated economic and social conditions in almost every country in the world, destroying millions of jobs and creating greater inequalities among citizens.

The malpractice perpetrated for years by US banks, which allowed excessive subprime lending⁹ (Garcia, 2019), started a de-escalation of economic events. Although it began

⁸ GPS (Global Positioning System) is a service, owned by the USA, that provides positioning, timing and navigation information for any object on Earth with an accuracy of a few metres.

⁹ Also known as subprime mortgages, these are loans for real estate that are characterised by not respecting the criteria that guarantee the future repayment of the loan, such as: verification of the income of the person requesting the loan, adequacy of the amount borrowed to the needs of

in the United States, the collapse of Lehman Brothers¹⁰ would quickly spread across the globe, especially in Europe.

As a result of this economic downturn, the reduction of disposable income and the limitation of credit (Cañigueral, 2014), new business opportunities and new consumption practices appeared as an alternative to the unsustainable situation of current production and consumption that had triggered the crisis.

"The crisis has forced people to look for new alternatives, not only to save, but to do business at the same time". (Cañigueral & Tamayo, 2013)

A great source of stimulus for those people who, with hardly any resources and at risk of being unable to meet their obligations, dare to innovate, start up a project or participate in collaborative economy models.

The emergence of new models such as the collaborative economy was a breath of fresh air in society, a reset button to clean up and rebalance the system (Cañigueral & Tamayo, 2013). This is why many of the collaborative platforms made their irruption after the economic crisis, taking advantage of a social and cultural metamorphosis based on a change in values, from individual ownership to collective use, shared benefit, transparency and mutual trust.

4.3. Society

Related to the previous point, the economic recession brought with it large social and cultural movements based on cooperation and collaboration. The aim of these currents was to seek an alternative to the hyper-consumerism of "throwaway", where activities based on experience and shared use were prioritised and replaced individual and private property.

A "community culture" (Diaz-leante, 2019) is being created, where thousands of people contribute to generating a lifestyle change and challenging traditional consumption and production habits. Collaborative platforms meet this need for socialisation, facilitating contact between users. For the first time, thanks to the *boom* in consumption and the

the applicant, repayment terms, etc. It became popular in the 1990s with automated "scoring" programmes in the USA. Later, between 2006 and 2007, the volatility of subprime mortgages exploded, the main US banks began to show losses and financial panic spread.

¹⁰ Global company dedicated to financial services and investments. As one of the four largest investment banks in the US, it went bankrupt in 2008, which had a major impact on the markets. Lack of transparency and poor regulation were the main triggers of the crisis.

collaborative economy, "users have realised that true value lies in collaboration and that free and easy access is always better than ownership" (Cañigueral, 2014, p.19).

4.4. Environment

One of the main premises within the business model offered by the collaborative economy is sustainable development (Rodríguez, 2017). This phenomenon makes it possible to do more with fewer resources, i.e. making a much more efficient and sustainable use of them.

Currently, both collaborative platforms and their users share a sense of concern for the environment (Lamberton & Rose, 2012) by combating certain practices of excessive and unsustainable consumption, and opting for maximising the useful life of a good or service by sharing it, thus reducing the environmental causes derived from the exploitation of these.

5. ADVANTAGES AND DISADVANTAGES OF COLLABORATIVE ECONOMY

In this section we will analyse the advantages and disadvantages provided by those markets that adopt the collaborative economy business model compared to traditional models. We will look at their impact on social welfare, as the emergence of this global and ever-growing social-economic movement brings with its implicit transformations, which are not always beneficial.

5.1. Advantages

In the following, we will analyse the different advantages that arise from the exchange of goods and services between individuals within the scope of the collaborative economy. These are: a) economic savings; b) use of idle or underutilised resources; c) increased access to goods and services; d) increased choice for consumers; e) promoting sustainable development; f) new opportunities for entrepreneurship and g) increased information availability.

Economic savings

From its inception, this economic model was conceived as a disruptive innovation, aiming to reinvent traditional behaviours (Botsman, 2015). The collaborative economy is based on collaborative and sharing initiatives.

Therefore, when people share their goods, they also share their costs, generating economic savings. This is also true for buyers, as it allows them to acquire a good at a lower price than in traditional markets. This exchange can be both economic and material, i.e. consumers can exchange goods for other goods, or for a certain amount of money.

Use of idle or underutilised resources

Together with economic savings, these are the main advantages that we can observe in the collaborative economy. The use of underutilised resources is an alternative where consumers, by lending, renting, sharing, exchanging and even giving away, optimise the useful life of goods and services to the maximum (Sastre-Centeno & Inglada-Galiana, 2018).

Collaborative consumption platforms such as BlaBLaCar allow users to share their own vehicles. In this way, one-off expenses are divided between travellers, reducing the cost of the journey for each one, while at the same time providing an environmentally sustainable consumption alternative.

Increased access to goods and services

The phenomenon of the collaborative economy would have been difficult to conceive without the emergence of the Internet and new information and communication technologies (Pascual, 2017). Online collaborative platforms have facilitated contact between supply and demand, allowing people all over the world to access all kinds of goods and services in real time. At the same time, they have also reduced transaction costs and purchase prices, increasing the accessibility of certain products that users would otherwise not have access to.

It is now more accessible to use services such as renting individual rooms or entire properties, share or reserve a car, exchange goods with people who are miles away, stay in a house for holidays without having to pay, among others (García, 2019).

Increased choice for consumers

Another of the great advantages brought by this phenomenon has been the increase in the supply of alternatives for new non-traditional goods and services (García, 2019). Online platforms have boosted new business models, while at the same time generating a space that was previously unavailable to both suppliers and demanders of goods and services (Diaz-Leante, 2019).

For example, in the past, when travelling abroad, people could stay in the hotel, motel or at a friend's house. However, actually, there are a greater number of accommodation alternatives such as holiday rentals, home exchange, room rentals in shared flats or room rentals for students, among others.

Promoting sustainable development

The collaborative economy is an economic model that bases its activities on the principles of sustainable development, from an economic, social and environmental point of view (Hernández, 2014). This phenomenon drives initiatives where users share and exchange, favouring a decrease in the waste of underused goods, which reduces demand and therefore the production of new goods, helping to reduce pollution.

Collaborative consumption initiatives can be observed, such as car sharing, allowing a better use of resources, reducing CO₂ emissions (Aguar, 2018).

New opportunities for entrepreneurship

The collaborative economy is characterised as a real alternative to the discontent generated after the financial and economic crisis, where people had seen their working, economic and social conditions worsen.

This phenomenon brought hope to these people, allowing them to generate new business models to be generated where anyone can become an employee and employer, completely changing the situation of workers and the labour market, in general terms (Aguar, 2018).

Thanks to crowdfunding, entrepreneurs, through the collective investment of people interested in their project, can obtain financial resources with better conditions and more easily than through traditional financing methods (García, 2019).

More information available

Online platforms make it possible to offer consumers more information about the goods or services they are interested in (Suárez, 2016). A wide range of alternatives in which the user can easily compare similar products and make a better decision.

Another advantage that facilitates consumer decision-making is the information provided by the rating and reputation system enabled by the platforms. In this way, users benefit from previous ratings of the products or services in question, eliminating the asymmetry of information that they previously suffered in traditional markets (CNMC, 2014).

5.2. Disadvantages

As with other economic models, there are negative aspects of the collaborative economy that need to be taken into account. The main drawbacks will be analysed, especially their regulatory issues, in order to understand their relevance and scope.

Inefficient regulation

The regulatory environment is the main drawback that has surrounded this phenomenon since its beginnings. It was noted, in previous sections, how the speed with which collaborative platforms evolve prevented legislators from developing a legal system in time (Espinosa, 2018), generating situations of uncertainty and serious conflicts between traditional operators and platforms. The problem lies in two main aspects: inefficiency in terms of tax regulation and labour regulation.

Firstly, the inefficiency in terms of taxation for both collaborative platforms and their users leads to misapplications and even tax evasion. This mismatch between current regulation and the development of collaborative platforms leads to unfair competition that puts traditional companies in an unfavourable situation (Espinosa, 2018).

The European Commission (2016) warns legislators of the particularity of these economic models and the difficulties in identifying the parties involved and the tax bases on which to apply the legislation. The Commission's guidelines are based on legislating by reference to companies providing comparable services (European Commission, 2016). In this case, collaborative platforms would be subject to corporate income tax (IS) and VAT, and platform users would be liable to either personal income tax (IRPF) or VAT, depending on the conditions.

Secondly, there is much concern about the conditions under which workers are employed on collaborative platforms. The trend towards the "proletarianization of the

self-employed" (Cobacho, 2017) where conditions are uncertain, as workers find themselves in limbo as "false self-employed". Another aspect to take into account is the irregularity in the income received, which forces workers to extend their working hours, in breach of traditional time modules (Rodríguez-Piñero, 2017).

Lack of consumer protection

It is the lack of regulation adapted to this economic model that places consumers in a defenceless position against collaborative platforms.

While it is true that the information available on the goods or services that the user is going to purchase is greater, in the event of an incident, there is a lack of responsibility on the part of the platforms. They act only as intermediaries between the parties involved, and are not responsible for the incident.

All of this means that users must be guided by the evaluations and recommendations that other users have given, instead of there being a guarantee of legal responsibility for the platforms to take responsibility for those goods or services that are defective, or that simply have not met the expectations that were promised (García, 2019).

6. ILLUSTRATIVE CASE: THE TRANSPORT SECTOR IN SPAIN

One of the main sectors in which the collaborative economy has generated a great impact has been in the passenger transport sector. Collaborative platforms, through new technologies and the Internet, have emerged as the alternative to the taxi service in our country.

The taxi sector, until recently synonymous with the transport sector in Spain, is in the midst of restructuring. As with any paradigm shift, the entry of new business models, in this case based on the collaborative economy, generates resistance. The country is currently immersed in numerous social and legal confrontations that make the transport sector one of the most conflictive in Spain.

The main reason for the conflict is due to the fear of the taxi sector, a traditional, monopolised sector with certain privileges, of the consolidation of new mobility models, which, supported by the advantages offered by continuous technological progress, offer a more efficient and higher quality service (Guerrero, 2019).

In this section, we will analyse the main collaborative platforms in the transport sector, the characteristics of each of them and the type of service they offer. At the same time, we will look at the success factors that have led to their economic and social impact.

Later, we will detail the similarities and differences between the taxi sector and the VTC¹¹ sector. We will analyse separately the evolution experienced by each sector in recent years as a result of the emergence of new models of urban mobility.

Finally, and with the aim of gaining a deeper understanding of the current conflict in this sector, we will analyse the limitations and apparent failures in terms of regulation in the taxi sector.

However, before delving deeper into the subject, we should define the types of mobility services that can be found in the transport sector in Spain, related to the collaborative economy.

The transport sector, according to the Sharing Spain platform (2018), is made up of the following types of mobility services: a) carpooling; b) carsharing; c) ridepooling; d) car rental between individuals; e) parking spaces; f) train; g) chauffeur-driven vehicle services; h) bike sharing services; i) P2P logistics and j) B2C logistics. Below is a brief description of each of them.

- **Carpooling:** a mode of sharing the use of a private vehicle for the purpose of making a journey, previously stipulated by the driver, and to which one or more passengers adhere.

This type of service allows users to share travel-related expenses (petrol, tolls, vehicle maintenance, etc.). Carpooling exemplifies the elements that identify collaborative economy markets (Sharing Spain, 2018).

Firstly, the use of underutilised or idle resources, as the driver shares the use and enjoyment of his or her private asset with other people who are also interested. Secondly, the driver does not make professional use of his vehicle, the journey is stipulated on the basis of his mobility needs and not on the basis of the passenger's demand, he does not seek to make a profit from this activity, the sole purpose is to share the costs of the journey. For all these reasons, this modality would also be identified with the collaborative economy due to its relationships based on altruism.

¹¹ This refers to chauffeur-driven tourism vehicles. The acronym stands for "Vehículos de Turismo con Conductor" (VTC).

A clear example of carpooling in Spain is BlaBlaCar. The collaborative consumption platform present in our country since 2010 and which defines itself as "a social network for carpooling" (García, 2016), has become a mobility alternative that promotes environmental protection, which in 2016 stopped sending more than 1 million tonnes of CO₂ into the atmosphere.

- **Carsharing:** this type of modality allows users to rent a vehicle, normally owned by the platform, on a temporary basis. Users use the vehicles for a few minutes, hours or even days at a time.

The advantages of this type of service are the lack of concern for the maintenance of the vehicle and the environmental impact it generates. On the one hand, there are fewer people who own their own car when using this type of service, which translates into a greater decongestion of cities and a reduction in CO₂ emissions (Sharing Spain, 2018). On the other hand, most carsharing companies have a fleet of 100% electric or hybrid vehicles, which is in line with the foundations of the collaborative economy (Suárez, 2016).

CarGreen would be an example of a carsharing company. The valencian company, founded by Alejandro Villamuera, has a fleet of 100 units of 100% electric vehicles. The service offered by CarGreen works on a per-minute rental basis and the company expects around 15 people per day to use each vehicle (El Economista, 2021).

- **Chauffeur-driven vehicle services:** a type of service that consists of hiring a driver, in this case a professional driver, to make a journey. Unlike carpooling and ridepooling, in this case, there is a profit motive on the part of the driver, i.e. in exchange for the service there is a monetary consideration. The professional driver meets the needs of the traveller, who stipulates the terms of the journey.

In Spain, the platforms that make use of this type of service operate under the VTC licence. The main VTC companies operating on Spanish soil are Uber and Cabify, which provide their clients with a fleet of private transport vehicles that, through their respective mobile apps, connect travellers with professional drivers.

- **Ridepooling:** a modality based on the connection, via a mobile app, between passengers with travel needs and drivers who are willing to make the previously established journey. Although "a priori" this modality does not seem to meet the requirements to be a collaborative economy, according to Sharing Spain (2018), it would be fulfilled if both parties share the journey without any profit motive and, therefore, the driver does not receive any monetary consideration.

The difference with carpooling is mainly due to the fact that in carpooling there is the possibility of modifying some terms such as pick-up points, specific deviations or the end point of the journey, while in ridepooling the driver previously establishes a route and there is no possibility of modifying it.

The best-known example of ridepooling is Uberpop. Currently in Spain, according to Law 9/2013, of 4 July, on the Land Transport Organisation Act (LOTT¹²), Uberpop is not allowed to operate as it does not meet the necessary conditions for a VTC licence. The main reason is due to the "non-professional" driver status under which the company operated, which meant committing infractions such as drivers not paying social security contributions or working with unauthorised cars (Suárez, 2016).

- **Bicycle sharing services:** a type of service in which platforms allow the temporary use of a bicycle for a specific period of time. The platforms that offer this type of service can be privately or publicly owned, the latter being the most common in Spain. In this type of service, we can also distinguish between two initiatives:
 - Service offered by public entities such as provincial councils.
 - Private individuals offering their private bicycles to other private individuals in exchange for a fee.

While the first initiative would be considered within the access economy, the second initiative would be closer to the collaborative economy (Sharing Spain, 2018).

In the case of an access economy initiative, an example would be Valenbisi, an urban bicycle transport service offered by Valencia City Council. And in the case

¹² In spanish it means "Ley de Ordenación de Transportes Terrestres" (LOTT).

of a collaborative economy initiative, we would have Spinlister, where users can earn money by renting not only their bike, but also their surfboard or snowboard.

- **Car rental between individuals:** a similar modality to carsharing, where in this case the private vehicle is owned by a private individual and not by a company. The service consists of one of the users making their private vehicle available to the rest of the users of a platform, in order to rent it for a specific period of time.

Socialcar would be an example of a car rental platform between individuals. Thanks to this modality, users can advertise their vehicle and get the maximum economic return possible when they are not using it.

- **Parking spaces:** in the same way that users rent their private vehicles for a certain period of time, they also rent their parking spaces when they are available (Sharing Spain, 2018).

Similar to the bike sharing service, in this modality we find private initiatives, related to collaborative economy models, and public ones, related to on-demand and access economy models.

- **Train:** service modality that allows, through a collaborative platform, to connect travellers with the same destination. The main purpose of these models is to provide users with the opportunity to benefit from discounts or promotions for groups (Sharing Spain, 2018).

The website “Compartir Tren Mesa AVE” offers travellers the possibility of sharing tables on RENFE trains between individuals and intermediaries. Through this initiative, users can save up to 60% compared to the usual fare (Compartirtrenmesaave.com, n.d.).

- **P2P logistics:** a type of goods transport service between private individuals via a platform. The route is agreed upon by both parties, the driver and the receiver/sender of the goods. The purpose of the driver will be for profit or at least a consideration that allows the costs of the journey to be covered.

- **B2C logistics:** mode of transport service of goods between professionals and private individuals through a platform. In this case, the conditions of the journey are decided by the receiver/sender of the goods.

For both B2C and P2P logistics, an example would be the company UberEats, where through its mobile app you can choose from a wide variety of gastronomic alternatives.

6.1. Main collaborative platforms in the transport sector

Having defined each of the types of services existing within the transport sector in relation to the collaborative economy, let's look at the main collaborative platforms in this sector. We will carry out a brief analysis of their evolution, the keys to their success and their economic and social impact in Spain.

6.1.1. BlaBlaCar

The french company was founded in 2003 by its founder, Frédéric Mazzella, when he had to ask his sister to help him get home because there were no train tickets available. On his way home, Frédéric noticed the number of empty cars on the road and thought about the potential of connecting people who, like him, needed to find a car to take them to their destination with those who had enough space in their car and were not taking advantage of it (BlaBlaCar, n.d.).

From that sudden idea and five years later, the largest social network for carpooling was born (García, 2016), present in more than 22 countries and with more than 30 million travellers with an average distance travelled of 330 km per traveller (Sharing Spain, 2018).

Since its entry in 2010, BlaBlaCar has influenced the way society moves, positioning itself as one of the most rational and efficient mobility alternatives. Its community has grown to 5 million users in Spain and 65 million in the 22 countries in which it operates (BlaBlaCar, 2018).

According to the company's website (2018), it has experienced a national growth of 67% in users registered on the platform. Madrid, Cataluña and País Vasco are the protagonists of this growth with 122%, 113% and 101%, respectively. The profile of users has also changed, with the average age increasing from 24 to 31.4 years (BlaBlaCar, 2018). An increase of 7 years from which we can extract that there is an increasing

confidence on the part of those sectors where the use of taxis to get around used to prevail in the past. This makes BlaBlaCar the leading company in carpooling, not only because of the economic savings it generates for its users, the main attraction among young people when it entered Spain, but also because more and more people of different ages are enjoying the experience (Mazzella, 2018).

The french company, like many platforms implementing new collaborative economy models in Spain, has been involved in lawsuits for unfair competition. In this case, the company CONFEBUS (Spanish Confederation of Bus Transport) sued BlaBlaCar in Spain in 2017 for alleged breach of the LOTT 16/1987, of 30 June, and its regulations (Martínez, 2018). However, the company was successful in this lawsuit because its scope of action was outside the scope of this law.

BlaBlaCar is the largest exponent of the collaborative economy within the transport sector (Sharing Spain, 2018). The company, as the ruling states, only limits itself to connecting non-professional and non-profit drivers with passengers with travel needs.

The collaborative platform recognises that there is still a long way to go in order to "consolidate this type of efficient and social initiatives, it is essential that companies and institutions work together with the aim of generating an inclusive regulatory environment" (BlaBlaCar, 2018).

6.1.2. Uber

In 2008, Travis Kalanick and Garrett Camp attended LeWeb, a technology-related event. At the event, they were introduced to the idea that collaborative consumption initiatives could significantly reduce transport costs. Once the event was over, the two tried unsuccessfully to find an available taxi. From this event, Uber was founded in 2009. The success of the company over the years is mainly due to the simplicity of its operation, where with a single "click" on a mobile app they could order a ride (Uber, n.d.).

Currently, the platform is present in more than 500 cities, with a user traffic in its app of more than 40 million travellers and a supply of professional drivers that amounts to 1.5 million worldwide (Sharing Spain, 2018).

In the particular case of Spain, we must differentiate between two stages in order to understand in depth the controversy in which the company is involved. In the first stage, the platform arrived in Spain in 2014 through its UberPop service. This service consisted of facilitating contact, through the mobile app, between non-professional drivers and people with travel needs.

That same year, a complaint filed by the Madrid Taxi Association (FMT) led to the precautionary suspension of its operations in Spain. The cause was due to the fact that Uberpop did not comply with the Land Transport Organisation Act (LOTT) in which its drivers had to have VTC licences to be able to carry out their service, exercising unfair competition against the taxi sector (Suarez, 2016).

In the second stage, Uber re-entered Spain, specifically in Madrid, through its UberX service in 2016. In this case, the platform facilitated contact between professional drivers with VTC licences and passengers, in compliance with the Land Transport Organisation Act (LOTT). However, tensions with the taxi sector remained due to the non-compliance with the limitation of granting 1 VTC licence for every 30 taxi licences, stipulated in Royal Decree 1057/2015 (Noa, 2019). Although this law was being complied with by UberX, taxi drivers demanded that not only the 1/30 ratio be complied with on the basis of licences, but also on the basis of the vehicles in circulation at the time (Noa, 2019).

Two years later, for the same reason, a strike was triggered in Madrid, Barcelona and Valencia, the main hubs of UberX. As a result of the pressure, Cataluña passed a new law that obliges "the pre-contracting of the VTC service with a minimum time interval of 15 minutes between the contracting and the provision of the service" (Noa, 2019), forcing drivers to remain in their garages while the service is not being provided. As expected, a few days later the company announced its withdrawal from Barcelona. On the other hand, in the Community of Madrid, in the end, pressure from taxi drivers did not lead to a modification of the law.

6.1.3. Cabify

Spanish travel agency, founded in Madrid in 2011. As part of the holding Maxi Mobility Spain S.L., Cabify quickly internationalised to Latin American countries. The platform operates in the same way as UberX, facilitating the encounter between passengers and professional drivers.

Cabify is currently present in more than 12 countries, promoting development and sustainable mobility initiatives within cities such as "Cabify Electric" (Sharing Spain, 2018). This transport initiative using 100% electric vehicles will allow, according to the company, a 30% reduction in CO₂ emissions.

As with Uberpop, in 2015 the company faced a lawsuit filed by the Professional Taxi Federation (FPT) for unfair competition (Martínez, 2018). At that time, Cabify's

professional drivers did not have a VTC licence either, in breach of the Land Transport Organisation Act (LOTT).

Years later, Fedetaxi and Comisiones Obreras denounced to the Ministry of Employment the non-compliance with the conditions stipulated in the labour market, hiring their workers as false self-employed (Suárez, 2016). Let us remember that one of the biggest regulatory challenges for the future of the collaborative economy is the fight against this type of trend. The "proletarianization of the self-employed" (Cobacho, 2017) entails, among other negative aspects, precariousness and a worsening of the economic, labour and social conditions of workers.

6.2. Taxi sector

There are many similarities between the taxi sector and the platforms that operate with VTC licences, where their main activity is based on the transport of passengers by private chauffeur-driven vehicles. However, in terms of regulation, both sectors have relevant differences.

In this section, we will analyse the evolution of the taxi sector since the emergence of collaborative economy platforms. We will observe the type of competition regime in which the sector is situated and the main regulatory characteristics that define it. Finally, we will define the most relevant aspects that give rise to the conflict between taxi drivers and drivers with VTC licences.

6.2.1. Characteristics of the taxi sector

The taxi sector is composed of three main types of service that operate differently (Arancón, 2018):

- **Hiring the service on public roads.** Taxi drivers travel around the city and are hired by the person who at that very moment makes a gesture, giving the taxi driver a hint that he/she is requesting the service.
- **Hiring the service from a specific parking area for taxi drivers.** Taxi drivers are parked in spaces set aside for this purpose, waiting for a user to come and request the service. This modality is characteristic of areas close to hospitals, airports, shopping centres, leisure centres, etc.

- **Prior contracting of the service by telephone.** Services such as Radio Taxi in Valencia offer the possibility of arranging a pick-up and drop-off service by telephone.

Hiring via a phone call is similar to the services offered by platforms such as UberX or Cabify. However, the first two services are exclusive to taxi drivers.

The National Commission for Markets and Competition (NCMC) places the taxi sector in Spain in a monopoly regime with respect to the provision of passenger transport services with a private driver (NCMC, 2017). Specifically, the taxi sector would act in a monopolistic regime by having exclusivity for the provision of the service on public roads and from authorised parking areas.

Other aspects of the current regulations that differentiate the taxi sector from the VTC sector are:

- Taxi drivers are subject to mandatory timetables and rest periods, regulations that do not affect VTC drivers.
- The territorial scope of action is limited to the municipality in which the licence is registered; VTC licences are not.
- The taxi sector is regulated with regulated prices, while the price of the service offered by VTCs is set by supply and demand.

6.2.2. Evolution of the taxi sector vs. the VTC sector

According to INE data (2020), the total number of vehicles in the taxi sector in Spain has been decreasing. Since 2014, the number of taxis has gone from 70,541 to 69,547 in 2019, representing a decrease of approximately 1.5%.

Given that we are in a sector with a very restrictive regulation (NCMC, 2017), where entry barriers and territorial limitations guarantee a certain stability in the number of licences, this 1.5% decrease can be explained by two main factors.

Firstly, we can attribute this negative trend in the taxi sector to the increase in the number of inhabitants, especially in large cities. In Madrid, the rate of taxis per inhabitant has gone from 2.2 taxis per 1000 inhabitants in 2014 to 2 taxis in 2019. In Barcelona, the rate has evolved from 2.5 taxis per 1000 inhabitants in 2014 to 2.2 in 2019. Finally, in Valencia, the rate has gone from 1.3 taxis per 1000 inhabitants in 2014 to 1.1 taxis in 2019 (INE, 2020).

Secondly, we can attribute this evolution to the emergence of collaborative platforms in the passenger transport sector, such as UberX and Cabify (Arancón, 2018).

The VTC sector, unlike the taxi sector, has evolved favourably since the platforms made their appearance in the Spanish market. In 2015, the total number of VTC licences amounted to 3,474, with 0.07 VTCs per 1000 inhabitants (NCMC, 2016). While, in 2019, the total number of VTC licences evolved to a total of 14,089, being 0.3 the rate of VTC per 1000 inhabitants (INE, 2020).

Although the total number and rate of VTCs per 1000 inhabitants is much lower than the data collected in the taxi sector, the data are very promising even though we find ourselves in a sector that operates mostly under a monopoly regime (NCMC, 2017), with a regulation that favours it and that discourages collaborative economy platforms such as UberX or Cabify.

6.2.3. Taxi vs VTC sector conflict

The new business models based on the collaborative economy, in this case referring to the transport sector, have generated important changes in the structure of the sector and in society's consumption habits. Some countries, such as the USA or Estonia, have opted to encourage the development of these platforms by welcoming them into their own, fair regulatory framework, where they could compete freely with the rest of the traditional operators in the sector (Arancón, 2018).

In our country, the emergence of companies such as UberX or Cabify has generated great rejection from the taxi sector, but it has also made us consider how beneficial or detrimental the current regulations are to this sector. According to the NCMC, in a study to analyse the negative impact generated by the monopoly regime of the taxi sector in Spain (2017), it estimated that the current regulatory framework raised prices by an average of 13.1% compared to other markets, which did not limit the free entry of companies and did not regulate the price. This rate of overpricing translates into a consumer welfare loss of €324.3 million each year.

The restrictions imposed by the State in terms of regulation for the transport sector, to a certain extent, protect the taxi sector and impose unjustified regulations on the rest of the operators (NCMC, 2017). This positioning on the part of regulatory institutions highlights the limitations of the taxi sector and the flaws in the design of several of its services (Doménech, 2015).

Firstly, the contracting of the service on public roads. This type of service entails a considerable time cost for the user who looks for an available taxi on the street, where in many cases the influx is minimal.

On the other hand, information asymmetry (Doménech, 2015) generates a total lack of knowledge on the part of the user about the characteristics of the taxi driver before hiring the service. The user does not have relevant information such as the best route to reach the destination, the comfort and hygiene of the cab, etc.

Negative externalities (Doménech, 2015) such as pollution and traffic congestion are other failures in the conception of the taxi service. Most taxi drivers circulate on public roads in search of new customers, in contrast to mobility platforms, which circulate once they have received the request for the service, polluting only when the vehicle is occupied.

Secondly, the hiring of the service in the authorised areas. In this case, users do not have the possibility of freely choosing with whom to hire a ride, but rather, as a general rule, taxi drivers give priority to the taxi that arrived first.

As can be seen, there are several reasons that suggest a review and modification of the current regulation by the state. So far, the tendency of the authorities to regulate in favour of the taxi sector, such as limiting the number of VTC licences, restricting the territorial scope or imposing a minimum number of vehicles (Arancón, 2018), has slowed down the development of these business models.

In short, as pointed out by the NCMC (2017), this behaviour on the part of regulators lacks justification, going against the progress and general interest of society. Looking to the future, the new changes in society's consumption and the progress of these platforms will eventually impose the liberalisation of this sector, fostering innovation, eliminating barriers to entry, allowing free competition and favouring the welfare of companies and consumers.

7. CONCLUSIONS AND RECOMMENDATIONS

- The phenomenon of the collaborative economy has generated major structural changes in the different markets, rewriting new ways of doing business and consuming that are more sustainable from an economic, social and environmental point of view.
- The collaborative economy has made it possible to place consumers as the main players in the exchange of goods and services, leaving companies, who act as mere facilitators of this interaction, in the background.
- With regard to the conceptual framework, although we perceive a global consensus on the bases that support the definition of the collaborative economy, the main causal elements and the social and economic impact generated by the new business models, we understand that there is still a long way to go to develop a solid conceptual framework that allows us to identify those activities that fall within this phenomenon and those that are being applied incorrectly.
- The emergence of collaborative platforms, supported by new technologies and the Internet, is generating new trends and social behaviours, aimed at activities based on trust-based relationships and the exchange of idle resources.
- The emergence of new business models based on the collaborative economy, driven mainly by discontent in the wake of the financial and economic crisis, has generated new entrepreneurial opportunities that improve labour, economic and social well-being.
- With regard to the regulatory framework, this is one of the great present and future challenges for the collaborative economy inside and outside our country. The current regulatory environment was conceived within a traditional context, radically opposed to the disruptive environment in which collaborative economy platforms are present. Despite the efforts of the administrations to modernise and adapt the current regulations to the new business models, they are insufficient as we continue to observe major conflicts with traditional operators.

In this aspect, the institutions should work towards a regulatory agenda that actively supports the innovation, competitiveness and sustainable development initiatives of these models. At the same time, the agenda will seek to address the major tax and labour regulatory challenges presented by collaborative economy platforms.

- With regard to the transport sector in Spain, we observe that the conflict between the taxi sector and the VTC sector continues to be perpetuated.

On the other hand, the State continues to defend a limited and inefficient taxi sector, which is in a monopoly regime, applying unjustified and disproportionate regulation towards collaborative transport platforms.

- Spain, on the recommendation of the European Commission and based on examples such as the USA and Estonia, should carry out regulatory modifications aimed at liberalising the transport sector, eliminating barriers to entry, promoting free competition and favouring the common interest.

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