1. Introduction

1.1 Overview

The sharing economy has been described as a disruptive socio-economic system that, by combining collaborative principles with the potential of the internet, represents a major challenge to well-established economic models which generally focus on hyper-consumption and private ownership (Botsman & Rogers, 2010; Howard, 2015; Doennebrink, 2016; Gansky, 2010). The sharing economy, also known as collaborative consumption (Algar, 2007; Botsman & Rogers, 2010), collaborative economy (Owyang, 2013; Bauwens, 2012) or crowd-based capitalism (Sundararajan, 2016), among several other names, seeks fairer and more sustainable means of consumption of products and services through powerful digital platforms. Additionally, the sharing economy appears to be linked to a set of principles which are transforming deeply rooted consumer habits into new patterns of consumption.

Some of these principles are: (1) the prioritization of peer-to-peer (p2p) transactions via digital platforms designed for sharing, exchanging, swapping, gifting or trading goods or services, without requiring third parties or middlemen (Benkler, 2004; Rifkin, 2014); (2) the fostering of collaborative consumption and shared ownership (Cañigueral, 2016; Chase, 2016; Matofska, 2016), which have been defended as more cost-effective and environmentally friendly than individual consumption and private ownership (Rifkin, 2014); and, (4) the almost exclusive use of smartphones and computers for making electronic payments and other market-based actions (Gansky, 2014; Owyang, 2013; Bauwens, 2012).

The sharing economy has become greatly popular due to the proliferation of well-known platforms like Uber, Airbnb or BlaBlaCar. In consequence, a considerable number of articles, books and reports documenting this phenomenon have been published throughout the last decade. However, current academic research has not been able to keep up with the rapid expansion that the sharing economy has experimented so far (Matofska, 2016; Botsman, 2016).

In addition, the sharing economy has recently been subjected to harsh criticism. The hospitality and transportation industry accuse Airbnb and Uber of endangering their businesses and livelihoods. This concern has also been raised by experts in economics and other fields, who consider the sharing economy a potential threat to basic social rights (Slee, 2015). Overall, the sharing economy appears to be highly controversial and is, in fact, looked upon with fear and distrust by a large segment of society. In part due to its recent appearance, multiple questions arise when it comes to comprehending the exact nature of this socio-economic system. Will the sharing economy be a favourable economic system in the long term? Is the sharing economy as beneficial as its defenders claim? What social implications are directly attached to the development of this paradigm? Is it solely a temporal trend or is it here to stay? How can this digital model of commerce be properly governed for the common good?

1.2 Scope

After having briefly contextualized the main subject, this study proceeds to examine the scope and the limitations that will be considered during the research process.

Period of research and geographical scope. This project seeks to explore the sharing economy from a global perspective. The main goal is to elaborate a common and holistic understanding of the sharing economy valid, not only for academics, but also for any reader interested in the topic. For this reason, the dissertation is based upon literature, articles and other sources issued in various countries, as well as interviews with experts across the globe. In terms of time, the study is scheduled to be completed within four years. The dissertation not only embraces publications issued within this period of time but also relevant works published in previous decades. More concretely, the temporal frame of the research sources spans mainly from the early 80s to the present day. This time interval comprises the rise of the early sharing economy and its further consolidation.

Which aspects does this dissertation explore? Following a Historical Sociology scheme, this PhD dissertation pays special attention to the exploration of social facts and their transformation over the time. More concretely, it embraces the in-depth analysis of the following subjects: social interactions via digital networks, consumer

behaviour, digital transformation, p2p exchanges, community building, social collaboration and reputation concerns. Although in a lesser degree of importance, the following list of concerns is also contemplated: labour issues, regulation of digital platforms, environmental aspects and social repercussions of the 2008 financial crisis. Naturally, all these aspects are explored in light of their connection to the sharing economy.

Which aspects are NOT explored in this dissertation? This dissertation does not seek to explore the sharing economy from the economic or political points of view. It does not analyse financial parameters nor business management practices. In addition, this dissertation does not seek to examine engineering aspects, computational processes, mathematical algorithms or coding systems. A basic conceptualization of these technological structures will be sufficient to contribute to the better understanding of the social phenomenon under examination. Furthermore, it is also essential to remark that, while collaborative practices based on the exchange of products and services date back to ancient times (Howard, 2015; Sundararajan, 2016), the concept of a sharing economy applies exclusively to a contemporary phenomenon facilitated by the advent of digital technologies (Algar, 2007). Thus, scientific works on collaboration that embrace the internet into their research field are prioritized in this dissertation.

Other limitations. The research team is comprised by Esther Martos as the main researcher and Muriel Blaive as supervisor of the project. In terms of research equipment and other resources, this study will rely on a computer, a printer, a scanner and internet connection. With regard to software and digital applications, this study uses Microsoft Office, Draw.io, Similar Web, Trello, Skype and Gmail. And last, excluding the active participation in several events about the sharing economy worldwide, the bulk of the research takes place in Prague, the Czech Republic.

1.3 Motivations, aims and research objectives

This dissertation is guided by the belief that a proper understanding of the historical grounds of any social phenomenon largely facilitates further investigations related to it. As mentioned above, the lack of research projects and academic publications regarding the emergence and development of the sharing economy, has led this study

to focus its attention primarily on researching, not only the roots of early sharing economy platforms, but also the posterior development of this paradigm.

Firstly, by researching the emergence and development of the sharing economy, this dissertation will provide a solid and coherent narrative foundation upon which additional research projects can be constructed. The historical and sociological analysis of the sharing economy over its first years of existence will function as a reference for future academics who seek to understand its origins. And secondly, the elaboration of this dissertation contributes to the Historical Sociology scientific community, given that, the research work published so far does not extend to this academic field. Therefore, this study and in consequence also the Historical Sociology Department of the Charles University of Prague, are pioneers in this particular approach.

My personal motivation for engaging in this research project dates back to the 2008 financial crisis when new and more affordable business concepts began to gain ground in large cities. Having first hand experience with this initial development stage of the sharing economy, not only as a passive observer but also as an active user, I would like to emphasize my interest on understanding this social phenomenon which appears to disrupt the consumer habits of a large number of individuals worldwide. Furthermore, I am personally interested in exploring to what extent the sharing economy might represent a solid form of commerce for the upcoming decades or, if instead, it is merely a trend destined to disappear. Thus, the main motivation for undertaking this research project is to bring light to an unexplored, but increasingly pervasive business paradigm. This study, therefore, does not embrace past and already finished events but a social reality still in transformation. By directly observing the sharing economy as it continues to develop, this dissertation will aid further investigations into the roots of this socio-economic paradigm.

In sum, the principal goals of this dissertation are:

- To explore the foundations of the sharing economy in order to understand what sort of events have made possible the emergence of this collaborative model of business.

- To provide a concrete and detailed understanding of the main characteristics and functions of the sharing economy, as well as, to define the goals, limitations, consumer behaviour, typologies, challenges and controversial issues which are linked to the sharing economy.
- To observe the evolution of the sharing economy from its early stage of development until the present day. The identification of variations from the original conception might contribute to understanding where the sharing economy is headed.

Aside from the above stated aims, this dissertation also seeks to focus its scope on several specific issues:

- What sort of digital innovations have lead the formation of the sharing economy?
- To what extent has the 2008 financial crisis boosted the emergence of the sharing economy?
- To what extent the digitalization of physical goods has disrupted existing patterns of consumerism?
- What makes the sharing economy similar to or different from other contemporary economic paradigms, such as the circular economy, the gig economy, the gift economy, etc.?
- Which are the main obstacles that lie ahead for the sharing economy?
- Are Facebook groups dedicated to sharing, buying or selling goods or services capable of winning over European citizens?[1] This is important due to the fact that Facebook is one of the latest platforms to join the sharing economy movement (Owyang, 2016).
- How has the number of user of 30 of the most prominent sharing economy platforms evolved between 2015 and 2017?[2]

[1] Case Study 2
[2] Case Study 1

2. Research methods

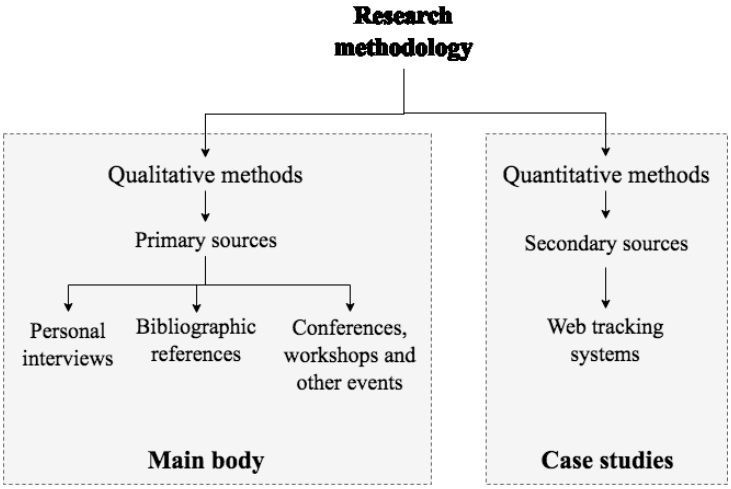
The previous chapter outlined the subject of this dissertation as well as its aims, scope and limitations. This chapter exposes the methodology chosen.

On the one hand, as it has been already stated, the aim of this dissertation is to understand a social phenomenon, the sharing economy, while approaching its historical roots, challenges and benefits, amongst other issues. Thus, this study has opted for using qualitative techniques which are principally focused on exploring these types of social and historical concerns (Hancock, 1998; Burns, 2000; Blaxter, Hughes & Tight, 1996). However, on the other hand, this study also attempts to explore the user evolution of 30 sharing economy platforms[3] as well as 13 Facebook groups[4] that perform sharing economy practices. This user evolution will be measured on a monthly basis by counting the number of visitors and membership additions to each of these networks. In order to properly collect, monitor and process such numerical data it is essential to appeal to quantitative methods.

In sum, qualitative methods will be used for the segment of the research project which seeks to develop the theoretical framework of the investigation. Afterwards, for the case studies, the methodology will shift to quantitative techniques. It is important to remark that quantitative and qualitative methodologies are not necessarily mutually exclusive, so in occasions, it is possible to find investigations which combine both formulas (Best & Khan, 1989). As Kus (2003) claims, "quantitative and qualitative approaches are not two opposite poles and researchers are not obliged to choose only one of them". Indeed, the use of qualitative methods might contribute with necessary information that would be difficult to obtain with quantitative techniques and *vice versa*; the combination of both might provide a more understandable general picture (Punch, 1998). Thus, this study proposes a hybrid approach, as illustrated in Figure 1:

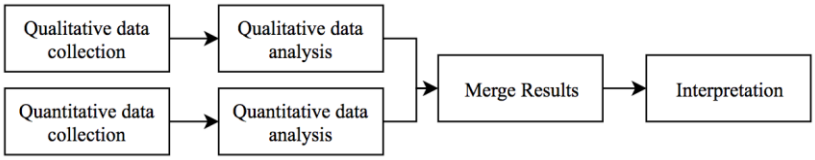
[3] Case Study 1
[4] Case Study 2

Figure 1: *Research methodology structure. This schema specifies methods, sources and essential parts of the dissertation.*



This research model has taken inspiration from the Mixed Methods Procedure (Creswell, 2013) in which qualitative and quantitative formulas reinforce each other:

Figure 2*: Mixed methods procedures structures*



2.1 Primary sources

The principal goal of this investigation is to develop a theoretical narrative regarding the nature, history and development of the sharing economy. For this, it is necessary to observe how the study subject behaves in different contexts, contemplating its historical transformations and societal implications. Thus, and appealing to Hancock's statement (1998), this study justifies its decision to employ qualitative methods on the following quote:

> "Qualitative research is concerned with developing explanations of social phenomena. That is to say, it aims to help us to understand the world in which

> we live and why things are the way they are. It is concerned with the social aspects of our world and seeks to answer questions about: why people behave the way they do, how opinions and attitudes are formed, how people are affected by the events that go on around them, groups…" (Hancock, 1998, p.2)

The list of data sources related to qualitative methodologies is quite extensive, however, Mason (2002) highlights the following ones as the most frequently used; people, organizations and entities, texts, environments, objects and events. Accordingly, this study focuses its qualitative methodology on three out of six of Mason's data sources. These are: (1) texts, making reference to literature already published (printed or digital) fundamentally related to the study field; (2) people, several personal interviews with sharing economy experts will provide crucial information to the understanding of this social phenomenon; and (3) events, this study aims to actively participate in multiple workshops, conferences and other events related to the sharing economy, in an attempt to exchange relevant knowledge and network with other researchers. These three data sources are detailed below.

2.1.1 Bibliographic references

The review of literature related to the field of investigation allows the researcher to precisely identify what sort of issues have already been explored and what concerns, on the contrary, remain unexplained (Polkinghorne, 2005; Gay, Mills & Airasian, 2009). By engaging in a detailed and proper examination of what has already been investigated, the researcher is able to frame his/her work and formulate plausible hypothesis or research questions. Therefore, the review of essential literature related to the sharing economy constitutes one of the most important data sources in this investigation.

It is imperative at this point to declare that this is predominantly a theoretical-based approach and that its structural basis is constructed mainly by the accurate analysis of existing documents. This study has painstakingly identified a body of potential written sources such as monographs, articles, books, reports or other dissertations which greatly contribute to the task at hands. However, only texts which meet certain additional requirements have been taken into consideration. For instance; (1) the subject of the publication must be centred on the sharing economy or any related topic; (2) given the

digital nature of the sharing economy, the literature published throughout the digital era is prioritized, although some previous documents have also been examined; and (3) the authors must be relevant in the academic and scientific field. The combination of these three requirements considerably reduces the range of possibilities of an already limited body of potential publications; given the relatively recent appearance of the sharing economy, the literature issued so far does not constitute a large narrative

This is, in fact, one of the main motivations of this research: to collect, analyse and compare the existing literature on the sharing economy in order to construct a solid narrative foundation.

2.1.2 Personal interviews

Personal interviews are considered one of the most efficient techniques for developing qualitative research (Kus, 2003), given that it provides substantial explanations of the subject under research from direct and personal experiences (Polkinghorne, 2005). The interview process seeks to uncover and explore relevant issues and perspectives which are absent in the published literature, effectively shedding light on certain blurred concerns. The obtained information fosters a more accurate understanding of the social phenomena than by using quantitative methods alone, given that the interviewer has the ability to redirect the conversation to other concerns, according to each situation. The interviewer has a higher degree of flexibility when posing questions, a fact that usually contributes to obtaining grounded information (Mason, 2002). Accordingly, all interviews conducted in this study are semi-structured, that is, although there is a template of questions designed to cover the principal concerns of the research project, the interviewer and interviewee are encouraged to interact in a more dynamic dialogue, a method which can effectively lead the conversation to unexpected outcomes (Edwards & Holland, 2013).

Therefore, this study has designed its own research procedure in which 22 interviews are conducted, mostly via Skype calls or in person. Initially, the interviewer offers a short description in which the context, aims and methods of the research project are presented. Subsequently, a basic set of 12 questions are posed in an average time range of 30 to 50 minutes in total. After having performed and recorded all interviews, questions and answers are transcribed and archived. It has been already argued that

interviews are based on qualitative methods, however, it is necessary to point out that, in chapters 4, 6, 7 and 8, responses are sorted and evaluated in tables by the use of numerical values. Thus, although the development of the interviews is qualitatively driven, there are cases throughout this dissertation in which quantitative techniques are used as complimentary measurement tools. As it is already stated, both dominant methodologies can be combined, indeed qualitative data often includes numerical quantification (Punch, 1998; Kus, 2003). Full interview scripts, as well as a short biography of each interviewee, can be found in the Annex.

2.1.3 Conferences, workshops and special events

In addition to bibliographic references and personal interviews, this study believes that the active participation in conferences, workshops and any other event related to the subject of study, is a potential source of knowledge. Attending these sort of events allows researchers to share their ideas, methods, findings and other issues about specific subjects (Mason, 2002).

Thus, the main aim of this dissertation when attending such events is to: (1) present the research paper to the audience and receive responses and feedback; (2) learn from similar research projects; and (3) connect with other investigators for possible further collaborations. Throughout the duration of the PhD program, the research paper of this dissertation has been presented at 11 major events. The full list can be found in the Annex.

2.2 Secondary sources

According to Leedy (1993), "the nature of the data dictates the methodology, if the data is verbal, the methodology is qualitative, if it is numerical, the methodology is quantitative". Unlike the core of this thesis, which attempts to construct an explanatory narrative based mainly on the comparison of theoretical approaches, the last two chapters address the transformation of the sharing economy from numerical data. Both case studies examine the development over time of certain online platforms by measuring the number of visitors that each platform gets per month. The empirical data produced will be presented in tables and graphs. Following Leedy's statement (1993) and considering the nature of these two exercises, it is suggested that the optimal

processing of such numerical data would be better achieved by the use of a quantitative methodology.

Quantitative research can be performed by using a variety of techniques and sources as long as they provide data which can be interpreted in terms of numbers (Best & Khan, 1989). As it is briefly explained above, only two variables are going to be measured: times and number of visits[5]; and, number of members[6]. Therefore, the procedure to initially collect the data will be based on web tracking systems which will monthly monitor and archive both variables.

2.2.1 Web tracking system

Web tracking systems are used in this research project to obtain quantitative empirical data from a set of sharing economy platforms. This data reflects the number of users who visit these platforms by *clicking* on them. More precisely, web tracking systems:

> …are used to collect, store and connect user web browsing behaviour record […] the web analytics field is concerned with the measurement and interpretation of web site usage data. A variety of information is potentially of interest to web site operators, such as: the number of visitors over time, which can further be divided into returning and new visitors. (Schmucker, 2011)

Therefore, visitor traffic data provides valuable information which, after having been integrated into statistical reports, will prove useful for drawing conclusions regarding the growth in popularity of digital platforms over time. This dissertation contemplates two different web tracking systems, one for each case study:

Case study 1. For collecting and examining the monthly visitor traffic of 30 sharing economy platforms, it will be used the web tracking service www.similarweb.com[7]

[5] Case Study 1
[6] Case Study 2
[7] The data is obtained from 4 main sources: 1) A panel of monitored devices, currently the largest in the industry. 2) Local internet service providers (ISPs) located in many different countries. 3) The web crawlers that scan every public website to create a highly accurate map of the digital world, and 4) Hundreds of thousands of direct measurement sources from websites and apps. Once we have collected volumes of raw data, we use statistical analysis and machine learning techniques to turn it into actionable knowledge […] Our raw data is treated with in-house algorithms to remove biases, filter out noisy information, and transform it into meaningful insights. The data from our diversified sources is intelligently combined, normalized, and projected to represent the entire Internet population. (SimilarWeb, 2017) www.similarweb.com (Retrieved 16-08-2017)

(Figure 3), which is able to track the number of *clicks* that each specific webpage gets every month worldwide. In order to get this numerical data free of charge, it is necessary to visit the web and manually collect the data every month.

Figure 3: *Screenshot of Similarweb.com while monitoring the user traffic of Airbnb.com (retrieved 24-08-2017)*

Case study 2. For this case study, it will be monitored the development of 13 Facebook groups in which users are allowed to sell, buy and trade products and services from peer-to-peer. Unlike Case Study 1 where SimilarWeb.com tracks the number of *clicks*, in Case Study 2, the target data is the number of members subscribed to each group. This data can be only collected by visiting each group and manually collecting the data. Thus, the data collection process is similar to Case Study 1, aside from not using the tool SimilarWeb.com.

2.3 Research agenda and content outline

Before closing this chapter, it is necessary to briefly define the research agenda as well as to draw an outline of the entire set of chapters.

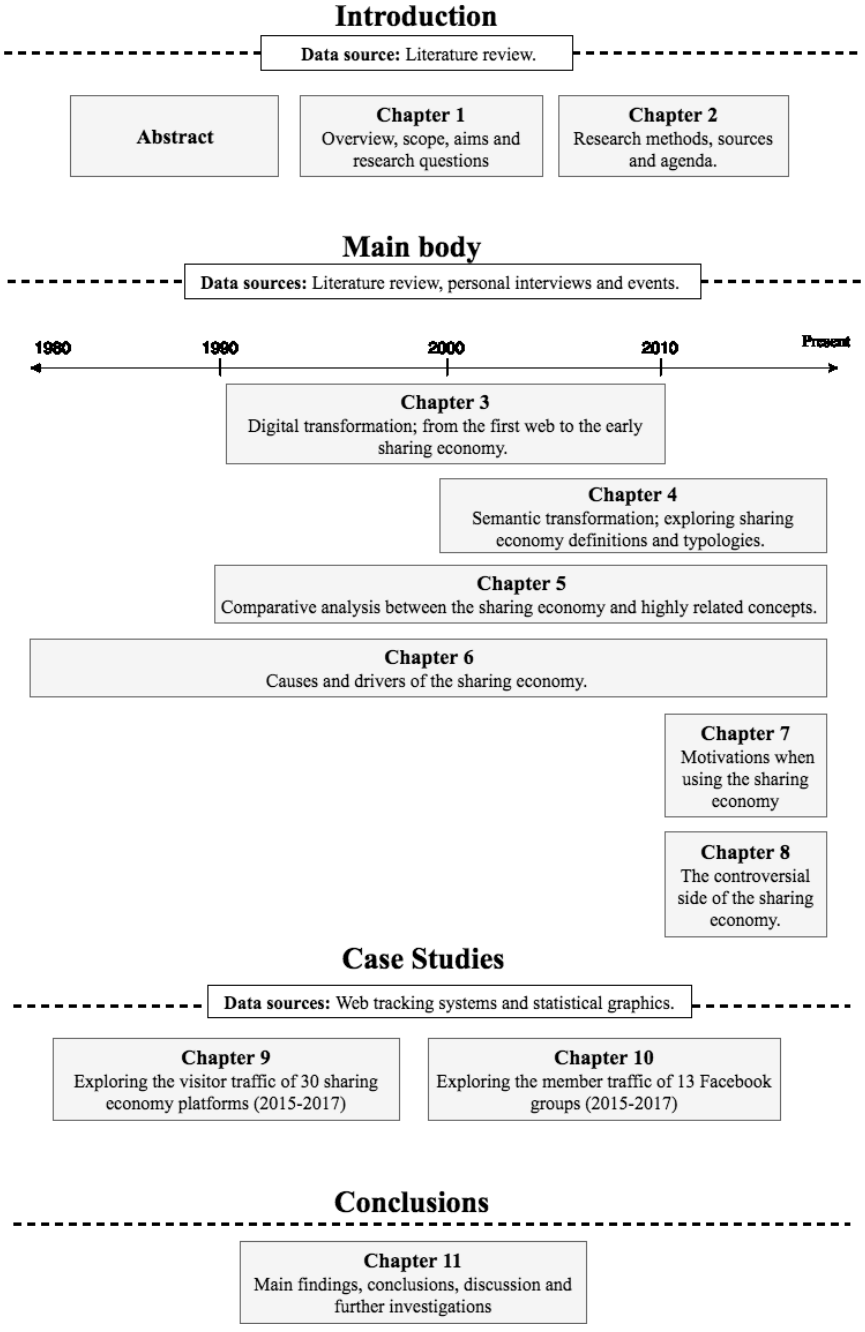
The research process can be structured into three main phases. The first is the theoretical phase, in which the basic idea, research questions, aims, methods, expected outcomes,

overview of the study field and relevant literature are initially settled and defined[8]. The second is the data collection phase, which constitutes the most extensive part in terms of time[9]. All data from the interviewing process and the literature review is collected, organized and classified into different topics, as such, definitions, typologies, drivers, aspects related to technology, social impacts, historical events, challenges, controversies, benefits, forecasts, etc. And the third is the data processing phase[10], this is a crucial phase in which all data collected in the previous phases is processed, interpreted and argued.

In order to conclude with this chapter, a summary and general outline of the content of this study, in all its length according to data sources, narrative sections as well as the temporal frame, is presented in Figure 4.

[8] Oct. 2014 – May 2015
[9] May 2015 – Sept. 2016
[10] Sept. 2016 – Sept. 2017

Figure 4: *Research outline and data sources organized by the principal sections. The section "main body" also includes the temporal scope in which each chapter is focused on.*



3. Digital transformation

The sharing economy is understood as a new socio-economical system only viable by means of the internet (Gansky, 2010; Chase, 2015). This new system is technically built on digital platforms which allow users to have "online accessibility" to assets stored on the net (Stephany, 2015). Therefore, this dissertation will not consider or examine sharing practices and collaborative communities which are fully established offline and independently from digital networks.

In order to accomplish the main goal of this study and understand the evolving behaviour of the sharing economy, it is of great importance to explore its digital roots. The specific objective of this chapter is to bridge the earliest phases of the World Wide Web and the current online marketplace, aiming to detect what kind of sequential events have made possible the existence of the sharing economy. As a result of this historical research, the chapter will conclude with a timeline and other relevant sociological findings.

3.1 Evolution of static websites into commercial platforms

The historical transformation of the Information Age is shaped by different stages and remarkable innovations. Although its beginning dates back to the 1950s, it was not until the appearance of the personal computer in the late 1970s and early 1980s when this new information period took prominence. Subsequently, in the 1990s, the advent of the first website and its new updated version 2.0 in the early 2000`s, marked the shift towards what Rifkin (2014) and Anderson (2012) refer to as the third industrial revolution, characterized by the democratization of the internet.

The first World Wide Web was born in 1991 when Tim Berners-Lee, a British scientist at CERN (European Organization for Nuclear Research Organisation), launched his project online for the first time. The initial web (http://info.cern.ch/) was designed to facilitate information-sharing among scientists, universities and other institutions worldwide. Berners-Lee found that, given the international nature of the CERN, different information was stored on distinct computers running all sorts of software.

This fact made access to relevant content highly limited and restricted. In response, Berners-Lee created the web's basic concepts, the URL, HTTP and HTML codes attempting to build an open scientific community where knowledge was easily stored, archived and shared. In 1993, CERN launched the WWW free of charge and available with an open license in the public domain, with a basic browser and a library of code, thus establishing the web as a common standard available to all. In consequence, the web experienced an immediate growth phase[11].

It is significant to highlight the non-commercial and decentralized nature of the early internet where openness was a fundamental feature. However, in 1992 an important shift allowed the commercialization of the internet and its source code. The Scientific and Advanced Technology Act permitted the US National Science Foundation to engage with for-profit online networks. Regarding this fact, Slee remarks that, "digital openness, which was initially a norm of the non-commercial world of researchers and enthusiasts cut off from the world of private property, was exposed to the profit motive" (Slee, 2015, p.110-111).

The privatization of the internet originated new for-profit usages focused not only on information exchange but also on the commercialization of physical goods, an unprecedented fact before the 90s. This phenomenon shaped the pillars of the early online market and subsequently the basis of sharing economy platforms. In order to argue this statement, it is necessary to cite the foundation of eBay in 1995, the first large p2p online market (Sundararajan, 2016). Traditional trade systems, such as flea markets or garage sales, were reconfigured into online interfaces. eBay allowed independent buyers and sellers, for the first time, to collaborate on a new concept of business.

This important shift from brick and mortar establishments to online shops produced new consumer behaviours: (1) users found an easier way of selling their items from home simply by uploading descriptions and pictures; (2) there was no initial fee or investment, contrary to physical flea markets where usually a space rental fee is required; and (3) the commercial scope changed from local to global. eBay is

[11] Home.cern. (n.d.). *The birth of the web | CERN*. [online] Available at: https://home.cern/topics/birth-web (Retrieved 29- 7- 2016).

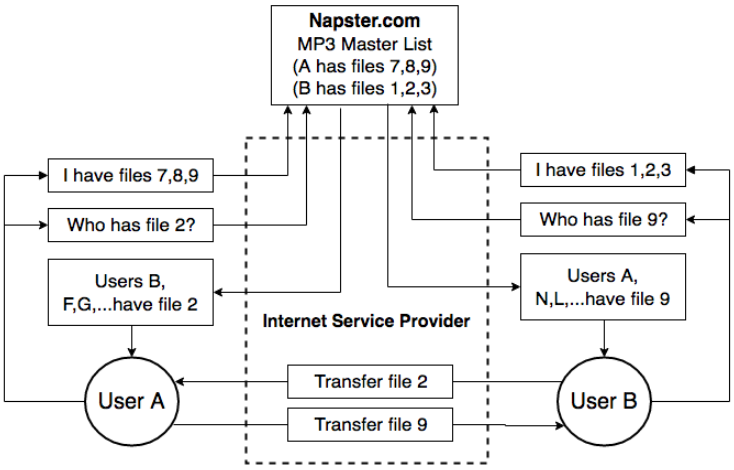
considered a conceptual ancestor of today's sharing economy due to its peer exchange relationship (Botsman & Rogers, 2010; Sundararajan, 2016).

A year later, in 1996, the e-mail service Craigslist would also play a considerable role in shaping the networking behaviour of the sharing economy, by establishing a completely self-managed and decentralized online community (Botsman & Rogers, 2010). From its advent, Craigslist experienced a rapid growth due to two main reasons: the simple and utilitarian design of its network and the exponential growth of user contribution (Dubner, 2007). The innovative strategy of this website was to launch a very basic platform and empower peers to build complements among themselves. By avoiding moderation of the online activity of its users, Craigslist witnessed an increase in participation of its members, who eventually added more sections like items for sale, housing, dates, jobs, or discussion forums. Craigslist's transformation was possible given to its openness and transparency; users themselves were creating value while supplying their demands. Currently running as a classified advertisements website, Craigslist is considered one of the most popular p2p service platforms, built on a decentralized network and with the ability to empower users to self-manage the community (Kidd, 2011). Nevertheless, there is a substantial difference between the early Craigslist and current p2p service marketplaces: the element of ratings and comments as a tool for reputation building (Sundararajan, 2016). The austere and simple design of Craigslist did not allow users to comment and leave ratings after the service, contrary to trust systems highly predominant in contemporary sharing economy platforms.

Continuing with p2p exchanges, it is important to briefly consider Napster, a pioneer platform in p2p file sharing. This network, formed in 1999, allowed users to share music openly and freely, a fact that caused serious problems to traditional music industries (Rifkin, 2014). One of its main drivers was attached to the advent of the digital format MP3, a new technological support that permitted members to easily save files in the Napster central server (Gowan, 2002). A large music database was stored and subsequently shared by enabling connections between peers as is shown in Figure 5. Lately, this data flow scheme was simplified by Botsman and Rogers as an "I need…you have…" relationship (Botsman & Rogers, 2010). Napster's system is

currently applied to a major number of sharing economy platforms based on on-demand services

***Figure 5**: The file sharing structure of Napster (Berschadsky,2000)*



The platform was well accepted by the population and achieved rapid success posing thus a strong and direct threat, as mentioned above, to several major record labels. In 2001, the Ninth Circuit Court of Appeals shut down Napster, establishing that it had violated the plaintiffs' copyrights and contributed to their infringement (Giesler, 2008; Douglas, 2004). Moreover, Napster's case also laid bare the seeds of controversy between traditional markets and new methods of online transactions. As Rifkin (2014) observes, this is the initial moment where traditional capitalism started being partly replaced by the digitalization of physical goods.

Online networks like Craigslist, eBay or Napster were highly relevant in the development of p2p exchanges and therefore also played a significant role as precursors of the web 2.0. The advent of the new WWW and its evolution established a considerable boost towards the consolidation of the commercial internet. Web 2.0 platforms generated an unprecedented virtual market for sharing diverse products and services by matching supply and demand (Botsman & Rogers, 2010).

The term “web 2.0” was first coined by DiNucci in 1999 after perceiving a move from a mere static web to a more dynamic and participative site. DiNucci (1999) stated:

> The Web we know now, which loads into a browser window in essentially static screenfuls, is only an embryo of the Web to come. The first glimmerings of Web 2.0 are beginning to appear, and we are just starting to see how that embryo might develop. The Web will be understood not as screenfuls of text and graphics but as a transport mechanism, the ether through which interactivity happens. It will [...] appear on your computer screen, [...] on your TV set [...] your car dashboard [...] your cell phone [...] hand-held game machines [...] maybe even your microwave oven. (DiNucci, 1999; p.32)

The web 2.0 allowed non-expert users to take part in the construction of digital content by interacting and collaborating in online communities. This statement takes us back to Berners-Lee’s vision of a network where content was intended to be freely created and shared among members. A decade later, the system integrated two more substantial elements to Berners-Lee’s concept; usability and interoperability. O’Reilly (2005) made an important contribution researching and exposing the main features and drivers of the novel web 2.0. The writer explored how well-established resources were eventually replaced by programmable and dynamic online networks. As such; Britannica online was defeated by Wikipedia, and similarly, Ofoto by Flickr, mp3.com by Napster, personal websites by blogging or content management systems by wikis. Tapscott and Williams (2006, p38-39) updated this list adding; “MySpace beat Friendster and Craigslist beat Monster” and redefined the concept arguing that the new web is driven by “peering”, a combination of sharing, socialization and collaboration maintaining connected communities. The transformation of the website into its dynamic version democratized information enabling users to innovate by themselves (von Hippel, 2005; Howard, 2015; Anderson, 2012).

Additionally, O’Reilly (2005) introduced the concept of “the web as platform” referring to an infrastructure designed and made to build applications on; a distributed operating system able to create software systems. Furthermore, the “platformization of the web” (Helmond, 2015) fosters empowerment and democratization (Beer, 2009), as well as participation and collaboration among users (Madden & Fox, 2006). In addition, Allen

(2013) downplays the dynamic web as "rhetorical technology", pointing out the power of computing companies to transform the way people understand the internet. More recently, Scholz (2016) explored the platform phenomenon in relation to the rise of the sharing economy, coining it as "the rise of platform cooperativism". This concept attempts to bring cooperative management guidelines into online ecosystems. Namely, a cooperative platform would be owned solely by its users, therefore avoiding external control by middlemen or other private companies. Platform cooperativism represents a phase in the evolution of collaborative consumerism, and will be examined in later chapters.

In its brief history, internet use has grown and diversified at an exponential rate. Having analysed its transition from being a static web, characterized by pure stored knowledge, to the more participative and dynamic WWW, this study proceeds to take a look at one of the last waves of online innovation called the Internet of Things (IoT), a technology which seeks to maximize resource optimization.

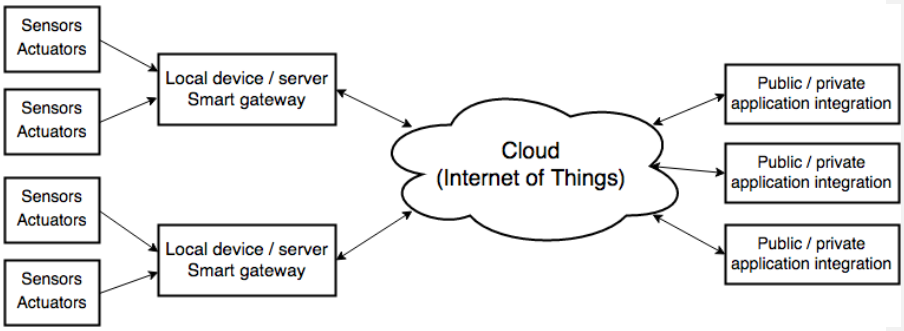
The economist Rifkin (2014) defines IoT as "the first smart-structure revolution in history, one that will connect every machine, business, and vehicle in an intelligent network [...] all embedded in a single operating system" (p.73). Although is there a long discussion regarding who coined the term first, Peter T. Lewis back in 1985 or Kevin Ashton in 1999, the concept has definitely attracted the interest of researchers and commentators during the last decade.

Simply defined, IoT is understood as the open connection of objects, processes and smart devices through sensors which in turn monitor and evaluate big data in order to maximize the optimization of physical resources (Kramer, 2015). This extreme level of connectivity allows embedded objects to become part of a computer-based system which generates a vast quantity of data. Pure digits are continuously being managed by individuals, corporations or public services. For instance, public transport services normally function with IoT technologies to inform passengers about the specific time they have to wait until the next coach arrives. In such cases, data is obtained by sensors and GPS, stored in the cloud, and finally interpreted by mobile apps or other electronic devices (see Figure 6). In an overall view, IoT reduces, amongst others, the use of

carbon, raw material and labour time, as well as "by socializing knowledge, it also has the power to amplify the results of collective action" (Mason, 2015, p.268).

IoT operating systems have been designed as open and distributed technologies where anyone and everything is connected via the same "cloud" (the internet). This collaborative network is highly productive, given that the more sensors that are embedded to the system, the more data is collected and stored and, factors such as time and energy are lowered to the minimum, thus reducing production costs (Rifkin, 2014). The following figure describes the basic IoT architecture[12]:

***Figure 6**: IoT basic architecture based on the "Eurotech IoT approach"*



IoT environments are fully interconnected within distributed networks; they allow other external entities to access and use big data stored in the cloud by means of applications developed to translate pure information into optimal outcomes. This early phenomenon has evolved into more complex structures, such as the Internet of Everything (IoE), which includes people in the formula. Thus, IoE is the networked connection of people, data, process and things (Kramer, 2015). In the "network of networks" (Evans, 2012) nations, enterprises, natural resources, individuals and other parameters will become digitalized adding value to the whole community (Howard, 2015).

Rifkin (2014) highlights the collaborative aspect of the IoT as a disrupting tool which encourages a sharing culture based mainly on peer production. Rifkin points out:

[12] Figure based on: Eurotech.com. (n.d.). *M2M IoT Software and Services*. [online] Available at: http://www.eurotech.com/en/products/software+services (Retrieved 27-11- 2016).

> The new infrastructure is configured to be distributed in nature in order to facilitate collaboration [...]. The operating logic of the IoT is to optimize lateral peer production, universal access, and inclusion, the same sensibilities that are critical to the nurturing and creation of social capital in the civil society. The very purpose of the new technology platform is to encourage a sharing culture, which is what the Commons is all about. It is these design features of the IoT that bring the social Commons out of the shadows, giving it a high-tech platform to become the dominant economic paradigm of the twenty-first century. (Rifkin, 2014, p.18)

This dissertation considers Rifkin's statement (2014) as suitable to conduct a sociologically focused analysis, and bridge it to the main body of this investigation, the current sharing economy. Assuming that online peer production is a predominant pillar of collaborative platforms (Stephany, 2015; Shirky, 2008; Howard, 2015; Chase, 2015), this study proceeds to deconstruct relevant theories and approaches that attempt to understand the nature of large peer networks.

3.2 Theories on open and distributed peer production networks

Peer production communities based on self-organization and cooperation have been the target of investigation in several studies developed by sharing economy experts (e.g. Sundararajan, 2016; Shirky, 2008; Slee, 2015; von Hippel, 2005; Mason 2015). According to such studies, peer production/exchanges shape the basic structure in which goods and services are interconnected within the sharing economy. Thus, as a point of great importance, this study explores online "peering", a new system that connects masses and open organizations by altruistic interventions (Tapscott & Williams, 2006).

Both Olsons's Collective Action (1965) and Hardin's Tragedy of the Commons approaches (1968) highlighted the difficulties inherent to generating cooperation within large communities. Moreover, Olson (1965), Boyd and Richerson (2005), as well as Kaplan and Gurven (2001), observed how cooperation within communities is achieved by means of rewards and punishments. Nevertheless, these studies were performed in offline contexts, making their conclusions weak and inconsistent when applied to explaining collaboration within online networks.

For instance, taking into consideration an online frame, Benkler (2011) attempts to argue how cooperation triumphs over self-interest when analysing large and homogeneous platforms such as Linux or Wikipedia. In his view, these networks are built on the basis of the "commons-based peer production" approach in which motivation functions as the main driver rather than punishment, personal compensation or hierarchical control. Benkler (2011) highlights, "the rise of peer production on the Net has produced a culture of cooperation that was widely thought impossible a mere five or ten years ago" (p.11-12).

Commons-based peer production is characterized by two main features: (1) the content produced is free, although users are not allowed to individually own it; and, (2) in terms of its collaborative production structure, participation is peer-managed and decision-making power is distributed (Mason, 2015). Furthermore, peer production generates "use-value" for the community rather than for the market or public organizations. At the same time that, this "use-value" is "freely accessible on a universal basis, through new common property regime [...] different from private property or public (state) property" (Bauwens, 2005, p.33-44). Additionally, commons-based peer production rests upon a "spontaneous division of labour" (Shirky, 2008; von Hippel, 2005), where a lot of different tasks are to be performed by various users according to their own personal skills, availability, schedule, etc. Under these circumstances, members of a community are more likely to engage and cooperate (Nissenbaum & Benkler, 2006).

Similarly, according to the "Self-determination Theory" (SDT), studied in detail by Deci and Ryan (2000), altruistic peer production is an outcome of self-motivation based on three psychological needs: competence, autonomy and relatedness. This theory affirms that personal motivation increases when choices are made without external control or manipulation. Furthermore, SDT has observed that a person who gets external rewards will eventually lose autonomy and therefore also willingness to participate. In cases where an actor believes he or she is "being manipulated or controlled [...] he/she will rebel by refusing to do, or by doing the opposite of what is desired" (Benkler, 2011, p.178-179).

Both, the self-determination theory and the commons-based peer production approach, attempt to understand the main reasons why large digital communities, such as

Wikipedia or Linux, have achieved global success from the spontaneous participation of volunteers. More concretely, aspects like motivation and effort within collaborative online projects have been deeply researched by Lakhani and Wolf (2005). Using a web-based survey, their study attempted to comprehend altruistic participation on coding free/open sources. Their survey revealed that a large number of interviewees freely participate in collaborative online projects, primarily, in order to receive intellectual stimulation. The second most important motivational force found was the potential to learn and improve personal coding skills. Other motivations reported were attached to the belief that source code should be open as well as personal feeling of doing the right thing (Lakhani & Wolf, 2005).

Collaborative projects based on peer production rely on openness as a key factor to engage successful participation (Shirky, 2008). This dissertation emphasizes certain major elements that, under the umbrella of openness, contribute to maximize innovation through peer participation. These are: open knowledge, low costs, self-governance and simplicity.

Firstly, free access to information represents a fundamental pillar in the construction of open networks. As opposed to hierarchical and centralized enterprises where innovation is usually kept private, open source communities freely reveal the entire set of data for the common good (Rifkin, 2014). By doing so, innovation becomes distributed among users in a way that each member will easily find projects suitable for his/her own data, which in turn will also be freely revealed. This circular process generates an exponential growth of innovation while motivating others to join the community (von Hippel, 2005). Bauwens (2005) attributes this outcome to "holoptism", as opposed to "panoptism". Under panoptic organizations, information is known solely by a certain number of members unlike the rest of the group which receives solely the necessary knowledge to commit its tasks. Contrary to this, holoptism promotes distributed knowledge among all participants aiming to "reduce information asymmetry and redefine the power balance" (Sundararajan, 2016, p.33).

Secondly, open source platforms reduce the cost of failure. Shirky (2008) has observed that coding errors committed by members of open communities barely represent an issue in terms of money. Indeed, these failures are practically costless due to their

digital nature, which in turn promotes creative participation. According to Shirky (2008), within open networks, anyone has the chance to code innovative ideas with almost no previous investments, if the idea fails the users will quickly change the strategy with no considerable repercussions. Furthermore, the bug is usually publicly shared, warning others to not commit the same mistake (Shirky, 2008). This is appropriately condensed in Linus's Law (Raymond, 1999), which states that any large task can be achieved cheaper and faster if it is undertaken by large open communities: the more collaborating participants, the more possibilities of finding a bug and solving the problem.

Many consider that the low cost of generating content within online communities has caused what Gabriel (1991) dubs "the rise of worse is better". According to this approach, individuals are more likely to collaborate and peer-produce when the source itself is very poor or mistaken rather than when it is well executed. After concluding his experiment where a complex and rich programming language and a simple and vague one were given to the crowd, Gabriel (1991) stated that "it is better to get half of the right thing available so that it spreads like a virus. Once people are hooked on it, take the time to improve it to 90% of the right thing" (Gabriel, 1991, p.11). The "worse is better" philosophy would explain why a wrong article on Wikipedia gets so rapidly corrected; the errors instantly attract the user's attention and awakening his/her willingness to improve it.

Thirdly, Benkler (2011) points out self-governance as a driving force to engage into collaborative networks based on altruistic participation, such as Wikipedia. In these cases, peer production networks are initially built with a reduced set of norms and guidelines permitting users the ability to review, discuss and reconstruct these norms based on their own criteria. Although the organizational structure is defined at the beginning, all members can actively participate in the decision-making process, turning it into a true collective cooperation (Chase, 2015; Benkler, 2011). A similar approach is developed by Sundararajan (2016) who considers that self-regulation might serve as an efficient tool when building peer production. In his view, self-regulatory networks are mainly controlled by internal members which are experienced within the functional process of the network itself. By doing so, internal participants are in a better position to detect and modify problematic issues than external agents or institutions. In terms of

common resources, Ostrom (1990) also supports self-organization arguing that neither the market nor the government are good enough at managing the commons. In her view, these common resources will be better managed and controlled by internal participants who adopt previous practices and design new rules and norms by means of learning-based processes and contingent strategies. If this process is consistent, individuals will be more willing to monitor each other, obtaining the information needed to achieve a contingent strategy (Ostrom, 1990). In addition, self-managed networks follow the same freedom-principles as the ones established in 1985 by the Free Software Foundation: (1) the freedom to use the data for any communal purpose; (2) the freedom to access all information and modify it to the user's needs; and (3) the freedom to distribute copies in and outside the community for a common good (as cited in Rifkin, 2014).

And lastly, the simplicity of the network structure as an innovation booster. Chase (2015) noted that "opening" a platform exponentially increases creative innovation, as opposed to closed networks. Peer production communities are initially built on quasi-blank platforms, as open and minimal as possible. Flexible and simple structures allow users to easily peer-produce content and value at their will. The initial code morphs rapidly into large collaborative networks. To exemplify this phenomenon, Chase (2015) cites the competition between YouTube and Google Video; the early peer participative and simple interface of YouTube succeeded over the rigid, closed and complex structure of Google Video which eventually purchased YouTube in 2006.

Although not directly related to openness, Metcalfe's Law (Gilder, 1993) provides useful insight on large peer production networks. According to this law, while the economic cost of developing a network increases constantly, the value generated by the same network rises exponentially, thus the more users participate in the community the more valuable this community becomes for all participants (as cited in Mason, 2015). This effect is applied to online platforms such as Wikipedia, Linux, Bitcoin and on-demand networks like Uber, where only high levels of participation make possible their viability.

Moreover, the transformation of early websites into peer production platforms has shaped a new active participant that poses a challenge to traditional manufacturing and

consumption: the prosumer (Bruns, 2009). The term "prosumer" was first coined by Toffler (1980), although the main concept was initially suggested back in 1972 when McLuhan and Nevitt announced the transformation of consumers into self-producers by means of new technologies. Toffler (1980) claimed that mass production markets and standardized products would be followed by a mass customization of goods in which the user takes a participative part in the design of the product that will later be consumed. By doing so, the consumer becomes a prosumer. Due to the increasing capacity to self-create assets using simple software and the advent of the 3D printer, prosumers began cooperating in order to build open databases where digital products would be stored (Anderson, 2012). In the early 2000, the Web 2.0 worked as booster factor encouraging prosumer movements like "Makers" or "Do it Yourself" (DIY). Anderson (2012) states:

> "Making things has gone digital: physical objects now begin as designs on screens, and those designs can be shared online as files. This has been happening over the past few decades in factories and industrial design shops, but now it's happening on consumer desktops and in basements too. And, once an industry goes digital, it changes in profound ways, as we have seen in everything from retail to publishing". (p. 17-18)

3.3 Main findings

As mentioned at the beginning of this chapter, the sharing economy is not comprehensible without an online frame. Thus, in order to better understand the digital background which has set the standard for most current sharing platforms, this specific chapter has explored: (1) the evolution of the website and its first steps toward peer-to-peer exchanges; (2) the 90s as a period in which the internet went commercial; (3) the web 2.0 as a successful tool for participation; (4) the high connectivity of the internet of things; and (5) peer production approaches. As follows, the study sorts its main findings into two categories; historical and sociological conclusions.

3.3.1 Timeline: exploring the origins of the sharing economy (1991-2010)

In order to contextualize all events chronologically, this study proposes the following timeline (Figure 8) in which the most important facts build, all together, a clearer view of the origins of the sharing economy. Thus, according to this historical transition,

framed from the advent of the first website to the first collaborative platforms (1991-2010), this study emphasizes the following insights:

The internet has evolved in a way that:

- Current websites are based on hybrid systems. In the early 90s, the website was intended to serve as a knowledge repository where scientists would have access to data stored on a common server. The first webs attempted to achieve communication-driven purposes. Shortly after, and in response to the disruptive dynamics of the web 2.0, large websites appeared as commercially driven, allowing individuals to trade goods and services. The online market phenomenon grew considerably to the point where nowadays it has merged with other communication/social-driven networks such as Facebook or Twitter, mutating into true hybrid systems. These hybrid systems are also used by sharing economy platforms in which pure commercial structures are embedded with social networking tools. In fact, the inclusion of social tools within the market platform constituted one of the greatest steps toward the origins of the sharing economy. These tools allow users to publicly evaluate the service or product acquired by feedback, ratings and comments, fundamentally differentiating common commercial platforms from sharing economy platforms.

- The internet has shifted from exclusive to inclusive. Before the arrival of the web 2.0, content creation was limited to a group of highly skilled individuals. Although all users were able to consult online data, only a very a reduced sector was able to engage in multidirectional communication. The common passive user has evolved into a very participative one. Normal internet users are constantly creating content and adding value by uploading text, pictures, music or any other digital data. Sharing economy networks normally provide users with the basic tools necessary to generate content adding in turn value to the network itself. Such is the case of Craigslist, AirBnB, YouTube and Wikipedia.

- The internet operates as a functional system required for managing and coordinating social life, production chains, air traffic, smart cities, etc. The initial network launched in the early 90s has evolved into very complex and extensive

systems connecting different networks, devices, processes and even people. As a result, the IoT has come to play a very important role in the development of the sharing economy. Interconnectivity and embedded systems are essential to high-tech platforms such as Uber, where the monitoring of traffic jams, routes, times and locations is an essential part of its service.

The sharing economy was built upon developments in the digital realm:

- Peer-to-peer open systems, such as the one offered initially by Napster, achieved rapid success, thus creating the basic structure for posterior sharing platforms. The concept of "I need… you have…" (Botsman & Rogers, 2010) constitutes the basic pillar of successful services like Uber, BlaBlaCar or TimeRepublik.

- Computational and data-flow systems were not only developed as centralized, but also as decentralized and distributed systems (see Figure 7). Craigslist is a perfect example, as it pioneered the development of decentralized networks where decision-making was shared amongst members. Decentralized patterns were soon adopted and improved by sharing platforms such as Wikipedia and, more recently, Bitcoin and its blockchain technology (this concept is further analysed in subsequent chapters).

***Figure 7**: Networking systems.*

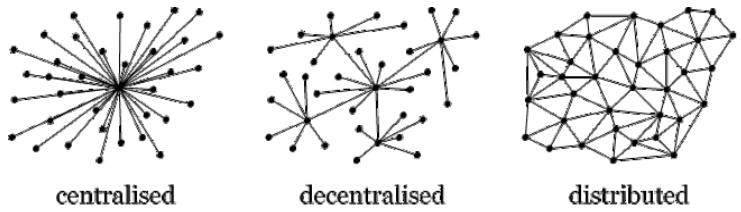
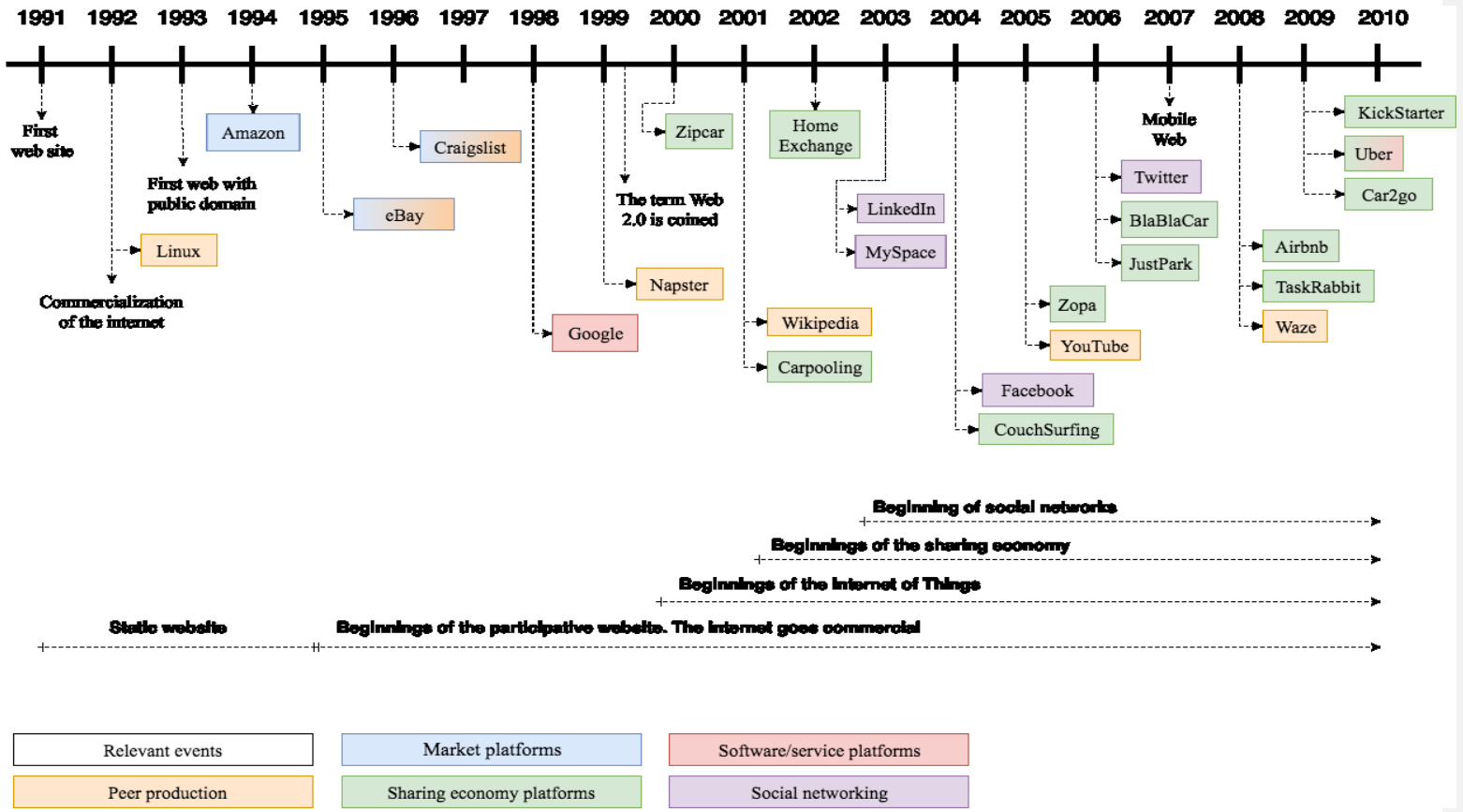


***Figure 8**: Digital transformation, from the first web to the early sharing economy (1991-2010)*



3.3.2 Social issues attached to the evolution of the internet

Finally, assuming that peer production constitutes an important aspect of the sharing economy (Benkler, 2011; Gansky, 2010; Chase, 2015; Rifkin, 2014) and, after the exploration of relevant social approaches on altruistic participation, this dissertation presents the following conclusions:

Successful peer production networks enjoy high levels of participation because:

- They lack rigid hierarchies and external control, a fact that enhances freedom and independence within the network. On the contrary, external rewards and compensations might imply responsibility and sensation of being controlled, thus decreasing the willingness to engage within the community. Instead, personal motivation, such as intellectual stimulation, skills improvement or the belief of "doing the right thing" are the main drivers in generating spontaneous participation.

- There is usually a task/network that perfectly suits each individual, not only in terms of the nature of the tasks, but also the time estimated to execute them. Due to the global nature of the internet, participation is in turn highly diversified and flexible. Each person will decide on which task to participate, how and for how long, without any restrictions. Accordingly, it can be said that the internet increases the division of labour.

- Openness is well established. Peer production networks generate innovation through the openness of the network itself: (1) by allowing all users full access to the data, the chances of committing errors are reduced; (2) the levels of inclusion increase in a way that members feel part of the whole system as decision-makers; and, (3) although in most cases open and basic networks are launched by a limited few, they are built and developed by multiple users who add value to the network while uploading digital content. These users shape the network according to their own needs, which in turn attracts other individuals to engage with the community in order to satisfy their own necessities. As an example, the peer-building map Waze in which users altruistically construct and update roadmaps in real time while

driving via GPS. YouTube, Craigslist, Wikipedia and Linux were also founded on this principle.

- Peer production considerably reduces the costs of failure. Contrary to traditional brick and mortar enterprises, global p2p production systems are usually based on digital environments. This fact eliminates the need for physical space, raw material, licences and ultimately high levels of investment. Entrepreneurs and investors enjoy a substantially reduced economic risk when it comes to the failure of an online business. Large companies such as Airbnb, YouTube, Facebook and Google where originally coded and launched from garages and small apartments with very small start-up costs.

- The number of members is large enough to meet the demand. As Metcalfe's Law (Gilder, 1993) states, the larger the community, the better. Analysis of on-demand platforms, such as Uber, reveals that the services provided are much more efficient when there is a relevant number of active drivers, for example.

Exploring the main predecessors of the sharing economy has provided a clearer picture of how "the internet has become the essential infrastructure and distribution channel for commerce" (Gorenflo, Harris & Doctorow, 2012, p.200). At this point, and taking into consideration the main findings exposed above, this dissertation proceeds to define the current sharing economy and its multiple variants.

4. Semantic transformation

According to Slee (2015), our current conception of the sharing economy differs substantially from the one originally developed a decade ago. Rapid transformations on the technological front make the act of providing an exact definition of the sharing economy extremely challenging. In fact, Matofska (2016) remarks that this rapid transformation stands in the way of forging a proper definition and common understanding about the entire phenomenon, which in turn produces great confusion, doubt and controversy when approaching this socio-economic system. More precisely, it has been found that this lack of an accurate definition is tied to a series of social facts:

- The disrupting and innovative sharing economy platforms developed by digital entrepreneurs in the early 21st century were originally designed and launched disregarding established and conventional guidelines. This led to the emergence of a new business concept that is alien to formal rules, regulatory norms and governmental acceptance, leading in turn to a controversial and distorted initial understanding. As El-Rejula (2016) puts is, ”the sharing economy was innovation without permission”.
- Sharing economy platforms have experienced an enormous growth in a very short period of time. This rapid global success has caused the rise of a large variety of networks linked, mostly or partly, to early sharing communities. This large umbrella of similar concepts hinders the ability to frame and define what sharing economy concretely means.
- Current scientific research is still weak when it comes to understanding the social, economic and political repercussions of the sharing economy. Experts differ considerably when attempting to describe the sharing economy, mainly due to its morphing nature (Nelson, 2016).

In response to the difficulties related to providing an exact definition of the sharing economy phenomenon, this specific chapter aims to: (1) collect, analyse and compare diverse sharing economy definitions elaborated by experts in the field; (2) identify and discuss valuable insights which stem from these definitions; (3) achieve a proper and common understanding by combining such insights; (4) interconnect the study of three

relevant sharing economy typologies formulated by Botsman and Rogers, (2010), Bauwens (2012) and Doennebrink (2016) for a broader contextualization; and, (5) develop a critical approach where the term sharing economy is chronologically explored, at the same time observing how the earlier definitions may have evolved through time, as Slee (2015) claims.

4.1 Sharing economy definitions (1978-2016)

Framing a proper conception of the sharing economy is vital in order to proceed with the exploration of further research questions. In an attempt to satisfactorily address this concern, this study has selected 17 sharing economy definitions provided by authors who have published relevant literature between 1978 and 2016. Table 1 reflects a variety of sharing economy definitions which are initially sorted by their year of publication. This classification also includes the author's name and his/her own term when referring to the sharing economy or a highly linked concept. In addition, the second column of Table 1 lists, first of all, direct quotes that authors have used when it comes to explaining the sharing economy; and, second of all, a set of basic characteristics proposed by the authors but ultimately argued by this study. Table 2 follows a similar structure, however in this case, definitions are provided by 12 sharing economy specialists that were interviewed in 2016.

***Table 1**: Analysis of sharing economy understandings obtained from relevant literature review (1978-2016).*

Year/ Author / *Own term / (En°)****	**Author's quote and main insights.**
1978 Marcus Felson & Joe L. Spaeth *Collaborative Consumption* (E1)	"Collaborative consumption, namely, those events in which one or more persons consume economic goods or services in the process of engaging in joint activities with one or more others. For example, drinking beer with friends, eating meals with relatives, driving to visit someone or using a washing machine for family laundry are acts of collaborative consumption" (p. 614). - Collaborative consumption is focused mainly on aspects of lifestyle, community building and consumer behaviour. - Timing represents a crucial factor given that cooperative routine activities are linked to temporal coordination. Furthermore, the spatio-temporal structure of a community directly affects the development of collaborative consumption activities, such as partying, driving or learning. Therefore, a community that performs the same routine activities in similar ranges of time will tend to participate in collaborative consumption. For instance, working time will influence activities such as having dinner in or out of the home. Workers will tend to meet each other at similar time and location.
2004 Yochai Benkler *Shareable Goods and Commons-based peer production* (E2)	"(Shareable practices/goods) represent instances where social sharing is either utterly impersonal or among loosely affiliated individuals who engage in social practices that involve contributions of the capacity of their private goods in patterns that combine to form large-scale and effective systems for provisioning goods, services, and resources" (p.275-276) - The redistribution of resources relies on relationships and ethics rather than on economical purposes. - The excess capacity of "shareable goods" is better optimized by means of sharing the good itself with others; either through second-hand shops (market provisioning), through public organizations (state provisioning) or directly from person to person (social provisioning). Multiple goods are designed to accomplish their function only in certain occasions (e.g. books, toys, drills or camping tents). Therefore, in these cases, when solely one person or a few persons enjoy the good, this loses its optimal functionality. As opposed, when goods are shareable, these are much more valuable in terms of usage as well as in economic aspects. Shareable goods reduce private ownership. - Technologies enable the possibility to build decentralized social-based networks opposed to hierarchical markets.

2006 Don Tapscott & Anthony D. Williams *Wikinomics and Collaboration Economy* (E3)	"Peer-to-peer creation and communication, this utterly decentralized and amorphous force increasingly self-organizes to provide its own news, entertainment, and services. As these effects permeate out through the economy and intersect with deep structural changes like globalization, we will witness the rise of an entirely new kind of economy where firms coexist with millions of autonomous producers who connect and co-create value in loosely coupled networks. We call this the collaboration economy" (p. 32). - Collaboration economy relies on strong communities and decentralized networks instead of on hierarchical organizations. Authority and control are replaced by collaboration and self-management - Collaboration economy aims passive actors to become prosumers allowing them to self-design and self-produce their own goods. - Wikinomics' principles are: openness, peering, sharing and acting globally. - New technologies and innovative operating systems play an essential role on developing collaboration economy and wikinomics. Indeed, the internet serves as a very low cost infrastructure for creating collaboration and peer production. - Collaboration economy includes seven models of mass collaboration; ideagoras, peer pioneers, prosumers, new Alexandria, platform for participation, global plant floor and wiki workplace.
2007 Ray Algar *Collaborative Consumption* (E4)	"What happens when pricing insight becomes accessible and consumers begin to share knowledge? Welcome to the world of collaborative consumption […] Technology is democratising the purchasing process and ultimately consumers will decide how far leisure suppliers can push the limits of these inventive ways of optimising price. The individual has morphed into a crowd and the crowd is wise" (p.16-17). - Collaborative consumption is a global phenomenon that harnesses connectivity. - Consumers collaborate through the web in order to exchange goods and services. Collaborating with the crowd brings much more than acting individually. - Consumers are becoming prosumers. Passive users demand an active role on producing the product that will be consumed afterwards.
2008 Lawrence Lessig	"There exists not just the commercial economy, which meters access on the simple metric of price, but also a sharing economy, where access to culture is regulated not by price, but by a complex set of social relations. These social relations are not simple. […] everyone reading this book has a rich life of relations governed in a sharing economy, free of the simplicity of price and markets" (p.145).

Sharing Economies and Internet Sharing Economies (E5)	- Sharing economies are built upon the non-monetary exchanges among friends, lovers, neighbours or strangers. - As opposed to other economies where individuals expect to get the same value back at that time, sharing economies' members understand that the practice of exchange involves fair compensations over time. - Sharing economies enhance personal connections and cooperative communities. - Sharing and commercial economies complement each other. - By embedding the internet, sharing economies enlarge its scope and become global and crowd-based (e.g. Wikipedia)
2010 Rachel Botsman & Roo Rogers *Collaborative Consumption* (E6)	"Collaborative consumption is enabling people to realize the enormous benefits of access to products and services over ownership, and at the same time save money, space and time, make new friends and become active citizens once again" (p. XVI). - It is an economic model in which underused assets are exchanged, rented or swapped. - Collaborative consumption depends on online networks and new technological devices. - This system highlights p2p communities based on decentralized and transparent networks. - Collaborative groups avoid middlemen, top-down mechanisms and hierarchies. - Principles of collaborative consumption: critical mass, idling capacity, belief in the commons, trust between strangers - 20th century vs. 21st century: hyper-consumption vs. collaborative consumption, credit vs. reputation, advertising vs. community and ownership vs. shared access. - It creates reputation capital as currency to build trust between strangers. - Collaborative consumption covers three subcategories; product service, redistribution markets and collaborative lifestyles.
2010 Lisa Gansky *The Mesh* (E7)	"The Mesh is based on network-enabled sharing – on access rather than ownership. The central strategy is in effect, to sell the same product multiple times. Multiple sales multiply profits, and customer contact. Multiple contacts multiply opportunities- for additional sales, for strengthening a brand, for improving a competitive service and for deepening and extending the relationship with customers" (p.6). - The Mesh is mainly based on a series of transactions in which individuals enjoy the same asset at different times (for example, the same car can be used by many). - The Mesh employs sophisticated information systems and innovative technology. By using smartphones and advanced webs, user and product information is monitored and stored in the mesh system. Customers are able to interact in real time with the service.

	- The Mesh is about immediacy; goods and services can be easily exchanged, anytime and anywhere. - In the Mesh, advertising is driven by word of mouth and mainly by social networks such as Facebook or Twitter - The Mesh economy is global in scale. - Within the Mesh network, every node is connected to each other, creating a decentralized community. - The Mesh develops high levels of sociability in order to increase trust among users. Social mobile networks play a central role in reputation systems.
2012 Michel Bauwens *Collaborative economy and Peer production* (E8)	- Bauwens distinguishes three types of collaborative economy: (1) Immaterial: "In the immaterial collaborative economy, what is mutualized is knowledge, software and design, through shared innovation commons usually governed by specific legal licenses" (p.51) e.g. YouTube, Facebook, Twitter, Wikipedia. (2) Material: "The fast-growing arena of collaborative consumption uses product-service platforms, often under corporate ownership, which allow users and consumers collective access to physical goods." (p.53) e.g. AirBnB or eBay. (3) Mixed: "Platforms in which designers of both immaterial products and material products can offer their work for sale, but where some form of collective aggregation or filtering takes places" (p.52) e.g. Makers, Fablabs or DIY. - It is of great importance to analyse each case separately given that nowadays hybrid and complex platforms are morphing under different principles, objectives and characteristics. - In all these systems Metcalfe's law plays a primordial role; the more peers are connected to the network, the more valuable it becomes. - The collaborative economy is usually built on decentralized networks, new technologies and social media function as crucial tools for its exponential development.
2012 Manuel Castells, Joao Carçada & Gustavo Cardoso *The Culture of the Crisis &*	"An alternative economy sector (not necessarily excluding for-profit production) based on a different set of values about the meaning of life" (p.12). "In a consistent cultural change in the perception of ownership, we have moved from needing to see where data is stored, to believing that, as long as we can access it somewhere in the world, we own it" (p. 203). - Technological innovations represent a great problematic issue for capitalist enterprises. - Individuals are shifting their values from material consumption to social, collaborative and cultural consumption. The 2008 financial crisis marked the beginning of this transition. - The internet has created innovative business models for individuals who prioritize access instead of possession and ownership.

Networked Culture (E9)	- In network culture, if something is available online, it should be shareable. - Popular culture production has moved from corporation and multinational to individuals with personal computers. - Everyday life activities depend less on governmental institutions or traditional organizations than in past times. - Trust is vital in alternative economic practices; in these cases trust is driven by personal relationships.
2013 Jeremiah Owyang *Collaborative economy* (E10)	"The Collaborative Economy is an economic model where ownership and access are shared between corporations, start-ups, and people. This results in market efficiencies that bear new products, services and business growth" (p.4) - This new phenomenon affects every social, economic and government sector on a global scale. - Access allows people to enjoy luxury assets. In a similar way businesses also achieve benefits by accessing on-demand workers or on-demand spaces. The philosophy is: get what you want just when you need it. - The collaborative economy is shaped by societal drivers (increasing population density, sustainability and altruism); economic drivers (excess of goods, increasing financial flexibility and access over ownership) and lastly, by technological drivers (social networking, mobile devices and platforms, and payment systems).
2014 Jeremy Rifkin *Collaborative Commons* (E11)	"Connecting everyone and everything in a global network driven by extreme productivity moves us ever faster toward an era of nearly free goods and services and, without, the striking of capitalism in the next half century and the rise of Collaborative Commons as the dominant model for organizing economic life […] where billions of people engage in the deeply social aspects of life" (p. 16). - Within the collaborative commons, networks are decentralized, open and free. It refers to a collaborative system defined by communities in which users have access to big data. Online accessibility allows users to create new applications to self-manage their lives almost for free. Freedom is measured by access while properties and ownership might represent a heavy burden. - Society tends to increasingly digitalize physical products, from atoms to bits, from scarcity to abundance. In consequence production costs drop considerably. - The high connectivity of innovative operational systems, such as the Internet of Things, represents the decline of capitalist economies and the rise of the collaborative commons. It removes middleman and brick and mortar establishments. - New technologies embed global peer production and prosumers within a "sharing culture". - "Shareable value" and the collaborative commons are replacing the "exchange value" of capitalism. Shareable economy aims to improve redistribution of existing goods.

Okomentoval(a): [Office1]: Is this right?

Okomentoval(a): [Office2]: Is this clear?

2015 Alex Stephany *The business of sharing* (E12)	"The sharing economy is the value in taking underutilized assets and making them accessible online to a community, leading to a reduced need for ownership of those assets" (p.9). - The sharing economy platforms are usually p2p market-based networks which generate reciprocal economic value. - The sharing platforms allow the exchange of a large range of different products and services. In current times, the sharing economy covers any kind of market niche, from knowledge to handy tasks to luxury products to baby toys. - The sharing economy has evolved into an online frame. The internet is vital in this context. - Community and its members are value-based; this value is understood as trust in transactions between strangers. - Sharing networks attempt to reduce the need of ownership. Users will access and enjoy the product or service during the time needed instead of buying it. Therefore, sharing economy functions as an effort to redistribute. - Prosumers play an important role in developing peer production within the sharing economy.
2015 Billee Howard *We-commerce* (E13)	"Collaborative consumption will reduce costs through shared infrastructures. The principles of We-commerce will apply as much to how things are conceived, created and produced as to how they are experienced and enjoyed. In the future, everything from office space to servers will be shared with an eye to improving efficiency and promoting creativity and collaboration […] how companies are owned will shift to cooperative ownership model, with profits in the hands of the many, rather than the few" (p. 174-176). - We-commerce promotes collective experiences and personal feelings over material products. - This economic system replaces middleman and hierarchies with decentralized peering. - Millennials are the main protagonists responsible for developing the sharing economy. - The global economy of sharing is the combination of art, commerce, and innovation. - Prosumers are the new co-creators of p2p digital content.
2015 Pual Mason *Post-Capitalism* (E14)	"Postcapitalism is possible because of 3 impacts of the new technology: (1) information technology has reduced the need for work, blurred the edges between work and free time and loosened the relationship between work and wages, (2) information goods are corroding the market's ability to form prices correctly -this is because markets are based on scarcity while information is abundant- and (3) we are seeing the spontaneous rise of collaborative production" (p. XV). - New markets and organizations are appearing regardless of managerial hierarchies. - Sharing economy raises a completely new paradigm in which ownership, lending, businesses and labour, amongst others, are reshaped through digital guidelines.

	- Capitalism is facing an increasing digitalization of physical products. Due to their digital nature, many products are nowadays free (newspapers, music, games, knowledge, etc.).
2015 Robin Chase *Peers Inc.* (E15)	"In a world of scarcity, Peers Inc. organizations create abundance. Harnessing resources we already have, physical assets, skills, networks, devices, data, experiences, processes, these organizations grow efficiently and sometimes exponentially. Peers Inc. redefines our understanding of assets, proprietary versus common, private versus public, commercial use versus personal use, and requires a rethinking of regulations, insurance and governance" (p.2-3). - Peers Inc.'s philosophy states that by embedding a large number of peers and shared resources, creativity and efficiency will rise within the network. When a community is driven by openness and connectedness this will, in turn, unlock potential innovation. - The collaborative economy is directly opposed to industrial economies. - The collaborative economy and Peers Inc. organizations rely on four main principles: (1) Open assets are more valuable than closed assets. When a certain product or service can be used efficiently by many instead of a few, its value increases. (2) The bigger the better. Innovation increases when a large number of peers are networked together. (3) In these communities, benefits are much larger than the setbacks. When conflicts or behavioural issues appear they are rapidly detected and addressed by means of reputation systems. (4) In large communities, members usually get more than they give (e.g. Wikipedia or Linux).
2015 Tom Slee *Against the sharing economy* (E16)	"The sharing economy is a wave of new businesses that use the internet to match customers with service providers for real-world exchanges such as short term apartment rentals, car rides, or household tasks" (p.9). "Major financial institutions and influential venture capital funds are seizing an opportunity to challenge rules made by democratic city governments […] It is not about building an alternative to a corporate driven market economy, it is about extending the deregulated free market into new areas of our lives" (p.27). - The sharing economy is all about "economy" rather than about "sharing". It is a for-profit economy based on commercial exchanges. Non-profit platforms represent a very reduced part of the whole system. - Large companies escape from city regulations, tax revenue and laws. - Sharing businesses are as consumerist as other capitalist enterprises. - Community building, sustainability and individual empowerment are unreal promises.

	- Sharing economy uses reputation systems as means of regulation. Rating systems are erroneous methods for evaluating people. Comments and ratings serve as a surveillance tool.
2016 Arun Sundararajan *Crowd-based capitalism* (E17)	"I call the sharing economy or crowd-based capitalism, terms I use more precisely to describe an ecosystem driven by the following five characteristics: largely market-based, high-impact capital, crowd-based networks, blurring the line between the personal and the professional as well as by blurring the line between fully employed and casual labor" (p.26-27). - This new phenomenon raises innovative markets where assets are potentially exchanged. Moreover, it develops new services increasing the global economic activity. - Sharing economy or crowd-based capitalism enlarges the usage of products by creating new opportunities of sharing. - Capital and labour management moves from hierarchical and corporate systems to distributed crowds. - Daily life activities such as giving a ride to someone or lending tools to a neighbour are becoming commercial activities. - Sharing economy distorts traditional work contracts. Sharing economy employees work usually as freelancers, entrepreneurs or independent workers, by self-managing their time and level of commitment. It also disrupts traditional tax policies. - It is an economic model between socialism and capitalism.

* Along history authors have used different terms when referring to the sharing economy or to highly similar concepts.
** En^{o}= (Expert number X) this factor identifies each sharing economy expert with a specific code for further analysis. The positions of more than one author are considered consensual findings and are thus represented as positions of a single author

Table 2: *Sharing economy interpretations argued by academics, entrepreneurs and specialists on the field. Interviews performed in 2016.*

Name / role / (Enº)*	**Sharing economy interpretations.**
Jordi Llonch Founder of Sharing Academy (E18)	The sharing economy is a social and economic model built on the sharing of human, physical, and intellectual resources. The sharing economy uses information technology to facilitate peer-to-peer transactions and communications, it relies on user-based rating systems, it offers users flexibility in work through the platform, and it provides the tools necessary to facilitate services.
Sam Naef Founder of iSkillU (E19)	Is an evolving area in which people are finding other people instead of establishments and companies, putting power into people's hands, and then we just apply that to every habit, education, transport, energy, etc. We are handing more power to each other, we trust in each other more, therefore we can do more. We are finding more efficient ways to do things. Nonetheless, we must be careful because, at the end of the day, people will just do what is best for themselves. If it is easier for me to travel by car sharing or by train I will always take the easiest and cheapest way.
Pieter van de Glind Co-founder of ShareNL (E20)	The collaborative economy, in the broad sense, refers to economic systems of decentralized networks and marketplaces that unlock the value of underused assets by matching needs and haves, in ways that bypass traditional institutions. For instance, borrowing and renting private consumer goods through Peerby, bypassing traditional retailers; renting accommodations through Airbnb, bypassing the traditional hotel; requesting a ride through the Uber app, without the use of a traditional taxi company.
Albert Cañigueral Founder of Consumo Colaborativo (E21)	I think we have arrived at the conclusion that there is no a definitive definition. The collaborative economy becomes a relevant topic of research that includes many aspects. It is about the impact that digital economies are exerting in many sectors and how these sectors are being reshaped from the advent of a new producer citizen, a citizen able to offer efficiently his/her goods to others.
Alexandra Nelson	The sharing economy is a market model that deploys a peer-to-peer-based sharing of access to goods and services coordinated through community-based online services. For us, the motto is "share a little, get a lot". It is finding the mutual

Marketing & Communications at Fon (E22)	benefits on sharing. Indeed, we also think that there is a big societal shift from ownership to access, something relevant in sharing economy environments.
Ondrej Kratky Founder of Liftago (E23)	Sharing economy is the economy where people cross the barrier of ownership in order to better utilize resources at their disposal or at their reach. Furthermore, technology enables faster information spreading, information about unused resources like price, location availability, etc. All is, therefore, much more accessible. People start to realize the value that they can get just by using goods more conveniently.
Laura Martinez Founder of Knok (E24)	The sharing economy is a number of initiatives and activities that imply the exchange of goods, knowledge, home, car, etc. among consumers without paying money for it. Furthermore, society is shifting. The reason is a mix of saturation of the consumerism economy with the development of the internet. Both things have happened at the same time and the boom in the sharing economy has been powered by easy access to real-time online platforms were people can see what things can be shared.
Sam Mellor PR manager of JustPark (E25)	It is the sharing and renting of under-used goods or services enabled by online platforms/communities and emerging mobile technology. It permits a more efficient use of existing resources. It is important to remark that access over ownership is becoming more important in our modern hyper-connected society, with dense urban centres that allow efficient sharing and distribution of goods and services via sharing economy platforms.
Benita Matofska Founder of The People Who Share (E26)	Sharing economy is a socio-economic system built around the sharing of human or physical resources. The "sharing" in the sharing economy refers to accessing shared resources either human or physical. I always divide the sharing economy into two kinds of companies; those that are purpose driven and those driven by profit. Sharing economy is driven by people, it is the people economy. It is a system that demonstrates different kinds of value exchange; means of production and distribution are shared.
Thomas Doennebrink OuiShare Connector	The sharing economy is at a crossroads. The first sharing platforms and representatives of the sharing economy were predominantly non-commercial and had their main focus on social/communal and ecological/resource-saving aspects, I call it the collaborative economy 1.0. The attention, attraction and efficiency and thus success of these sharing platforms, models and concepts led to the increasing involvement of VCs and influx of capital, I call it the collaborative economy 2.0. With

(E27)	the advent of platform cooperativism and other intents of not-for-profit or not-only-for-profit or for-benefit or commons-based platforms a new development stage has begun, I call it the collaborative economy 3.0.
Karim Varin Co-founder of Time Republik (E28)	The sharing economy is still underground, but it is growing and you find it everywhere, in every sector from transportation to banking. The current market economy has some problems; we are experiencing a period of change since 2008. In the sharing economy people spend less money, but not only because there is less money around, also because people are overloaded with stuff. The sharing economy gives people a chance to do something different.
Pavel Prouza Country manager BlaBlaCar CZ&SK (E29)	I like to use statements of our founder Frederic Mazzella; "This global revolution, enabled by databases, search engines, and connectivity, has begun. It's allowing mankind to break free from the limits of the past. We start doing what we do best: collaborating and sharing; at an unprecedented scale. […] Thanks to platforms that connect peers and enable the creation of interpersonal online trust, individuals are suddenly empowered to share goods, knowledge, money, skills, network, content, etc. They regain their ability to contribute more directly to society and the economy, but on a global scale, redefining relationships between economic and social actors along the way" (Mazzella, 2016).

*Enº= (Expert number) this factor identifies each sharing economy expert with a specific code for further analysis.

The lack of a common and solid definition of the sharing economy provokes a negative conception of its own nature among individuals who are not entirely involved in sharing economy platforms (Botsman, 2016; Matofska, 2016). It is, therefore, necessary to carefully frame its meaning as well as specify which set of insights are included when referring to the sharing economy. Considering this fact as a critical issue, this investigation proceeds to extract and enumerate the most common characteristics found in all sharing economy understandings exposed in Tables 1 and 2. As a result, 12 characteristics (C) have been detected to be mentioned several times, these are:

C1 = It is a market-based system. It develops relevant levels of economic activity.

C2 = It is built on decentralized networks.

C3 = It is crowd-based (global scale).

C4 = Trust among strangers enhances social value (trust is mostly created from reputation systems).

C5 = It blurs the line between fully employed and casual labour.

C6 = The internet and new technologies constitute the essential functional core of this system.

C7 = It redistributes underused assets (excess capacity). It promotes access over ownership.

C8 = It emphasizes collective experiences, personal feelings, sustainable lifestyles, etc.

C9 = Prosumers play an important role in peer production.

C10 = The digitalization of physical goods leads to reduced prices. Great issue for capitalist markets. Abundance over scarcity.

C11 = It allows p2p transactions while empowering individuals.

C12 = It disrupts traditional systems (including policies and tax revenues).

In an effort to reach an appropriate and accurate definition in which the essence of the sharing economy is clearly reflected, this dissertation proceeds to quantify and classify each of the characteristics previously mentioned. Characteristics (C) are matched to each of the expert's understandings (E). It is important to note that, this study considers as significant insights solely those mentioned when asking about what sharing economy broadly means. Thus, authors and interviewees may consider other characteristics not crossed in the following table important too, but not essential to framing a broad general definition.

Table 3: *Main sharing economy characteristics rated by experts.*

	Featured characteristics (Cnº)											
Exp. (Enº)	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
E1								x				
E2		x	x			x	x	x				
E3		x				x			x	x	x	
E4			x			x			x	x		
E5			x			x		x				
E6		x		x		x	x	x			x	x
E7	x	x	x	x		x	x					
E8		x				x	x		x			
E9		x		x		x	x	x		x		
E10	x		x			x	x					
E11		x	x			x	x		x	x		x
E12	x		x	x		x	x		x		x	
E13	x	x	x				x	x	x		x	
E14	x	x			x	x	x		x	x		x
E15	x		x	x			x			x		x
E16	x				x	x						x
E17	x	x	x		x		x					x
E18	x			x	x	x	x				x	
E19		x	x	x							x	
E20	x	x					x					x
E21						x	x		x		x	x
E22	x					x	x				x	
E23	x					x	x					
E24						x	x				x	
E25	x		x			x	x					
E26						x	x				x	
E27	x						x					x
E28			x				x				x	x
E29	x		x	x		x	x				x	x
Total	**15**	**12**	**14**	**8**	**4**	**21**	**23**	**6**	**8**	**6**	**12**	**11**
%	**51,7**	**41,3**	**48,2**	**27,5**	**13,7**	**72,4**	**79,3**	**20,6**	**27,5**	**20,6**	**41,3**	**37,9**

Table 3 reflects the wide range of opinions among sharing economy experts, which includes entrepreneurs, professional workers, advisors, academics and well-known authors, regarding the difficult task of outlining a general definition of the sharing economy. Only three characteristics from twelve have been identified as crucial by more than 50% of the experts (C1- market-based system, C6- driven by the internet, C7- optimal redistribution of underused goods and services). Closely following this result, three more coinciding views range from 40 to 50 percentage of the total evaluation (C2-

based on decentralized networks, C3- crowd-based system and C11- enabler of p2p exchanges). Subsequently, a diminished number of interviewees and authors (20% - 40%) agree on five additional characteristics (C4- trust is generated via reputation systems, C8- it fosters collective experiences and sustainable lifestyles, C9- prosumers play an important role, C10- it is addressed to the digitalization of physical goods and C12- disruptor of traditional systems). Finally, feature C5 (blurred line between fully employed and casual labour) was mentioned by a mere 13,3% of the experts.

Although the findings indeed reflect the difficulties inherent to defining the sharing economy, partly due to its sudden and still evolving nature, it is also remarkable to observe general consensus regarding certain aspects. This study sorts all characteristics analysed on Table 3 in three different levels of importance: essential (41%-100%), important (20%-40%) and influential (up to 20%). Therefore, and according to this classification, this study can broadly state that the sharing economy is *essentially* characterized by the following:

C7 - Redistribution of assets. It promotes access over ownership (79,3%). The sharing economy aims to redistribute existing goods across the population in order to maximize their functionality (Howard, 2015). This view privileges access over ownership, although hybrid systems like co-ownership are also considered as part of the sharing economy (Doennebrink, 2016). Sharing economy platforms allow users to share (not necessarily for free) their possession with others thus developing new patterns of consumption. Goods are owned by few but enjoyed by many, the sharing economy highlights the need to make use or dispose of the overproduced goods of large capitalist enterprises (Botsman & Rogers, 2010; Rifkin, 2014). Accordingly, a considerable amount of everyday goods such as toys, digital devices, construction tools, sports equipment, etc. pass from user to user, thus reducing the need to buy the same product as new brand. Placing access over ownership considerably reduces costs given that consumers pay solely for the needed time.

C6 – The internet and innovative technologies are the core of the sharing economy (72,4%). The emergence of the sharing economy has been made possible by the development of certain innovative digital devices combined with online networks (Algar, 2017; Tapscott & William, 2006). Analysing the previous characteristic (C7), the reader

may notice that similar sharing behaviours have occurred throughout history. Certainly, activities such as swap, exchange, rent, or trade constitute a quite antique form of consumption, nevertheless when referring to the sharing economy it is essential to frame the concept within a technological and digital environment (Sundararajan, 2016). The evolution of the website and the subsequent advent of the smartphone have greatly contributed to create new ways of commerce in which large communities are digitally connected (Benkler, 2004). The majority of sharing economy initiatives are based on high-tech platforms which enable the combination of multiple features such as location by GPS, instant messaging, online payments, rating systems and the integration of social networks among others. Thus, all in all, the internet performs an essential role when differentiating between traditional sharing and the one explored in this dissertation.

C1 – The sharing economy is a market-based system (51,7%). It is important to remark that the sharing economy also appeals to its own word *economy*, in that it produces, distributes, and consumes goods and services (Slee, 2015). Sharing economy platforms mainly function as a digital marketplace where supply and demand are matched, either for economic compensation or for any other type of value exchange. Matofska (2016) clearly differentiates two types of sharing platforms; profit-driven and purpose-driven. The first (and larger) form, in which successful companies such as Airbnb or Uber are pioneer, is experiencing an exponential annual growth generating high incomes (Owyang, 2013). In addition, the sharing economy is being applied to a considerable range of different niche markets thus creating new opportunities for commerce. Purpose-driven networks, also referred to as "pure sharing", represent a minor part of the whole system in which there normally is not any monetary exchange (e.g. time banks).

C3 – The haring economy is crowd-based (48,2%). The sharing economy is conceived as a enormous network of connectivity in which users can easily participate (Chase, 2016; Sundararajan, 2016). This statement directly stems from the fact that sharing platforms are coded on the internet. C6 enhances C7 and it becomes C3. In other words, due to the widespread use of the internet, local sharing initiatives such as second-hand markets or hitch-hiking have evolved into global initiatives. This was not possible before the internet. Moreover, as mentioned in the previous chapter, on-demand services operating under the umbrella of the sharing economy depend on crowds, that is, the bigger the network is the

better. This type of platform requires immediacy, which means that services and goods must be exchanged anytime, and anywhere.

C2 – The sharing economy is built on decentralized networks (41,3%). As opposed to hierarchical and pyramidal structures, sharing economy platforms are designed from decentralized and often distributed networks (Bauwens, 2012). A decentralized network is intended to spread decision-making power among its nodes in order to avoid superior control (Botsman & Rogers, 2010). By doing so, the figure of the middleman loses importance; nonetheless, it is relevant to point out that in a certain way, platforms function as a sort of middleman. Even though sharing economy workers are allowed to decide their own schedule, price, settings, etc. the platform is ultimately the one which decides the basic rules and obligations, being able to change them at any time. For this, is important to clarify that just a minor part of the sharing economy is executed from pure distributed networks (Slee, 2015).

C11 – The sharing economy enables p2p transactions while empowering individuals (41,3%). Sharing economy applications allow individuals to trade, exchange, share or swap from p2p while avoiding any external middleman except the platform itself (Meran, 2016; Nelson, 2016; Kratky, 2016). Decentralized networks enable direct connections optimizing time and saving costs. For instance, if Peer A requires any service provided by Peer B, the transaction will materialize faster as well as relatively cheaper through a decentralized network than if the transaction is channelled through a third Peer C. As mentioned above, the digital platform indeed functions as Peer C, as a virtual place where peers engage in determined transactions. Once the platform matches Peer A and Peer B, both peers are free to set their own conditions for the transaction. In terms of labour, p2p platforms empower individuals because: (1) there is no need for previous payments or investments, and users can easily raise capital by uploading content to the net; (2) in terms of bureaucracy, extensive legal forms are replaced by simple online sign-ups; and, (3) it allows users to capitalize on their own possessions, knowledge or time; for many, sharing economy platforms function as a secondary source of income.

In addition, this dissertation considers the following characteristics of the sharing economy as *important*:

C12 – The sharing economy disrupts traditional systems (37,9%). The emergence of digital economies, in which the sharing economy is included, has disrupted common trade practices, traditional regulations, policy systems, city legislations, consumer behaviour and other socio-economic habits (Mason, 2015). Most of the experts addressed in this research advocate for alternatives to well-establish capitalist markets arguing their current inefficiency. Theoretically, the sharing economy, compared to capitalism, promotes access over ownership, collaborative consumption over hyper-consumption, openness over privacy, cooperation over competition, self-organization over hierarchy and control, peer-to-peer (p2p) over business-to-business (b2b), networked structures over top-down structures, prosumers over passive consumers, and customization over standardization. However, in practice, many sharing platforms are becoming more and more corporate and profit-driven, contradicting their original guiding principles (Slee, 2015). Regardless, it is remarkable to notice how different manners of consumption and production are being developed through digital environments, in apparent contradiction with capitalist principles. A major aspect in which this disruption is clearly visible is related to regulations: the sharing economy introduces new conceptions of trade, so therefore a new specific legislation is required to protect its basic principles (Matofska, 2016).

C4 - Trust among strangers enhances social value. Trust is mostly created from reputation systems (27,5%). Although trust between peers fosters successful exchanges within sharing economy communities, lack of trust greatly discourages individuals to share their own goods or spaces with others (Gansky 2010; Stephany, 2015). The appearance of reputation systems, which fundamentally enable people to evaluate each other's services by means of comments and ratings marked the transition from early digital marketplaces (e.g. Craigslist) to the current sharing economy (Sundararajan, 2016). As mentioned before, neighbourhood communities where trust is generated by personal relationships are rarely found in large sharing economy platforms. Thus, assuming that most transactions take place between strangers, a new trust system is required in order to maintain the whole system active. In these cases, reputation systems are designed, not only as a means of providing personal information about a peer, but also as a tool to warn about previous actions or behaviour observed by other users. Sharing economy members usually consider comments and ratings as trustworthy and reliable proof to base their final decision when accessing a service. In terms of trust building, large communities will generate fairer systems than smaller ones. Statistically, an asset

valued by many will be more reliable than the same one rated by a few. At this point, it is important to indicate that the potential unfairness of current rating systems is being monitored and observed closely by many experts in the field.

C9 - Prosumers play an important role in peer production (27,5%). The term prosumer must be understood with a digital framework. Firstly, most authors cited in this chapter (e.g. Benkler, 2004; Tapscott & Williams, 2006; Algar, 2007) use the term prosumer in reference to digital producers and consumers: users who actively create digital content while consuming other's information, as for instance is the case with open source coders or wiki writers. In these cases, prosumers share knowledge (mainly code). Secondly, prosumers are also defined as active citizens who play reciprocal roles on sharing economy platforms, not only by allowing others to use their possessions, but also actively accessing and using others' assets. For example, *couchsurfers* are intended to be guests and hosts at any time in order to be part of the community. As such, prosumers share physical goods. Thirdly, users of communities like Makers or Do It Yourself (DIY) are also considered prosumers given that they produce and consume each other's assets. In most of these communities the 3D printer plays an essential role: objects are initially coded and stored in large virtual libraries for the common use and subsequently printed using additive products. This type of prosumer represents a hybrid user who first shares knowledge and afterwards consumes material objects.

C8 – The sharing economy emphasizes collective experiences, personal feelings and sustainable lifestyles (20,6%). The sharing economy fosters cooperation and collaboration among community members enabling them to collectively consume goods and services. As originally indicated by Felson and Spaeth in 1978, current sharing platforms continue to attract new members by highlighting the meaningfulness of experiencing sharing practices with strangers. The sharing economy aims to create a collaborative atmosphere driven by trust, altruism, transparency, openness and common goods (Lessig, 2008; Castells, Carçada & Cardoso, 2012). The integration of these factors into communities leads to both, personal and collective positive feelings.

C10 - The digitalization of physical goods leads to highly reduced prices. Abundance over scarcity represents a great issue for capitalist markets (20,6%). This study assumes that the sharing economy is comparable to any other digital economy (e.g.

platform economy, access economy, gig economy, e-commerce, etc.). Digital economies are designed to function as global virtual markets, thus replacing traditional brick and mortar businesses (Sundararajan, 2016). Given the high demand for digital content, several industries have been forced to reshape their products into digital forms causing a readjustment of production costs (Algar, 2007; Rifkin, 2014). Traditional capitalist markets produce a limited number of products, which in turn leads to scarcity: the production and trade of physical assets are linked to the use of natural resources combined with manufacturing processes, transportation and storage (Rifkin, 2014; Mason, 2015). Digital economies, on the other hand, transform scarcity into abundance by digitalizing material goods, which in turn may be copied infinitely without losing quality (Howards, 2015). Production costs decrease considerably, making goods and services highly affordable. This situation can be observed in several applications developed under the umbrella of the sharing economy. For instance, Wikipedia instead of the printed version of Encyclopaedia Britannica, music platforms (e.g. Youtube or Spotify) instead of CDs, community building maps (e.g Waze) instead of paper roadmaps or online classrooms (e.g. Coursera, University of People or Tutellus) instead of conventional academies, schools or universities.

And finally, on a lower level of importance, this research considers the following characteristic of the sharing economy as *influential*:

C5 – The sharing economy blurs lines between fully employed and casual labour (13,7%). Most of the digital economies, including the sharing economy, rely on alternative models of labour in which users practically establish and define their own work conditions. Behaving as freelancers, sharing economy workers are allowed to, at any time, determine their availability, prices, or even to whom they want to work for. Normally, employees of sharing economy platforms make use of this system as a secondary source of income, with the unfortunate consequence that, as Sundararajan (2016) alerts, many common activities such a giving a ride or borrowing tools from a neighbour, are now becoming a for-profit business.

After carefully deconstructing the concept of the sharing economy into specific principles, this dissertation proceeds to condense the most relevant insights into one unique definition. Thus, the following statement is proposed as a working definition of

what the sharing economy essentially represents (this definition will be used and applied in subsequent chapters):

The sharing economy is a global socio-economic system based on the better redistribution and management of underused goods, services and knowledge prioritizing collaborative-shared access over ownership. Peer-to-peer production, trading, swapping or renting is normally arranged by means of decentralized online platforms.

4.2 Sharing economy typologies

The sharing economy phenomenon covers a large range of specific sectors in which the general definition stated above can be properly applied. Its rapid growth and popular acceptance have positioned the sharing economy as a successful means of production and consumption of goods and services, including knowledge, accommodation, banking, retail or transportation services (Owyang, 2013; Mellor, 2016; Cañigueral, 2016). For a better understanding of the wide range of activities that sharing economy communities encompass, this research proceeds to analyse and compare three different classifications developed by the experts Botsman and Rogers, (2010), Bauwens, (2012) and Doennebrink (2016).

4.2.1 According to Botsman and Rogers (2010)

Collaborative consumption extends to cooperatives, collaborative communities and p2p networks principally driven by a more sustainable utilization of existing resources, social trust and accessibility. This novel socio-economic system technologically reinterprets traditional practices such as swapping, sharing or lending into three categories:

Product service system: It allows users to pay for a good or service only for the time required, instead of paying for full ownership. Product service systems are similar to traditional renting businesses or public services like libraries or public transport. In these cases, assets are generally available for common use. The same product is used by several users at different times, all parties agreeing to return it in optimal conditions. Therefore, within product service systems goods and services are privately owned by the platform itself and used (mostly rented) by its members. For instance, the organizations Car2Go or Zipcar own cars in various cities, enabling citizens to access them directly with their smartphone and make the payment online according to the time consumed. Product

services systems initially appeared in several cities that offered bike-sharing service to its citizens. In these cases, private organizations supported by governmental institutions, distributed a large number of bikes throughout different neighbourhoods for their common use. Moreover, the recent phenomenon known as *the library of things,* either managed by private or public organizations, promotes access over ownership, making available products such as electronic devices, construction tools, camping gadgets or toys, charging a fee solely for the time consumed. Product service systems require a strong sense of collaboration within communities and members are expected to treat assets responsibly for the common good.

Redistribution markets: This system functions as a virtual second-hand market where underused goods are p2p traded. Redistribution markets are built on online platforms that serve as a common place where individuals have the capacity to sell or gift their own goods. In this context, ownership passes privately from peer to peer. The platform (normally charging a percentage of the total income as a fee) allows users to advertise their products by uploading pictures, descriptions and prices. Normally, global redistribution markets offer delivery service, while more local platforms let buyers and sellers arrange their own pick-up system. This digital market includes sharing economy platforms such as Wallapop, Freecycle, ThredUp and more recently Facebook (analysed in-depth the Chapter 10).

Collaborative lifestyles: This third system involves swapping, sharing or trading of less tangible assets, for instance, when individuals with similar interests and tastes collaboratively share working places, exchange knowledge or skills, lend money or participate in local food sharing communities. This specific category is driven by personal emotions and feelings and users are usually willing to engage within groups to experience and share joyful moments with other members. Collaborative lifestyles might occur either on a global or local level. In the first case, individuals personally get together and share goods and services such as physical spaces (co-working spaces or Hubs), language-learning practices best known as tandem, skills and professional abilities (e.g. TaskRabbit) or traditional meals with locals (e.g. EatWith). On the other hand, global platforms usually highlight collaborative lifestyles and personal feelings in various ways: by sharing accommodation (e.g. CouchSurfing and Airbnb), by giving a ride between cities (e.g. BlaBlaCar) or by crowdfunding other's projects (e.g. Kickstarter, IndieGoGo).

Collaborative lifestyles are directly related to Felson and Spaeth's early concept of collaborative consumption (1978), as well as to Lessig's approach (2008).

***Figure 9**: Visual representation of Botsman and Rogers' collaborative economy classification (2010).*

4.2.2 According to Bauwens (2012)

Bauwens (2012) also identifies three different arenas in which the collaborative economy is developing. According to his scheme, sharing practices are sorted by the nature of the goods and services provided: if they are material or immaterial, or a hybrid combination of both. Nonetheless, and due to the exponential growth of this economy, Bauwens (2012) alerts that it is necessary to carefully examine each collaborative economy platform in order to position it under the most adequate arena.

Immaterial focus:

- Commons-oriented peer production in knowledge and software. Members of large communities contribute to the common good by coding information under different shapes: free software, open databases, knowledge libraries, etc. Digital prosumers play an important role in peer production: virtual sources are usually created and consumed reciprocally by active communicational users. This collaborative economy category requires a large level of participation: optimal results are achieved only when a substantial number of users participate. Commons-based peer production is intended to enhance innovation and creativity, as well as personal skills improvements. The best examples are Linux and Wikipedia.

- Sharing Platforms. Within this system, private and corporate platforms provide a common virtual space where individuals share personal experiences, topics of interest or creative work such as photos, videos, games, music or literature. Sharing platforms, unlike peer production platforms, are not oriented to create complex content; their main goal is to merely facilitate the open publication and sharing of information. Although there is a relevant sector where sharing is managed under licenses such as Creative Commons, the vast majority of popular sharing platforms are governed through internal regulations established initially by the platforms themselves. In these cases, licenses allow the sale of user behaviour data to external marketing enterprises. Facebook, Flicker, YouTube, Twitter or Instagram are included within this system.

Material focus:

- Shared material infrastructures for 'using'. This group enables users to trade, exchange, share, rent, gift or swap physical assets. This specific category of collaborative consumption aims to optimize the lifespan of material objects by allowing their shared access. Bauwens (2012) includes Botsman and Roger's classification (2010) within this arena. Thus, in his view, product services system, redistribution markets and collaborative lifestyles clearly exemplify the concept of shared material infrastructures.

- Digital marketplaces. In this specific context digital markets are understood as virtual places where "haves" and "needs" are matched, not only by sales and purchases, but also through collaborative exchanges. For instance, the platform eBay enables individuals to proceed with such transactions through transparent, decentralized and reliable processes. Digital marketplaces typically involve access to objects, services, labour, ideas, innovation and money.

With a mixed focus:

- Crowdsourced design and products. All platforms covered under this hybrid system allow designers, entrepreneurs, artists and innovators to advertise and trade material as well as immaterial goods and services. In order to consider this sub-category as an example of collaborative consumption, it is necessary to allocate any collective or cooperative action within the whole structure, otherwise it will be understood as any traditional art market. For instance, crowdfunding platforms such as Kickstarter or Indiegogo serve as a global storefront of ideas in which a sizeable number of peers raise

capital in order to finance a proposed project. Normally, individuals invest small amounts of money, getting a symbolic gift in return. Many companies use these platforms for scouting talented workers; they normally present a collaborative challenge to a given online community and then select a final candidate after carefully evaluating the various solutions presented by interested users or job seekers.

- Shared design and distributed manufacturing. This sub-category addresses users that produce physical assets from digital data. In this case, so-called prosumers fundamentally develop lines of code that are usually stored in open repositories, allowing any member of the community to use them. Eventually, these digital files might be transformed into physical products by using additive or subtractive manufacturing machines. As it has been already stated, the free distribution of code allows others to improve the initial source and share the outcomes within the network, in turn increasing levels of creativity as well as cooperation. The Makers movement and DIY among others embrace this tendency and practice.

- Open innovation. This sub-category includes the co-design and co-creation of private corporate industries and crowdsourcing networks. In this context, companies and freelancers collaborate on various projects in order to achieve similar goals.

4.2.3 According to Doennebrink (2016)

Doennebrink (2016) also identifies three different types within the sharing economy scheme, although his classification is guided by two different key factors: time period and main drivers.

Sharing economy 1.0: It represents the first stage of the sharing economy in which early sharing communities aimed to develop more sustainable and collaborative manners of consumption and production. Non-commercial initiatives were, and still are, purpose-driven, focusing mainly on social and ecological issues. This first wave of networks emphasized crowd collaboration as a vehicle to optimize existing resources and decrease overproduction. Usually, non-for-profit platforms are managed and regulated internally, allowing the members to take part in decision-making processes.

Sharing economy 2.0: The efficiency and rapid popularization of early sharing economy 1.0 attracted large amounts of venture capital from private investors, which inevitably led some initiatives to stray far away from their original purposes, missions and goals. Entrepreneurs soon realized that profit could be made by linking commercial initiatives with sharing economy fundamentals. Taking advantage of the 2008 financial crisis, several platforms emerged as for-profit-driven (e.g. Uber), while other existing networks opted to shift from pure sharing to more commercial purposes, as in the case of CouchSurfing, which in 2011 accepted £4.7m in venture capital (Baker, 2011). It is essential to point out that, the sharing economy 2.0 constitutes the greatest segment of the whole landscape.

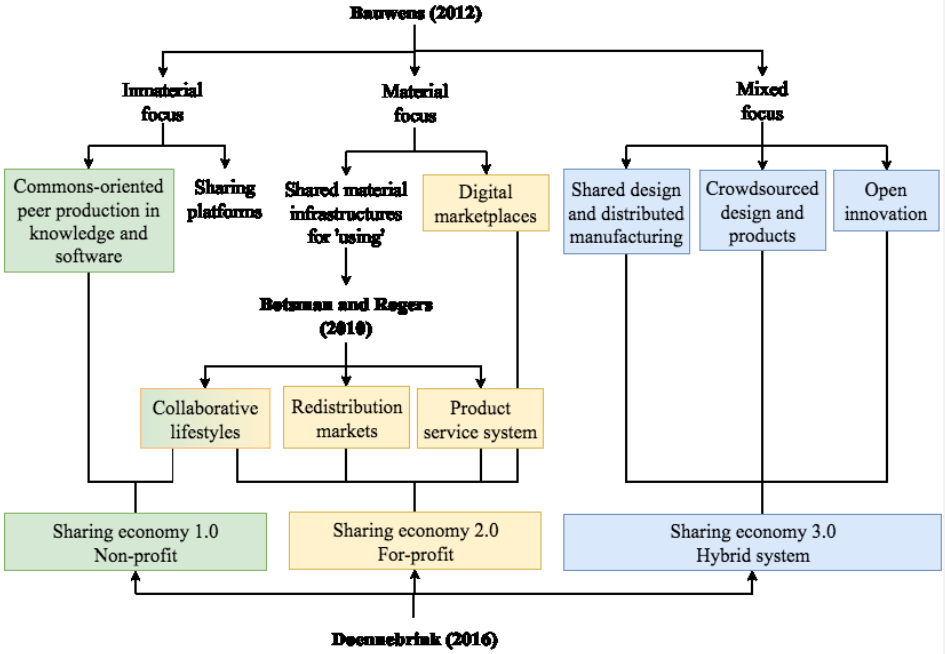
Sharing economy 3.0: The third and newest wave of collaborative practices is being shaped by the insights gathered from both 1.0 and 2.0 sharing economies. It is a solid combination of collaborative distributed networks with profit making aim. Platform cooperativism (this term is explained in detail in subsequent chapters) is the main feature of this hybrid and yet morphing category. Its principles assure shared and equitable ownership over all members of the community thus avoiding external control. For instance, the driver-owned app Union Taxi in Denver or VTC Cab in Paris are aimed at establishing a more cooperative alternative to the well known platform-owned Uber. Unlike Uber, where workers have to accept owners' conditions, alternatives like the ones mentioned allow drivers to equally own the platforms and therefore also to determine its management, share benefits and costs, etc. The sharing economy 3.0 also includes not-only-for-profit, for-benefit or commons-based platforms.

4.2.1 Connecting sharing economy classifications

Considering these typologies in an isolated manner will not suffice to describe the system as a whole. In order to provide a clearer picture of the previously mentioned sharing economy typologies, this study proceeds to examine several connections between them.

Figure 10 shows the schematic integration of the three different classifications studied thus far. Fundamentally the sharing economy has been categorized according to the following criteria: firstly, the nature of the asset itself analysed (Bauwens, 2012), secondly, the manner in which the asset is consumed (Botsman & Rogers, 2010) and thirdly, profit-purposes and time period (Doennebrink, 2016).

Figure 10: *Interconnections between the classifications formulated by Botsman and Rogers (2010), Bauwens (2010) and Doennebrink (2016).*



Principally Figure 10[13] indicates that Bauwens and Doennebrink contemplate a larger scope of sharing practices in comparison to Botsman and Rogers who rarely make reference to hybrid systems or peer-production communities. Besides that, it has been also found that; the earliest wave of the sharing economy (1.0), which is meant to be social driven (coloured in green), fits mostly with the non-commercial sub-category *commons-peer production* and partly with *collaborative lifestyles* segment that embraces both for-profit-driven and social-driven communities. In the case of the second sharing economy wave (2.0), which is defined by its commercial purposes (coloured in yellow), it directly corresponds with the *material focus* category of Bauwens and the entire proposal of Botsman and Rogers. At this point, all three categories meet together and agree on the fact that, in most of the cases, platforms, where physical products are exchanged/shared/traded, are market-based and therefore in these platforms goods are

[13] NOTE: It is important to note that Figure 9 aims to reflect a general overview of all three classifications explored, thus, minor exceptions are excluded (e.g. a platform running as *product service system* does not necessarily have to be for-profit, however are rare cases). In addition, the sub-category *sharing platforms* proposed by Bauwens (2012), better known as social networks, is also dismissed given that only a few authors contemplate social media as part of the sharing economy.

transacted in return for money. This crossroads in which all categories coincide is where companies like Airbnb or BlaBlaCar are situated.

And last, hybrid forms (coloured in blue), which include commercial, creative and social aims, are only addressed by Bauwens and Doennebrink who observe the great potential that characterizes this mixed sharing economy. This latest wave, the sharing economy 3.0, allows individuals to make some profit out of their goods, services and creations but always from a cooperative point of view. The hybrid wave can be understood as a middle point between capitalist enterprises and the earliest sharing economy platforms defined by quasi altruistic exchanges. Good examples of this wave are crowdfunding campaigns in which innovative projects (social, technological, or artistic) are funded by small contributions of numerous collaborators worldwide.

To conclude, it has been found that even though the classification provided by Botsman and Rogers (2010) is perhaps the most well known and used when categorizing the sharing economy, it actually fails to encompass the entire sharing economy landscape. Certainly, the sharing economy is popularly associated with large platforms like Airbnb, BlaBlaCar or TaskRabbit; and these are in fact the platforms that Botsman and Rogers have examined. However, as Doennebrink (2016) and Bauwens (2012) demonstrate, the sharing economy extends to many other fields, most of them still in the stage of development. Indeed, one of their most interesting observations is that the sharing economy (3.0) seems to be evolving into quite innovative forms where social aims, commercial purposes and environmental purposes may be properly balanced.

4.3 Interpretations of the sharing economy over time

At the beginning of this chapter a set of sharing economy definitions, stated between 1978 and 2016, have been explored in an attempt to detect possible variations throughout the years. Also, with regard to temporal transformations, special attention has been paid to Doennebrink's classification, in which profit goals have driven the evolution of the sharing economy. Therefore, by linking both approaches as well as the conclusions reached in the previous chapter, this study attempts to summarize the evolution of the sharing economy according to its diverse definitions while highlighting which characteristics have changed over time and which have not.

By comparing early definitions and the ones proposed more recently, several differences stand out. Firstly, early understandings identified community building, social relationships, altruism, sustainable lifestyles, and non-monetary exchanges as the main drivers of sharing or collaborative economies (e.g. Felson & Spaeth, 1978; Benkler, 2004; Lessig 2008). The initial manifestations of the phenomenon were mainly driven by social concerns instead of profitability potential. In fact, it was intended to serve as a participative tool to promote personal relationships by means of shared resources, services and knowledge. These early interpretations of the sharing economy are included into what Doennebrink (2016) calls sharing economy 1.0, a period in which the sharing economy focused more on sharing than on commercial purposes.

However, as time passed, this aim seems to have shifted: aspects related to sociability, personal experiences or enjoyable lifestyles appear progressively to be used by sharing economy platforms as marketing strategies rather than as part of their true aim (Slee, 2015). According to contemporary authors (e.g. Howard, 2015; Sundararajan, 2016; Slee, 2015) the sharing economy is nowadays understood as a global economic system which moves large amounts of capital every year. In fact, it is important to point out that some of the most relevant literature published so far about the sharing economy has been written by CEO's of large commercial platforms, such as Robin Chase co-founder and former CEO of Zipcar or Alex Stephany CEO of JustPark (currently he works as board advisor).

Indeed, the capitalization of some sharing economy platforms has led to the redefinition of their own purposes and, at that point (approx. from 2008 onwards) is when the sharing economy 2.0 (Doennebrink, 2016) began to emerge. Unlike the sharing economy 1.0 which was driven by social aims, version 2.0 includes large corporations driven by market principles. Although these two waves of the sharing economy drastically differ in terms of their main goals, both still share a common principle: this is, the optimal redistribution of underused goods, knowledge or services. At the moment, both waves, 1.0 and 2.0, are still present.

Secondly, reputation systems, understood as digital tools that enable users to rate and evaluate other's services, were not considered a main component of the sharing economy until 2010 when Botsman and Rogers published their popular book *What is Mine is Yours*.

Although prior to this event, reputation among unknown individuals already played an important role in the sharing economy, it is from the publication of this book when reputation systems begin to draw the attention of diverse authors. As such, Gansky (2010), Owyang (2013), and Stephany (2015) began to explore reputation systems in which users build their own reputation, evaluate the behaviour of others, and report negative/positive experiences. As stated in the previous chapter, the emergence and use of reputation systems are key features which stand out when comparing traditional digital markets with sharing economy platforms (Sundararajan, 2016). Thus, on a broader scope, reliability and trust among strangers are also subject to change and transformation. Personal and direct relationships developed normally at a local scale (Felson & Spaeth, 1978; Lessig, 2008; Castells, Carçada & Cardoso, 2012) are reshaped by the sharing economy into virtual systems where reputation is based on ratings, comments and feedback provided by multiple users worldwide (Howard, 2015; Chase, 2015).

Thirdly, it is important to note that some elements have not changed much form the earliest interpretations of the sharing economy to the more contemporary understandings. Fundamentally two elements remain untouched: on the one hand, the internet is still considered the major pillar upon which the sharing economy rests and, on the other hand, the idea that the main aim of the sharing economy is the efficient access to underused goods and spaces. Regarding the first element, 72,4% of the definitions explored in Tables 1 and 2 agree on the fact that the sharing economy is not viable without an online frame. Drawing a temporal line, it is Benkler who, in 2004, emphasized the collaborative behaviour of large online communities based essentially on open and free sharing of information through decentralized networks. His studies on virtual collaborative systems were rapidly followed by other authors like Tapscott and Williams (2006), Algar (2007), Lessig, (2008) Bauwens (2012) or Rifkin (2014). Therefore, and excluding the definition proposed by Felson and Spaeth in 1978, which in fact does not mention the internet, practically all subsequent interpretations of the sharing economy, in one form or another, are linked to the existence of the internet.

The second and most important element applies to the idea that the goal of the sharing economy is the efficient access to underused goods and spaces, finds mention in a great number of published definitions. Daily activities such as having lunch, driving to another city or doing laundry were already subject to analysis back in 1978 when Felson and

Spaeth observed the benefits of performing these activities collaboratively instead of individually. They described a society where individuals, known or unknown, shared spaces, rides or equipment among themselves in a way that would become more sustainable as well as enjoyable. This interpretation of the sharing economy has been likewise addressed in the last decade by multiple authors (e.g. Botsman & Rogers, 2010; Mason, 2015; Matofska, 2016) when explaining the basis of the sharing economy. Therefore, the optimal consumption of underused physical object and spaces as well as the shared access to knowledge and services, remains, since 1978 to this date, an almost unmodified and major principle of the sharing economy.

5. Exploring the sharing economy in comparison with closely related socio-economic systems

After having summarized the main characteristics of the sharing economy, this dissertation proceeds to examine its relationship with other closely related socio-economic systems. The exponential growth of the digital economy has led to the appearance of several hybrid shapes of production and consumption (Rifkin, 2014) which might lead us to erroneously classify them as examples of the sharing economy. The confusion stems from, firstly, the fact that some of these hybrid forms are highly linked to the sharing economy, and secondly, because there are yet no proper and accurate definitions for each of these new socio-economic systems (Matofska, 2016). Therefore, and in an effort to clarify misleading approaches, this specific chapter aims to:

- Isolate and examine certain socio-economic systems in which goals, functional structures or other relevant elements are highly linked with the sharing economy.
- Compare these economies and the sharing economy in order to highlight the essential factors that make them distinct or similar.
- Construct a visual diagram in which all economies and systems explored are interconnected within a unique holistic schema.

The socio-economic systems explored are: the circular economy, the gig economy, platform cooperativism, platform capitalism, the gift economy and the blockchain technology. This selection covers the frameworks most commonly cited by the interviewed experts and by the reviewed publications.

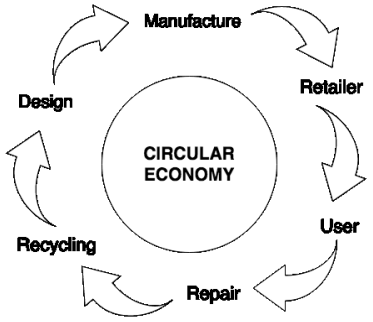
5.1 The circular economy

The circular economy stands in direct opposition to lineal manufacturing processes where products are made, consumed and subsequently discarded. These traditional open-ended economies are designed to produce objects with a very reduced time of usability, thus fostering hyper-consumption as well as material waste (Pearce & Turner, 1989). As a reaction to environmental and socio-economic concerns, the circular economy can be defined as a system in which: (1) product components are fabricated from non-toxic

biological materials that facilitate recycling and biodegradation; (2) re-assembly elements and adaptable connections are design priorities, allowing products to be more resilient to external factors than others built on compact structures; (3) production and distribution function by means of renewable energies; and (4) maximum functionality of the final product is achieved by understanding the relevance of the components in isolation (The Ellen MacArthur Foundation, 2015).

In short, goods manufactured in circular economy processes (See Figure 11) experience increased levels of utility and value at all times, preserving natural resources, minimizing environmental impact and reducing production system risks by limited stocks. The aims of circular economies are successfully achieved in the long term (Webster, 2015).

***Figure 11**: Cycling process of the circular economy proposed by Ellen McArthur Foundation*



Both experts interviewed, Carrie Snyder (circular economy professor at University of Harvard) and Alex Lamille (Valued Circular Economy ^{TM} expert), agree that financing is the main obstacle which stands in the way of the widespread development of the circular economy model across private companies and public organizations. This issue is tied to the fact that circular economies are viable only when a considerable number of institutions, public and private, interconnect their services and apply similar principles when producing goods. Thus, the first companies implementing this system always face high initial investment until other enterprises join the network. This transition period of moving from stock market to a more flexible commercialisation, challenges the creation of new businesses.

Moreover, the lack of a common and broad understanding complicates an optimal development of the circular economy (Snyder, 2016). This lack of a clear understanding is due to the fact that circular economies are themselves a combination of very different approaches, production technologies and operational systems. In addition, Snyder (2016) points out that some individuals and companies mistakenly focus on short-term benefits, rather than on the benefits that circular economy systems can provide as a whole. In these cases, short-term benefits are prioritized over long-term compensations. Lamille (2016) also identifies governments and policymakers as potential enablers of alternative and more sustainable proposals.

Furthermore, although long-term environmental benefits are intrinsic to circular economic models, they also provide long-term economic benefits by focusing, for example, on waste reduction and cost-efficient production processes. In this context, Lamille (2016) points out that environmental concerns have not been the main driver behind the circular economy model: "people are using it because it is an economic model, not an environmental one". Although pollution concerns do not represent a decisive affair for which private companies engage within the system, contamination issues are ultimately embraced too as a direct repercussion.

5.1.1 Relationship between the circular economy and the sharing economy

In order to better comprehended the degree of relatedness between the sharing and the circular economy, this dissertation proceeds to highlight certain parameters that function similarly in both socio-economic systems. First and foremost, although several sharing economy principles are present in the circular economy model, it is important to state that these constitute a small component within the whole circular economy spectrum (Lamille, 2016; Snyder, 2016; Egerton, 2016). Circular economies mainly seek to develop a looping production process in which products are initially designed, manufactured, consumed, repaired and reused, thus creating a sustainable circle. Therefore, and according to this definition, sharing economy principles would be present mainly at the moment where the product is being consumed. Summarizing, circular economy focuses its attention on how to produce a more sustainable and reusable product while the sharing economy attempts to optimize its consumption (Ferguson, 2016).

Second, the sharing and circular economy are connected by two main features: (1) the use of new technologies for optimal resource management; and (2) the desire to unlock the idle capacity of ordinary products. On one hand, digitally embedded technology solutions allow companies to offer their services through online applications while promoting access to existing goods, thus leading to cost reduction. These digital solutions are a key element in the efficient development of both economies (Egerton, 2016).

On the other hand, the fact that profitability can be increased by maximizing the use of idle assets remains an essential part in both conceptions. The sharing, as well as the circular economy, seeks as a primary aim, to maximize the use of goods, in the first case by means of trading, renting, swapping or gifting and, in the second instance, by building objects with repairable and recyclable components (Snyder, 2016). Both systems highlight the economic benefits that redistribution and reuse of physical elements imply. Indeed, both reject capitalist manufacturing principles in which products are designed to serve for a short period of time. Hyper-consumption, in this context, stands in direct opposition to collaborative and circular economies.

5.2 The gig economy

The gig economy, also known as on-demand economy, enables direct connections between freelancers and employers through digital platforms. Gig workers primarily perform flexible part-time jobs that vary from ride sharing to qualified research projects (Brinkley, 2016). Specifically, the gig economy is characterized by the following: (1) independent workers act on a task-by-task basis which usually changes from one day to another; (2) it is predominately run by millennials (people born in the 80's and the 90's) in search for autonomous and nomad jobs; (3) it promotes the shared use of co-working spaces; (4) it faces traditional workforce structures; and, (5) digital platforms are the main tool for creating immediate connections. In fact, these platforms are the point where supply and demand efficiently meet together (AI Group Workforce Development, 2016).

The digital revolution has sparked numerous changes in several fields: social, cultural and economic issues have been partly reshaped under a technological umbrella, including the manner how people conceive work (Aeppel, 2016). As a necessary part of this transformative process, the gig economy, as is the case for most digital economy

platforms, must eventually address major labour issues already contemplated and enforced by existing institutions. This dissertation proceeds to present and discuss the main advantages and disadvantages of this emergent economy.

Regarding its advantages, the gig economy brings real alternatives for individuals to increase their monthly income. Most gig jobs are complementary to regular jobs (Sundararajan, 2015; Aeppel, 2016). Gig workers highly value control over their schedule and location: the gig economy provides the possibility of working from any part of the world with internet access. For gig workers, these factors represent freedom and autonomy (Sherk, 2016). Furthermore, the use of online networks allows the gig economy to maximize a freelancer's chance of finding jobs that best suit his/her skills. From the employer's side, agility and quickness are essential for developing potential projects. In this context, the gig economy eases a company's ability to hire talented workers solely for the time required for specific and temporary projects (AI Group Workforce Development, 2016). In the case of small and developing companies seeking temporary and part-time workers, gig freelancers represent an efficient and more affordable solution: indeed, low periods can be overcome by hiring gig employees.

In terms of its disadvantages, it must be noted that the gig economy disrupts established labour rules and dismisses important worker's rights, such as unemployment insurance, maternity leave, and retirement plans. Indeed, the rise of the gig economy "could contribute to rising income inequality, by locking low-wage workers into unstable careers without the guarantee of a steady pay check" (Aeppel, 2016, p.1). In addition, and in reference to large gig companies such as Uber, workers are usually barely protected by the company. When a negative situation occurs, the platform tends to define itself as a mere meeting point, thus avoiding any kind of responsibility. In sum, the gig economy acts as a short-time resource for income. Therefore, as a long-term system, this economy (performing under current legislations), might imply uncertain stability (Slee, 2015).

This study distinguishes two types of gig economies:

- **Gig economy based on the temporary production of digital content**. This range – also known as nomad or remote jobs- includes freelancers who work on digital projects independently from any concrete platform. Examples include editors, graphic designers, web developers or online marketing specialist who are paid for specific

tasks at a specific time. In these cases, workers are not tied to any platform or location; digital products are created, sent and paid for through online applications. Reputation systems are not required in this category.

- **Gig economy based on regular local services.** In this variant, gig workers offer personal services: giving a ride, hosting guests or repairing physical objects. As opposed to the previous range, this type of gig economy implies a less flexible mobility due to the fact that freelancers must stay in the specific location where the services are required. As such, Uber drivers or TaskRabbit household errands are tied to the specific platform that advertises their local services, a fact that in consequence leads to a reduced autonomy when compared to pure digital gig economies. Thus, given that workers are anchored to specific platforms, these systems essentially require reputation systems. Workers who obtain negative reviews will lose visibility and, in the case of reiterated bad feedback, the platform is allowed to permanently exclude that gig employee from working again through the platform. Within this gig economy type, two specific sub-categories can be identified:

    - **Gig platforms focused on idle capacity.** In this context, workers profit from the idle capacity of their own assets. For instance, a BlaBlaCar driver who is driving to a distant city can partially finance the trip by sharing costs with others who are headed in the same direction. In this case, the gig worker advertises the empty seats. Freelancers here perform occasional tasks solely when these are convenient enough. Compared to other types of gig economies, this is the one most closely related to the basic sharing economy principles.

    - **Gig platforms focused on labour.** This range refers to platforms where members announce services but not material goods: only labour is transacted in these communities. In the case of Uber, drivers function identically to traditional taxi drivers, offering their services instead of their empty car seats. Contrary to a BlaBlaCar driver, who in most cases has to drive from point A to B for personal reasons, an Uber driver moves from A to B in response to an on-demand user request, so no improvement on idle capacity is achieved. For this reason, Uber has been singled out as a very difficult and controversial case when it comes to framing it into the sharing economy. (Matofska, 2016, Slee, 2015)

5.2.1 Relationship between the gig economy and the sharing economy

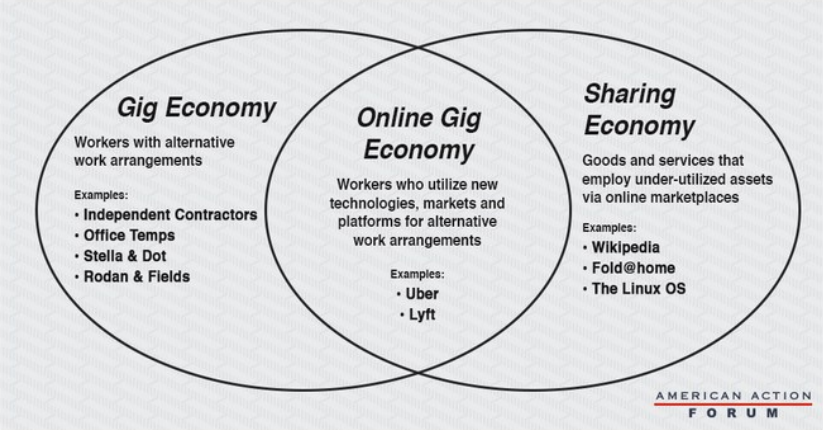
Taking the factors stated above as a starting point, this study proceeds to engage in a more detailed exploration of the connections between the gig and the sharing economy, as well as their main areas of divergence.

The gig economy constitutes the specific sector of the sharing economy where the act of sharing/swapping/exchanging is the principal method of generating capital. The gig economy can be placed at a middle point between the sharing economy and the current capitalist economy. Therefore, although the collaborative economy embraces a variety of sharing practices such as peer production, time banks, altruistic exchanges, co-operative initiatives etc., the gig economy focuses solely on for-profit sharing in which users provide services, goods and knowledge expecting monetary compensation. More specifically, the gig economy is closely related to the sharing economy 2.0 (Doennebrink, 2016), the second wave of the whole schema in which pioneer corporative sharing platforms like TaskRabbit or Airbnb may be classified. Sharing economy 2.0 has merged gig workers and collaborative practices of online marketplaces into the same recipe (Rinehart & Gitis, 2015).

Furthermore, there exists a substantial difference, the gig economy is purely concentrated on alternative labour arrangements while the sharing economy focuses on a more sustainable use of underutilized or idle assets. In consequence, goals diverge as well: most gig or on-demand platforms are not centred on the optimal use of existing assets, but instead on finding temporal labour matches, regardless if the idle capacity of the asset in transaction is being unlocked or not. Nonetheless, even though gig practices aim to achieve different objectives than the sharing economy, the performance of the first indirectly affects the second. Thus, gig workers seeking monetary income contribute in a way to using assets that would otherwise remain idle.

Rinehart and Gitis (2015) observe the emergence of a third arena as a common point where both paradigms meet together: the *online gig economy* (See Figure 12). In this context, online gig workers make use of sharing economy platforms appropriating some of its collaborative insights.

***Figure 12**: Comparison between the gig economy and the sharing economy by Rinehart and Gitis (2015) for the American Action Forum.*



In conclusion, this study proposes the following statements as binding and comparative arguments between both economies: (1) the gig economy is a market-based system and refers only to profit driven networks; (2) sharing economy workers are better known as gig workers; (3) the for-profit sharing economy does require gig workers while the gig economy does not necessarily embrace sharing economy principles; and, (4) for-profit sharing and the gig economy are mutually beneficial, since gig economy offers the workforce needed to sustain sharing platforms while these, in turn, allow freelancers and independent contractors to bear flexible and autonomous jobs.

5.3 Platform economies

Digital economies are based on complex online platforms which allow, not only optimal market-based transactions of assets, but also the free massive participation of individuals to render these transactions on a global scale. These platforms might be managed either privately, which implies that owners have absolute control over users, or collectively which in turn implies a shared ownership among all participants. Both manners of governance can be found in sharing economy platforms.

5.3.1 Platform cooperativism

Platform cooperativism is the latest wave of the sharing economy (Matofska, 2016) and is the result of combining two essential elements: traditional co-operative guidelines and

innovative digital technologies. Regarding the first element, the International Co-operative Alliance (1995) outlines seven basic values that a proper cooperative should meet: (1) co-operatives are voluntary and open to all individuals who are willing to participate by accepting responsibilities regardless their gender, culture, or religious beliefs; (2) co-operatives are democratically controlled, all members equally make decisions on how to manage the organization by voting; (3) all members contribute equitably to finance the co-operative, while a reserved part of the total capital is kept as common property to support the community; (4) co-operatives are independent and autonomous, self-governed by members; in case any external organization aims to engage somehow with the co-operative, the original democratic control must prevail; (5) educational training is provided to all members aiming to ensure an optimal understanding of how the co-operative functions, and information about benefits, goals, vision and mission are published for the general public; (6) co-operatives enhance openness and effectiveness by collaborating with other local, national or international organizations; and finally, (7) co-operatives aim to sustainably attend all concerns raised by their community.

These seven values apply to current co-operative structures, nonetheless, the implementation of new technologies into this well-established system stands out as the key factor transforming the initial concept into what is known as platform cooperativism. Digital platforms serve as a base where the previous seven principles are efficiently adjusted. By using powerful communicational tools, members govern their own community, vote for sustainable rules, interconnect ideas, control benefits and provide public information. Therefore, like many other digital economies, platform cooperativism boasts traditional manners of commerce by using the internet, in turn increasing its economic possibilities.

This new business model was first proposed when Janelle Orsi, at the San Francisco SHARE conference in 2014, suggested that shared ownership would provide a fairer redistribution of wealth within giant shared economy platforms. A year lately, Trebor Scholz coined the term “platform cooperativism” and focused his efforts on promoting this concept (cited by Sutton, 2016). Taking into consideration that this traditional manner of governance might be altered by combining it with new technologies, concretely with digital platforms, Scholz (2016) has redefined the whole picture attempting to clarify its

main pillars. Firstly, although platform cooperativism resembles the sharing economy in that both make use of online platforms, it differs greatly in terms of shifting governance from corporate and private ownership to shared ownership. Secondly, platform cooperativism is driven by solidarity and the desire to benefit a particular community. Thirdly, platform networks are distributed as well as protected by legal frameworks that guarantee their optimal functionality.

Bauwens (2016) understands platform cooperativism as a system where value is created by mutualisation of knowledge, in turn contradicting large capitalist enterprises where value is driven by capital and labour. As a matter of fact, Bauwens (2016) focuses his approach on an emerging paradigm, a hybrid conception of mass participation and private ownership, a *netarchical economy*. In this context, large privately owned platforms make profit out of human cooperation. For instance, corporations such as YouTube or Facebook are basically built and sustained from the active contribution of their users worldwide. To conclude, this study approaches Bauwens and Kostakis' conception of the emerging netarchical capitalism as an ideal link to explore the next system, platform capitalism. Both authors state:

> "…the netarchical capital is that fraction of capital which enables cooperation, but through proprietary platforms that are under central control. While individuals share through these platforms, they have no control over the design and the protocol of these networks/platforms, which are proprietary. Typically, under conditions of netarchical capitalism, while sharers directly create or share use value, the monetized exchange value is realized by the owners of capital. This arguably creates a longer-term *value crisis*, since the value creators are not rewarded" (Kostakis & Bauwens, 2014, p.23).

5.3.2 Platform capitalism

As opposed to platform cooperativism, platform capitalism -or netarchical capitalism- embraces a different set of values focused mainly on the benefit of private organizations (Doennebrink, 2016). If in platform cooperativism the term *platform* constitutes a common resource equally profitable by all members, in platform capitalism, the same term functions as central element for the capitalization of big data, controlled and enjoyed solely by the platform's owners.

Within platform capitalism, users become potential suppliers of goods, services or knowledge while accepting the standards established by the platform. In this sense, users are very limited when using such services and large corporations based on platform capitalism (e.g. Uber, Facebook, YouTube) take economic advantage by exercising control over the products and information supplied by their users. In sum, these platforms are completely market-based systems focused on the capitalization and monetization of the circulation of data, therefore do not contemplate any instance which involves the *sharing* of goods or services. However, platform capitalism is closely related to the already explored gig economy: labour, market and capital are main drivers in these two socio-economic structures (Drahokoupil & Fabo, 2016).

Referring to platform capitalism, Lobo (2014) points out both the advantages and disadvantages inherent to business models based on this concept. Firstly, the creation of digital platforms and their maintenance implies a very reduced cost in comparison to brick and mortar establishments. Secondly, these virtual spaces transform every economic transaction into an auction (high levels of competition are evidenced when it comes to setting prices), a fact that, in her view, further minimizes costs for the platform itself. Indeed, the fact that labour is managed by means of auctions provokes a fall in prices as well as an unbalanced reward between amateurs and professional workers (see also Olma, 2014).

Furthermore, Srnicek (2017) alerts that giant capitalist platforms are not profitable from the perspective of a global economy given that gains are reported to a limited few. Indeed, in his view, such corporations follow a monopoly tendency acquiring progressively other related platforms (e.g. BlaBlaCar has bought the Czech ridesharing platform Jizdomat, the German Mitfahrgelegenheit and many other competitors in the last 3 years), which in consequence causes an increasing dominance over their specific sector. Furthermore, platform capitalism directly affects the basic structure of life: "our social life depends on Facebook, the ways in which we gain information is now depending on Google, and the way we shop for most things is sometimes depending upon platforms like Amazon" (Srnicek, 2017). As a response to the negative impact that monopolies might cause in societies, the author proposes an alternative model called *public platform*. This model would be managed by public and governmental institutions which in turn would protect worker's rights while providing sustainable services to citizens. In terms of regulation

and legal policies, both platform capitalism and the gig economy are still weak in the area of workers rights protection (Slee, 2015; Kowalsky, 2016). Both systems allow platforms to assume very little responsibility. In the scenario of negative experiences, platforms disassociate themselves justifying their limits as mere intermediators (Graham, 2016).

In an effort to better understand platform capitalism, Langley and Leyshon (2016) classify the concept into five different types of platforms.

Table 4: *Platform capitalism typology proposed by Langley and Leyshon (2016)*

Platform type	Description	Examples
Online markets	Online marketplaces for sale of physical products, services or digital content.	Amazon, eBay, Alibaba, Craigslist.
Social media and user-generated content	Platforms where users post and share data.	Facebook, YouTube, Twitter, Flicker
Sharing economy	Marketplace that efficiently redistributes underused assets.	Airbnb, BlaBlaCar, JustPark
Crowdsourcing	Marketplace for contractual and transactional labour	TaskRabbit, Upwork
Crowdfunding and p2p lending	Platforms for investing, donating or lending money.	Kickstarter, Indiegogo, Lending Club

Table 4 describes each market segment included in the scope of this research, the sharing economy. It is remarkable to observe that many companies placed out of the sharing economy type, as such TaskRabbit, Indiegogo, or Kickstarter, are considered by many experts to be attached to the sharing economy ecosystem (e.g. Botsman & Rogers, 2010; Gansky, 2010; Owyang, 2013). Indeed, Bauwens (2012) embraces platforms like Facebook or YouTube as part of the sharing economy, concretely framing them as *immaterial sharing*. At this point, it is important to highlight certain disagreements between some authors regarding the terms discussed in this chapter.

5.3.3 Relationship between platform economies and the sharing economy

This chapter has aimed to establish similarities between the platform cooperativism and platform capitalism models, and the sharing economy phenomenon. At this point, it is of great importance to holistically understand the relationship between these three models.

First and foremost, it is vital to highlight that although platform cooperativism and platform capitalism are both contemplated within the sharing economy phenomenon, they are characterized by completely opposed manners of governance. Thus, a sharing economy platform, regardless of the service or product provided, can be controlled and owned by means of cooperative or capitalist principles. Second, these opposing models of governance are also at odds in terms of goals and missions. A cooperatively controlled sharing economy platform boasts a highly democratic system of management, promoting sustainability and transparency. Furthermore, these platforms are based on distributed networks where all peers are equally connected, information is publicly shared and decisions are taken by all members. On the other hand, a sharing economy platform governed under a capitalist frame is designed as a centralized structure which allocates less decision making power to its members.

Matching these findings with the conclusions obtained in previous chapters, this study proposes the following classification (Table 5) in which governance models and their main insights are exposed and linked to the sharing economy environment.

Table 5: *Different manners of ownership and governance practised within the sharing economy.*

Sharing economy governance types	
Name	**Description**
Platform capitalism	- Corporate and private ownership. - Main benefits are enjoyed by investors and owners, workers are paid correspondingly to their personal work, workers must pay a fee to the platform. - It is based on centralized or partly decentralized networks. - It represents the largest range of the whole sharing economy. - It requires gig workers. - It is part of the sharing economy 2.0 (Doennebrink, 2016) - Sharing practices become monetary businesses. - It is also referred as *netarchical capitalism* (Kostakis & Bauwens, 2014) - Examples: Airbnb and BlaBlaCar.
Platform cooperativism	- Shared ownership. - Costs and gains are equally shared by all members. - It makes also reference to *commons-based peer production* (Benkler, 2004). - It is based on distributed or decentralized networks. - It represents a late, and yet not well-established, stage of the sharing

	economy. - It is part of the *sharing economy 3.0* (Doennebrink, 2016) - It is located in a middle point between capitalism and socialism. - Examples: Fairmondo, Resonate and TimesFree.
Public platform	- It is owned by public organizations. - It is initially financed by governments and maintained by membership payments. - Services provided are usually cheaper than the ones offered by platform capitalism or platform cooperativism. - Public platform workers enjoy traditional contracts as well as labour rights. - It is based on centralized networks. - It represents a late, and yet not well-established, stage of the sharing economy. - It is part of the *sharing economy 3.0* (Doennebrink, 2016) - It is mainly focused on *product service systems* (Botsman and Rogers, 2010) - Examples: Bike sharing services.

Third, it has been found that large companies which, in theory, are part of the sharing economy, but in practice are based on platform capitalism (e.g. Uber or TaskRabbit) might distort the whole sharing economy picture. These enterprises can be seen as mere capitalist markets which have been reshaped by the digital era. In fact, recent studies (e.g. Slee, 2015; Srnicek, 2017) have highlighted this issue remarking that several *a priori* sharing economy platforms are nowadays operating as any other capitalist enterprise, even though they claim to be anti-capitalist. Therefore, the line between the sharing economy and capitalism is apparently getting blurred over time. This confusing crossroads is where the term platform capitalism finds its meaning: platform capitalism merges concepts of the sharing economy, capitalist markets and digital technologies. In sum, the still growing sharing economy is being rapidly capitalized by the development of large for-profit online markets and, in turn, producing the gradual disappearance of collaborative and altruistic practices. Gig economies and platform capitalism are at this point far from performing real sharing practices.

5.4 The gift economy

The gift economy is a system based on non-monetary trading that has been used within communities since ancient times. Numerous societies previous to the colonization of the Americas (e.g. Iroquois, Potlach) have been studied in relation to their reliance on such

economy models (Howard, 2015). For example, early gifting practices were found to be essential in small matriarchal communities in which women were responsible for distributing grain surpluses to those members most in need (Vaughan, 2007).

In essence, the gift economy is a system opposed to market economies where goods and services are exchanged by means of monetary transactions (Eisenstein, 2011). Within gift economies, there are no established agreements in which value, place and time for compensation are settled. In societies which practice gifting, members transfer their assets to others performing a sustainable circle in which elements are in constant rotation. This non-monetary model of exchange ensures that all members of the community cover their basic needs while creating high levels of cooperation (Cheal, 1988). This study proceeds to analyse certain decisive parameters attached to the development of the gift economy.

It is important to note that the gift economy acts as any other economy in the sense that products and services are exchanged, thus making it a non-altruistic system. Individuals who engage within the gift economy expect, either immediately or in the long run, to receive an equal value in return (but never money). Therefore, reciprocity plays an essential role in maintaining this economy (Malinowski, 1922). According to Sahlins (1972), reciprocity functions in three different levels or stages: (1) gift reciprocity in which givers believe that sooner or later they will receive a fair compensation, necessarily requiring strong ties between members; (2) balanced reciprocity, where individuals expect that the same value of the asset given will be returned at a mutually established time; and (3) negative reciprocity, this level makes reference to market-based systems where individuals expect a higher value in return for the asset given. Besides that, Sahlins (1972) highlights that gift reciprocity is better performed between relatives or friends.

A substantial outcome derived from gifting is the consolidation of the community itself. As has been already mentioned, assets are in constant movement passing from one individual to another creating, in turn, strong networks (Howard, 2015). Thus, gift communities flourish due to two factors: on the one hand, when transferring the good in question both parties engage in certain gratefulness which reinforces personal relationships (Sundararajan, 2016)*;* and, on the other hand, members are aware of their dependence on the acts of other members, thus requiring the maintenance of optimal ties between individuals, a goal that is primarily achieved by giving gifts (Bollier, 2003).

Gregory (1982) has focused his research on understanding to what extent the two pillars of the gift economy, personal relationships and reciprocity, are interconnected. In his view, the fact that an individual gives an asset to another places this last person in a position of debt. Members of a community which are in debt to someone else will understand that, for ethical and moral reasons, they will have to reward, at any time, the initial giver. These normally long-term exchanges sustain the relationship created by both parties, thus reciprocal relationships will exist as long as someone is in debt. Given that, goods and services are in constant rotation, members might be in debt with multiple persons which in turn greatly reinforces the connections within the network (Vaughan, 2007).

There are many ways in which products and services can be given to other members. For instance, the asset can be completely gifted including all its rights, in these cases ownership is fully transferred from one to another. However, it is also possible to give solely certain rights, for example, an individual gives a flock of sheep to his/her neighbour, the giver still owning the flock while the receiver has the rights to "use" them, this process contemplates the gifting of *inalienable possessions* (Weiner, 1992).

Nevertheless, when comparing market economies and gift economies some substantial differences are found. Firstly, the aspect of time: in market or barter economies there is immediacy when exchanging products while in the gift economy there is not. Secondly, the aspect of dependence: within gift communities, members are extremely dependent on one another and strong ties are built. However, in market economies trade can be performed between strangers who do not seek to relate to each other more than the needed time of the transaction (Sahlins, 1972). Thirdly, gifting fosters collaboration while a market economy tends to encourage competition (Vaughan, 2007). Fourthly and last, it is argued by many authors (e.g. Hyde, 1983; Eisenstein, 2011) that money, as the centre element of market economies, cancels any chance for developing gift practices: indeed, the for-profit sale of a gifted product contradicts the basic principles of the gift economy.

5.4.1 Relationship between the gift economy and the sharing economy

Although the gift economy was initially developed without the aid of digital technology, it is nowadays possible to find some digital platforms based on gift economy's principles.

This important fact leads this study to explore the complex relationship between both systems.

Firstly, the gift economy constitutes a very specific and reduced range of the sharing economy. More precisely, it embraces all those sharing economy platforms where money is not involved. It is important to note that neither the gift economy nor this concrete sector of the sharing economy are altruistic: in fact, both expect rewards when giving. However, both exclude any kind of monetary payment, profitable sales, or the exploitation of resources. For instance, online time banks such as TimeRepublik can be considered as the common point where the non-monetary sharing economy and the gift economy meet. Time banking networks implement rewarding mechanisms that are similar to gift economy rewarding schemes: users of these digital networks offer their skills (e.g. translating texts, designing a logo, teaching any specific software, or painting walls) in an effort to help those who require them (Varin, 2016). These users, as *gifters* do, expect that once they require any service other users will help them, so the initial giver is eventually compensated. In both systems, individuals contribute their own resources (goods, knowledge or services) for the common good, always assuming that rewards will arrive at the right time. But more importantly, there are no monetary or instantaneous exchanges.

Secondly, there is a crucial difference between the gift and the sharing economy: group size. Original gift tribes were formed by a small number of individuals while non-monetary sharing economy platforms are built upon large amounts of users. In this last case, sharers are unknown and normally relate to each other exclusively at the moment of gifting. This fact leads to another relevant point of divergence: while in the gift economy a giver A gifts giver B, who in turn will have to reward giver A, in large sharing communities there is no direct reciprocity, this is, giver A gifts giver B but this does not have to reward necessarily giver A, giver A can be compensated by any other giver of the community. In this context, both economies pay special attention to community building although within the gift economy ties between individuals are much stronger than the ones present in sharing networks.

Thirdly, gift economies appear to be analogous to Bauwnes's sharing economy immaterial type *Commons-oriented peer production in knowledge and software* (2012)

(see page 67). When analysing peer production systems, some similarities to gifting practices are observed: for instance, the manner in which users contribute their knowledge for the benefit of the community (Vaughan, 2007). *Gifters* and common-peer producers are driven by the principle that the act of giving anything today will bring rewards tomorrow. Nonetheless, this temporal exchange is not only well established in current information-based sharing platforms, such as Linux or Wikipedia, but also in *product-based systems* (Botsman & Rogers, 2010). Taking into consideration that the gift economy, as well as a large part of the sharing economy, consists of peer-to-peer exchanges, it is common to find sharing applications which apply gifting practices. As such, the free app Olio (https://olioex.com) connects neighbours, local shops and restaurants aiming to reduce food waste and help people who are in need. Givers simply upload their leftovers adding a picture and a short description, in case any other user is interested, both parties will arrange the pickup time and place. Networks like Olio, apart from approaching environmental issues, seek to protect the community by linking its member's through gifting ties.

Fourthly, both economies unlock the idle capacity of goods (Sundararajan, 2016). As already discussed in previous chapters, the use of the idle capacity of an asset not only constitutes the major principle which defines the sharing economy, but also a direct consequence when reciprocal gifting occurs. Within the gift economy, assets are temporarily and individually owned, but collaboratively used. This leads to a situation in which the asset in question is continuously profitable: when it is no longer needed then it goes to the next user and so forth (Hyde, 1983). Regarding the sharing economy, although it is normally commercially driven, it fosters a more efficient utilization of underused products.

Fifth and finally, reputation systems function as potential non-monetary currency in both systems. Eisenstein (2011) has developed a remarkable study in which current sharing economy reputation systems are analysed in comparison to the gift economy. In his view, nowadays several platforms make use of likes, comments or ratings as means of rewards, he states:

> Many online systems do indeed convert reputation and contribution to a number. The user rating systems of websites like Amazon and eBay are one such quasi-currency.

> Not only can users rate and review products, they can also rate each others' ratings, creating a self-policing system. What is essentially a gift economy (no one receives any direct reward for writing reviews) is evolving structures that parallel the mediatory functions of money (Eisenstein, 2011, p.222)

More specifically, Eisenstein (2011) points out that social network users tend to like posts with the intention to, in the upcoming days, get likes on their own posts. Similarly, sharing platforms in which the visibility of the services is fully based on reputation systems, the more an individual gives, the better his/her position will be. In these cases, reputation points function as exchange currency.

To conclude, it must be noted the recent appearance of hybrid economic models which merge gift and sharing economy insights. For instance, borrowing shops/events (e.g. in the Czech Republic: Bazarek and Bio Zahrada) allow individuals to take any of their products while giving another with similar value in return. The exchange is done at the same time (sharing economy) avoiding monetary payments (gift economy) and increasing the usability of the object (sharing and gift economy).

5.5 The blockchain system

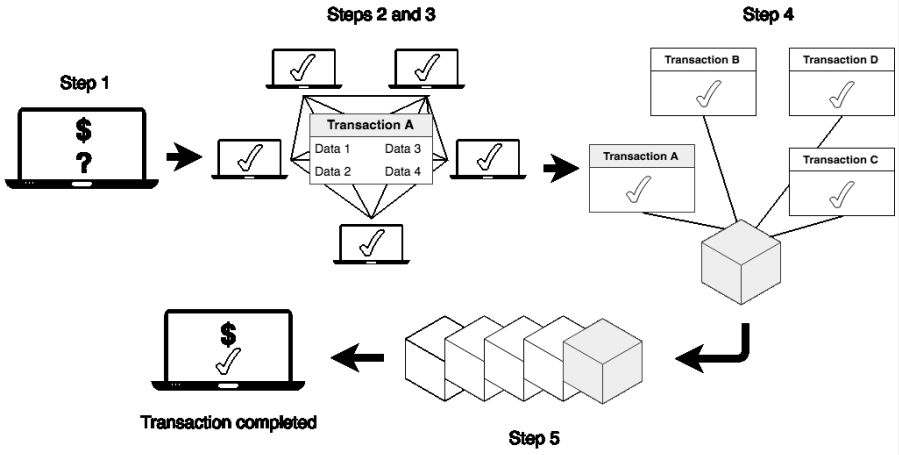
Blockchain technology does not represent an economy in itself, but a new high-tech tool to develop distributed markets. This research has already explored a set of economies which in a way share certain main principles with the collaborative economy, however in order to close this spectrum of sharing systems, it is of great importance to include the study of the blockchain technology as a potential booster to develop a more sustainable sharing economy. Furthermore, this novel technology has been identified by several sharing economy authors (e.g. Gansky, 2010; Owyang, 2013; Cañigueral, 2016) when approaching the study field. For all of these reasons, the analysis of blockchain technology and its best-known application, Bitcoin, constitute a necessary duty within the scope of this dissertation.

The concept of the blockchain technology emerged in 2008 with the online publication of an anonymous paper (using Satoshi Nakamoto as a pseudonym) in which a disruptive digital currency, based on fully distributed networks coded by complex cryptography models, was scientifically proposed (Mattila, 2016). At first, blockchain technology was

designed with the intention of removing third parties from monetary transactions, for example, banks, public institutions, accountants, etc. as well as to solve double-payments issues by embedding powerful security systems (Pilkington, 2016). Fundamentally, *blockchains* are data compilations assembled with highly complex algorithms which prevent hackers and ensure its democratically distributed functionality. Within this context, it is important to remark that, this study is not focused on understanding the intricacies of the mathematical codification involved in this novel technology. Nonetheless, it is essential to briefly highlight its basic functions and principles.

As such, the blockchain is a system that enables the connection of computers by forming a distributed network which shares a public database or ledger where all sort of information is stored and blocked. Each computer receives a copy of this ledger only for consultation; modifications are not allowed. Anytime a member transacts money (in the case of Bitcoin) to another user, all related information such as date, time, amount or participants, is automatically registered and published in the common ledger, in a way that all peers are aware of this transaction (et al. Crosby & Pattanayak, 2015). The whole system consists of a set of blocks electronically chained to guarantee its distributed nature, where each block contains a specific number of transactions and their corresponding information (El-Rjula, 2016). As opposed to traditional systems where a central authority acts as a controller, blockchain technology permits all its members to verify any given transaction. Supervision is executed by many instead of a limited few, thus guaranteeing the reliable and transparent viability of this technology (Mattila, 2016). In other words (see Figure 13), a transaction which takes place through the blockchain proceeds as follows: (1) a user requests a transaction; (2) this is broadcast to the whole network; (3) nodes must verify its authenticity using codified and automatically generated passwords, algorithms and other types of records; (4) once the transaction is approved it is combined with other transactions in a block; and finally, (5) this block is attached to other blocks forming a chain of completed transactions.

***Figure 13**: Basic schema of a transaction performed through the blockchain.*



This study identifies a number of essential principles which underlie the design of blockchain applications. Firstly, the network generates and manages its own assets, this is, assets produced externally do not have validity in the network. In this context, Christopher Franko, one of the Bitcoin experts interviewed in 2016, remarks that traditional currencies are normally created by privately owned banks which later loan their new currencies to governments at an interest rate. However, the open source protocol Bitcoin relies on a transparent and predictable rate of inflation which makes the application more trustworthy. Furthermore, the amount of bitcoins created and transferred is consensually approved and permanently tracked on the public ledger. Any possible error is rapidly detected and solved (Depository Trust & Clearing Corporation, 2016).

Secondly, the network must ensure open and inclusive participation. Blockchain technology applies the very basic concepts of the early web page: the open connection of several computers and their ability to access a central repository of information. As explored in Chapter 3, in 1992 an important shift allowed the commercialization of the internet and its source code which implied that networks passed from open to closed. Facing such restrictive structures and with the specific aim of ensuring openness, blockchain applications must allow users to freely enter and leave the community at any time, as well as, protect the equal distribution of governance among its peers. By doing so, the network is capable of maintaining its inclusive and cooperative nature (Gaur, 2017).

Thirdly, in order to achieve optimal functionality, the application must allow its internal skeleton to be scalable and extensible. As part of its openness, the blockchain network must guarantee its members the ability to build and later govern improvements on the system (El-Rjula, 2016). Furthermore, the full or partial integration of other computational systems such as the internet of things into blockchain models might provide highly efficient solutions where natural resources, time or money can be optimized. These hybrid models can be applied in sectors such as public transportation, farming or logistics (Rifkin, 2014).

Fourthly, in blockchain applications ownership is equally shared by peers. This pure distributed network allows equilibrium when it comes to decision making. Traditionally, databases have been owned and managed by central organizations, while protocols created with blockchain technology are directly *shared-owned* by all those peers that download the ledger to their computer (Chain Finance, retrieved in 2017). This principle is tied to the already explored platform cooperativism model.

Fifth and finally, blockchain applications such as Bitcoin are focused on developing high levels of security in order to avoid any type of corruption or alteration. Security is guaranteed in two ways: a decentralized consensus protocol in which unknown peers must corroborate fair transactions unanimously and by the computation of complex algorithms (et al. Kosba & Miller, 2016). Once the whole transaction process is executed all the data is locked in the chain allowing no chance of further changes. This fact is considered by *bitcoiners* as indispensable to prevent possible frauds (El-Rjula, 2016). However, the blockchain technology raises certain questions when it comes to privacy. The system is purely transparent, public and open which means that all members are able to see the acts of every other member. This might produce distrust among individuals who prefer to keep their own personal data private. Indeed, specialists greatly differ when identifying an ethical midpoint when balancing rights for data protection and public data (e.g. Slee, 2015; Zyskind, Nathan & Pentland, 2015). However, as professor Qualman (2009) notes, new generations are far less preoccupied about their privacy than previous generations.

5.5.1 Relationship between blockchain technology and the sharing economy

Blockchain technology plays an important role in decentralized and distributed sharing economy platforms. The collaborative economy presumes to be based on p2p networks

in which third parties are excluded, while highlighting the benefits of non-hierarchical and horizontal systems and promoting community building through innovative digital tools. Thus, this study considers that the blockchain serves as a technological source for the optimal construction of *pure* distributed networks within the sharing economy landscape. Subsequently, it is necessary to observe certain important connections between both concepts.

Firstly, in both systems physical objects move from individual to individual annulling the figure of intermediaries (Botsman & Rogers, 2010; Gansky, 2010; Stephany, 2015). This fact would seem to imply decentralized control and equal distribution of decision making rights among all members (Sundararajan, 2016). However, this statement is in need of a more accurate explanation. Although the blockchain certainly performs under p2p exchanges and it counts with a non specific owner (blockchain protocol is owned by all users), the sharing economy mostly makes use of the platform as a third party and therefore as a sort of internal controller. Once the platform matches supply and demand, both parties will transact the asset from peer-to-peer, but normally under the platform conditions. The larger part of the sharing economy is based on the platform capitalism approach (e.g. Bauwens, 2016; Srnicek, 2017) which relies on the use of centralized systems. Thus, when companies such as Airbnb or TaskRabbit, among others, allege to be decentralized, they are not making an accurate statement. In sum, generally both systems execute p2p exchanges but, blockchain technology embraces pure peer exchanges while the sharing economy requires the use of a virtual intermediary: the platform. According to this assumption, Lundy (2016) suggests that:

> Eliminating the need for an intermediary could impact some of the biggest technology companies. Rather than use Uber, Airbnb or eBay to connect with other people, blockchain services allow individuals to connect, share, and transact directly, ushering in the real sharing economy. Blockchain is the platform that enables real peer-to-peer transactions and a true "sharing economy". (Lundy, 2016)

As a matter of fact, the application Bitcoin, which has been already contextualized under sharing economy principles, constitutes one of the few communities embracing a pure blockchain distributed network[14]. The implementation of totally distributed networks in

[14] This case was discussed at length in 2016 at the 3rd Research Workshop on the Sharing Economy in Paris.

sharing platforms raises several doubts when it comes to defining ownership, decision making and responsibility. Researchers agree on the fact that fully distributed communities might face issues of self-management which will require a completely new structural conception of governance in order to achieve optimal sustainability.

Secondly, communities are shaped through technology. As opposed to traditional gift economies where personal relationships among members were essential to maintain the whole trade circle, in sharing economy platforms and blockchain applications the concept of community is built upon digital sources and innovative devices (El-Rjula, 2016). By embedding technology into the formula, the community size considerably increases creating new virtual connections which do not imply face-to-face relationships. Therefore, it is essential to note that both, the blockchain protocol and the sharing economy, require complex technological structures to sustain the community, as well as to guarantee efficient peer-sharing among strangers (Franko, 2016). An erroneous or fallacious network might lead to inadequate practices such as corruption, distrust among peers and, in consequence, to the disintegration of the community itself.

Finally, the 2008 financial crisis boosted both phenomena[15]. Approaches suggested by several sharing economy authors (e.g. Castells, 2012; Howard, 2015; Mason, 2015; Chase, 2015) and the ones proposed by the two blockchain experts interviewed in 2016, Tey El-Rjula and Christopher Franko, coincide when stating that the latest financial crisis was the motivational drive to create alternatives to established markets, which in turn led to the birth of blockchain technology, as well as boosting sharing economy platforms. Accordingly, the 2008 economic crisis increased global awareness and a general distrust of traditional establishments such as banks, large corporations, or governmental institutions. It has been also found that, the bankruptcy of global financial firms such as Lehman Brothers led to a profitable situation for high-tech entrepreneurs to develop new models of online trading. The blockchain protocol was published in 2008, the crypto currency Bitcoin was first launched in 2009, Airbnb and TaskRabbit were appeared online in 2008 and one year later Uber joined the list. Besides, by that time, already existing platforms such as BlaBlaCar experienced a major increase of users in search of more affordable transportation options (Prouza, 2016).

[15] The 2008 financial crisis is explored in depth in Chapter 6

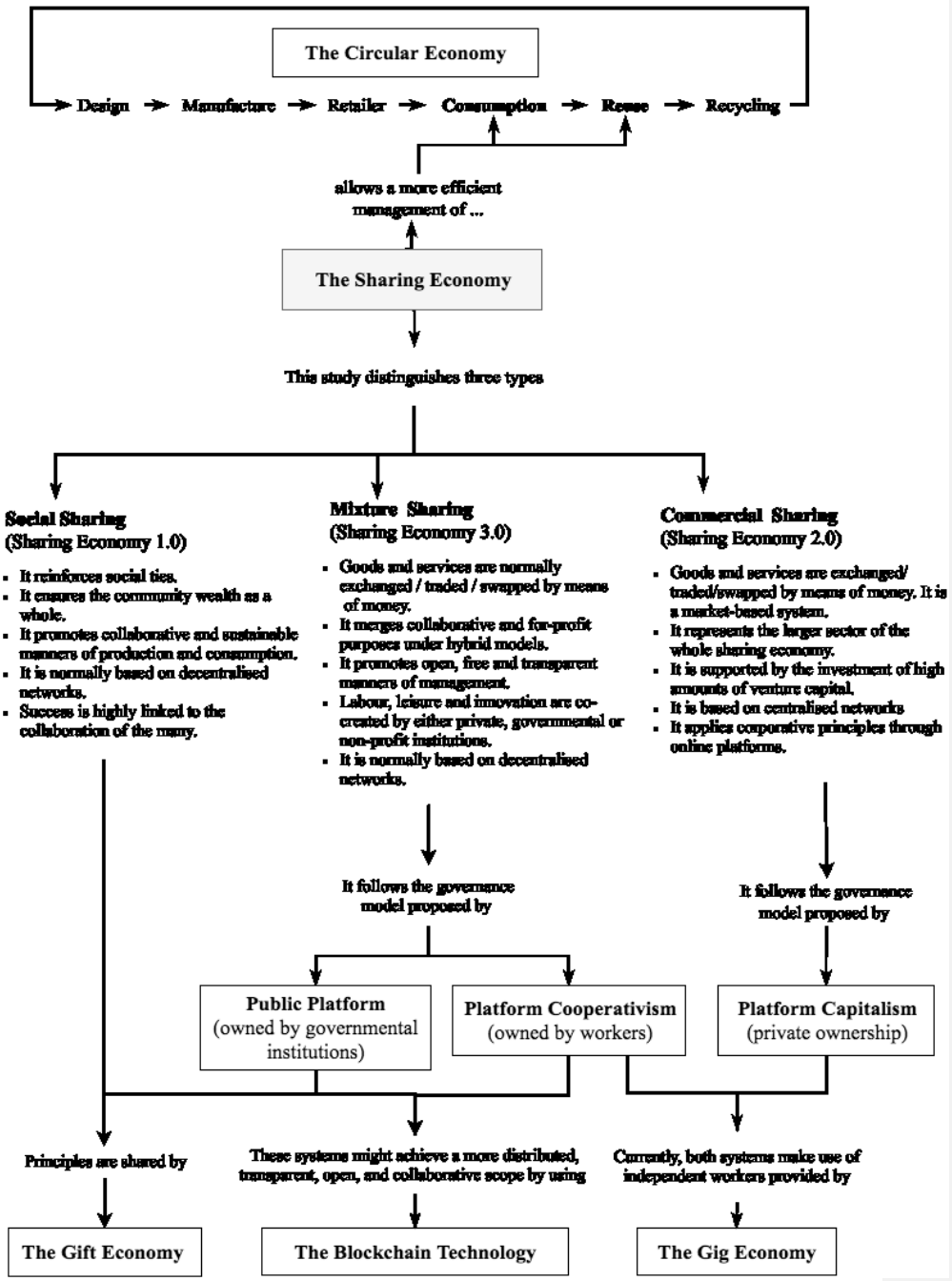
Overall, blockchain technology enables the feasible creation of real distributed sharing economy platforms, dismissing middlemen and sharing governance equally among peers. However, this insight is not shared or applied by most major sharing platforms. The implementation of blockchain-based systems would cancel the for-profit nature of commercial sharing enterprises, forcing them to reshape their main foundations. The blockchain technology creates new opportunities for developing useful, open, free and transparent applications which could be applied to all aspects of human social life. For instance, by combining the secure blockchain protocol and the high connectivity of the internet of things farming applications like FarmShare, Provenance or Filament ensure a more sustainable productivity by collecting and analysing meaningful data (damaged territories, weather information, GPS machinery positioning, etc.).

5.6 Main findings

In order to conclude this chapter, this dissertation provides a visual schema to bridge the main principles presented thus far. The goal is to create a conceptual map which interconnects relevant conclusions related to the circular economy, the gift economy, the gig economy, the sharing economy, platform cooperativism, public and capitalist platforms, and the blockchain technology.

Figure 14 schematically illustrates the links between the concepts explored previously and the sharing economy. By comparing these systems, we can conclude that, even though there are many connections between the various economic models, each of these, in fact, possesses its own characteristics: they are related but not equal.

***Figure 14**: Classifying the sharing economy according to related systems.*



Arguing Figure 14, sharing economy practices play a great role in certain stages of the circular economy, particularly the ones related to the optimization of product use. Nevertheless, unlike the sharing economy, the circular economy does not prioritize the collaborative optimization of services or knowledge. However, in terms of physical product lifespan, both systems highlight the need to practice a more sustainable consumption in order to preserve natural resources and reduce waste. As a method to achieve this, the circular economy proposes recycling and repairing product parts as well as reusing objects; this closely relates to the sharing economy's aim of unlocking the idling capacity of goods. In the end, both the sharing[16] and the circular economy are market-based systems which focus on the commercial reuse of goods in order to address environmental issues and collaborative practices. In this sense, both systems are complementary and mutually supportive.

Figure 14 mainly distinguishes two general groups: firstly, social sharing represented by not only monetary exchanges where transactions are mediated by alternate forms of compensation; and secondly, for-profit systems in which commercial and mixture sharing are included in with the goal of economic benefit. Focusing on the first group, it is important to highlight the similarities between gifting practices and the ones proposed by social sharing. From a temporal viewpoint, both constitute early stages of a whole conceptualization: social sharing as a first wave of the sharing economy and the gift economy whose origins date back to colonization times. Currently, these two manners of consumption seek to enable the exchange of goods, services and knowledge by avoiding monetary payments. Indeed, in order to maintain the survival of the community, peers reward each other through alternative currencies such as time, information, reputation benefits, etc. The focus is on long-term compensation: both *gifters* from ancient tribes and current time bank users (e.g. TimeRepublik) assume that rewards are not received at the time when the asset or service is given, expecting instead to receive reciprocal support in the future. Moreover, the gift economy and social sharing are community-based systems. The survival of these economies is viable only when all peers actively cooperate and participate, thus selfish activities might distort the efficient functionality of the whole landscape. At this point, it is important to note that not all networks included within social sharing behave under the same protocol. When analysing commons-based peer production

[16] As it has been already mentioned, there also exist a non-commercial sharing economy however the larger range of this economy is considered commercial.

platforms (Benkler, 2004) such as Linux or Wikipedia where any person has the right to access and take advantage of the service, even though this peer has not contributed the community's support. This would not be allowed within gift economies given that all members must give and receive, thus closing a circular process.

As a last shared characteristic, gift and social sharing networks are built upon decentralized structures in order to ensure that control, management and decision making are distributed among all users. Similarly, blockchain technology guarantees high levels of distribution while ensuring reliable and transparent transactions. It is in this particular area where the gift economy, reputation systems and the blockchain technology coincide: in all three systems, user information is public, facilitating the rapid detection of undesirable activities. Nevertheless, aspects such as public, free, open, or decentralized are rarely seen in the second group proposed by this study, for-profit sharing, especially with its sub-component referred as commercial sharing.

According to Figure 14, the sharing economy spectrum is mainly comprised by for-profit networks and market-based communities that seek to gain economic benefits by swapping, exchanging, trading or renting assets. Referring to structural management, for-profit platforms incorporate traditional market-based principles. For example, businesses such as TaskRabbit, BlaBlaCar or Lyft apply hierarchical organizational models in which power is dispensed by top-down strata. Founders, CEO's, managers, advisors and specialists in diverse fields, control the guidelines of these businesses. Therefore, commercial sharing is usually built upon centralized and capitalized networks, the reason for which this concept is also referred to as *platform capitalism* (Srnicek, 2017) or *netarchical capitalism* (Kostakis & Bauwens, 2014). Both terms refer to the fusion of capitalist insights with innovative digital platforms in search of renewed models of trading. Accordingly, a large portion of the sharing economy is based on platform capitalism governance principles, thus, it is privately owned and managed. Indeed, although commercial sharing represents the most popular and well established arena of the entire landscape, it would be erroneous to consider sharing economy and platform capitalism as analogous concepts.

Additionally, in order to survive as a whole, commercial sharing systems require active users and/or gig workers. Since these platforms function as a mere virtual meeting point in which demand and supply come together, the absence of traders would imply the decline of the platform. A sharing economy user becomes a gig worker when he/she assumes trade practices as a usual job. For instance, an Airbnb host who has listed more than one state on the web is probably making use of the platform as a personal business or an Uber driver who provides rides for others with no other intention than to gain some extra money: in both cases, the individuals have become gig workers. Therefore, the inclusion of the gig economy within the sharing economy enhances the perception of how the initial collaborative behaviour of the sharing economy is becoming increasingly capitalized; what was primarily conceived as an alternative to capitalism apparently seems to be imitating every aspect of it.

The mixture sharing group, which is also included in the profit-driven segment, combines certain features from social and commercial sharing. As a hybrid and morphing category, mixture sharing platforms claim new forms of governance by opposing capitalist structures. As a reaction to monopolies created by large corporations such as Uber, platform cooperativism or public platform models have emerged with the aim of developing more inclusive manners of governance. Thus, even though mixture sharing is a market-based and profit-driven system, it seeks shared ownership built upon decentralized or distributed networks in which all nodes enjoy equal rights of ownership, control and management.

Additionally, this study has identified certain issues when it comes to relating blockchain technology with the sharing economy. As such, commercial sharing does not seek to incorporate a distributed schema within its functional core, fact that would distort its capitalist behaviour. However, communities which highlight the importance of building decentralized networks for a more democratic functionality might observe efficient results when embedding complex technologies like the blockchain. Besides that, the blockchain technology pays homage to the early aspirations of a true sharing economy where all peers perform equally while profiting from existing resources. In theory, the sharing economy, as well as, the gift economy and partly the circular economy, promote aspects attached to community building, shared knowledge, social value, accessibility transparency and peering among others. All these concepts are well established in the blockchain technology. In sum, the blockchain system

might function as an optimal tool for boosting sharing and participative forms of commerce attached to the still emerging sharing economy 3.0.

To conclude, this comparative and explanatory chapter proceeds to enumerate the main findings. These conclusions serve as basis for further explorations within this dissertation:

- The sharing economy constitutes a specific stage of the circular economy process, particularly the phase of consumption and reuse of assets.
- The gift economy is comparable to the sharing economy solely when referring to non-monetary and long-term rewards. This can be found for instance on commons-based peer production networks (Linux and Wikipedia), time banks (TimeRepublik), or accommodation communities (CouchSurfing).
- Currently, sharing economy networks can be either privately owned (platform capitalism), owned in a sharing scheme (platform cooperativism), or owned by governmental institutions (public platforms).
- For-profit sharing platforms are usually run by gig workers.
- The blockchain technology develops a more collaborative sharing economy by establishing pure distributed networks.

6. Main drivers

Previously, this research has focused its main attention on understanding what the concept *sharing economy* means itself, approaching a variety of definitions developed by experts while chronologically analysing their historical transformations. Furthermore, the overall concept has been carefully disaggregated into sub-systems differentiating their particular manners of governance, goals, structures, etc. Ultimately, the exploration and comparison of the sharing economy and similar economic systems have brought a greater conceptualization of the field on research as a whole.

Naformátováno: Angličtina (Spojené království)

At this point, and taking into consideration definitions, categories and claims remarked in preceding chapters, this study shifts its scope to focus on exploring what sort of historical and sociological facts have eventually given rise to the current sharing economy. Specifically, this chapter seeks to achieve the following objectives:

1. Compile and evaluate the most remarked sharing economy drivers proposed by the entire literature reviewed (Table 6).
2. Develop an in-depth exploration of each driver in isolation.
3. Understand to what extent such drivers and causes have influenced the sharing economy along its brief history.
4. Interconnect relevant findings obtained from objectives 1, 2 and 3 and construct a holistic explanatory narrative focused on how these drivers have shaped the sharing economy together.

6.1 Exploring specific causes that have given rise to the sharing economy

Naformátováno: Nadpis 2, Doleva, Řádkování: jednoduché

After having carefully analysed the short narrative on the current sharing economy, four main driving facts -cultural, economic, societal and technological- have been detected as the most mentioned by the authors in their research. Table 6 reflects each driver and its evaluation according to several sharing economy investigators. The elaboration of this table aims to rank every fact regarding its level of implication when creating the sharing economy.

Table 6: *Evaluation of the main sharing economy drivers found in the literature reviewed. (2006-2016)*

	Main driver or cause			
Author (Year)	**Digital technologies**	**Economical crisis (2008)**	**Shift from ownership to commons**	**Environmental issues**
Tapscott and Williams (2006)	x		x	x
Shirky (2008)	x		x	
Gansky (2010)	x	x	x	x
Botsman and Rogers (2010)	x	x	x	x
Benkler (2011)	x	x	x	
Castells, Carçada and Cardoso (2012)	x	x	x	
Bauwens (2012)	x	x	x	x
Owyang (2013)	x	x	x	x
Rifkin (2014)	x		x	
Chase (2015)	x		x	x
Mason (2015)	x	x		
Stephany (2015)	x	x	x	
Howard (2015)	x	x		
Slee (2015)	x			
Sundararajan (2016)	x			
Kramer (2016)	x			
Total	**16**	**9**	**11**	**6**
%	**100%**	**56,25%**	**68,75%**	**37,5%**

According to Table 6, the most crucial factor for developing the sharing economy is the successful integration of new technologies, mainly the internet, into societies. The second driver is attached to the apparent social shift that promotes common access and community over ownership and private property. The 2008 financial crisis and the economic issues caused in consequence are ranked in the third position. And finally, the least voted factor regards to environmental issues like the increasing growth of global population, pollution and residual wastes. This study proceeds to deeply explore each of these drivers and their implication with the sharing economy.

Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

6.1.1 Digital technologies as sharing tools

All of the literature explored agree on the fact that the emergence of the sharing economy has been possible because of the successful introduction of innovative and digital technologies into the common population. Particularly, Sundararajan (2016) observes two elements that have directly affected the transformation of traditional sharing practices into the ones performed online. The first cause applies to how new technologies have enlarged collaborative scopes passing from small local communities to large networks operating worldwide. This statement reinforces the definition of this study, which assumes that the sharing economy is a global socioeconomic system. The second technological implication refers to the increasing number of independent entrepreneurs involved in digital economies. Innovation has, in a way, enabled the massive inclusion of individuals into the market system as active participants. Accordingly, the internet's facilities were, and still are, profitable by creators to establish their own businesses independently from traditional brick and mortar firms.

Following a similar perspective, Mason (2015) considers that the development of digital technologies has been the greatest adversary of pure capitalism, which has not been efficient enough to adapt itself into the digital era. Mason observes three decisive facts of the rise of both systems, the sharing economy and his own concept of post-capitalism. Firstly, the line between traditional labour and free time is dissolved while alternative manners of work, not regulated yet, emerge (also claimed by Sundararajan, 2016). Secondly, digital goods imply abundance rather than scarcity, which in consequence causes prices to decrease considerably, sometimes even becoming free (see also Rifkin, 2014). And lastly, the third fact refers to *commons-based peer production approach* (Benkler, 2011) and the rise of free massive collaborative networks, like Wikipedia.

Moreover, Owyang (2013) observes how the integration of social networking tools into existing sharing economy platforms has raised levels of trust when transacting assets from peer to peer. Accordingly, the author states:

> "In our analysis of 30 top sharing start-ups we found that nearly three-quarters (74%) have social profile and reputation features and over half (54%) have integrated Facebook Connect. Sites like Airbnb also use Facebook's open graph so that users can identify ratings and rankings from their Facebook friends. These features help build trust between buyers

and sellers." (Owyang, 2013, p. 6)

From that analysis, it can be observed how sharing economy networks from different sectors (accommodation, social relationships, transportation, etc.) engage with other digital platforms in an attempt to increase their own market. In this sense, also advanced online payment systems such as PayPal have been integrated into several sharing platforms in order to enable economic transactions worldwide (Owyang, 2013).

Continuing with technological drivers, the launching of the first iPhone in 2007 allowed online platforms to be *portable*. The emergence of smartphones increased existing levels of connectivity to the extent that websites had to reshape themselves in order to offer a mobile version too (Blau & Fingerman, 2010). Nowadays, the great popularity of smartphones within societies is highly utilised by several sharing economy platforms, such as Lyft and Uber, which are fully built on mobile apps. Their websites are only informative and invite users to download the mobile application. Stephany (2015) remarks that smartphones and their online connectivity have boosted sharing practices given that physical assets posted online are automatically accessible to be *shared* (for free or by payment) by others. In other words, smartphones and sharing apps facilitate a better redistribution and reuse of goods, simply by uploading descriptions, pictures and other relevant information to the net. Similarly, Sundararajan (2016) highlights the capability of *digital machines* to be easily reprogrammable and adaptable to new functions. That is, systems based on code permit the aggregation of improvements, other applications, updates, etc., faster and cheaper than by doing the same task on physical machines.

Considering previous claims, this dissertation observes that the largest part of the sharing economy, is a software-based system. Namely, the majority of platforms[17] do not own or produce any physical asset; BlaBlaCaruue se han acumuldo utilizados y acumulados durante previas decadas. tes, la economi en lugar de otro fisico,ceso a cualquier ob does not own cars nor does Airbnb own apartments. Sharing economy business models must count with efficient high tech platforms that are able to instantaneously collect, analyse and store vast amounts of information. Accordingly, several authors (e.g. Kramer, 2016; Qualman, 2009; von Hippel,

[17] With the exception of sharing economy platforms based on *Product Service Systems* (Botsman and Rogers, 2010) which do normally own physical goods.

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Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

2005) expose the adaptive behaviour of sharing economy platforms when it comes to cover new market necessities. For example, several platforms have integrated Google Maps into their own system to indicate locations, GPS signals to detect movements and positioning, and social networks to provide reputation systems. These updates or improvements, as Shirky (2008), Rifkin (2014) and Mason (2015) have pointed out, implies low risks and costs for the company. In case the new integrated application does not solve the initial problem, it is rapidly deleted without many inconveniences.

New devices and complex software have also remodelled sharing economy marketing tools. Qualman (2009), as well as Botsman and Rogers (2010), agree on the fact that the internet has created a diverse conception of advertising. In their view, traditional centralised marketing companies are facing distributed peer-marketing: "the 30-second commercial is being reshaped by the 30-second review, tweet, post, status update and so on" (Qualman, 2009, p. 240). Their approaches indicate that sharing economy users act differently than brick and mortar users when it comes to purchase one asset or another. Traditionally, agencies launch specific ads on TV, the radio or in the newspaper aiming to reach potential customers. However, sharing economy platforms do not advertise their businesses on these channels but rather on the internet.

Another factor that appears as a linkage between the sharing economy and digital technologies regards to their neuralgic point of development. "It all begun with the transformation of an arid stretch of land in San Francisco now widely hailed as the global Mecca of the future of technology" (Howard, 2015). Several authors (e.g., Howard, 2015; Slee, 2015; Stephany 2015) associate Silicon Valley as the place where the sharing economy was born. The meeting of several young and talented computer developers in the same area generated high levels of innovation applied on digital-based systems. As a matter of fact, principal platforms like Uber (2009), Airbnb (2008), Lyft (2012) and TaskRabbit (2008) were first launched in San Francisco.

From a more sociological perspective, the combination of advanced devices and complex operative systems has given rise to a period of *network individualism* (Wellman, 2001). This term seeks to describe a society greatly driven by new technologies in which individuals are linked between themselves, instead of through big corporations or governmental institutions

(Blau &Fingerman, 2010). The network individualism approach also appeals to communities where users are able to get information in real time through the internet. The early formulation of this approach in 2001 applied solely to communication services; for instance, individuals were able to belong to different specific online networks in order to get information about sports, health, economics, etc. However, in current times, the same approach may be considered when observing on-demand sharing economy platforms. Nowadays platforms like Uber, Lyft and TaskRabbit offer quasi-instantaneous services varying from homemade food delivered directly to homes or offices, rides to any part of the city, or a technician for repairing computers. This study suggests that theories like *network individualism* (Wellman, 2001) or the *network society* (Castells, 2007) are considerably attached to how the sharing economy behaves. That is, digital communities that perform p2p transactions in real time, with the difference that in these theories there is a mere exchange of information while in the sharing economy the transactions have also been extended to personal services and physical products.

Several disruptive devices, new applications and modern operating systems have participated in the development of sharing economy business models. However, from a broader perspective, the advent of the internet is the key factor for creating this socio-economic system. "The internet has become the model for organizing life in the 21st century, as well as, the essential structure and distribution channel for commerce, ideas, work and play" (Gorenflo, Smith & Doctorow, 2012, p.200). According to this quote, Pérez (2002) agrees that every salient technological discovery causes the reshaping of the main pillars of societies: labour, leisure, personal relationships, legislation, etc. The age of telecommunications (from 1950 up to date), but more currently the period of the internet, is considered as the third and latest industrial revolution (Benkler, 2011; Anderson, 2012). Rifkin (2014) identifies the collaborative economy as a consequence of the third industrial revolution. In his view, this transformative period would be characterized by social capital, horizontality, transparency, redistribution of wealth and high levels of networking, as opposed to traditional market economies. In an effort to better understand the sharing economy, several authors make use of comparative approaches in which capitalist markets and the internet are faced, as such, Chase (2015) claims:

> "Over the last 2 centuries, the industrial economy rewarded a specific type of capitalist. To survive and thrive involved becoming just a smidge smaller than a monopoly, controlling the market while avoiding regulation. Control was maintained by exclusive ownership of

> intellectual property, trade secrets, copyrights, equipment, and employees. Why? Because factories, tools and other expensive means of production demanded organizations large enough to extract their full potential. Products and services were standardized because high volumes led to economies of scale and the ability to offer lower-priced products. Higher volumes also meant increased market share. Then the Internet happened!" (Chase, 2015, p. 249)

Connecting all insights, this research highlights that:

- All authors explored in this exercise attribute digital technologies as the major element for developing the sharing economy.
- The internet has blurred traditional capitalist principles giving rise to hybrid models of businesses like the sharing economy. Particularly:
  - The internet has enabled massive participation and the inclusion of young entrepreneurs into global market systems.
  - The internet creates modes of labour that differ from traditional contracts.
  - The internet transforms scarcity into abundance.
  - The internet reduces costs of production and distribution among others.
- Sharing economy networks embed other online platforms to scale up their market.
  - Trust and payments become digitalized.
- The sharing economy is a software-based system, platforms collect, analyse, manage and own others' data[18].
- The launching of the iPhone in 2007 successfully boosted sharing networks.
- The internet has moved marketing from centralised agencies to distributed peer advertising production.
- Silicon Valley in San Francisco is considered as the place where the commercial sharing economy was born.

6.1.2 The shift from individual ownership to common access

Sixty-eight percent of the authors researched in this study agree on pointing out a particular cultural shift that promotes access over ownership as a decisive cause on the emergence of the sharing economy. This cultural shift establishes that new generations (starting from the

[18] Some product service systems like Zipcar or Car2Go also own physical goods.

Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

millennial generation) prefer to have the possibility to access any asset and consume it solely for the required time rather than privately own it (Owyang, 2013; Tapscott & Williams, 2006; Bauwens, 2012; Stephany, 2015). In other words, according to this cultural change, individuals prefer to consume what others own. This fact would face capitalist principles -which defend private property and ownership- while it would favour the rise of the sharing economy landscape. This cultural transformation and other sociological issues such as: (1) millennials' preferences, (2) access caused by the digitalization of physical goods and (3) cooperation versus ownership are the subject of this chapter that aims to understand to what extent they have influenced the development of the sharing economy.

The transitive change from ownership toward access appears more understandable when comparing their representative economic systems, traditional capitalist markets and the sharing economy. The first system advocates for an economic model based principally on markets, capital and private ownership. Capitalist economies foster the acquisition of properties as a symbol of wealth, autonomy and freedom (Mason, 2015). From a historical perspective, in the United States and Europe, properties privately owned experienced a salient increase in number between the 18th and the 19th century (Botsman & Rogers, 2010). In the mid 90's, especially in America, Gansky (2010) observed the greatest movement toward ownership. In her view, this moment was remarkable given that the middle class moved from the city centre to neighbourhoods where houses were quite affordable. This trend was boosted by a philosophy in which social status and autonomy were essentially driven by the acquirement of private property.

Contrary to systems that encourage individuals to privately own goods, the sharing economy claims the benefits of non-ownership as Russell's quote (1916) states, "it is preoccupation with possession, more than anything else, that prevents men from living freely and nobly." In this context, Stephany (2015) believes that *disownership* currently shapes social status which can be measured by what one person is intelligent enough to not own. In traditional capitalism what is a symbol of freedom and autonomy in the sharing economy causes the opposite result. In other words, in the sharing economy, the more you own, the less free you are. Stephany (2015) and Botsman and Rogers (2010) argue that this shift is partly provoked by a period of deep

capitalism and hyper-consumption that led to a society overfilled of unnecessary and unwanted products.

Although the majority of authors studied in this chapter (e.g., Rifkin, 2014; Howard, 2015; Mason, 2015) claim that the sharing economy is decisively opposed to capitalism, Sundararajan (2016) disagrees and argues that the sharing economy functions as a mixture of capitalism and communism. According to his assumption, the sharing economy brings to the society common access to goods and services (communism) but through private companies (capitalism). However, the concept of ownership renders differently in each system: in capitalism individuals own goods, in the sharing economy the same goods[19] are owned by private platforms and in communism central governments own goods.

Coming back to concepts like social status and autonomy, the term *freedom* appears quite linked to this cultural shift when analysing the literature proposed in this dissertation. For instance, in Rifkin's view (2014), young generations measure freedom according to their online relationships with other individuals, their inclusion in social networks such as Facebook or Instagram and their ability to collaborate from peer-to-peer. From a different perspective, Botsman and Rogers (2010) and Gorenflo (2012), observe rising levels of freedom when the dispossession of physical goods occurs. These authors compare private properties to heavy burdens that impede mobility, autonomy and therefore freedom. It is remarkable to notice a transition from what freedom was intended in previous generations to how it seems to appear to the millennial generation: "the car was freedom, now it is a ball and chain. Freedom is an iPhone" (Gorenflo, Smith & Doctorow, 2012). Similarly, Palahniuk in *Fight Club* (1996) claims "the things you own end up owning you." There are several studies aiming to prove this cultural shift in which freedom seems to move from ownership to access.

For instance, Chase (2015) studied in 1999 the reaction of Americans when asking them about sharing cars. Forty percent of the respondents showed their clear rejection to share their cars with strangers. In their view, these practices are linked to dirtiness and hippies. Additionally, having their own cars provides them safety and autonomy. However, a more recent study led

[19] Only sharing economy platforms that are included under *Product service system* and *Collaborative lifestyles*, (Botsman & Rogers, 2010). In the case of *Redistribution markets*, ownership pass from peer to peer. There are also other types of sharing platforms that only own data or the rights to use other's properties.

Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

by the car-sharing company Zipcar (2013) based on an online survey administered to licensed drivers ages 18 and over showed that only the youngest generation (millennials) prefers to give away their own car instead of their smartphone (cited by Kingkade, 2013). The findings also stated that millennials mostly refuse car ownership due to the high expenses that are required (petrol, parking, insurance and maintenance) but also because it represents a great responsibility. In response to these issues, individuals from 18 to 35 years old showed willingness to use alternatives like public transport, car sharing, carpooling, etc.

Furthermore, Schoettle and Sivak (2013) developed a study seeking to understand the reasons why young driving licensing had decreased in the U.S. Their findings concluded that in 1983 a 33% of the driving licenses were held by people between 16 and 30 years old, however, this percentage drop down to 22% in 2008. The study concretely pointed out three main reasons for not having a driver's license: (1) too busy or not enough time to get a driver's license; (2) owning and maintaining a vehicle is too expensive and; (3) the ability to get transportation from others.

The *asset-light generation* (Meeker, 2012) best known as Generation Y or Millennial Generation (people born in the 80's and 90's) appears as the first one in contemporary times to experience this change from ownership to access. This generation is particularly characterized by the following aspects: (1) millennials are digital natives, they grew up at the same time as the internet, this fact has greatly shaped their lives around online apps, social networks, virtual platforms and other innovative software. Indeed, millennials have excellent computational skills, they have the ability to easily self-learn new technologies and their functionality. (2) Millennials are multitasking, this generation usually deals with several different channels to accomplish a variety of activities at the same time (Gutiérrez-Rubí, 2014), they are capable of sending an email, chatting with friends, reading the latest news and booking an Uber in a very short time. (3) Millennials are impatient, they are supporters of on-demand applications that provide them products and services almost instantaneously. This "whenever I want" philosophy drives this generation to prefer *light* access instead of *heavy* ownership (Meeker, 2012). The capability to access enormous quantities of goods and services in real time readily from a smartphone, in millennials' opinion, offers many more benefits than by owning the same assets (Blau & Fingerman, 2010). (4) And last, millennials are aware of how hard their parents have

worked in order to acquire properties and, therefore, social status. However, this generation considers leisure activities more valuable than labour. For them, salary is not as important as flexible work time, the capability to perform remote work (from any part of the world with online connection) or to work with a friendly work team (Asthana, 2008).

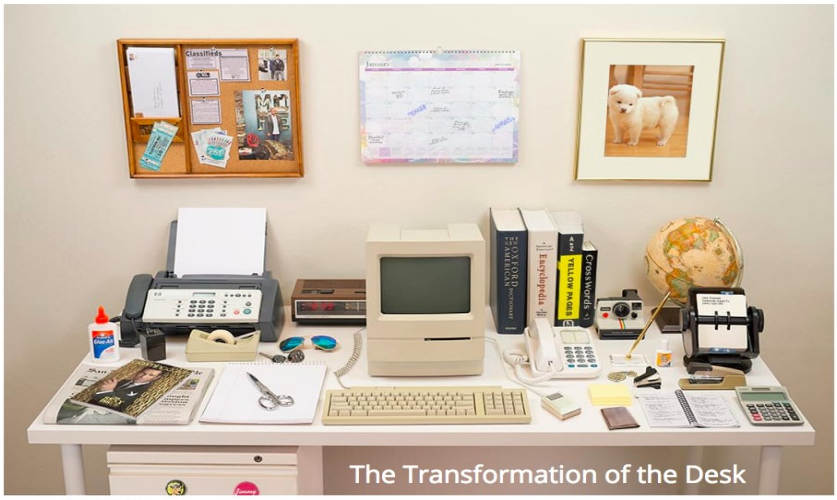
There is an apparent linking connection between the millennial generation, the sharing economy and the shift from ownership to access. All three remark that "a shared future means less stuff [..] it allows people to share goods in common without the burden and costs of personal ownership, which means less time buying and more time living" (Gorenflo, Smith & Doctorow, 2012). In this context, Botsman and Rogers (2010) believe that people will still shop and trade products and services in their daily lives, however in their view, there is a movement from individual hyper-consumption toward a society that commonly consumes from a shared pool of resources. Approaching a similar argument, Rifkin (2014) observes that businesses that allow access to a certain product are gaining ground to companies that offer the same product by means of purchase.

This fact in which users seem to be more willing to access goods rather than buy them is coined by Cardoso (2012) as the *cloud culture*. He perceives an important cultural shift in which ownership is redefined. Previous to the digital era, individuals were concerned about where goods or information was stored, for instance, a hard disk, a CD, a garage, etc., in these cases, the recipient was needed to physically own and enjoy what was inside. However, in his view, online technologies, especially clouds, have changed this perception arguing that "as long as we can access it somewhere in the world, we own it" (Cardoso, 2012, p.201). Within *cloud cultures* physical devices, equipment and storages are reduced to the minimum; common virtual spaces are conceived to allocate vast amounts of digital assets worldwide for common usage.

Continuing within the digital landscape, this study suggests another decisive element that propitiates the change from ownership to access, this is, the digitalization of physical goods. This fact has been already discussed in previous chapters, however, at this point, the digitalization of assets refers to how societies are less in need of owned goods but rather instantaneous online access. In order to argue this assumption, this study considers *The*

transformation of the desk[20] from 1980 to current times proposed by the Harvard Innovation Lab (2015) as an appropriate example. *The transformation of the desk* is a 50-second video that chronologically links material objects with their analogous digital application.

Figure 15: *Office desk in 1981 including physical equipment.*



[20] Full video: http://bestreviews.com/best-standing-desks#the-transformation-of-the-desk (Retrieved, 29-04-2017)

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Figure 16: *Office desk in 2017 including digital applications' icons.*

It is remarkable to notice how several physical objects that were required in a normal workday in the 80´s have been digitalized and integrated into a single laptop. What initially was materially manufactured, today it is digitally codified. Mentioning the most prominent examples: the calculator is replaced by Excel, the world map by Google Maps, letters by Gmail, the telephone by Skype, the encyclopaedia by Wikipedia, business cards by LinkedIn, newspapers by their online version, printed and scanned documents by .pdf files, even the car keys are replaced by Uber. But also, cassettes or CD's are currently substituted by Spotify or YouTube, textbooks books by online tutorials and coins and bills by digital transactions.

The comparison of Figure 15 and Figure 16 highlights the transformative period of 30 years in which ownership has progressively moved to access. Within this context, there are certain implications necessary to point out. First, referring to economic aspects, the desk in 1980 had several objects acquired by monetary payments: maps, dictionaries, notebooks, pens, etc. were purchased. However, in Figure 16 when observing the digital substitute applications, it is important to notice that the majority are free of charge. Therefore, as it has already been mentioned, digitalization considerably reduces costs. Moreover, unlike digital applications, physical objects are not meant to be updated; a roadmap or a dictionary becomes inefficient in the future, which forces the user to buy an updated version.

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Second, Figure 15 represents the *asset-heavy generation* while Figure 16 represents the *asset-light generation* (Meeker, 2012). Light and heavy in this context also applies to the amount of raw material that is required to produce these services, as well as, the waste that is generated after using them. By digitalizing goods and services, the exploitation of natural resources, the emission of contaminant gases and other environmental issues are being reduced (Chase, 2015; Owyang, 2015). Indeed, the digitalization of physical goods also optimizes portability, all tasks and activities performed in 1980 required several objects, sometimes fixed in the desk or too heavy to transport, which can now be equally rendered through any laptop, smartphone or tablet.

Third and foremost, instant and free access to services and goods distorts the necessity to own them. From the analysis of Figure 15 and Figure 16, it seems reasonable to suggest that contemporary individuals tend to value the fact of having digital access to what is required rather than needing to directly buy it themselves. More precisely, in the 80's getting information, services or products in real time was anchored to ownership. For example, a person who wanted to know anything about Egypt had to either own a related book or they had to borrow a friend's book, which required time. Similarly, when a person wanted to suddenly move from point A to point B, excluding the use of public transport, this individual was, in a way, forced to own a car. Nowadays, plenty of on-demand services like Car2Go, Lyft and BlaBlaCar facilitate transportation at anytime and anywhere with no need to own a car. In conclusion, in the past, instant consumption depended mainly on ownership while in current times it depends on having an internet connection.

Continually, this study shifts its scope seeking to analyse how cooperation has evolved into this cultural shift toward access. Assuming that an individual owns less private things and consumes more common resources, a certain sense of cooperation can be identified that guarantees the sustainability of these common resources. For instance, and focusing on the sharing economy, peers who normally use car sharing platforms like Car2Go or local bike sharing services are aware that cars and bikes are not their property and that implies they should leave them in the same conditions as they were found. Even though products within the sharing economy are normally consumed individually, they are maintained commonly. The optimal functionality of

services based on access requires cooperation among their customers, unlike market businesses in which the buyer can do whatever they want with the product once it is purchased (Sundararajan, 2016).

Nevertheless, there exist different levels of collaboration when it comes to access to certain services. Accordingly, Shirky (2008) proposes a classification of three types of online participation that seems to engage with certain sharing economy segments (see Figure 10) . These are, from least to most degree of collaboration:

1. **Sharing.** Individuals that share (or sell) online goods or services are independent and their implication regarding the sustenance of the community is very low. It follows a take-it-or-leave-it philosophy. Applied to the sharing economy, this type makes reference to *redistribution markets* (Botsman & Rogers, 2010) in which ownership passes from peer A to peer B, and to *sharing platforms* (Bauwens, 2012) which refer to social networks where users share digital content regardless of the implications that it might cause within the community.

2. **Cooperation**. "It evolves changing your behaviour to synchronize with people who are changing their behaviour to synchronize with you" (Shirky, 2008, p. 49-50). Cooperation in this sense applies to *product service systems* (Botsman & Rogers, 2010), users are aware that the product in use must be kept clean and in good condition for the next user. Peers cooperate individually to maintain the efficiency of the community, which is usually owned by a governmental institution or a private company. For instance, cooperation is a representative aspect of public libraries; the access to common resources implies a sense of responsibility by each reader to guarantee the sustainability of the whole system. In this case, ownership is held by peer A, but peer B and C have access to the product in question.

3. **Collaborative production**. This segment embraces the highest level of mutual participation: the success of projects based on collaborative production requires the active involvement of many. In Shirky's view (2008), this group is the most difficult to develop efficiently; high levels of participation imply high levels of risks, social dilemmas and other issues. For instance, it is more simple to individually share pictures on Instagram than collaboratively

create an article on Wikipedia that requires consensus, collective decisions, and periodical reviews. Collaborative production appears to be similar to *Common-based peer production* (Benkler, 2011) and it is exemplified by networks like Wikipedia and Linux. In these cases, users do not own the service, they cannot make economic profit from it, but instead, they can access and even modify it for their own needs. However, users must be concerned about the whole network in order to maintain it.

This classification seeks to understand to what extent collaboration might appear as opposed to ownership. The sharing economy performs through these three levels of cooperation and their correspondent types of ownership (individual, private, public or shared). With the exception of the first group, *sharing* where ownership passes from peer to peer, the other two groups allow access to other's properties. In these type of businesses, the user is supposed to take care of their goods and leave them ready for the next users. However, what makes the difference between, for instance a traditional rental car like Hertz and a sharing economy platform like Car2Go, is precisely this cultural change in which collaboration is linked. Shirky's classification (2008) and the proposed comparison with the sharing economy might demonstrate that access implies collaboration. Although users are conscious that large private companies or governmental institutions are behind the services, they feel responsible as owners for a short period of time.

In order to highlight the most relevant insights found along the study of a cultural shift in which individual ownership appears replaced by common access, this research proceeds to argue its main conclusions. Therefore, the sharing economy and the cultural transition studied previously are mutually implicated to the extent that:

- 68% of the authors explored identify a cultural shift that promotes access over ownership as one of the main causes of developing the sharing economy.
- Capitalism is driven by individual ownership while the sharing economy is by common access.
    - Autonomy and freedom are now attached to online access instead of to individual ownership.
- Millennials have been the centre of this cultural transformation. Millennials favour instant online access to goods and services, while considering properties as unnecessary heavy

burdens. Millennials are driven by digital technologies, are multitasking and value the capacity of working remotely as a symbol of freedom.

- The digitalization of physical goods fosters access over ownership.
  - Online applications are cheaper than their analogous material product.
  - The digitalization of physical goods reduces environmental impacts.
  - Before the beginnings of digitalization, instant consumption was anchored to private ownership, now it is attached to online access.
- Within a large segment of the sharing economy, products are individually used but commonly maintained. Even though large corporations are the real owners of data and goods, customers are concerned about the services they are using, as owners for a short time, for the good of the community. Unlike long-term individual properties, shared access requires cooperation.

6.1.3 The 2008 financial crisis

The year 2008 and its global financial crisis are considered, by 56.25% of the authors studied, as a critical point from which the current sharing economy truly emerged. However, by analysing Figure 7 in Chapter 3 it is important to notice that some prominent sharing economy platforms like BlaBlaCar were already founded by 2008. That would indicate that the financial crisis was not a direct cause but a booster that propitiated the successful spreading of this new economy worldwide. On the other hand, several pioneer sharing platforms were launched when the financial crisis happened, Airbnb and TaskRabbit in 2008 and Uber in 2009. A set of factors appear to point out this year as the moment in which the sharing economy took off. Therefore, this study seeks to understand this set of factors in an effort to argue to what extent the 2008 financial crisis influenced the evolution of the sharing economy.

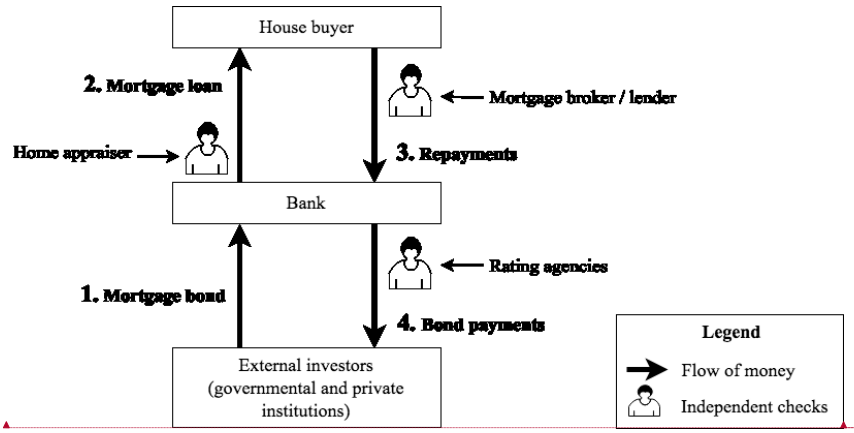
Initially, this study considers necessary to briefly review what socio-economic factors occurred before, during and after 2008. First, the 2008 financial crisis is observed as a failure of capitalism and its incapability to balance debt (Thompson, 2012). The whole capitalist system requires the circulation of debt and, therefore also of credit, to maintain the circle of production and consumption. Simplified, banks and other institutions provide credit to individuals while charging them some fees called *interest-bearing loans*. As a matter of fact, this crisis is also referred as the crisis of credit (Jarvis, 2012). Since 1970, countries based on a debt-credit capitalist system experienced a successful economic growth that in turn also propitiated social

and cultural wealth. This profitable period was supported by "governments which deregulated financial markets and attenuated government oversight in order to attract financial capital and reap the benefits of increased tax revenues" (Thompson, 2012, p.68).

More particularly, between 2000 and 2003 the U.S Federal Reserve, an organization where investors buy treasury bills to ensure their profits with a very low risk, reduced the interest rate from 6.5% to 1% (Hemmelgarn & Nicodème, 2010). This lowering generated great volumes of cheap credit that was quite attractive to banks. At that time, families had the chance to acquire their own home by periodically reimbursing the price of the property to the bank while this benefited from interest-bearing loans and prime mortgages. House prices were estimated to rise with time. This fact guaranteed the bank could sell the property and gain the added value if the owner would not pay the loan back (Verick & Islam, 2010). This enthusiastic period shaped the beginning of the *housing bubble* in which several construction companies took advantage by building large areas of houses and apartments.

At the beginning of this period, to buy a house required a simpler process: the family contacted a mortgage broker who, in exchange for a commission, contacted the mortgage lender who gave a mortgage to the family. Later, the banks decided to get involved in the whole process by buying that mortgage from the lender for a fee. At this point, banks continued to borrow more capital from the Federal Reserve and other private investors aiming to purchase more mortgages (Marshall, 2009). This economic system was suitable for all parties until 2004 when two factors met together: first, there were more houses for sale than customers willing to buy a property, and second, the Federal Reserve initiated to raise the interest rate up to 5.25% in 2006 (Hemmelgarn & Nicodème, 2010). In response to the first factor, banks and mortgage lenders decided to enlarge their target by offering sub-prime mortgages (see Figure 17) addressed to families with very low economic resources. These new mortgages did not require proof of income or any other document that guaranteed the investment (Jarvis, 2012).

Figure 17: *Simplified sub-prime mortgage model.*[21]



Despite all the attempts to keep the bubble growing, the whole system began to fail when homeowners and their mortgages defaulted. At this point, banks relied on abundant houses for sale with a reduced demand, which in turn provoked falling house prices (Merrouche & Nier, 2010). Families were not interested in purchasing houses any longer and this directly affected mortgage brokers and bankers who were in debt with their investors. In consequence, several organizations declared themselves bankrupt and unable to return their loans, while families understood that their investments were worthless (Marshall, 2009).

As a direct consequence, from 2008, governments affected by this global crisis were forced to implement some measures like: reducing capital investments designated to public health and education or scientific research projects, cutting some social benefits or raising taxes. Subsequently, a profound social discontent emerged in form of protests and manifestations which took place in several cities around the world (Thompson, 2012).

When analysing the consequences of the 2008 financial crisis, Caraça, Castells and Cardoso (2012) remark the prominent emergence of a new culture driven by common resources, sustainable markets and alternative modes of production and consumption in the aftermath of

[21] Schema based on the model published in the BBC News, 21-11-2007. http://news.bbc.co.uk/2/hi/business/7073131.stm (Retrieved 11-04-2017).

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the crisis. Even though the authors refer to this new culture as *the culture of the crisis*, it may be comparable to the sharing economy and its main principles. In their view, when a financial crisis occurs, a new social and cultural phenomenon appears in response. Thus, societies, as a direct reaction to the issues occasioned by financial corporations and governments, may have developed new behaviours opposed to capitalist practices. Furthermore, the financial crisis, in their view, would have forced individuals to buy less and access more when it comes to consuming a product. Caraça, Castells and Cardoso (2012) highlight that:

> Indeed, if people cannot consume as much as they would like, they will have to find fulfilment in something else. But they cannot find fulfilment in something else unless they change their values; that is, unless they generate from within a new economic culture unified under the common goal of superseding consumerism. (Caraça, Castells & Cardoso, 2012, p. 12)

The culture of the crisis and the sharing economy present several related connections. For instance, both systems reject hyper-consumption and embrace access to commons resources; they are theoretically opposed to capitalist principles, hierarchies, middlemen and centralization; they foster personal relationships, collective experiences and sustainable lifestyles. Either the culture of the crisis or the sharing economy presume to offer cheaper services than capitalism. In sum, these two paradigms might be understood as quasi analogous, with the difference that the culture of the crisis is more focused on personal and local practices while the sharing economy encompasses a broader scope.

Stephany (2015) approaches a resembling conception when suggesting the global crisis as one of the sharing economy catalysts. The author pays special attention to how the financial collapse generated high levels of unemployment and the reduction of salary for those who were able to keep their job. Especially in countries like Spain, Italy or Greece, the economic distress gave shape to the *1000-euro generation* which had to readjust its expenses. Stephany (2015), Gansky (2010) and Castells and his research team (2012) agree that first, this generation was forced by the capitalist failures to find cheaper manners of consumption like renting, exchanging, swapping or buying second-hand goods; and second, the same failures caused a great opportunity for young computational entrepreneurs to redesign markets and offer more affordable services and products to customers affected by the crisis.

Similarly, Howard (2015) finds the 2008 collapse as the key year that allowed the decline of the *me-economy* and the emergence of the *we-economy*. In her view, the *me-economy* is a capitalist-based system driven by competition, accumulation of capital, hierarchies and consumerism that has failed to sustain itself. Instead, and right after the financial crisis, the *we-economy* emerged which proposed alternatives focused on openness, personal experiences, creativity, technological innovations and sustainable infrastructures. This assumption is partly shared by Gansky (2010) who also considers the importance to analyse individual's desires. The author states that the inefficient function of large financial corporations, insurance companies, brokers and public institutions have led customers to shift their priorities. In other words, individuals would have developed a sort of distrust of such companies provoking peers to ask themselves what is more valuable to them. In her view, an economic crisis forces people to rethink the real value of material and immaterial things.

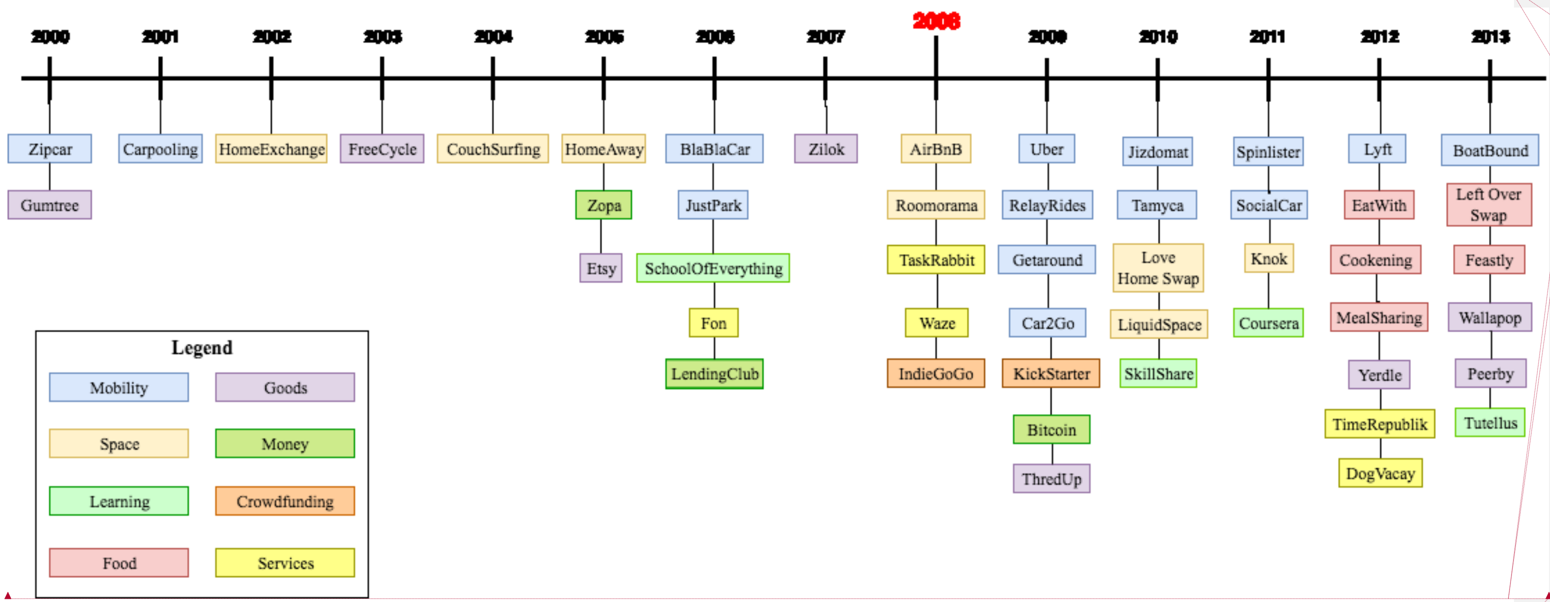
Slee (2015) also detects how almost unnoticed several new economic activities, like alternative currencies, crowd-sourced projects and digital cooperatives, were created during the years of recession. Slee states that "new forms of ownership, new forms of lending, new legal contract, a new business subculture has emerged over the past ten years, which the media has dubbed the sharing economy" (Slee, 2015, p.XV). In sum, Castells (2012), Stephany (2015), Gansky (2010), Howard (2015) and Slee (2015), although from different perspectives, observe a strong linkage between 2008 and the rise of the sharing economy, suggesting that essentially one thing comes after the other. Thus, a critical economic situation forced not only customers but also entrepreneurs to redefine consumption manners in a way that costs were well optimized. The initial solution was to replace ownership by access. By doing so, users would pay for the service or product solely for the required time, which would reduce costs. This new system also permitted individuals to make a profit out of their own assets by allowing others to use them. This disrupting model rapidly grew giving shape to the current sharing economy.

However, from a different point of view, Botsman and Rogers (2010) do not attach the financial crisis as a major cause of the emergence of the sharing economy. Their argument exposes that assuming that the sharing economy is a repercussion of financial issues, it would disappear as soon as the crisis recovers. In that case, the sharing economy would be a mere trend with a short

lifespan. Although their forecast was formulated only two years after the collapse, Botsman currently remarks on her blog (www.collaborativeconsumption.com) that the sharing economy has overpassed the period of recession and it continues approaching new market niches, generating enormous revenues and networking larger number of users. Therefore, in Botsman and Rogers's view, the 2008 financial crisis has solely functioned as the momentum in which people opened their minds to consume from alternative routes.

As it has already been stated, the main research question about whether the 2008 financial crisis was one of the major causes of the emergence of the sharing economy is still not consensually approved by the experts. Thus, and in an effort to achieve a clearer visualization of the state of the sharing economy before and after the global recession, this study proposes a timeline in which 49 popular sharing economy platforms are sorted by their year of foundation. The main goal of Figure 18 is to explore to what extent the financial crisis influenced the development of this economy, as well as construct a historical vision in which the evolution of the sharing economy is exposed. In addition, Figure 18 classifies all platforms by colours specifying their main market niche.

Figure 18: *Timeline with the main sharing economy platforms sorted by their year of foundation and their market niche (2000-2013)*



Notes:
(1)The criteria when selecting these platforms as relevant for this study is based on all literature reviewed, (the majority of these platforms are highlighted as meaningful on the course of the sharing economy) as well as in the *Collaborative Economy Honeycomb version 3.0* proposed by Owyang in 2016.
(2)The year of foundation is retrieved either by the literature explored or from the platform's official web page.
(3)The scope has been delimitated from 2000 to 2013, this study considers that even though there is a vast number of platforms launched after 2013 these are not yet relevant (due to their early stage or because of their reduced number of users) when it comes to analyse the sharing economy schema.
(4)Carpooling and Jizdomat are now property of BlaBlaCar
(5)The best known RelayRides is currently renamed as Turo.

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Figure 18 shows that several well-known networks, such as BlaBlaCar, Zipcar, Carpooling, JustPark, HomeExchange, CouchSurfing, HomeAway, Gumtree, FreeCycle and Etsy were created and launched before the financial crisis started. This fact may suggest that 2008 and its global crisis were not so crucial, unlike the majority of authors argue, when locating the roots of the sharing economy.

However, it is of great importance to statistically analyse the progression of the sharing economy along these 13 years. On one hand, 15 out of 49 (30%) platforms were launched in the eight years before 2008. The remaining 70% of the platforms were put online during a shorter period of six years, including 2008. According to this data, there is an increase of platforms created, which would demonstrate the growing nature of the sharing economy.

On the other hand, 2006 appears also quite salient for the emergence of early sharing economy platforms. Five remarkable p2p platforms were born unaware of the upcoming crisis. In an attempt to better understand the origins of these prompt platforms and their possible relationship with the financial crisis, this study has interviewed experienced workers of three of these platforms: Pavel Prouza country manager at BlaBlaCar CZ & SK, Sam Mellor PR manager at JustPark and Alexandra Nelson marketing and communication specialist at Fon.

To the question, *why in your opinion have customers moved from a traditional service to the one offered by your sharing economy platform?* all three interviewed answered that the main reason of this change is given that their platforms provide a more affordable and convenient service. This fact may point out that economic benefits are prioritized by clients when opting for sharing services (customer motivations are studied in depth in the following chapter). If assuming that sharing economy users are mainly driven by monetary issues, it is also probable to suggest that the 2008 financial crisis worked as a booster for all those platforms that were already existing. Prouza (2016) and Mellor (2016) highlight that their services are far cheaper than the ones offered by public transportation in the case of BlaBlaCar or private parking spots when referring to JustPark.

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Continually, and in an effort to properly understand the relationship between the 2008 global recession and the sharing economy, this study proceeds to highlight its main findings. This dissertation considers essential to point out that:

- 56.25% of the authors explored in this study believe that the 2008 financial crisis was a crucial factor on the development of the sharing economy.
- The global recession fostered a shift in terms of consumerism.
    - Individuals affected by the crisis observed that access would be more economically convenient than ownership. This shift may have propitiated a pass from capitalist systems towards the sharing economy: buy less and rent more.
    - More affordable manners of consumption took back prominence this time reshaped under digital frames: such as, swapping, gifting, crowdsourcing, etc.
    - The lack of economic resources influenced people to re-evaluate and prioritize their necessities as consumers.
- The inefficient performance of banks, public institutions and other large organization provoked individuals to develop a sort of distrust upon these entities. This moment of discontent favoured digital entrepreneurs to create alternative business models based on sharing economy insights.
- The sharing economy emerged before 2008, however, the financial crisis has acted as a major event when referring to engaging users into the system. Supposing that the global recession would have never occurred, the sharing economy would probably have grown slower.

6.1.4 Environmental concerns

Thirty-seven point five percent of the authors consider that issues related to pollution, residual waste, the exploitation of natural resources, as well as, the accelerated increase of the global population, have been of great importance for the emergence of the sharing economy. Access to common resources appears as an efficient solution to prevent issues related to hyper-consumption and massive production, among others. In this context, the sharing economy may provide a more sustainable path of living that prioritizes the optimal usage of goods and services. This factor, environmental concerns, has been considered as a decisive cause for the emergence of the sharing economy by a minority of the experts. However, this study considers meaningful to explore certain approaches that indicate an implication between both events.

This specific exercise seeks to explore: (1) an overview of historical and social facts that have propitiated communities based on excess and idle capacity; (2) to what extend the sharing economy and its three business models proposed by Botsman and Rogers (2010) may negatively or positively impact the environment (3) and what sort of conditions are required to meet in order to achieve a sustainable outcome when using collaborative services.

First, *excess* appears as the main ecological issue cited by the majority of the sharing economists (e.g. Gansky, 2010; Bauwens, 2012; Owyang, 2013; Chase, 2015). According to Brachya and Collins (2016), the origins of massive excess date back to the end of World War II where a series of events led societies to become hyper consumers. Their findings highlight four influential events: (1) there was a baby boom period that caused the increase of the global population, as a response, industries begun to magnify their productivity in order to supply the customer needs; (2) the aftermath of the war led to a situation in which labour and capital incomes progressively flourished allowing individuals to purchase a variety of products; (3) the *American Dream* functioned as a motivational message for families to acquire assets as a symbol of freedom and autonomy and (4) the automobile became accessible to common individuals and it became an indispensable element of mobility. The tendency toward a mass consumerism society successfully progressed until the 2008 financial crisis (Brachya & Collins, 2016).

At this point, it is remarkable to observe how three out of four sharing economy drivers are highly interconnected. First, mass consumerism produced excess issues, but hyper-consumption was slowed down after the global crisis occurred. In consequence, a societal shift in which ownership was replaced by access started to take shape. Individuals economically affected had to make a profit from their excess goods or access other's properties (this assumption is further explained in the following chapters).

There are in fact numerous research studies seeking to demonstrate that societies are currently overloaded with unnecessary assets. For instance, the popularized Botsman and Rogers's example (2010) argue that to individually own a drill is practically worthless given that it is usually used up to 13 minutes of its lifetime. Their study aims to make users aware that there is a large quantity of daily products that are underutilized when comparing their real usage and the productive life for which they have been designed.

Similarly, Steffen (2007) proposes a case in which washing machines are shared by a neighbourhood. This typical practice in some European countries like Austria, greatly reduces the carbon footprint while it is economically effective for all users. Steffen (2007) claims that privately owning a washing machine, when considering its real usage per person, is more expensive than sharing it with ten people. Indeed, a community with ten private washing machines represents a serious negative impact on the planet.

Bauwens (2012) extracts some meaningful data from the website universe.com concerning excess, idle resources and sharing practices, arguing that:

- There are one billion cars on the road, 740 million of them carrying only one person.
- There are 460 million homes in the developed world, with an average of $3,000 worth of unused items available. 69% of households would share these items if they could earn some money from it.
- Of the two billion internet-connected people in the world, 78% declare that their online experience has made them more amenable to sharing in the 'real world.'

These data support the hypothesis that the sharing economy and its main principle, the optimal redistribution and reuse of products, may be beneficial when approaching ecological issues. This hypothetical statement is promoted by Chase (2010) and Owyang (2013) who identify an increasing awareness within contemporary societies that embraces the better usage of natural and manufactured resources for the common good.

In their view there is a second related factor that favours the development of the sharing economy: the growing global population. However, it has been found a controversial observation. On one hand, as Gansky (2010) and Owyang (2013) have remarked, the increase of population and the moving of people to large cities creates density and an excess of assets permitting the viability of the sharing economy; "access to more people means more points of supply in the Collaborative Economy" (Owyang, 2013, p.5). On the other hand, the increase in population entails augmenting levels of production in order to supply large customer demands; this in turn requires the utilization of abundant raw material while increasing residual waste. Therefore, what apparently appears as a key factor in developing the sharing economy and solving idle issues, it also favours mass production that prejudices environmental concerns. In any case, the global population is

certainly growing and it is expected to reach nine billion people by 2050 (United Nations, 2013). Thus, the proper employment of the sharing economy might enable societies to efficiently connect resources and people while preserving the planet.

The philosophy *same product used by diverse clients* is proposed by several sharing economists (e.g. Howard, 2015; Stephany, 2015; Benkler, 2011) as an ideal solution for dealing with overcrowding issues, as well as with ecological complications. However, it is essential to take into account that an optimal application of the sharing economy as a whole requires the fabrication of high quality and durable products in order to ensure a long and effective lifespan throughout multiple users. Particularly, all three business models proposed by Botsman and Rogers (2010), product service systems; redistribution markets and collaborative lifestyles (see Figure 8), are intended to accomplish this philosophy, although from different levels of implication. This study considers relevant to explore how, in isolation, all three sharing economy business models are designed to create a more sustainable consumption.

First, the case of redistribution markets is well exemplified by Demailly and Novel's case (2014) which exposes the following instance:

> "(a pushchair is abandoned in Mr. X cellar) Mr. X could sell his pushchair to Mrs. Y on the Internet or at a car boot sale, or he could even give it to her. In which case, Mrs. Y would not have to buy a new pushchair, lowering the number of goods that would need to be produced and distributed. One might even expect that Mr. X had planned to resell the pushchair at some point, and consequently bought a more solid and durable one: a positive environmental effect emerges—the increase of product lifespan, which also contributes to lower production" (Demailly & Novel, 2014, p.19)

Their research highlights four sustainable outputs when redistributing assets: (1) Mr. X has no need to throw away the underutilized pushchair which would generate waste, indeed in the best case Mr.X can economically benefit from this practice; (2) Mrs. Y has supplied her necessity so she does not need to buy a new one, which reduces the quantity of pushchairs produced. Waste is measured by the number of products manufactured and not by their usage. (3) And last, redistribution aims to enlarge the products lifespan in order to guarantee their multi-user functionality; more durable assets reduce mass production, and therefore also residual waste.

Quite similarly the second category, product service systems, -based on short-time renting or lending- also foster the reduction of goods production. Public libraries or car sharing platforms, like Car2Go or Zipcar, exemplify this specific category in which users access, for a limited time, others' properties.

The third sharing economy type, collaborative lifestyles, presumes to solve idle capacity issues by allowing users to share unused goods and spaces with other people while creating social relationships (e.g. BlaBlaCar). When it comes to analysing how sharing platforms based on mobility affect aspects related to ecological concerns, certain consequences appear as greatly beneficial, for instance, CO^2 emissions are lower when rides are shared by multiple users (Brachya & Collins, 2016). It has also been found that a common car is, on average, used only for eight percent of its lifespan. Indeed, the sharing of this car through sharing economy platforms would replace four to eight private cars (Demailly & Novel, 2014). As a direct repercussion, it may also be claimed that traffic congestion and parking issues would be addressed by sharing mobility, however, it is important to distinguish two types of sharing within this frame. Car sharing focused on long distance rides (e.g. BlaBlaCar) reduces the number of cars on the road, while services based on rides within cities (e.g. Uber or Lyft) have aggravated traffic concerns. According to Ed Reiskin, director of transportation for the San Francisco Municipal Transportation Agency, "the transportation revolution that brought ride services like Uber and Lyft has added thousands of vehicles to the streets — estimates range as high as 15,000 — and many of those cars double park to pick up or drop off passengers" (cited by Cabanatuan, 2015). This evidence might be demonstrating that certain on-demand platforms, like Uber, are erroneously framed under a sharing economy scheme, instead they would perform as part of the gig economy which does not unlock idle capacity.

In addition, there is another crucial factor to take into consideration when exploring possible ecological effects produced by sharing economy platforms based on redistribution markets and product service systems: transportation. When a product is sold, rented for a short time or lent from peer-to-peer, some sort of transportation is generally required. If the product is resold or rented multiple times, as the sharing economy stipulates, the times which it needs to be transported increases. Thus, the levels of contamination caused by transportation would partly deny the positive effects provoked by reducing goods production. However, not all sharing economy services require the same degree of transportation. On one hand, redistribution markets focused

on local exchanges (e.g., Buy/Sell/Trade Facebook groups) allow users to personally approach the product or service over short distances. Similarly, product service systems (e.g., Car2go) permit clients to rent their goods for a short term within the city itself. However, on the other hand, redistribution markets which offer delivery services over different cities or countries (e.g., eBay) require long distance transportation, which in turn augments gas emissions.

In sum, as it has already been claimed positive environmental impacts are enhanced by reducing goods production (Demailly & Novel, 2014): the less assets that are manufactured, the less waste will be generated and the less natural resources will be extracted. However, the ecological effectiveness of sharing platforms would imply a combination of specific conditions (more durable products, recycling processes and objects designed with interchangeable components, see also the circular economy), which at first might not be economically profitable for factories.

As a matter of fact, Gorbis (2010) claims that societies have reached an unprecedented degree of excess goods and wastes caused by the imposition of large enterprises. Her observations pay special attention to how global corporations, like clothing retailers and food industries, foster excess by overproducing products which do not have to be necessarily consumed. Fundamentally, Gorbis (2010) states that for large enterprises it is economically convenient to throw away the surplus rather than reallocate it to communities in need. Marketing and financial strategies of sizable companies focus on maximizing benefits and reducing costs, even though that implies destroying the products.

To conclude this section in which ecological issues have been treated as one of the main drivers of the sharing economy, this study proceeds to argue the most remarkable conclusions:

- 37.5% of the sharing economists explored in this study observe that a global environmental awareness has propitiated the emergence of more sustainable and collaborative practices of consumption promoted by the sharing economy.

- In the mid 20th century, a chain of social and economic circumstances, such as the flourishing of employment, the baby boom generation and the desire to achieve the *American Dream* shaped a culture driven by mass consumerism. In consequence,

societies from developed countries have experienced a progressive accumulation of underutilized goods.

- Issues related to excess and idle capacity have been found as the main environmental driver for unlocking sharing economy services. The sharing economy presumes to optimize the functional usage of goods by reallocating them over multiple users. Therefore, the excess of stuff, which implies a negative ecological impact, would be overcame by the sharing economy as long as certain conditions meet together:
  - Products have to be designed to be resistant and durable in order to effectively pass from user to user. The shift from *use and throw away* products (capitalist economy) to long-lifespan goods (sharing economy) represents a critical dilemma for factories which solely would obtain benefits in the long term.
  - In order to enlarge the effective life of a product, they must be easy to repair or update. In this context, the sharing economy and the circular economy would better play hand to hand.
  - In the case of product service systems, not only the provider but also the consumer, must take care of the product in order to preserve its functionality through time.

- High levels of production and transportation are considered to produce negative environmental impacts. However, from a general view and comparing access and ownership, it is important to notice important variations:
  - When it comes to manufacturing a product, private ownership, in comparison to common access, increases production and therefore also transportation. Ownership in this point develops a low degree of sustainability.
  - When it comes to consume a product, private ownership allows less transportation, opposed to shared goods which are in constant mobilization. Here, access is less sustainable than ownership.

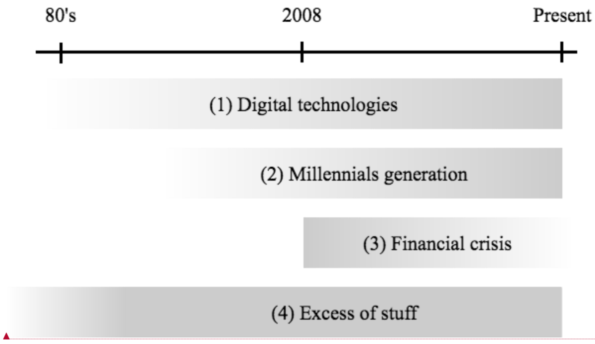
- This study considers that the sharing economy is still not yet capable of producing a real positive impact on the environment; possible results might be achieved in the long-term.

6.2 Exploring, from a holistic perspective, the beginnings of the sharing economy based on the interconnection of its drivers.

Throughout this chapter, four decisive sharing economy drivers have been desegregated and argued in isolation, however, this study has found several linkages that interconnect them as a whole. It is therefore suggested that the emergence and the gradual consolidation of the study field are given to a sequential chain of events that have mutually reinforced one another. That is, the sharing economy would possibly not have achieved its rapid success with the lack of one of these events. The main goal here is to relate these connections and elaborate an understandable narrative focused solely on the most crucial events that have shaped the origins of the sharing economy.

To begin, this study proposes Figure 19[22] in which the four sharing economy drivers are chronologically represented.

Figure 19: *Chronological representation of the four sharing economy main drivers.*



Using Figure 19 as a reference point, it can be noticed that, at first, two main forces were acting independently from one another. On one hand, the 80's[23] and the 90´s were crucial for the introduction of digital technologies within societies of developed countries. The first domestic computer and the innovative improvements of the website, among others, marked the beginning of a transformative period in which the internet would reshape markets, human relationships, cultures and lifestyles. Meanwhile, the first millennial

[22] NOTE: The number indicates the order of importance when giving shape to the sharing economy according to the experts interviewed; one implies the first position and four the last position. The grey gradient indicates the impact of the driver within society, light dark marks low degree while dark grey implicates a high degree of importance.

[23] Digital technologies date far before the 80`s, however, it is considered that this period worked as the moment in which common users started to get involved with these technologies.

babies were born. On the other hand, this time was greatly favourable for societies based on capitalist principles; economic wealth helped families purchase properties while raising their social status. As a response, factories also experienced an optimal momentum for increasing production and generating more benefits.

In the very beginning of the 21st century, early sharing economy platforms started to appear across the U.S and Europe (e.g., Zipcar, Carpooling, HomeExchange, FreeCycle and CouchSurfing). In general, advances in computational systems, combined with affordable devices, facilitated the expansion of digital economies. At this point, Silicon Valley played an important role in developing disruptive initiatives. Young entrepreneurs took advantage of the benefits offered by digital environments: the costs required to code a business were substantially lower than the costs needed to build a brick and mortar company, risks were lower and solely a few developers were necessary to sustain the whole system. Nowadays, large organizations like Google, Facebook, Netflix, Apple, Intel and Tesla[24] are placed in this vast technological park.

This chronological study stops in 2008 where certain circumstances appear to influence the course of this period. By 2008 the first millennials were at the age of 20-30. This generation, which grows hand to hand with the internet, addresses a new lifestyle based on social networks, instant access and digital devices. Contrary to their parents at the same age, millennials find that their iPhone provides them more freedom than a private car would. The beginnings of the shift from individual ownership towards common access are linked to the early wave of the *asset-light generation* (Meeker, 2012). However, it is in September of 2008 after the large financial company Lehman and Brothers failed from bankruptcy when some factors began to change. The lack of monetary resources added to cutting social benefits and the augment of taxes led to individuals readjusting their budget. This circumstance forced customers economically affected to buy less and rent more. Access here gained weight and some developer entrepreneurs took advantage out of it. As such, Joe Gebbia and Brian Chesky, and their now well-known hospitality service Airbnb, represent a good example of how the lack of capital was transformed into a billionaire company:

[24] http://www.siliconvalley.com/companies/ (Retrieved 26-04-2017)

Naformátováno: Standardní písmo odstavce, Angličtina (USA)

Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

> "The two roommates living in San Francisco couldn't afford to pay rent. The pair decided to turn their loft into an area that could fit three air mattresses. Along with the mattress and a night's sleep came the promise of a breakfast too. The pair knew a big design conference was coming to San Francisco, and it was making hotels hard to come by. They created a simple site, airbedandbreakfast.com, and bought three air mattresses. The duo had met at college at the Rhode Island School of Design, so they thought acting as tour guides to designers would be a fun way to make money. Their first guests, two men and one woman, showed up. Each guest paid $80 to stay on the air mattress. They soon realized it could be a big idea. They got together with their old roommate, Nathan Blecharczyk, to build it into a business" (Carson, 2016).

Naformátováno: Písmo: (výchozí) Times New Roman, 11 b., Angličtina (Spojené království)

Also by that time in California, TaskRabbit (2008) and Uber (2009) launched their platforms offering more affordable services. The already existing sharing economy communities, plus the ones joined within these years, observed the great opportunity that the global recession would provide. On one hand, there is already a young generation of consumers with great experiences with Facebook, Google and Amazon willing to try new digital services. On the other hand, the lack of economic resources invites customers to, instead of paying a traditional taxi driver, access BlaBlaCar and get the same service for half the price. Therefore, in this period the sharing economy experienced a flourishing moment due to these platforms which appear to fully cover millennials demands: it is cheaper, it is easily managed from the smartphone which implies "I can get whatever I want, whenever and wherever I want" and it eliminates the necessity to acquire properties.

There is another decisive component linked to the development of sharing economy platforms: the excess of stuff. In decades prior to the 2008 financial crisis, mass consumption worked as an optimal driver to increase wealth. As a direct consequence, peers were accumulating and storing personal goods while gradually entailing excess and idle issues. This abundance of things functioned as a great ingredient for sharing economy communities to arrange their businesses. It is meaningful to remark that the largest part of the sharing economy redistributes existing assets, therefore, societies with excessive stuff would be more likely to perform sharing economy exchanges. For instance, a user needs to rent a camera for the next day, but this user is not willing to ride long distances to pick up the camera. In this case, the sharing economy platform will be convenient only if the offer of total cameras is large enough that the user can find one close to his/her

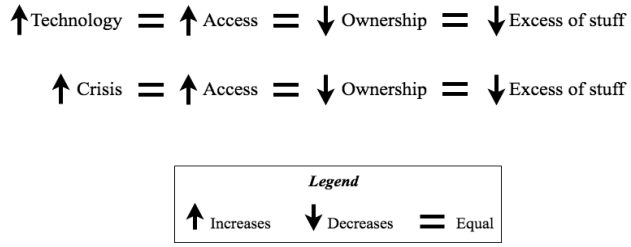
location. In sum, the abundance resulting from hyper-consumption was, and still is, profitable for the growth of the sharing economy.

There are some linkages that relate aspects like excess, ownership, access and digital technologies. Ownership creates an excess of stuff while digital systems foster access. Thus, there is not only the millennial generation, but also a process of digitalization which seems to challenge the traditional concept of ownership and therefore excess too. In other words, as the example of *The transformation of the desk* (Harvard Innovation Lab, 2015) demonstrates, digitalization converts physical products into virtual ones, which annuls their value as property. Therefore, ownership is no longer needed because digital applications offer the same services usually for free or cheaper than the analogous physical product. Once again, sharing economy drivers appear to influence one another, digitalization leads millennials to travel lighter, it helps individuals affected by the crisis to consume cheaper services and it is more environmentally sustainable than the production of material goods.

The years following the financial crisis marked the spreading of the sharing economy worldwide. Several popular books were published claiming the benefits of this disrupting socio-economic system: *What is Mine is Yours* (2010), *The Mesh* (2010), *Peers Inc.* (2015), etc. Nowadays, however, the initial four factors explored have evolved in different manners: the financial crisis is recovering from its recession; digital technologies continue experiencing an exponential public acceptance; online applications gain ground to traditional businesses; millennials now at the age of 30-40 are preceded by generation Z, which is even more digitally oriented; and last, excess and idle issues still represent an environmental concern that the sharing economy has not been able to solve.

To conclude, this study proposes the following schema in which all four drivers are mutually compared:

***Figure 20**: Formulas comparing the four main sharing economy drivers: digital technologies, the pass from ownership towards access, the financial crisis and excess issues*



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7. Users' motivations

Economic, environmental, societal and technological drivers have been previously explored in an attempt to comprehend the formation of the origins of the sharing economy. At this point, the same drivers are approached as the main motivations for users to engage in sharing economy practices. While the main goal in Chapter 6 was to explore what causes gave rise to the sharing economy, Chapter 7 aims to focus its scope in current times in order to understand how these initial drivers might have evolved over time.

The specific methodology applied in this research exercise is based on 17 interviews performed in 2016 in which sharing economy experts were asked the following question: "In your opinion, what are the key factors that motivate people to use sharing economy services?" It is important to notice that these four incentive facts have not been directly taken from Chapter 6 as indicative of possible motivations, but instead from the analysis of the interviews from which it has been observed that initial sharing economy drivers practically coincide with current users' interests.

Therefore, after having studied the whole set of answers provided by the sharing economy experts, it has been found that individuals engage in sharing economy platforms mainly because: (1) this new economy offers cheaper services than traditional businesses; (2) it fosters collective experiences, collaboration, personal relationships and positive emotions; (3) it is entirely managed by digital technologies, a fact that greatly facilitates commercial transactions and (4) it cares for the environment. These findings are exposed in Table 7 where each motivation has been evaluated according to the 17 sharing economy experts.

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Table 7: *Evaluation of users' motivations when engaging in sharing economy platforms.*

	Main motivation			
Expert	**Facilities of digital technologies**	**Save/gain money**	**Community experience**	**Environmental issues**
Meneses	x	x	x	x
Matofska		x	x	x
Varin		x	x	
Naef	x	x	x	x
Lemille		x		
Chang	x	x		
Prouza		x	x	
Zwartkruis		x	x	
Van de Glind		x	x	x
Cañigueral		x		
Nelson		x		
Krátký	x			
Caballero	x	x		
M. Celada		x	x	
Mellor	x	x		
Ramió	x	x		
P. Castellon		x		x
Total	**7**	**16**	**8**	**5**
%	**41.1%**	**94.1%**	**47%**	**29.4%**

7.1 Economic motivations

Ninety-four point one percent of the respondents identify economic purposes as one of the main motivations for individuals when engaging in this novel economic system. The fact that sharing economy communities usually offer the same services as traditional firms but for more affordable prices seems to attract the attention of numerous customers willing to save or gain capital. Almost all participants in this research have observed how beneficial, in terms of economic wealth, the collaborative consumption of products and services can be. The redistribution and reuse of existing products reduce consumption costs for clients, but it also motivates individuals to perform as providers which allows them to earn extra income by renting, swapping, selling or exchanging their underused assets.

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Concerning this fact, Pavel Prouza (2016), country manager at BlaBlaCar CZ&SK, exposes that ride-sharing communities notably create more affordable transport solutions. More precisely, Prouza (2016) remarks that services provided by BlaBlaCar are on average half the price of travelling by bus or train. In his opinion, this fact renders as the primary motivation for peers to use ride-sharing services. Similarly, Ronald Zwartkruis (2016) CEO and founder of ParkYourCar, a p2p marketplace for providers of parking spaces, states that the majority of his clients are driven by economic profits. In this context, Zwartkruis (2016) distinguishes two main advantages: first, his service is 30-50% cheaper than regular parking spots; and second, clients like the concept of giving a part of the turnover back to the local community.

This second advantage is also highlighted by John Y. Chang (2016), founder of Bimpies and Prynter. Y. Chang (2016) observes that a relevant part of users prefers to give their money to local and independent workers rather than spending it on global and corporative enterprises. Zwartkruis and Y. Chang's statement reinforces the idea previously discussed that users, because of the 2008 financial crisis, might have developed a sort of distrust of large companies. Accordingly, sharing economy users would be more likely to support small and local initiatives. However, it is important to remark that several large sharing economy platforms make a profit from their providers by charging them a service fee. Therefore, even though money is transacted from clients to independent workers, the platform in question also receives a commission. Nevertheless, and retaking Zwartkruis and Chang's statement, it appears that sharing economy users feel they are *doing the right thing* when consuming directly from local independent workers than to pay for services provided by large firms. Indeed, the fact that a transaction is done from person to person, implies that clients personally meet the person who is going to receive the money unlike transactions made from person to large companies. For instance, Hilton's guests pay the company while Airbnb's guests pay, most of the price, to the owner of the room/apartment.

Sam Mellor manager at JustPark, Europe's leading provider of pre-bookable private parking, points out that corporative parking spots in city centres are up to 70% more expensive than the ones offered on his platform by peers. A reduced number of spots in city centres, normally owned by companies, forces prices to increase. However, by unlocking sharing economy services, lots of individually owned parking spots become

available for their use, which in turn balances prices. Furthermore, prices are also related to investments and maintenance costs; spots situated in large parking places would require high costs in comparison to expenses derived from individually owned spots. This case exemplifies how sharing economy platforms provoke a serious financial impact when it comes to setting prices. This fact directly affects how established firms are sometimes unable to compete against cheaper prices.

Continuing with relevant data attached to sharing mobility, Alexandra Ramió (2016) marketing manager at Social Car, a community based on p2p car rentals, highlights the great economic benefits that sharing economy platforms propitiate. She affirms that renting a car from another peer results in saving up to 30% compared to renting it from a rental car company. Additionally, Social Car and similar platforms allow their users to find vehicles in their own neighbourhood. Therefore, individuals from small villages, where there are no rental car services, do not have to ride to the closest city to pick up a car, which also reduces transportation costs. In Ramió's view, these sort of sharing mobility applications offer optimal advantages on the basis that their peer-distributed networks permit users to find rental vehicles practically everywhere.

At this point, the research's scope shifts from commercial sharing to non-monetary sharing. Table 7 indicates that users engage in sharing platforms in order to save or gain some economic resources. However, the possibility in which services and knowledge are exchanged by means of time also exists, a condition that may be even more attractive for users with economic difficulties. Some contemporary online non-monetary communities keep using older practices based on gift economies (see Chapter 5) where compensations did not necessarily have to be given at the same time of the transaction and always without using monetary currencies. This concept is used in iSKILLu, a live-learning and non-monetary platform where people can share knowledge with each other face-to-face around the world. Sam Naef (2016), the founder of this platform suggests that the use of money as a currency of exchange implies the exclusion of certain groups of individuals when it comes to trade and consumption. However, time functions as a resource that all humans are able to use. Naef (2016) remarks that:

> "We use an alternative currency, time, so anyone around the globe can use it, if we use money then it stops knowledge from getting to places in the world, and getting

> to places of certain societies, it excludes people from certain backgrounds. We know that traditional money has created inequality so we need a way which connects everyone around the world to transfer things from one to another" (Naef, 2016)

Accordingly, Karim Varin (2016), co-founder of the time banking platform TimeRepublik, adds:

> "Today, money is limited for many many people, or they do not have it, or they do not want to spend it. With time it is different, the relationship becomes a peer-to-peer relationship, it is horizontal because we have got rid the money out of the relationship […] the sharing economy gives people another chance to do something" (Varin, 2016).

iSKILLu, TimeRepublik, as well as many other non-monetary sharing economy platforms like CouchSurfing, offer optimal solutions for customers who do not desire to spend money at all. Nevertheless, users of these sort of platforms are required to compensate their acquisition, at any time, by means of their own assets, knowledge or services. For instance, a CouchSurfing guest would be asked to also host as long as they belong to the community.

To conclude with this section, this study aims to highlight that practically the same report has been given by three different sharing economy experts when asked what sort of aspects motivate individuals to use this new economy. Celada (2016), founder of the home exchange platform Knok, states that "members come for the *money* and stay for the *experience.*" Similarly, Varin (2016) claims "I think they (TimeRepublik users) start from economic concerns but this is only the starting point […] the second part is that in this way the relation between people is superior." Finally, Matofska (2016) founder of the organization "People Who Share" and the "Global Sharing Week" notes that:

> "… first time a person engages in the sharing economy the driver is money and that may be because they want to save money for themselves, their communities, their families or just because they want to make money. However, the reason why people return, or the reason why the sharing economy is growing is because of the experience, and because that experience gives you something that money cannot buy" (Matofska, 2016).

These three quotes share the idea that what initially boosts a user to form part of this disruptive economy is their willingness to share costs, obtain products and services for a better price and/or gain extra income. Within this context, Cañigueral (2016) clarifies that economic motivations do not appeal to economic problems. In other words, individuals (as providers) with financial difficulties should opt for another type of economic system in order to gain capital. The sharing economy functions as a complementary financial support. Nevertheless, what seems to keep users motivated to continue using sharing economy services is the gratification provided by p2p relationships.

7.2 Personal relationships and satisfactory experiences

Naformátováno: Písmo: (výchozí) Times New Roman, 14 b., Angličtina (Spojené království)

Forty-seven percent of the respondents declared that peers who use sharing economy services experience positive feelings while consuming collaboratively. As it has been previously argued, sharing economy customers join sharing platforms because of their low cost services, however, their motivation to continue using this economy appeals to immaterial rewards. This assumption indicates that peers, after using sharing economy platforms for the first time, would have experienced satisfactory moments due to the personal relationships that p2p exchanges entail. Therefore, in this context, clients' values would shift from monetary and tangible purposes towards emotional and sensorial aims.

For instance, Sam Naef (2016), regarding the p2p learning platform he leads, iSKILLu, affirms that users are willing to connect and exchange experiences with someone else. In turn, these personal connections create enjoyable feelings that motivate users to frequently participate in these sort of practices. Furthermore, in his view, the sharing economy implies that people consume through other people's resources and not via establishments, institutions or large corporations. Naef's observation suggests that production and consumption performed under traditional economic systems are impersonal while the sharing economy fosters trade at a more personal level. For instance, Hilton clients arrange the booking and stay with different employees; however, Airbnb guests approach a direct relationship with the householder. Naef (2016) seeks to remark that a potential sharing economy customer would prioritize a peer-to-peer (p2p) transaction over a peer-to-business (p2b) purchase given that, in the first case, apart from getting the service or product in question, the provider and demander establish some sort of satisfactory relationship.

Similarly, Laura Martinez Celada (2016) states that usual customers of the home-exchange community Knok greatly appreciate the benefits that p2p home sharing offers in comparison with hotels or empty apartments. In her opinion, benefits are linked to personal sensations. For instance, she believes that a family would feel much more comfortable in others' homes than in a basic hotel room (Knock users like to feel like they are at home, even though it is another person's home). Although this assumption is not valid for all customers (people might feel uncomfortable being in others' properties), there is an important factor that seems to motivate clients to be involved in these practices. This is, accommodation exchange hosts usually allow their guests to use part of the facilities available in the house: such as the kitchen and kitchenware, living room, terrace, washing machine, clothes iron, TV, etc. In addition, platforms like Knok, Airbnb and CouchSurfing offer flexible check-in and check-out; guests and hosts normally arrange the most convenient time for both parties.

Therefore, positive experiences and feelings, as Naef (2016) and M. Celada (2016) claim, are achieved by means of personal interactions; for instance, if a client is in need of a specific demand, it would probably be better to solve their necessity through a p2p relationship (e.g., Airbnb hosts) than via peer-to-business (p2b) connections (e.g., Hilton, in this case, clients normally must pay an extra fee for the service). A personal, direct and effective service, in this context, develops motivational positive experiences for customers; good feelings would influence these customers to opt for the same service in the future. Nevertheless, as Mason (2015) remarks, when it comes to reporting negative experiences or poor quality services clients prefer to face established firms than individual persons. Customers believe that a well-known organization will respond better to the discomfort caused. In short, enjoyable experiences appear to be a consequence of p2p connections. However, in the case of adverse situations, clients would rely and trust more in p2b transactions.

In the case of ridesharing services, more precisely BlaBlaCar, Prouza (2016) states that one of the reasons why this platform has become so popular is because users have spread their positive experiences through word of mouth to their friends. He specifies, "if a member of BlaBlaCar uses ridesharing for the first time, he goes and shares positive information. When people hear it more often, they tend to try it for their own experience." The current success of the community BlaBlaCar has been given, apart from reasonable

prices, to its ability to create good experiences, as Prouza (2016) indicate, by simply talking to someone. Indeed, the *bla bla* of BlaBlaCar makes reference to chatting in a car, highlighting thus one of its main benefits.

Matofska (2016) reinforces this previous assumption arguing that in the sharing economy "you are connected to other people, you are doing something that gives you a sense of belonging, a sense of meaning, something that is authentic […] so the reason why people go back is because of the experience and, to have this kind of experience is like giving something back to the society." She highlights the importance of belonging to a community and the benefits that that implies. For instance, by being part of a sharing economy community, first, peers connect with other peers while sharing their thoughts, assets or knowledge, collaborative consumption in this sense develops enjoyable situations; and second, peers feel to *do the right thing* referring to environmental issues, they are contributing to the planet and therefore also to society, this fact would also evolve positive feelings for users.

From a different point of view, Jordi Llonch, founder of the p2p tutoring platform Sharing Academy (2016), believes that collaboration represents an important factor for performing pleasant experiences. The platform he leads fosters collaboration and participation in order to tie peer linkages and strengthen the whole community. It has already been discussed that collaboration, within the sharing economy, represents a crucial element when supporting the entire system, however, from a more specific scope, it appears also bridged to the creation of satisfactory experiences. Accordingly, Doennebrink (2016) claims that several empirical investigations have demonstrated that collaboration has always been a part of human behaviour and the most contemporary examples have been found in communities like Wikipedia and Linux. Collaborators of these types of platforms contribute by doing what they like most, as Doennebrink (2016) remarks "tasks are close to their heart". By collaborating, participative peers consider themselves useful and meaningful within the community. Thus, as Doennebrink (2016) and Llonch (2016) have argued, feelings caused by collaborative practices would be also propitious for generating positive experiences for contributors.

With regard to non-monetary sharing economy platforms, Varin (2016) highlights the importance of removing money from the formula when it comes to embracing positive

relationships. In his view, an authentic relationship must be horizontal and from p2p; however, if capital gets involved, the relationship will not be as pure as without it. Furthermore, the fact that individuals are capable of enjoying services and products for free reduces their sense of dependence. For example, a *couchsurfer* who is able to get accommodation in different cities without any economic cost would experience a positive feeling of autonomy and freedom. Therefore, money, in Varin's (2016) view, reduces the good behaviour of the sharing economy, and in consequence the formation of real p2p relationships.

7.3 Facilities provided by digital technologies

Naformátováno: Písmo: (výchozí) Times New Roman, 14 b., Angličtina (Spojené království)

Forty-one point one percent of the interviewed have declared that the facilities and commodities provided by digital sharing economy platforms encourage individuals to take a participative role within these networks. As it has already been discussed in previous chapters, digital devices and communication systems have transformed personal relationships, finance, daily habits, labour and leisure. Focusing on aspects related to markets, trade and consumption, digital technologies are progressively morphing traditional brick and mortar commerce into e-commerce (Rifkin, 2014). This transformative process includes the emergence of websites and online applications as virtual marketplaces, the rise of on-demand platforms, the ability to track and monitor services in real-time, online payments, live chats with customer service, etc. The sharing economy, as well as other digital economies, has adopted these digital features in order to develop a more efficient system of commerce: a system oriented to satisfy contemporary customers willing to access instant services through their smartphone.

Y. Chang (2016) refers to this transformative period as the "app driven ecosystem" that connects suppliers and demanders faster, easier and more efficiently. In his view, this ecosystem is very attractive for not only clients who are able to purchase, rent, swap or access vast quantities of products and services at a push of a bottom, but also to people in search of alternative work. Because it is profitable for both buyers and sellers, digital technologies create new opportunities for individuals to form part of the global market; the internet allows practically everyone everywhere to perform commercial transactions. As a matter of fact, Doennebrink (2016) suggests that sharing economy users are highly

attracted to the entire set of benefits that the digital phenomenon brings. Fundamentally, he states that:

> "Innovation and technology in form of platforms can empower people by creating low entry barriers and enabling them to freely and self-directed participate and create value, access and enjoy the value created" (Doennebrink, 2016).

Furthermore, Y. Chang (2016), referring to providers of on-demand platforms, states that technologies enable them to freely decide how to perform their work duties (schedule, availability, prices, etc.). This fact, in his view, creates a sense of autonomy that also serves as a motivation when it comes to joining sharing economy communities. Moreover, Llonch (2016) argues that new technologies enlarge the scope of visibility and therefore the possibilities to make business. In regard to Sharing Academy's providers, Llonch (2016) affirms that online platforms "provide to peers flexible opportunities to leverage their skills to hundreds of peers they have never met before." Due to the global landscape that the internet offers, a relevant sector of providers has moved from physical establishments to virtual spaces. As a matter of fact, Llonch (2016) and Naef (2016) affirm that in the scope of education, a considerable number of independent teachers have found that the sharing economy and its representative platforms are a more convenient manner of work. In addition, Miguel Caballero (2016) CEO of Tutellus, the largest collaborative learning platform in the Hispanic world, considers that ubiquity also represents a motivational key for choosing this type of online service. The internet allows teachers to give their lectures from home and this is greatly valuable for Tutellus' users.

At this point, this study shifts its scope to focus more precisely on the client's side. For instance, Ondřej Krátky (2016), CEO of the Czech on-demand transportation platform Liftago, affirms that the principal reason why customers decide to use this service is entirely centred on the several facilities that the digital app provides. First, efficient and simple usability of the app enables clients to easily book and pay the nearest driver; second, Liftago has aggregated more drivers than any other taxi company, this increases the possibility to find a ride at peak times; third, ratings by previous clients lead other peers to trust and rely on the service; and fourth, the app tracks the entire fare which ensures transparency and fairness, drivers are forced to adjust the ride to the most suitable route (all these features are also applicable to Uber). In short, Krátky (2016) believes that

mobility apps based on sharing economy principles are substantially more convenient than services provided by traditional firms, mainly because the latter are not digitally designed.

Quite similarly, Ramió (2016) states that users, first opt for the service offered by Social Car due to the usability that the online app guarantees. More specifically, she argues that the flexibility attached to booking a car comfortably from a computer or smartphone, at any time and anywhere, is considered by users as one of the most remarkable benefit. Mellor (2016) agrees with previous observations and adds that customers of ParkYourCar value "the peace of mind and convenience by being able to pre-book a space, it means no uncertainty and circling the block to look for parking on arrival at the desired destination."

In order to conclude this specific section, it is important to highlight certain findings. On one hand, the development of innovative digital technologies and their successful integration within society appears as the major cause of the emergence of the sharing economy (see Chapter 6). However, when analysing users' motivations, facilities currently provided by digital applications drop down to the third position below economic aims and the enjoyment of positive experiences. Therefore, even though the sharing economy would probably never have existed without the advent of the internet, customers seem to take the benefits of digital technologies for granted while prioritizing other aspects that other digital economies might not guarantee, like a cheaper and more gratifying consumption. For instance, suppose the following case, there is a restaurant with an innovative app that allows users to book a table, pre-select the menu and make the payment; on the other hand, there is a sharing economy app that offers the same features but rather than going to the establishment, clients have lunch in the chef's house, normally for a cheaper price. Both services provide the benefits derived from their digital app, however the sharing economy application also embraces personal relationships and more affordable prices. This example is intended to show that digital economies greatly range from one to another: different scopes, targets, aims, etc. The sharing economy is solely one part of the digital revolution; thus, digital benefits should not be understood as its main attribute given that these advantages are already successfully embedded in many other types of e-commerce.

Moreover, after having analysed the arguments provided by the respondents, it is remarkable to notice that on-demand networks are more likely to require advanced and complex digital apps. On-demand communities, like Liftago or ParkYourCar which aim to offer transportation services here and now, need to rapidly and efficiently connect demanders and suppliers. However, when observing *not* on-demand services like Knok or BlaBlaCar where the service normally takes days to be effectuated, digital benefits lose weight while price and p2p experiences are considered more valuable.

7.4 Environmental motivations

Naformátováno: Písmo: (výchozí) Times New Roman, 14 b., Angličtina (Spojené království)

In the last position, environmental awareness appears as an influential motivation for peers to engage in the sharing economy. Five respondents (23.5%) have declared that even though there are other more notable motivations, the global environmental crisis has prompted conscious people to change their consumption habits and prioritize more sustainable economic models.

Accordingly, Naef (2016) believes that the sharing economy has achieved such a number of users given to two decisive reasons: the first one appeals to the positive personal relationships that p2p exchanges offer and the second reason refers to a societal shift driven by the preservation of the environment. Naef (2016) specifically states that "we live in a moment in which people like to not use so many resources and tools, they like to use the internet in a more efficient way to save the planet." This observation appears related to the already argued transition from private ownership towards common access. It has been observed that new generations tend to use fewer material objects (which have been substituted by digital applications) than earlier generations. However, previous findings have indicated that the main reason why young generations opt for online applications instead of physical products is attached to the fact that digital products and services are more convenient in terms of price and usability, not because they are environmentally more sustainable. Nevertheless, van de Glind (2016), Meneses (2016), Matofska 2016) and P. Castellón (2016) agree with Naef's vision (2016) in the sense that although environmental concerns constitute a minor driver, it has influenced some customers to avoid hyper-consumption and consider alternative manners of consumption based on common access.

Therefore, this study observes from the interviews effectuated and from the literature reviewed that ecological objectives are indirectly achieved. Mainly economic, but also societal and technological motivations, encourage new peers to join sharing communities. However, these peers, by reusing and redistributing existing assets, are also indirectly contributing to diminishing residual waste and optimizing natural resources.

7.5 Motivations promoted by sharing economy platforms

It has been previously stated that sharing economy communities are mainly intended to attain economic, societal, technological, and in the very last position, ecological aims. This study seeks to reinforce such assumptions by analysing the web pages of five well-known platforms (Airbnb, CouchSurfing, Uber, BlaBlaCar, EatWith) in an effort to understand what types of motivational resources are used to attract new users. The following classification shows the benefits, accompanied by an advertising slogan written in quotation marks, that each community offers to its customers (see also Figures 21 and 22):

- **CouchSurfing:** Positive experiences. “Stay with locals and meet travellers. Share authentic travel experiences.”
- **Airbnb**
  - Become a host: Make money. “Earn money as an Airbnb host”.
  - Become a guest: Positive experiences. “Book accommodations and special experiences around the world”.
- **BlaBlaCar**: Positive experiences, safety, and saving in costs (environmental benefits are also announced, but in a sub-page). “Love getting there, carpool in good company.”
- **Uber**
  - Become a driver: Be your own boss, make money and let the app lead your way. “Make money when you want.”
  - Become a rider: More affordable prices and find what you need in one click. “Always the ride you want, the best way to get wherever you are going. There is a ride for every price and any occasion.”
- **EatWith**

Naformátováno: Písmo: Times New Roman, 14 b., Angličtina (Spojené království)

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Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

- Become a host: Make money, be your own boss and enjoy positive experiences. "EatWith lets you be a chef on your terms. Set your own menu, schedule and dining experience–you'll be earning money in no time."
- Become a guest: Enjoy positive experiences. "Explore tables around the world."

***Figure 21**: Main webpages of AirBnB and CouchSurfing. Retrieved in May 2017.*

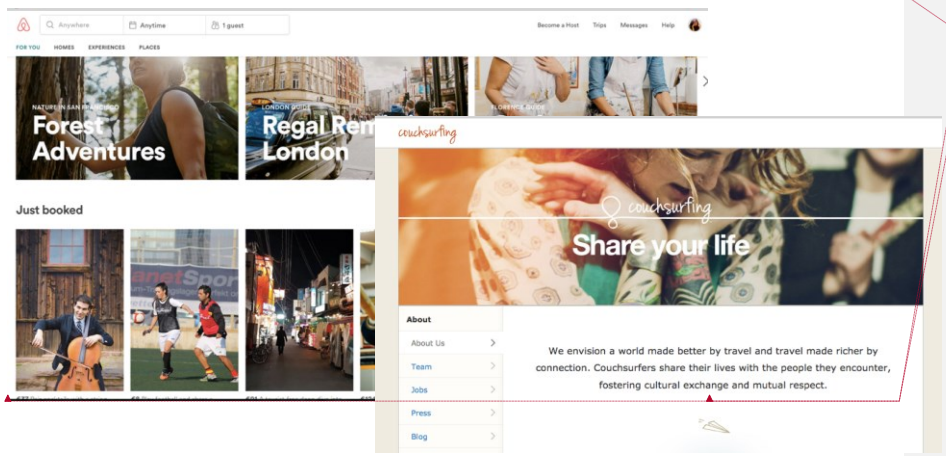
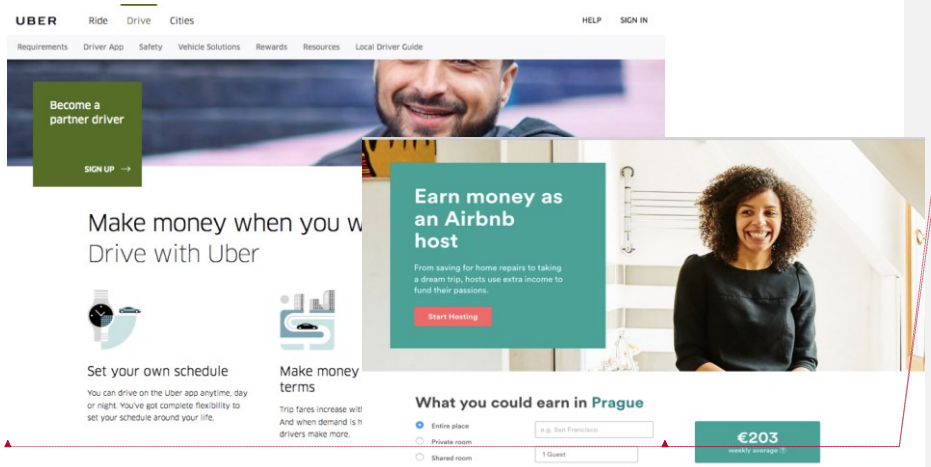


***Figure 22**: Main webpages of Uber (become a driver) and AirBnB (become a host). Retrieved in May 2017.*



After having explored the benefits offered by these sharing economy communities, certain remarkable points have been found. (1) CouchSurfing, the only non-monetary community researched, greatly emphasizes the positive experiences that peers might

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Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

enjoy when using its service; it centres all its content on selling the advantages of travelling, sharing, networking, cultural exchanging, etc. It does not emphasise economic motivations, for instance, it does not mention that the guest would save money when *couchsurfing* or that the basic service is free of charge[25]. Moreover, CouchSurfing essentially dismisses the benefits of usability that its webpage and app offer, as well as the environmental advantages that sharing accommodation might imply.

(2) The marketing strategy shifts when money is involved. BlaBlaCar, EatWith, Uber and AirBnB promote their services as an alternative manner to save/gain money, however in different levels of implications. For instance, BlaBlaCar dedicates solely one sentence to state that its drivers will save costs while sharing the ride. This platform, however, focuses its scope on advertising the enjoyable experiences that meeting new people brings, as well as its different resources to protect the security of the rides. Furthermore, although in a sub-page, BlaBlaCar is the only platform to declare its environmental advantages, arguing that "it is estimated that only in the last year, more than 1,000,000 tons of CO^2 emissions have been saved."

With regard to economic motivations, it has been also found that (3) there is a clear distinction between providers and consumers. All four profit-driven platforms (BlaBlaCar, Uber, AirBnB and EatWith) are aware that both types of users are required in order to maintain the system. For that reason, these platforms have oriented their advertising mechanisms in two separate categories: became a guest/rider or become a host/driver. For instance, when it comes to recruiting new providers, the slogan *Make money* appears highlighted on the Uber, AirBnB (see Figure 22) and EatWith webpages. However, when engaging consumers these platforms opt for selling experiences. For instance, as Figure 21 shows, Airbnb landing page proposes *Forest adventures* or *Crafters in Florence.* In sum, platforms use economic benefits to attract new providers while experiential advantages are used for engaging demanders.

And last (4), referring to providers, the idea of *being your own boss* seems to function as an attractive resource to obtain new Uber drivers and EatWith cooks. These two platforms guarantee the ability to *set your own schedule* and *make money on your terms.*

[25] CouchSurfing also offers premium services that require payment.

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7.6 Main findings

Naformátováno: Písmo: (výchozí) Times New Roman, 14 b., Angličtina (Spojené království)

After analysing findings from both research methods, interviews and webpages analysis, this study proceeds to summarize the most meaningful conclusions:

Within the sharing economy, providers and consumers are motivated by different factors.

Sharing economy providers:

- Providers find an alternative way to make money in the sharing economy. Indeed, even in non-monetary platforms like CouchSurfing or TimeRepublik, providers expect something in return at any time.
- Sharing economy platforms are based on advanced digital technologies. Individuals see the benefits of such technologies as a profitable opportunity to conduct business. These benefits include: (1) affordability, the capacity to offer products and services without previous costs or investments unlike those that occur with brick and mortar establishments; (2) visibility, to enlarge the market scope from local to global; (3) ubiquity, in many cases providers are able to offer their services from home or any other place with internet connection; and (4) autonomy and flexibility, digital apps let their providers decide their own schedule, availability, next clients, etc.

Sharing economy consumers:

- Enjoying pleasant experiences appears in four out five platforms explored as the main benefit for which individuals should consume sharing economy products and services. However, 94.1% of the interviewed consider that cheaper prices are decisive for a new consumer to engage in the sharing economy. Both findings suggest a contradiction between the marketing strategies used by platforms and the real motivations of consumers. A possible explication of this paradigm may be that, as Matofska (2016) Varin (2016) and M. Celada (2016) suggest, users are initially driven by economic purposes however they stay because of the positive experiences these platforms propitiate.
- The sharing economy enables p2p exchanges and therefore, in consequence, also personal relationships. Trading, swapping, sharing or renting at a more personal level is considered by several respondents as vital for generating pleasant experiences. More precisely, three main factors have been found to create positive experiences for sharing economy users:

- Relationships. Users are willing to connect with new people, to engage in conversations and share thoughts.
- Sustainability. Users develop a sense of doing the right thing due to the fact that the sharing economy enables a more sustainable consumption.
- Collaboration. Users contribute to sharing communities doing what they like most, which in turn develops a sense of being useful for the common good.

- Digital technologies are quite attractive for consumers who value rapid and easy purchases. The phenomenon *access what you want, whenever and wherever you want* is based on digital communication systems that facilitate users to effectuate commercial transactions in a few steps from their smartphone. Furthermore, sharing economy apps unlock scarcity. That is, apps enable the aggregation of enormous quantities of independent providers, which in turn implies a greater offer of diverse products and services. In this context, consumers are provided with a large range of possibilities from which they can select the most suitable product.

Other findings:

- Ecological motivations are barely mentioned by the respondents nor the literature reviewed. This study suggests that environmental aims do not play a decisive role in obtaining new sharing economy users. It is also suggested that even though environmental concerns are not prioritized in the sharing economy, some ecological benefits might be indirectly achieved.
- Some respondents have observed that sharing economy users appraise the fact of giving their money to local and independent providers rather than to large corporations.
- In non-monetary sharing economy communities, like CouchSurfing, iSKILLu or TimeRepublik, users are intended to be consumers and providers at any time.

8. Controversies and challenges

The sharing economy, throughout the last years, has raised several discussions whether it contributes positively to contemporary societies or not. In multiple cases (e.g., Uber or Airbnb), sharing economy communities have been detected to perform in *grey* areas which have put into question their legitimacy. The sharing economy is nowadays challenging criticism and rejection from a myriad of institutions that identify serious contradictions attached to this disruptive socio-economic system. Concretely, the most controversial issue approached in conferences[26] regards how to properly regulate sharing economy businesses under a legal framework as suitable for providers as for consumers. In this context, it has been found that the efficient functionality of this economy urgently requires the elaboration of concrete and specific legislation that ensures the basic principles for which the sharing economy has been intended for. Besides that, other issues, like labour rights or tourism concerns, are currently being highly questioned by several city councils (e.g., San Francisco, Barcelona and Paris), which are frequently facing protests and social discontent from some working sectors.

So far, this dissertation has theoretically explored what historical events have shaped the current sharing economy, as well as its main beneficial outcomes, typologies, leading principles, definitions, etc. However, at this point, it is considered imperative to also focus the investigation on the downside of the sharing economy in an attempt to achieve a more accurate conception of how the sharing economy operates. Thus, fundamentally, it is desired to encompass four different scopes: (1) to explore what sort of challenges critically affect the development of the sharing economy; (2) to study how legal issues were addressed by pioneer sharing economy platforms, as well as to approach possible regulative systems that might be suitable to protect the nature of the sharing economy; (3) to resume, and subsequently argue with related investigations, the findings provided by one of the most prominent authors against the sharing economy, Slee (2015) and (4) to analyse the apparent commercial behaviour of Airbnb in four European cities: Paris, London, Berlin and Vienna.

[26] See full list of conferences attended in the Annex.

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As it has already been mentioned the sharing economy is the centre of discussion in several ambits and scopes. Its rapid growth and successful implementation in different cities worldwide have attracted the attention of, not only supporters, but also renowned detractors (e.g. Slee, 2015) who have greatly warned about the variety of damages that this economy is progressively causing on societies. On the other hand, sharing economy supporters are also aware that certain critical questions must be carefully approached in order to guarantee the authentic nature of this evolving economy.

Thus, initially, this study proceeds to analyse the responses of 16 sharing economy experts when asked about what sort of issues the sharing economy is facing in present times. Accordingly, Table 8 presents the results that identify five different issues that have been found to be challenging the basis of the sharing economy. These issues are: (1) regulation and policies appear as the priority duty to settle, the line between legal and illegal gets blurred when analysing certain platforms; (2) the lack of proper knowledge and the misunderstanding of certain concepts seem to hamper the spreading of the sharing economy in specific social sectors; (3) distrust toward strangers when it comes to sharing properties also seems to detain individuals from being interested in this economic system; (4) the lack of financial support by governments and private institutions to fund innovative start-ups and (5) the scarcity, in some cases, of enough services and assets provided in p2p platforms.

***Table 8**: Evaluation of different issues that the sharing economy currently faces.*

	Issues				
Expert	**Regulation**	**Social unawareness**	**Trust**	**Financial support**	**Scarcity of products**
E. Menses	x				
Matofska	x	x			
El-Rejula	x		x	x	
Llonch	x		x		
Naef				x	
Lemille	x				
Prouza		x			
Zwartkruis		x			
Van der Glind	x	x			
Cañigueral					x
Nelson	x				
Krátký		x			
Caballero		x			
M. Celada		x			
Mellor	x				
P. Castellón	x		x		
Total	**8**	**7**	**3**	**2**	**1**
%	**56,25%**	**43,75%**	**18,75%**	**12,5%**	**6,25%**

8.2 Policies and regulation

Legal dilemmas have been found to act as a major barrier for developing sustainable sharing economy practices. Not only 56.25% of the respondents, but also observations obtained from my personal attendance to relevant conferences throughout the dissertation period (2014-2018), attribute regulatory concerns to creating controversy, disarray and discontent in some social groups. Therefore, and taking into consideration the results obtained from these diverse resources, this section focuses its main attention on exploring to what extent the sharing economy and regulatory policies are being mutually affected.

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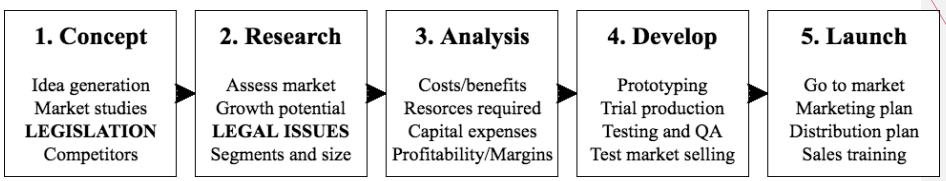
One of the factors that have contributed to postpone the proper regularization of the sharing economy is its own disruptive tech-enabled nature (Bauwens, 2012; Owyang, 2013; Rifkin, 2014). According to this statement, Mellor (2016) suggests that laws and policies are too slow to adopt the agile behaviour of innovative start-ups, which are capable of morphing rapidly into new forms of commerce. Hence, it is likely to assume that digital technologies have accelerated the process of creation, in turn avoiding bureaucratic procedures or traditional guidelines of production. In connection to this fact, El-Rjula (2016) claims that the sharing economy is innovation without permission. In a way, multiple digital applications, such as Bitcoin, have introduced their services to potential consumers around the globe regardless of obtaining permission from governments or pertinent institutions. This assumption indicates that traditional development processes for innovators to introduce their products into markets would have greatly shifted due to the insertion of new digital production patterns.

In an effort to corroborate or deny this last statement, this dissertation proposes Figures 23 and 24 where a common creation process of a material product is compared to the development of a digital business, particularly the p2p marketplace Airbnb. In both figures, aspects related to regulation and legality are highlighted in capital letters.

Figure 23: *Traditional development process of a physical product*[27].



[27] Graphic adapted from Demand Metric's diagram. https://www.slideshare.net/demandmetric/product-development-process-diagram (Retrieved, 10-5- 2017).

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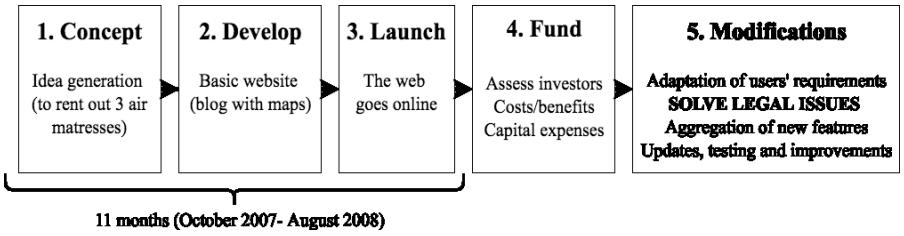
Figure 24: *Development process of Airbnb*[28].



From the analysis of Figures 23 and 24 certain significant insights arise. (1) The procedure required to design, develop and launch a physical product greatly differs from the one needed in digital creations. A physical object, before it reaches the consumer, must efficiently pass through rigorous steps in which several aspects are evaluated: customer requirements, quality controls, simulations, testing protocols, financing, regulations and policies. Once all steps are verified, the product is launched to markets. The final product is considered to cover all requirements at different levels: social, economic, environmental, bureaucratic, legal, etc. In rare cases, the final product is updated *a posteriori*, which would require an important extra economic investment.

However, digital products appear to behave differently, for instance, Airbnb and other giant digital platforms like Facebook and BlaBlaCar were launched following a particular methodology. Once the idea is well defined, it is coded as a very simple and basic website; aspects related to design, usability and regulations are irrelevant at this point. Only two people and eleven months were needed to launch the first version of Airbnb[29]. In a second phase, creators, over time, observe and analyse users' responses. Accordingly, features are improved and new ones are aggregated. Only when the community is large enough it is required to respond to possible legal issues (Varin, 2016). In sum, the production of a physical product ends when it is launched; its update will require beginning the process all over again. However, a digital product is in constant renewal; steps one, two and three (Figure 24) are executed only once, while step five is repeated many times along the lifespan of the digital product.

[28] Graphic adapted from: Anna Vital infographics http://www.peerviewdata.com/blog/airbnb-instagram-pinterest-ever-wonder-how-they-got-started (Retrieved, 12-5- 2017) and Juggernaut AirBnB Timeline http://nextjuggernaut.com/blog/airbnb-business-model-canvas-how-airbnb-works-revenue-insights/ (Retrieved, 12-5-2017)

[29] The first version was: www.airbedandbreakfast.com

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(2) Focusing on legal issues, in the conception of a new physical product, regulative policies are approached at the very first beginning of the whole process. Creators identify the legal viability of the product even before it is created, thorough research ensures that the product will meet all legal conditions once manufactured. However, pioneer digital platforms, like Airbnb, considered legal aspects before the product was launched and after having had a prominent community. As a matter of fact, Varin (2016) warns about the risks of such procedures. He states that "Uber is already so big, so they can take whatever they want, when they get a fine, then they pay them, but they do not stop the service." Also with regard to Uber, Matofska (2016) argues that "governments have tried to stop it, but time to time again they discover it is impossible […] when there is an attempt to ban Uber, what happens is that they get millions more users." Respondents have noticed that generally early prominent communities like Airbnb, Uber and BlaBlaCar are likely to be accused of functioning illegally years later of their foundation.

Besides that, bureaucracy plays an important role in the development process of a physical product. They must be patented and obtain certain quality certificates (which vary from country to country), otherwise, it will not be launched. In this context, bureaucracy ensures legality. On the contrary, the only bureaucratic step before launching the first version of Airbnb was to buy the web domain and officially register it. At this point, bureaucracy appears to lose relevance.

(3) Concepts like money, time and the workforce, greatly differ between the production of a physical object and the development of a digital product. In the case of producing a material product following traditional standards, the entire process demands longer periods of time to research, analyse and test the proper functionality of the product compared to the process of launching an online platform. Digital products, as it has already been mentioned, do not need to be completely finished to be released. Then in the case that the product is well accepted by consumers, the creators will continue improving the digital product. Moreover, the workforce also varies from one process to another, Airbnb was first coded and launched by two internet entrepreneurs with, by that time, basic knowledge of informational systems. No experts in other fields were needed; once the product achieved success, lawyers, marketing specialists, designers and engineers, among others, joined the team. However, the common production process of a physical product involves the participation of different working roles and entities from the very

beginning. For instance, a physical product will probably require engineers, experts on quality testing, an external factory to produce the packaging, and a construction company in the case of brick and mortar establishments. And last, investments and initial costs are reduced to the minimum when it comes to developing disruptive digital products or services. In consequence, economic risks are lower than during the creation process of a physical asset.

(4) However, this study considers that this comparison entirely functions when analysing pioneer sharing economy platforms. Namely, it has been observed that early sharing economy services like AirBnB and BlaBlaCar were critically disruptive in shape, scope, aims, procedures, etc., in a way that they were the first to perform out of existing standards of production, regulatory policies and other established guidelines. Nowadays, new sharing economy platforms are not considered disruptive innovations any longer, there exists a large market in expansion full of competitive sharing economy initiatives attempting to succeed. The triumph of early sharing economy communities, plus the massive emergence of similar applications over the last decade, has caused a balance between the development process championed by early networks like Airbnb (Figure 24) and the standards of production established for creating a physical product (Figure 23). For instance, nowadays to successfully launch a sharing economy application implies market research, marketing strategies, fancy interfaces and also legal support. The sharing economy is progressively being consolidated into a society as if it was another common product or service. Therefore, with regard to regulative laws, as it has occurred multiple times in the past, when an innovative product is created new policies are correspondingly designed too. This study considers that the frequent attempts to ban disruptive platforms like Airbnb, Uber and BlaBlaCar are not as unusual as they have been perceived. Indeed, they have created necessary precedents that new sharing economy apps, private institutions and city councils are taking into consideration.

Going back to the information obtained from the interviews elaborated, Nelson (2016) remarks on the enormous legal challenge that certain sharing economy platforms are facing in order to expand across different countries. In her view, the fact that, not only each country but also each region, has its own regulatory policies and tax issues substantially affects the diffusion of this economic system. These imbalances, in van de Glind's view (2016), can also be found at a more local level when regulating the different

business models that the sharing economy embraces. He states that there is a "blurred line between private and business activities; zoning, taxes, licenses and unfair competition." Both, Nelson and van de Glind's statements, indicate the serious challenge of regulating sharing economies. On one hand, it would be erroneous to regulate the sharing economy as a whole due to its activities greatly differing from one another. On the other hand, and approaching a more global perspective, even though sharing economy businesses are based on digital platforms (which might suggest that they are globally regulated), they are mostly trading others' physical properties from different countries, which means that these platforms must proceed according to the market laws established in that corresponding country. These observations suggest that an optimal regulation accepted by sharing economy companies, customers and governments appears as a very complex duty not addressed yet.

These legal complications, in Matofska's view (2016), would not be overcome unless a completely new legal paradigm is established. Fundamentally, she believes that current policies are weak and unsuitable for protecting the sharing economy system. Regulation must be updated and restructured according to innovative discoveries, not in the other way around. Matofska (2016) throughout her research has paid special attention to define the authentic meaning of the sharing economy, a more specific part of her task has been focused on investigating how the implementation of new policies may have influenced the natural behaviour of the sharing economy. For instance, she remarks that the British government, when introducing multiple new policies to incentivise the proper function of the sharing economy, has recognized that the sharing economy, being well managed, can be greatly beneficial for the whole economy of the country. Besides that, Matofska (2016) proposes, as an optimal manner to control this paradigm, self-regulation or shared regulation. She defines the sharing economy as *the people economy* and therefore, in her opinion, it should also be regulated by people. More precisely, she believes that "policies that we currently have were created before the sharing economy existed and not necessarily appropriated […] Actually, it is about having shared regulation, working across multiple disciplines with a number of stakeholders to combine and build bridges."

Approaching a similar argument, Sundararajan (2016) claims that the sharing economy requires the reinterpretation of existing rules into innovative policies to ensure the functioning of its economic activity. Indeed, Sundararajan (2016) also states that there

have been enough cases in history that have corroborated that it is simply inviable to adopt established policies into new economies; at some point, these established policies will fail because they are incapable of properly evolving. Furthermore, like Matofska (2016), Sundararajan (2016) also suggests self-regulation as one of his proposed models to efficiently manage the sharing economy. These models are: peer regulation, self-regulatory organizations and delegated regulation through data operate as follows:

Peer regulation. This model enables peers to control each other. For instance, a community based on peer regulation assumes that each member will report other's incorrect practices. Sundararajan (2016) considers this model to be economically affordable for societies and appropriate to successfully scale up through a learning-by-doing process: peers will rapidly identify and solve internal problems for the common good. In these communities, regulation is equally managed; standards and protocols are designed by all the peers according to their own goals, missions, scopes, targets, etc. As it has already been discussed in Chapter 3, peer regulation shares several elements with Ostrom's theory (1990) in which it is argued that communities regulated by governments or markets are "perceived as being trapped in a static situation, unable to change the rules affecting their incentives" (Ostrom, 1990, p.182). In her view, to allow members to self-govern their own community ensures that the rules designed will be appropriate to guarantee the success of the community, contrary to policies established by external entities which do not accurately understand the aims and functions of the community.

Self-regulatory organizations. This model merges principles of peer regulation and governmental regulation. In this case, certain active members of the community would also act as educators and inspectors; they would be in charge of controlling and improving the entire system from within. These actors will be compensated by the community for their extra work and trained by governmental regulatory agencies.

Delegated regulation through data. This regulative method relies on complex computational systems that are capable of automatically detecting corrupt activities. Delegated regulation through data makes use of enormous sets of digital information generated from the online activity of users worldwide. These data sets are processed by machine learning techniques and complex algorithms that detect erroneous activities and reports these failures to the corresponding entity. Sundararajan (2016) exemplifies this

regulative method with stolen cards security systems: when the electronic system of a bank detects an unusual transaction, the system automatically warns about possible fraudulent operations. With regards to regulation through data, El-Rajula (2016) points out the blockchain technology as an optimal exemplification. This digital system collects, analyses and archives all monetary transactions effectuated in a way that in case any information introduced do not coincide with the expected, the system alerts the entire community about the error. El-Rajula (2016) remarks on the benefits that digital security might offer to society: in his view, it is cost-effective, safer and more reliable.

This study, as well as El-Rajula (2016) and Sundararajan (2016), considers digital regulative systems as a potential manner for regulating not only the sharing economy, but also other governmental affairs. For instance, if applying delegated regulation through data to ride-sharing platforms like Uber, which tracks a lot of information about the entire ride, it is possible to detect negligence, like exceeding speed limits. In this hypothetical case, Uber can directly fine the driver or provide the information to the corresponding institution. This manner of regulation would only be viable with a proper aggregation of: technologic systems such as the Internet of Things (IoT) and its massive number of inter-connected smart sensor (see Chapter 3), data processing software capable of operating with large and complex databases, and governmental agreements to ensure access to such data (e.g. maps, public transport information, speed limits, road works, etc.). However, this paradigm brings attention to a highly discussed social dilemma about what is more important: privacy or security?.

From a different point of view, E. Meneses (2016) considers that governments play an essential role in controlling and managing the efficient regulation of this economy. He argues that the sharing economy has its own code of conduct, a code that defines the nature and behaviour of this system. Thus, governments and legitimate institutions must, in his view, determine, comprehend and defend this code with the aim to maximize potential outcomes. E. Meneses (2016) states that regulative measures must focus on the protection of individual prosumers (users who usually provide and consume sharing economy goods and services) given that, they are the vital actors for sustaining and enriching this socio-economic system. E. Meneses (2016) claims that nowadays governments are practically dismissing prosumers' rights while favouring corporative

firms. This fact, in his view, would negatively affect the whole sharing economy scheme over time.

Also addressing governmental responsibilities, however from a different perspective, Lamille (2016) observes that not only current policies and regulations, but also intellectual property rights, address a critical barrier in performing the optimal reusing of physical goods. In his view, intellectual property rights function against the conception of a possible landscape where goods are commonly shared. What Lamille (2016) seeks to explain is that intellectual property rights have been designed by and for capitalist economies which would exclude the protection of systems such as the circular economy or the sharing economy. From that, Lamille (2016) ultimately finds that governments are responsible for approaching these emerging economies by also ensuring the protection of rights from a more cooperative and global prospect. Otherwise, the development of these disruptive economies will not achieve their potential outcomes.

What Lamille (2016) and E. Meneses (2016) seem to indicate is that, up to date, governments play the most crucial role when it comes to boosting sharing economy practices and that only when these public organizations realize that the sharing economy behaves differently from other economies, then this disruptive system will properly develop itself. Indeed, until this regulative process is completely achieved, controversy and misunderstanding will still be occurring (Matofska, 2016). Furthermore, if citizens have doubts about the legality of sharing economy platforms, they might develop a certain sense of doing the wrong thing, which in turn would make them avoid such platforms. In this context, El-Rejula's (2016) makes the following comparison: "Uber is in the grey area, this is the disadvantage of Holland. Holland has a lot of grey areas, it is not legal, it is not illegal. It is like marijuana; it is not legal but not either illegal. You can buy it in the shop but you cannot grow it in your garden." Namely, grey legal areas prevent new potential users from joining the sharing economy for fear of being fined. At this point, the dissertation takes a break from analysing interviews and it focuses its attention to study Slee's approach (2015): an extensive work that observes the apparent unregulated activity of the sharing economy.

8.2.1 Slee's argument against the sharing economy

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At this point, this dissertation pays special attention to the, up to date, most extensive literature published against the sharing economy. In 2015, Slee published his book titled *What is Yours is Mine* as a direct confrontation to *What is Mine is Yours,* the latter written by Botsman and Rogers (2010) and focused on magnifying the sharing economy ecosystem.

Slee (2015) presents, throughout his book, an imperative rejection to what the sharing economy has caused in societies so far. His findings point out that, from a broader perspective, the sharing economy has nothing to do with aspects such as community, sustainability or collaboration, as several sharing economy supporters, like Botsman and Owyang, claim. The book explores and argues an endless list of facts and cases where the sharing economy has not only failed but also provoked critical damages on well-established legislations.

In an attempt to comprehend to what extent the sharing economy might be negatively affecting society in terms of legal aspects, this dissertation proceeds to argue Slee's most remarkable findings and put them into context regarding similar approaches elaborated by other authors and cases proposed by this dissertation. Slee states that:

(1) A considerable level of contradiction and hypocrisy exist within the whole system. Its own name begins with *sharing* which suggests practices driven by altruism and generosity, and by the will of giving and help. However, the second word *economy*, which is in Slee's perception the most prominent, makes reference to pure commercial transactions. After having holistically explored the sharing economy landscape, Slee (2015) remarks that there are few *sharing* and tons of *economy*, indeed a very small segment of the entire system is based on non-profit principles. In his view, individuals must be aware that the sharing economy is not as collaborative and sustainable as it is claimed, but a digital morphing form of capitalism. This belief is also shared by Sundararajan (2016) and Mason (2015) who consider that the sharing economy is fundamentally driven by market guidelines and for-profit purposes.

(2) Sharing economy networks, initially based on collaboration and sustainability, end up being corrupted by the desire of scaling economic profits. Slee (2015) aims to remark that

sharing economy platforms have definitely shifted their purposes, from cooperation and anti-materialism to venture capital and monetary incomes, progressively throughout their short history. This statement practically coincides with the sharing economy's classification promoted by Doennebrink (2016) in which the entire evolution of this socio-economic system would have passed through three different stages: the sharing economy 1.0 driven by collaborative, environmental and societal purposes; the sharing economy 2.0 in which the same networks would have oriented their purposes to merely gain capital, and the sharing economy 3.0 would be a middle point between economic and collaborative aims. Both authors observe that several communities, which at first truly fostered a society based on distributed networks instead of hierarchical pyramids, access to common resources instead of hyper-consumption and cooperation instead of competition, have become as capitalist as those they initially criticised.

This dissertation finds BlaBlaCar to be the most suitable case to exemplify Slee's approach. This ride-sharing initiative began on Christmas of 2003 when its founder Frédéric Mazzella wanted to get to his family home 420km away in Paris. He had no car and all trains were already booked for those days. Finally, his sister agreed to pick him up. On the way to Paris, Mazzella observed that the majority of the cars on the road were practically empty and therefore also wasted (Cowan, 2015). After a period of development, BlaBlaCar emerged as an environmentally concerned community that makes better use of private cars while creating enjoyable personal relationships. For several years, BlaBlaCar has tried to avoid venture capital investors that would have distorted its collaborative philosophy. However, in 2014 the network raised 100 million dollars that they used to acquire other competitive platforms in the sector (Slee, 2016). Throughout the dissertation period (2014-2018), BlaBlaCar has bought: Carpooling (Germany), Podorozhniki (Ukraine), Aventones (Mexico), AutoHop (Hungary) and Jizdomat (the Czech Republic), among many others. BlaBlaCar has dramatically absorbed salient competitors while progressively creating its own monopoly on long distance ride-sharing services. This instance would indicate how scaled-up sharing economy communities might blur the general anti-capitalist philosophy that pioneer sharing economists, like Botsman and Rogers (2010) and Chase (2010), have claimed from the very first beginning. Accordingly, it will also reinforce the already discussed *Platform Capitalism* approach, deeply explored by Srnicek (2017) and Lobo (2014), in which sharing economy businesses would perform as mere capitalist companies based on

competition, corporative hierarchies, for-profit aims and centralised networks, but built and fully managed through digital platforms.

(3) The sharing economy is driven by deregulation. Slee (2015) finds that the sharing economy is critically destroying democratic foundations which have been achieved after great efforts. Concretely, Slee (2015) warns that:

> "(sharing economy companies) are seizing the opportunity to challenge rules made by democratic city government around the world, and to reshape cities in their own interest. It is not about building an alternative to a corporate driven market economy, it is about extending deregulated free market into new areas of our lives" (Slee, 2015; p. 27).

Indeed, Slee (2015) points outs that large sharing economy networks have entirely ignored existing laws claiming that regulation has become obsolete and no longer appropriate for modern digital-based societies. Thus, as the author states, sharing economy platforms argue that established city policies were designed for a pre-internet environment and therefore they are outdated when it comes to supporting their digital activity. For instance, Airbnb and Uber consider that their technology offers a fairer and more efficient mode of regulation than the one established by common city councils.

(4) Contrary to what it is suggested by renowned authors, reputation systems are not regulation tools. Several sharing economy experts (e.g., Bauwens, 2012; Stephany, 2015; Howard, 2015) believe that reputation systems are suitable to substitute unfair manners of regulation. In their opinion, the key factor would rely on the fact that reputation systems provide equal feedback from all peers that form the distributed community. Voluntarily, sharing economy users evaluate and rate services provided by other users which in turn develops a sort of control system in which *good providers* will be rewarded and *bad providers* will be, in a way, punished. With regards to this regulative system, Slee (2015) detects two principal issues. On the one hand, reputation systems do not create trust, rather they create surveillance and strict discipline. Slee (2015) highly criticizes and denunciates reputation systems to be:

> "a boss from Hell, an erratic, bad-tempered and unaccountable manager that may fire you at any time […] it provides a disciplinary mechanism that keeps service providers smiling and efficient by virtue of erratic and inconsistent ratings (Slee, 2015; p.101-108)".

What the author seeks to explain is that sharing economy workers are forced to act kindly, friendly and always highly efficient in order to achieve five stars (e.g., Uber), which would ensure their visibility for potential providers. If not, workers and their services will automatically drop to unseen positions.

On the other hand, comments, likes, rates and followers can be easily bought through webs like reputation.com. Paid ratings fundamentally question aspects like fairness and reliability when it comes to evaluate the whole reputation system. Thus, what initially was intended to develop trust through real personal experiences, seems to be becoming a for-profit factory of unfounded opinions and fictitious feedbacks. Slee`s observation (2015) is well reflected in one of the episodes of the TV serial *Black Mirror* (2016) in which a society is fully controlled by a specific rating system app that permits all individuals to rate each other based on their daily activities. The entire reputation of a person is based on other people's comments: a higher rating indicates a higher social status, thus, privileges and commodities are reserved to those who get high ratings. Citizens are forced to always behave perfectly, otherwise, they get excluded from the entire social system. This hypothetical, and in principle futuristic case illustrates what Slee (2015) attempts to warn of: the total integration of digital reputation systems into societies would cause serious damages on fundamental social rights. The centralization of rating systems from different social networks and apps into one unique system, as a sort of personal ID, would distort authentic relationships. In fact, this idea is now being materialized by the web traity.com. Their proposal is:

> "Be the owner of your reputation. Right now, you can only use your eBay stars within eBay, your Airbnb reputation within Airbnb, so... who owns your reputation? At Traity, you own your reputation, you can use your reputation passport to become a reliable member of any community[30]" (Traity, 2017).

[30] https://traity.com/ (Retrieved 20-06-2017)

Naformátováno: Standardní písmo odstavce, Angličtina (USA)

Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

(5) Uber and Airbnb exemplify how risky the sharing economy can be for societies. Slee (2015) focuses practically his entire approach on exploring how these two multimillion-dollar companies gravely destroy well-established labour rights, social benefits and economic wealth. Starting with Uber, its success does not derive from its disruptive technology but from *being parasitic* on all countries where it is active, claims Slee (2015). His findings remark the inappropriate and inequitable manner of business that Uber performs. On one hand, it avoids costs from vehicle security inspections, corresponding taxes, insurances, etc. And on the other hand, it greatly profits from its drivers charging them an elevated percentage fee (around 25%). Slee (2015) suggests that Uber's success is due to the combination of low maintenance expenses and great benefits obtained from the exploitation of its workers. With regards to the payment of taxes, Uber avoids any responsibility and remarks that its function merely applies to matching offers and demands. Accordingly, Uber states on its website:

> "As an independent contractor running your own business, taxes from your earnings are not withheld by the federal or state government. This means that it is your responsibility to file taxes at the end of each year[31]" (Uber, 2017).

Differently, a traditional taxi company retains part of its earnings to pay taxes to the city, in a way that money flows back into the community. However, Uber does not guarantee that drivers will pay their corresponding taxes to the city at the end of the year, which in Slee's view, represents a critical issue.

Furthermore, it has been claimed that Uber drivers, on several occasions, do not ride through poor or deprived areas. Unlike traditional taxi drivers who must offer their services in all neighbourhoods, Uber drivers are able to decide their operative area, as well as their specific clients. This fact, as Slee (2015) indicates develops unwanted levels of social exclusion. This matter has been deeply explored by the researchers Ge, R. Knittel, MacKenzie, and Zoepf (2016) who have found that, in American cities, Lyft and Uber aggravate racial and gender discrimination. Their findings demonstrate that African American riders have to wait up to 35% longer to get the ride confirmation than other American citizens. Besides that, the cancellation of black sounding names was two times

[31] https://www.uber.com/info/how-much-do-drivers-with-uber-make/ (Retrieved 21-06-2017).

Naformátováno: Standardní písmo odstavce, Angličtina (USA)

Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

higher than with white sounding names, and last, it was also found that women are more likely to be taken for longer and costlier rides.

And continuing with Airbnb, Slee (2015) considers that this platform is definitely confronting one of its main (marketing) aims, "commitment to cities and community." The author believes that what Airbnb does is an irreversible damage to existing local communities that, so far, have developed and maintained strong social ties, economic wealth and cultural heritage. Accordingly, Slee (2015) remarks that Airbnb, in reality, does not aim to create sustainable communities but to scale its business up as fast as possible. In consequence, citizens experience an increase in their rents, the closure of local shops and the overcrowding of tourists. Slee (2015) adds, "(Airbnb) is playing an increasingly destructive role in global travel, preventing cities from striking the balance they need to find between tourism and the other needs of a healthy city." Part of the evidence that, in Slee's point of view, perfectly functions to measure the little part of *sharing* that Airbnb has is by comparing the number of private rooms and entire apartments that the platform offers. His approach claims that the first case, in which the guest shares the property with the host, represents a very tiny slice of the entire service. Therefore, in an effort to investigate this assumption more in detail, this dissertation proceeds to explore and analyse the activity of Airbnb in different European cities.

8.2.2 The case of Airbnb in leading European cities

Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

Thus, by using the same parameters that Slee uses to demonstrate his assumptions, this study seeks to analyse the sharing or commercial behaviour of this platform in four European cities: Vienna, London, Berlin and Paris (unfortunately there is not enough data about Prague). The parameters applied in Slee's research are based according to the three different listings that Airbnb offers:

Entire home/apartment: Guest and host stay in different houses. These listings are more likely to operate like a hotel; they are not considered to develop any sharing or collaborative practice.

Private room: Guest stays in the same house as the host. These listings are considered to develop certain levels of sharing, sustainability and personal relationships.

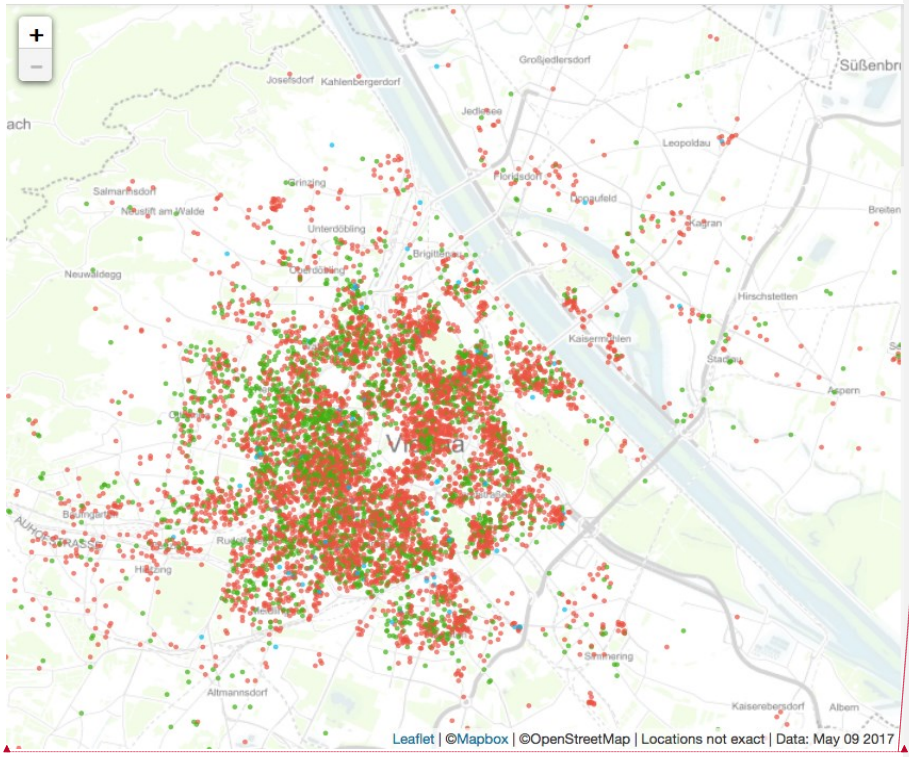
Shared room: Guest stays in the same room as the host. These listings are considered to develop great levels of sharing, sustainability and personal relationships.

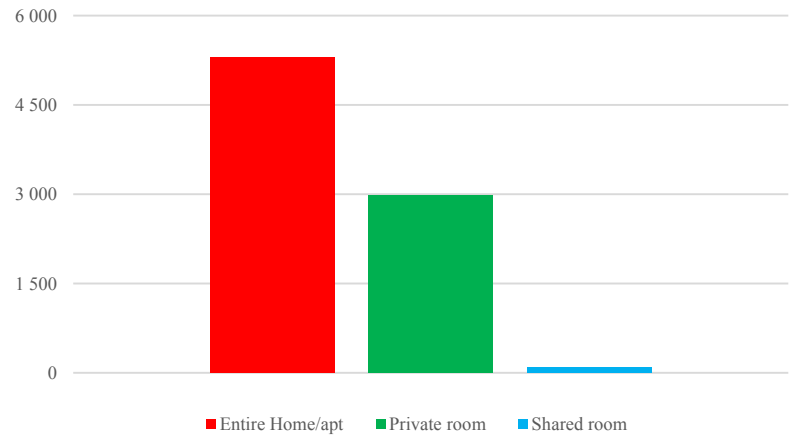
For that, this study has collected specific data available on the public database Insideairbnb.com[32], a non-commercial website fully independent from Airbnb that seeks to understand how this platform operates. Figures 25, 26, 27 and 28 show the business activity of Airbnb in Vienna, Berlin, Paris and London with their corresponding map and chart based on the parameters described above:

[32] http://insideairbnb.com/about.html Data collection: This site is not associated with or endorsed by Airbnb or any of Airbnb's competitors. The data utilizes public information compiled from the Airbnb web-site including the availability calendar for 365 days in the future, and the reviews for each listing. Data is verified, cleansed, analyzed and aggregated. (Retrieved 22-06-2017)

Naformátováno: Standardní písmo odstavce, Angličtina (USA)

Figure 25: *7.893 Airbnb listings in Vienna. May, 2017.*





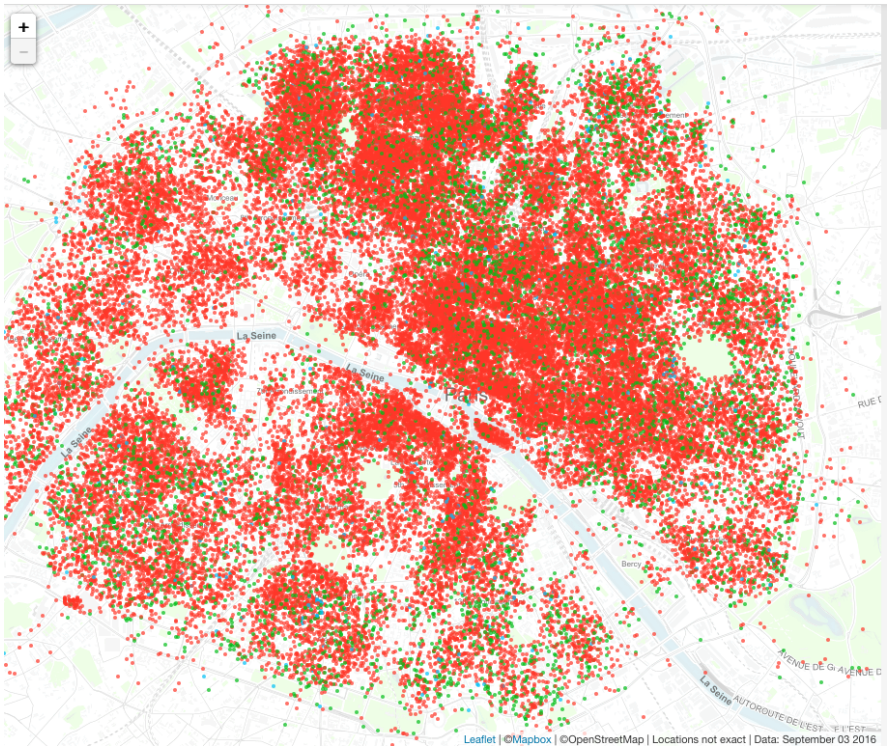
Naformátováno: Písmo: Kurzíva, Barva písma: Automatická, Angličtina (Spojené království)

Naformátováno: Písmo: (výchozí) Times New Roman

Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

Naformátováno: Písmo: (výchozí) Times New Roman, Kurzíva

Figure 26: *55.720 Airbnb listings in Paris. April, 2017.*



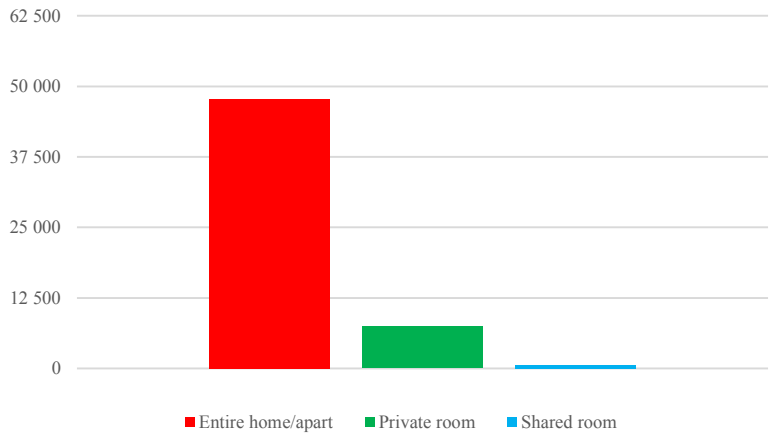
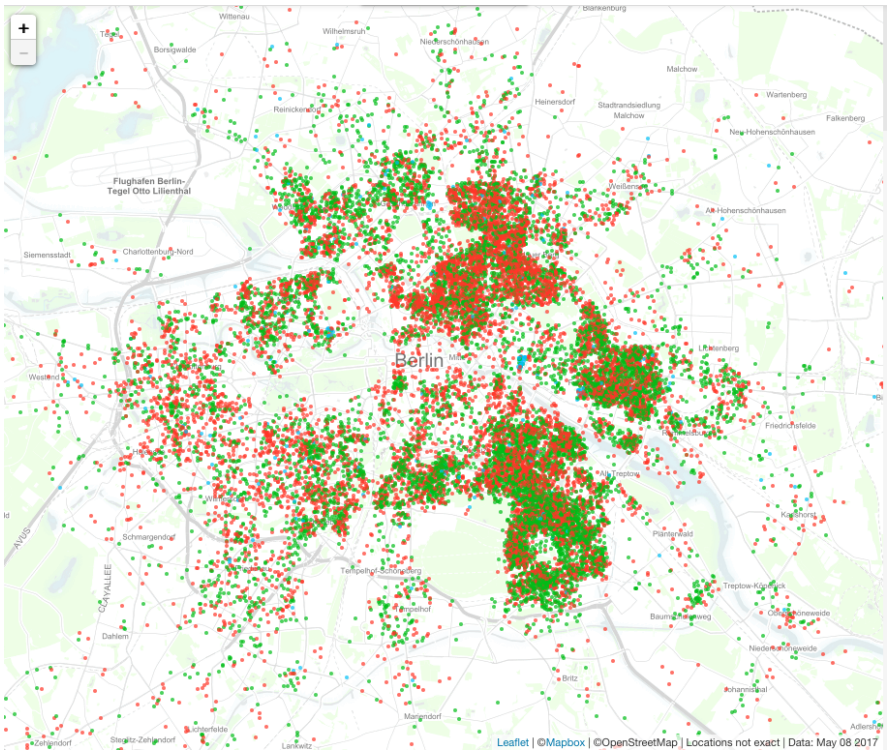
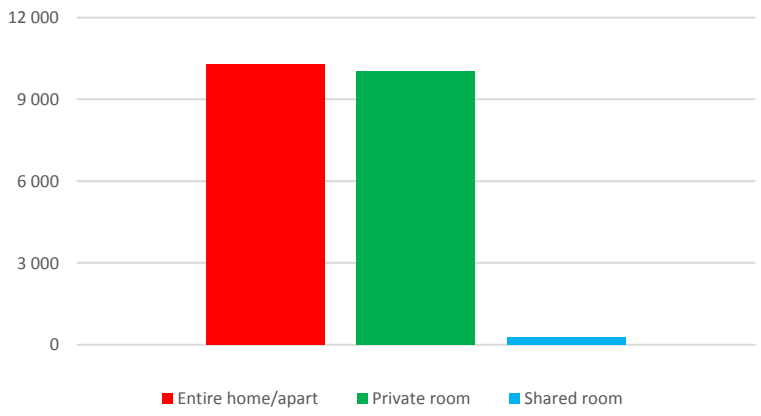


***Figure 27**: 20.576 Airbnb listings in Berlin. May, 2017.*



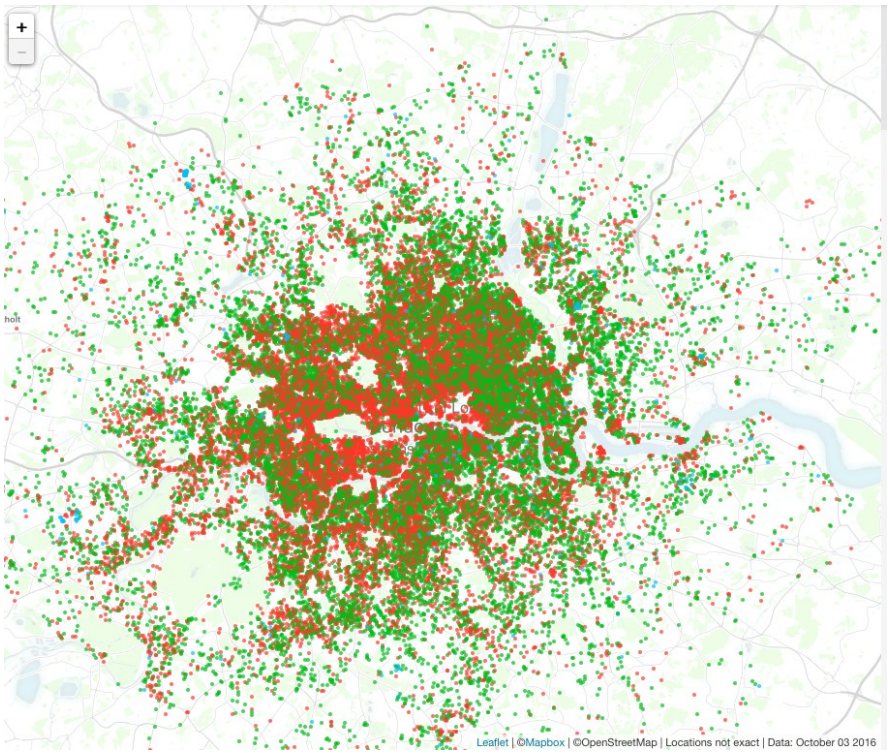


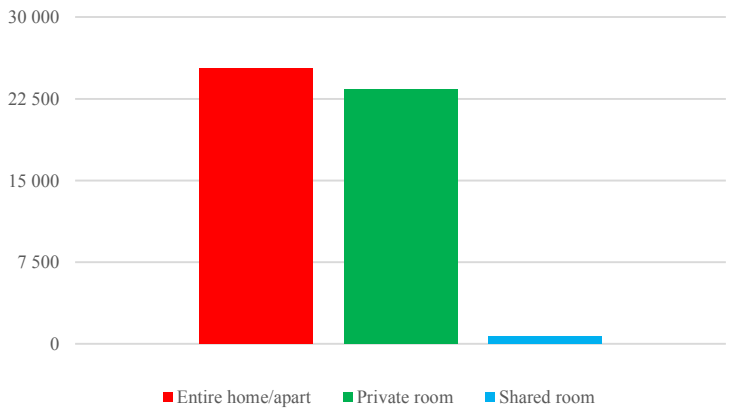
Naformátováno: Písmo: (výchozí) Times New Roman, Barva písma: Automatická, Angličtina (Spojené království)

Naformátováno: Písmo: (výchozí) Times New Roman, Barva písma: Automatická, Angličtina (Spojené království)

***Figure 28**: 49.348 Airbnb listings in London. March, 2017*

Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)





After having analysed Figures 25, 26, 27 and 28, some relevant findings must be carefully argued. (1) In Vienna, Paris and London the number of listings offering entire homes or apartments exceeds those where guests share the property with the host. More precisely these are the percentages of entire house/apart listings per city: London 51.2%, Vienna 67.3% and Paris 85.7%. However, in the case of Berlin, the results are equally balanced, 50% entire home/apart and 50% private rooms and shared rooms. Therefore, what all four European cities have in common is that, at least half of their Airbnb listings are for entire houses or apartments -as Slee (2015) considers, that would indicate that their corresponding hosts are likely to be running a business.

In terms of community, these types of listings do not contribute to developing personal relationships or activities based on sharing or collaboration. Guests, when opting for renting an entire home, normally meet hosts for a very short period of time in which both parties arrange check-in, check-out and other conditions. After this meeting, guests and the host are independent and do not share the house at the same time. In this context, the relationship created does not greatly differ from any other experience in a traditional hotel. Therefore, in all four cities explored at least 50% of their listings do not contribute to fostering positive experiences based on meeting strangers, community building or real sharing.

(2) Private room listings would be placed in a middle point between profit purposes and more collaborative and social aims. This type of service achieves different levels of relevance depending on each city: London (47.3 %), Vienna (31.5%), Paris (13.3%) and Berlin (48.7%). This middle point is due to the fact that, on one hand, the host and guests share common spaces like the kitchen, living room, bathroom, etc. Both become flatmates and in consequence, even though it is for a short period of time, they will cohabit together. Accordingly, a certain relationship arises between the guest and the host who eventually may share conversations about personal experiences, concerns or interests. On the other hand, hosts obtain an economic benefit by renting their empty rooms, these unused spaces become an optimal source for gaining extra income. This income might help hosts to pay their monthly rent or another expense. Of the European cities explored, London and Berlin are quite balanced, offering almost half of their listings as private rooms. In these two cities it seems probable to affirm that Airbnb acts as an economically beneficial

platform (for hosts and guests), but based on shared resources, collaboration and personal relationships.

(3) Shared room listings represent a very reduced segment of the whole community: London (1.4 %), Vienna (1.2%), Paris (1%) and Berlin (1.4%). It appears that the platform Airbnb is not oriented to people willing to share their room for a short time period. These services however, appear more significantly in not-for-profit and altruistic platforms like CouchSurfing.

(4) The French city of Paris, which has the largest number of Airbnb listings in the world (Bischop, 2017), greatly stands out over Berlin, Vienna and London. It shows an imperative percentage of entire houses and apartments (85.7%) listed, which would point out that Airbnb hosts in Paris are more focused on gaining a considerable income through the short-term rental of their houses than on achieving collaborative or social benefits. The great majority of listings in Paris do allow few personal interactions, sharing, or community building. These listings, as it has been argued previously, behave quite similarly to any traditional accommodation business. The general success of Airbnb in Paris may be given by the implementation of the law Bill ALUR in 2014 which is fundamentally designed to support short-time rental businesses (Leeds, 2014).

(5) As an overall analysis, except in the case of Paris, the number of private room listings and entire home listings appear quite balanced. This fact would suggest that, in the worst scenario (assuming that all Airbnb hosts with entire home listings are running a proper hotel business), the slice that Slee (2015) considers creating collaboration would not be as reduced as he thinks. The tiny slice would represent, on average, a bit less than half of the cake.

However, this study considers that the exploration of Airbnb as a presumable platform for users to create their own accommodation business is weak solely by contemplating the number of diverse types of listings offered. An Airbnb host may have an entire empty home listed, which does not necessarily imply that they are running a business similar to a hotel. However, there is another parameter that helps to achieve a more accurate perspective of how Airbnb operates, this is, the number of entire home/apart listings that one unique person offers on the platform. For instance, a host with multiple listings would

be much more likely to perform proper business activities based on short-term rentals. It may be the cases where hosts acquire several properties in order to later rent them through the platform.

Therefore, in an attempt to obtain a more concise perspective of the business activities developed through Airbnb, the parameter *multi-listing* (listings where the host has at least one other listing) is explored taking into consideration only entire home/apart listings. It is aimed to reveal the percentage of entire house/apart listings where the host has a minimum of one more other entire property offered on Airbnb. That percentage would bring a more accurate estimation of hosts that, by renting multiple houses or apartments, might be practically running a hotel business.

Table 9: *Calculation of the amount of AirBnB entire home/apart listings*[33] *where the host has at least one other entire property listed.*

City	Total of listings	Listings of entire home/apart	Listings of entire home/apart with multi-listing host*	% total of entire home/apart with multi-listing host**
Vienna	7.893	5.309	2.402	30.4 %
Paris	55.723	47.769	9.309	16.7%
Berlin	20.576	10.285	2.112	10.3%
London	49.348	25.285	10.639	21.6%

* Number of entire home/apart listings where the host has at least one other listing.
** This number represents the percentage of entire home/apart listings where the host has at least one other listing from the total amount of listings, including entire home/apart, shared room and private room.

Some revealing results point out that: (1) in Vienna almost a third of the total listings are entire homes managed by multi-listing hosts. This city occupies the first position for using the platform as means of work, followed by London, Paris and Berlin. It is remarkable to observe that Paris was previously indicated as the city where more hosts may be running a business. However, now by applying the multi-listing parameter, the results place the French city in third place. This may suggest that the majority of Parisian hosts solely rent out their secondary residence with no other intention than to gain extra income with no intentional business aims.

[33] Source: insideairbnb.com (Retrieved, 22-06-2017)

Naformátováno: Písmo: (výchozí) Times New Roman, Barva písma: Automatická, Angličtina (Spojené království)
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Naformátováno: Písmo: (výchozí) Times New Roman, Barva písma: Automatická, Angličtina (Spojené království)
Naformátována tabulka
Naformátováno: Písmo: (výchozí) Times New Roman, 10 b., Angličtina (Spojené království)
Naformátováno: Řádkování: jednoduché
Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)
Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)
Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)
Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)
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Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)
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Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)
Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Barva písma: Automatická, Angličtina (Spojené království)

(2) Airbnb activity in Berlin develops the highest level of sharing over the other three cities. Only 10.3% of the total listings in Berlin are considered likely to operate as hotels; it is the lowest percentage in comparison to London, Vienna and Paris. Airbnb in Berlin, therefore, achieves the best outcomes of all the cities explored when developing a real sharing economy because it has the highest number of listings of private rooms and shared rooms, which as it has already been mentioned, are the types of accommodation that foster sharing and personal relationships.

(3) The tiny slice of cake that, in Slee's perception, creates authentic sharing and community building within the Airbnb community seems to be more prominent than he has stated. However, in general, a significant percentage of Airbnb listings (between 10% and 30%) appear to operate similarly to traditional accommodation establishments. These listings challenge the genuine essence of this platform, which is presumed to operate under the sharing economy umbrella. This critical issue might cause the complete transformation of the initial collaborative vision of Airbnb into a mere corporate business driven not by private peers but by full-time workers (like Uber) in charge of multiple listings.

8.3 Social unawareness and distrust

Naformátováno: Písmo: (výchozí) Times New Roman, 14 b., Angličtina (Spojené království)

Coming back to the thoughts and observations provided by the sharing economy experts interviewed, 43.75% of the respondents consider that a general social unawareness of what the sharing economy fundamentally means, implies and requires, constitutes a serious barrier that impedes the proliferation of this economic system into societies. On the other hand, 3 out of the 16 respondents have noticed that there is still a considerable level of distrust when it comes to using sharing economy platforms, either as a provider or as a consumer. This assumption indicates that peers are not comfortable enough to share their own goods with strangers, and also to use other people's belongings. To proceed, this study considers that aspects like social unawareness and distrust are extremely linked - lack of information normally causes distrust. Individuals who have no previous experience, feedback from friends or close relatives, etc., would tend to generate levels of distrust of new paradigms, in this case, the sharing economy. Because of this, both concepts are explored as a consequential fact.

With regard to trust building, Llonch (2016) remarks that it is highly important to let users know that sharing economy practices are as reliable as any other traditional company can be. In his view, the most challenging issue is convincing the first individuals to join the sharing network. The sharing economy is creating a new way of consumption and production; thus, initial users, who do not clearly understand how this system acts, develop some sense of distrustfulness that will progressively disappear after having repetitive positive experiences of consumption. Therefore, Llonch (2016) observes that sharing economy communities, like the one he leads Sharing Academy, have to dedicate plenty of time to create strong levels of trust, at least in this time in which the sharing economy is still unknown by large segments of societies.

In this sense, individuals appear guided by traditional customs or habits, as well as by remarkable past events. Thus, possible sharing economy users who have had negative experiences using any other type of sharing would eventually refuse this collaborative system and opt for other models of commerce. Focusing on this historical factor, Prouza (2016) points out the Czech Republic as a precise example in which historical events are still prominent enough to lead consumers' behaviours. Concretely, Prouza (2016), when referring to the implementation of BlaBlaCar into the Czech Republic, states that:

> "We are still in a stage of educating the public about the advantages ridesharing brings, what are the differences from hitch-hiking, Czechs have lots of prejudice issues connected to hitch-hiking from the past […]. At the beginning of usage of our platform we still face a bit of distrust from the newcomers" (Prouza, 2016).

This assumption indicates that past experiences greatly influence how peers consume in current times, and therefore specifically in the Czech Republic, communism and its models of consumption would still be present nowadays as a sizeable barrier for peers to engage in any type of non-capitalist system. It seems reasonable to notice that individuals who were strictly affected by communism rules would, at this time, prefer to opt for capitalist principles, such as private ownership. On the contrary, as it has already been argued in Chapter 6, countries led under capitalist norms, which also experienced the 2008 financial crisis first-hand, were the pioneers of developing sharing economy platforms. Accordingly, the discomfort that capitalist failures and hyper-consumption caused in certain social groups provoked a direct reaction of rejection that favoured the

rise of collaborative and sharing practices. In conclusion, negative past experiences seem to lead consumers to drastically shift their preferences when consuming.

The fact that consumers are highly influenced by past habits is also remarked on by Krátký (2016) who states that individuals who have had positive consumption experiences in the past will continue anchored to these patterns of consumption. Therefore, their inclusion into alternative modes of commerce would be a complicated task. In his view, the most efficient solution to overpass this situation is to progressively adapt the platform (referring to Liftago) to the user's requirements; more specifically he adds, "we were our own biggest barriers before we found out that you have to experience and pivot a lot, to have a vision but no plans etched in stone." Krátký (2016) attempts to explain that in order to dissolve past habits and develop emerging patterns, it is necessary to slowly incorporate basic new functions into society. Then, after having observed and analysed users' behaviours, the platform aggregates other innovative functions or improve the existing ones, and so on. This morphing process ensures that peers gradually gain knowledge, experience and trust regarding the new paradigm in question, which in turn also provokes the spreading of positive experiences to other individuals and the growth of the network.

P. Castellón (2016) agrees that trust building is a long-term process and that it represents one of the major concerns of sharing economy platforms. Based on his experience with Relendo, a p2p assets renting community, P. Castellón (2016) points out that normally there is a confrontation between traditional businesses and the analogous driven by the sharing economy. In these cases, it is crucial to inform users that both systems are independent and that they can co-exist simultaneously. P. Catellón (2016) also states that informing peers about their rights from the very beginning generates propitious levels of trust. Thus, what appears remarkable at this point, is that differences must be declared in advance; users must be aware that sharing economies function, for the most part, differently from other economic systems. Customers should be able to identify that they are using a sharing economy platform with its corresponding implications. By making these implications known in the initial phase of a sharing economy community, its members will develop higher levels of trust than by blurring the authentic nature of the network.

The same situation, Prouza (2016) suggests, might occur in the other way around. For instance, some digital businesses might claim to act under the sharing economy umbrella when in fact they do not redistribute any underutilized asset nor do they perform any collaborative consumption. In his view, the sharing economy is moving rapidly to the mainstream, which leads several new applications to take advantage of it and gives them access to a wider segment of users looking for more affordable, collaborative and sustainable consumption. The inclusion of non-sharing economy initiatives under the same umbrella also causes confusion and misunderstanding for users that might feel cheated. This study finds Uber as a clear example of controversy. Most people identify Uber as a sharing economy platform because rides are shared from point A to point B for the convenience of both rider and driver (as BlaBlaCar does). However, it has been verified (Slee, 2015) that Uber's drivers primarily work as an ordinary taxi driver; drivers go from point A to point B mostly because the rider has required it. Namely, there is no reuse of empty spaces, nor are there ecological benefits or any kind of collaborative consumption[34]. Approaching a similar argument, M. Celada (2016) warns about the risks that misconceptions imply: an improper understanding of the sharing economy might damage its pillars and therefore also its appropriate development. More precisely, she detects that common users tend to not differentiate between the sharing economy and the renting economy. However, this study opines that a quite relevant portion of the sharing economy is driven by renting services and therefore it is not erroneous to find linkages between both systems.

From a different perspective, van de Glind (2016) and Caballero (2016) believe that social disinterest or apathy leads individuals to underestimate the benefits that sharing economy practices can bring to society. Their approaches indicate that, fundamentally, peers would not yet be motivated enough to shift their consumption habits to an unknown system. In this sense, inquiry or research tasks would produce relevant degrees of laziness and indifference to some individuals who *a priori* do not require an alternative manner of consumerism. In other words, people would reject innovations that might alter or endanger their established customs. Van de Glind (2016) and Cabellero (2016) claim that there is an indispensable duty to inform societies about the numerous benefits - social,

[34] Uber is currently implementing different ride options in which multiple riders can share the ride from different points. For instance, Uber's driver picks up the first rider in point A and the second one in point B, both riders go together to point C. This example is considered a sharing economy practice.

Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

economic and environmental - that the proper utilization of the sharing economy is able to provide. With regard to who must be in charge of performing this duty, as well as claiming social unawareness as the major issue of the sharing economy, Zwartkruis (2016) states that:

> "[it is important the] awareness of the public, of the regular consumer, that sharing is a very efficient, cheap and logical way of using, spaces, property, things and services. It needs a lot of coverage in the mainstream media, from advocates like ShareNL[35] but also from consumers who are informal ambassadors of the sharing economy" (Zwartkruis, 2016).

This specific section concludes by highlighting some relevant points: (1) the sharing economy requires great levels of trust due to the fact that assets and services are shared, swapped and consumed by multiple unknown users; in El-Rejula's words (2016), "it is difficult to share something with people you don't know, even if it is a word." Concepts like common access, shared resources and p2p exchanges imply personal interactions, trust and reliability by both parties will ensure the success of the transaction. (2) A lack of information leads to distrust and blurs the lines between the legitimate sharing economy and other economies (Matofska, 2016). (3) A considerable number of the interviewed consider that the sharing economy is still facing, as a major issue, distrust and social unawareness. These points understood together prevent new users from engaging in this socio-economic system.

8.4 Minor challenges

Interview responses indicate that two other factors, lack of financing (12.5%) and scarcity of products to share (6.25%), directly challenge the efficient expansion of the sharing economy.

First, the absence of economic support from governments or private entities to boost innovative projects, as Naef (2016) remarks, causes the stagnation of the sharing economy. In his view, a sense of hypocrisy exists when investing in presumable disruptive initiatives. On one hand, funding organizations encourage entrepreneurs to

[35] ShareNL, knowledge and networking platform for the collaborative and sharing economy. Founded in the Netherlands in 2013. More info at: http://www.sharenl.nl/#home

Naformátováno: Písmo: (výchozí) Times New Roman, 14 b., Angličtina (Spojené království)

Naformátováno: Standardní písmo odstavce, Angličtina (USA)

develop ingenious ideas that would revolutionize existing paradigms. However, on the other hand, the same organizations require previous guarantees of success, as well as future profitable revenues, in order to proceed with the investment. Naef (2016) claims "every single organization says, show us and prove that it works, and that is stupid, if you have a new idea you can not know if it works yet." What Naef (2016) seeks to clarify is that several impressive ideas do not pass from its initial stage due to a lack of economic resources. Funding organizations must take some risks when it comes to impulse disruptive projects. It is also suggested that a clash of interests from governmental institutions or private entities might act as a barrier for developing alternative ideas capable of interfering with established businesses.

El-Rjula (2016) agrees with the fact that funding concerns nowadays constitute a great issue for new start-ups willing to launch their initiatives. Discarding the option of investment by large organizations, new platforms can borrow money from their first users, but it results in a complicated task given that even before launching, the development of the platform itself and its marketing strategy requires the previous inversion of capital. As it is already discussed in the section focused on regulation and legal issues, the costless developing process that platforms, like Airbnb or BlaBlaCar, went through is hard to accomplish in current times. An already highly competitive sharing economy market forces new entrepreneurs to depend on venture capital investors to support their start-ups. El-Rjula (2016) suggests crowdfunding as an efficient solution that guarantees potential projects can accumulate the necessary capital to accomplish their initial goals.

Finally, and only pointed out by Cañigueral (2016), the scarcity of enough assets accessible to sharing economy platforms, appears as a complication to the prosperity of such online networks. He has noticed that the great majority of sharing communities are only useful when they reach a large number of products and services listed on their platforms. This fact has been already stated in previous chapters. Sharing economy platforms, more precisely those driven by on-demand services, are potentially efficient once an abundance exists. Cañigueral (2016) is aware that a sharing community functioning in its initial phase faces the immediate task of finding enough providers willing to make their assets and services accessible to other users. Once such platforms overcome this issue, matches are dynamically effectuated and they can achieve a sizeable

community of members. Only then other challenges like regulation, confrontation with established organizations, distrust, etc., emerge.

8.5 Main findings

Naformátováno: Písmo: (výchozí) Times New Roman, 14 b., Angličtina (Spojené království)

Seeking to understand the most controversial side of the sharing economy this dissertation has explored: first, the most critical challenges that the sharing economy faces in current times; second, the extensive literature provided by Slee (2015) in which sharing economy benefits are highly questioned and third, the apparent business-oriented behaviour of Airbnb hosts in four European cities. At this point it is essential to highlight the most substantial finding:

It has been found that issues related to regulation and policies are the centre of discussion when it comes to identifying the most crucial challenge that the sharing economy faces in current times. Although, supporters and rejecters agree on this fact, both parties greatly differ when approaching their arguments. In this context, it has been noticed that:

- Several sharing economy authors identify the extremely accelerated growth of the internet phenomenon, as the first cause for which existing laws are still incapable of efficiently regulating the sharing economy. This would be given to the incapacity of laws to adapt themselves fast enough according to innovative discoveries. Nevertheless, this dissertation considers that issues like this are part of the whole process of the implementation of innovations into society. Once these achieve a relevant number of users, then rules and laws can be designed.

- The traditional development process of a physical product and the one used in early sharing economy platforms greatly differ when it comes to addressing legal concerns. It has been argued that unlike when launching a physical product where regulative norms, tests and quality certifications are a must before the product goes to the market, the first sharing economy networks left these aspects for stages after launching.

- The sharing economy began to spread over the USA and Europe unaware of its future social and legal repercussions. However, after the imminent success of this economy, the development process commented above has been balanced. The fact that new

sharing economy applications are not considered as innovative as their predecessors, plus the immense number of competitive start-ups offering similar p2p services, has forced entrepreneurs to approach legal terms, market studies, marketing strategies and venture capital investments before launching, otherwise they might quickly fail.

- Slee (2015) highlights four critical issues concerned with this disruptive economic system. First and foremost, the whole system is driven by controversy and hypocrisy; the sharing economy is as corporative, centralized, profit-driven and competitive as capitalism is. Second, although early networks were designed under collaborative and sustainable principles, they have progressively turned into large enterprises merely driven by acquiring potential competitors. In this sense, the authentic sharing economy will tend to eventually become platform capitalism (Srnicek, 2017; Lobo, 2014) or a sharing economy 2.0 (Doennebrink, 2016). Third, it is a deregulated system that attempts to modify the whole democratic system of economic wealth, security and rights according to its own benefit. More precisely, Uber has been found to generate a substantial degree of social exclusion and Airbnb to damage existing communities. In this context, this dissertation considers that Slee's approach, which points out that Airbnb is fundamentally driven by hosts attempting to run a proper business, is erroneous. Indeed, in the worst scenario (Vienna), almost 70% of the entire home listings are managed by hosts who have no other listings. That points out that these hosts solely aim to make some profit out of their secondary residence. And last, Slee (2015) warns about the risk of substituting current manners of regulation by p2p reputation systems. This assumption essentially challenges the proposals of sharing economists (e.g., Botsman & Rogers, 2010; Gansky, 2010; Stephany, 2015; Matofska, 2016) who believe that a shared or distributed regulation (e.g. rating systems) is the fairer manner to regulate an economy based on p2p exchanges. In any case, this dissertation believes that a middle point where governmental institutions, community members and advance computational systems (Delegated Regulation through Data; Sundararajan, 2016) meet together would develop an efficient model of governance.

In the second place, social unawareness and levels of distrust, have been identified as significantly challenging the optimal progress of the sharing economy. Specifically, it is to remark that:

- The sharing economy, although it is being progressively integrated in several large cities worldwide, is still unfamiliar for a prominent segment of the population. The lack of a proper definition, the belief that the sharing economy operates in *grey* areas, the insufficient feedback provided by friends or family, etc., leads peers to distrust in sharing economy platforms.

- Historical events have been found to greatly influence consumption habits. Therefore, individuals who have had difficulties in the past with economic systems based on shared resources, would tend to reject sharing economy services while favouring concepts like private ownership. However, individuals with prosperous deep-rooted traditions would be more likely to conserve their manner of consumption; the inclusion of these individuals within the sharing economy would imply a long process.

- Apathy and disinterest by consumers to learn about the basics of the sharing economy also seems to prevent them from being a part of it. These individuals are generally satisfied with their consumption habits. There is no enough motivation or necessity to change.

- Confusion increases when platforms do not specify clearly and honestly their guidelines, aims, goals and principles. Some respondents have remarked that it is common to find networks presuming to be part of the sharing economy landscape, and also sharing economy networks which have moved to the capitalist market. These misunderstandings lead individuals to have doubts about the real meaning of the sharing economy, in consequence levels of distrust increase.

Some other minor challenges appear to be facing the development of the sharing economy:

- The lack of economic support by part of private and public institutions to fund ingenious projects make the expansion of the sharing economy into new fields difficult.

- The larger segment of the sharing economy is driven by p2p exchanges and on-demand services. Therefore, within this segment it is required to have enough providers offering their goods and services in order to satisfy all users' demands. Thus, one of the most challenging issues for new start-ups, which aim to find a market niche in this economic system, is to encourage people to share (rent, swap, etc.) their goods with others. This issue appears quite linked to facts argued previously, such as social unawareness and distrust; peers would reject sharing their properties unless they understand the service well, they get positive experiences from close friends and they are aware that the service is based on a reliable and legal platform.

9. Case study 1: Monitoring the user evolution of 30 sharing economy platforms.

This study has so far explored the grounds of the sharing economy covering aspects concerned with social, historical and technological issues. The main aim for doing a broader and more holistic exploration has been to provide the reader with a clear understanding about how this paradigm has evolved from its very beginning up to current times. A general picture of the sharing economy has been drawn based on personal interviews, scientific works, literature, articles, reports and other relevant studies. As a result, a set of aspects such as digital roots, drivers, typologies, definitions and historical events have been theoretically argued according to their relationship with the research subject.

However, at this point, this study shifts its scope to now focus on the quantitative exploration of a set of sharing economy platforms. The principal aim of this case study is to observe the evolution, in terms of online visitors, of 30 sharing economy platforms from May 2015 to September 2017. By online visitors, it is understood to be the total number of *clicks* that a website gets; one *click* is equivalent to one visit. The method used in this exercise to obtain this data is known as a web tracking system and it fundamentally measures the user traffic of websites by counting the *clicks* received. Several web tracking tools exist, however, SimilarWeb.com has been opted for given that it offers reliable data for no cost. Furthermore, in order to comprehend the mission, research method and limitations of this exercise it is important to detail the following aspects:

Purpose: Findings obtained so far point out that this socio-economic system is here to stay. However, at this point, these findings will be examined through a more practical lens by exploring 30 sharing economy businesses. Thus, the main interest for doing this exercise is to answer the following questions:

1. How are these platforms behaving in terms of visits during the research period? Are they succeeding or are they losing users?
2. In general terms, and assuming that the most representative sharing economy platforms are covered by this exploration, is the sharing economy, as several

authors believe (e.g., Howard, 2015; Rifkin, 2014; Chase, 2016), increasingly growing?

Sample: Two criteria have been applied for selecting the sample. First, platforms that have been pointed to belonging to the sharing economy by several authors are part of the sample: 22 in total[36]. And second, some other platforms have been selected that operate at a more local level in European countries: 9 in total. These last platforms have been selected from discussions in conferences and workshops with other researchers on the field and from my personal observation as an active user of this economy. The objective of this criteria is to not only take into consideration large companies primarily from the USA (but running also in Europe), but also other platforms that only operate in Europe which are not yet mentioned in the literature.

Research tool: SimilarWeb is a tool that, by using multiple complex algorithms and data sources, measures the traffic of websites. Data is collected from four different categories: (1) Global Panel Data from hundreds of millions of desktop/mobile devices, (2) Global ISP Data from partners with millions of subscribers, (3) Public Data Sources from over a billion sites and app pages every month and (4) Direct Measurement Data from hundreds of thousands of sites and apps (SimilarWeb, 2017). The free version of this tool does not allow users to see data older than the six previous months. Therefore, data has been taken manually every month and introduced into an excel database. It is also important to remark that throughout this research period the algorithms used by SimilarWeb have been updated two times: in October 2015 and April 2017. Thus, when looking at Figures 28-50, these two interruptions in the progression of the data can be detected. Gregory Schrank, SimilarWeb specialist, has personally explained that all changes in the algorithms are justified in order to achieve a more accurate result[37].

[36] Note: Although Uber has been greatly mentioned through the entire literature reviewed, it has not been taken as part of the sample. As some authors (e.g. Matofska, 2016, Slee, 2015) I personally do not consider Uber as a sharing economy platform fundamentally because it does not accomplish the main principle: the better utilization of idle goods or spaces.

[37] "Our researchers are constantly testing new algorithms and ways to increase our data accuracy. In order to understand the changes to the algorithm, let's begin by quickly reviewing the two main components of the previous algorithm. The first component involves the calculation of the share of users that enter a specific website. In the new algorithm, this component primarily remains the same with a few additional stability enhancements. The second component involves the extrapolation of the share of users which enables us to estimate the behaviour of the entire world. In order to calculate these estimations, we use direct measurement data as a baseline for calibration. Over the past year, there has been a significant increase in the number of websites that share their direct measurement data with us. Up until now, we haven't been able to use all these datasets because of lack of standardization of how each website measures themselves. For example, some websites place tracking pixels in the wrong place on their site, in other cases site owners

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Naformátováno: Písmo: (výchozí) Times New Roman, 9 b., Angličtina (Spojené království)

Risks: There are certain risks that must be taken into account. First, the success of an online platform can be measured by multiple factors; this case study only considers the number of visits that the specific platform gets every month. However, one click does not imply one purchase, booking or active interaction. A person can access any website and leave it after a few seconds having not performed any activity. Therefore, an in-depth analysis of a business in terms of success would require a more proper investigation addressing several other parameters. Second, in the majority of the cases, global domains .com and .org have been taken into consideration[38]. However, large platforms can have specific domains for each country, for instance airbnb.es (Spain), airbnb.cz (the Czech Republic), airbnb.fr (France) and so on. So, although normally .com redirects to the specific country domain and therefore that *click* would count in this exercise, some users can access the same platform from different URLs so those *clicks* would not be counted. Nevertheless, in spite of these two risks, this study considers that the traffic data collected represents a valuable estimation of how these platforms have evolved in terms of popularity along the research period. Third, the sharing economy, seen as a holistic phenomenon, can also be measured according to multiple perspectives. For instance, success can be defined by the number of new sharing economy start-ups that emerge every year or by its expansion into new sectors. Nevertheless, here only platforms already existing in May 2015 and operative in any country in Europe are addressed. Although all data is collected from reliable sources, results will be based on approximate estimates.

Range of time: May 2015 - September 2017

Table 10 lists the 30 sharing economy platforms that form the sample, as well as a brief description of each of them. In addition, all platforms are classified according to the growth rate that they have achieved throughout the research period. Thus, platforms marked in green are all those which have increased in terms of visits, those in yellow have decreased or they maintain practically the same amount of visits and platforms with a red status applies to companies that have shut down their website during this period. The

define app traffic as mobile web traffic. The major improvement for this component was to build an algorithm that weights the websites that measure themselves correctly differently than how sites that measure themselves incorrectly are weighted. This algorithm enables us to use all the data that is shared with us, thus increasing the number of data sets that we use to calibrate our estimations. As a result, the new algorithm is significantly more accurate" Gregory Schrank. October, 2017.

[38] With the exception of taskrabbit.co.uk that, within the European context, it only operates in the UK, thus it has been taken the URL the exclusively refers to this country. And quoka.de that is solely focused on Germany.

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growth rate has been calculated addressing data from Figures 28-50 and applying the following formula:

$$growthrate = \frac{visitsSept.2017 - visitsMay2015}{visitsMay2015}$$

Table 10: *List of 30 sharing economy platforms with their short definition and their growth rate calculated from May 2015 to September 2017.*

The growth rate is positive *The growth rate is 0 or negative* *It is no longer active*

Name	Short description	Status
Airbnb	p2p hospitality service that enables people to lease or rent short-term lodging.	
CouchSurfing	Hospitality service that offers its users exchange of hospitality and social networking.	
BlaBlaCar	It connects drivers and passengers willing to travel together between cities and share the cost of the journey	
Mitfahrgele-genheit	German long-distance ridesharing community.	
Zopa	Company that provides an online monetary exchange service allowing people who have money to lend to those who request it.	
Jizdomat	Czech long-distance ridesharing community.	
Zipcar	It provides car-sharing services to its members by prior reservation and with hourly or daily usage rates. Cars are parked over the city and can be unlocked with a digital card.	
TaskRabbit (UK)	It provides skilled people to handle a variety of everyday tasks, from home repairs and moving to errands and cleaning.	
EatWith	Marketplace for communal dining, which offers an online community for hosts and guests to have food events together.	
Quoka	German platform that enables p2p trading of goods and services.	
School of Everything	It connects teachers and learners, lessons can be given via payment, for free or by skill swap.	
Home for Exchange	Community for non-commercial home exchange for holiday purposes.	
Liftshare	British long-distance ridesharing community.	
Roomorama	Platform for vacation and short-term accommodations. Hosts can offer their homes to travellers looking for local experiences.	

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Konk	Network of trusted families, who swap their houses for holidays and enjoy travelling the world with their children.	
Love Home Swap	Community where members swap their homes when they are on holidays.	
Lending Club	Company that provides an online monetary exchange service, allowing people who have money to lend to those who request it.	
Time Republik	p2p platform where people use their time to get the services they need. Members earn time by sharing their expertise, skills or talent with other members. All services are measured by the time it takes to perform them.	
Skillshare	p2p learning community that matches teachers and learners through online courses based on video tutorials, assessments and other tasks.	
Indiegogo	Crowdfunding platform that allows people to solicit funds for a project. People worldwide make their contribution to those projects that they like the most in exchange of any reward.	
Kickstarter	Crowdfunding platform that allows people to solicit funds for a project. People worldwide make their contribution to those projects that they like the most in exchange of any reward.	
Coursera	Learning platform with courses taught by instructors from universities and educational institutions. Courses include recorded video lectures, auto-graded and peer-reviewed assignments, and community discussion forums. It offers both paid and free courses.	
Waze	On this network, road maps and navigation data are updated by users in real-time. By simply driving around with the Waze app installed, users can share real-time GPS information that translates into traffic conditions and road structure for the usage of other users.	
Social Car	Spanish p2p car renting service. Individuals are allowed to rent their own car to those who required it.	
Tamyca	German p2p car renting platform for private car owners to rent their vehicles to drivers in their neighbourhood.	
Relendo	Spanish platform that enables p2p renting of goods.	
Tutellus	p2p learning community that matches teachers and learners through online courses based on video tutorials, assessments and other tasks.	
Car4way	Czech car-sharing service that allows its members to reserve a car and pay according to the time of usage. Cars are parked over the city and must be unlocked through a digital card.	
Just Park	Platform that matches drivers with private parking spaces. Users are allowed to rent their own parking spots.	
Wikipedia	Free online encyclopaedia with the aim to allow anyone to edit articles.	

In order to gain a more accurate perspective of how these sharing economy companies have evolved, the monthly amount of visits of each platform are shown below in form of graphics (Figures 29-51). From these graphics, it is possible to not only frame the success of a platform in terms of users but also to observe possible growth trends. This data can give the reader an idea of how popular the platform is itself and how well it has been accepted by the public during the research period. Besides that, it is important to notice that throughout this time, 7 out of 31 sharing economy platforms have either closed their businesses or their monthly amount of visits has dropped to less than 5,000[39]. Thus, this study can only show graphics of the 24 platforms that, up to September 2017, are still getting more than 5,000 visits per month.

***Figure 29**: Number of visits in airbnb.com*

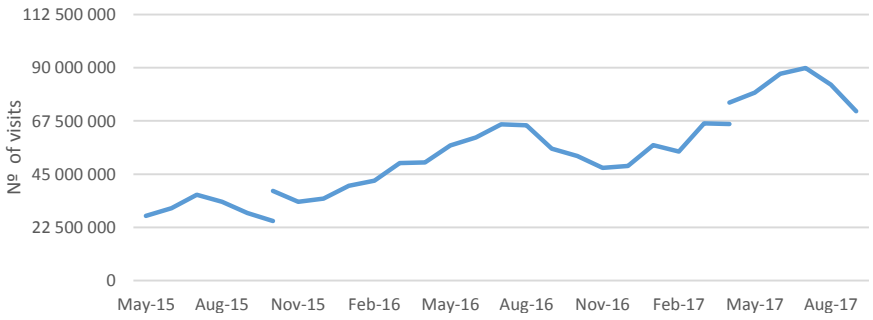
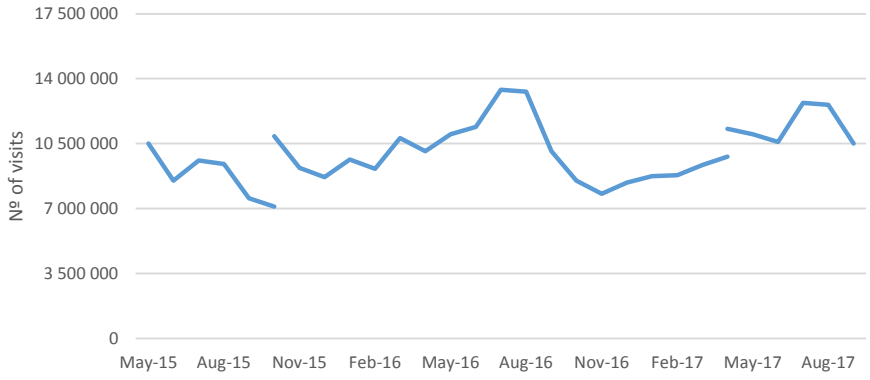


***Figure 30:** Number of visits in couchsurfing.com*



[39] In this last case, SimilarWeb is unable to track information and it shows "not enough data.

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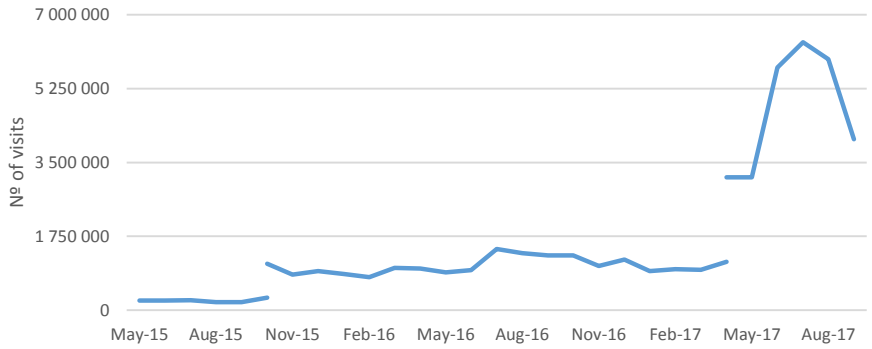
***Figure 31**: Number of visits in blablacar.com*



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Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

***Figure 32:** Number of visits in zopa.com*

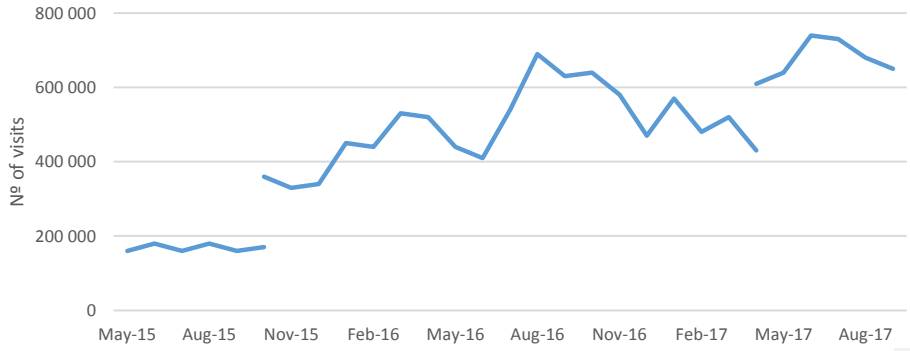

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***Figure 33:** Number of visits in zipcar.com*

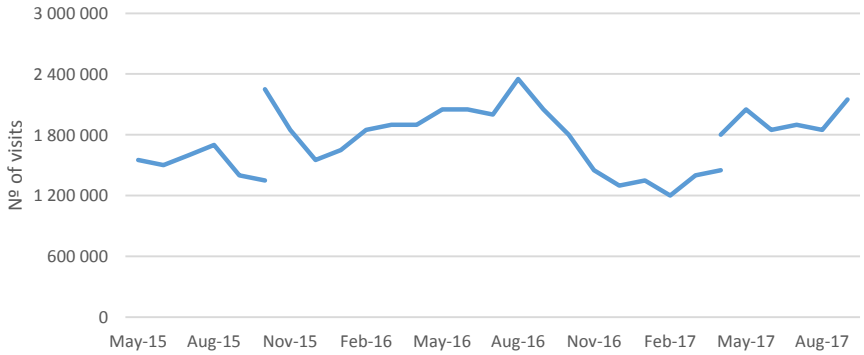

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***Figure 34**: Number of visits in taskrabbit.co.uk*

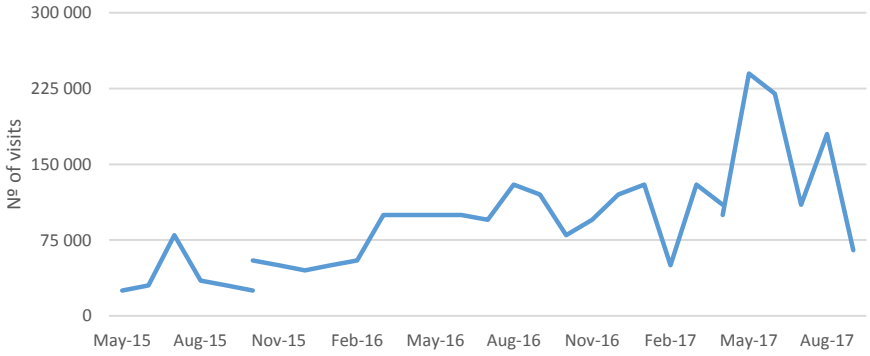

***Figure 35**: Number of visits in eatwith.com*

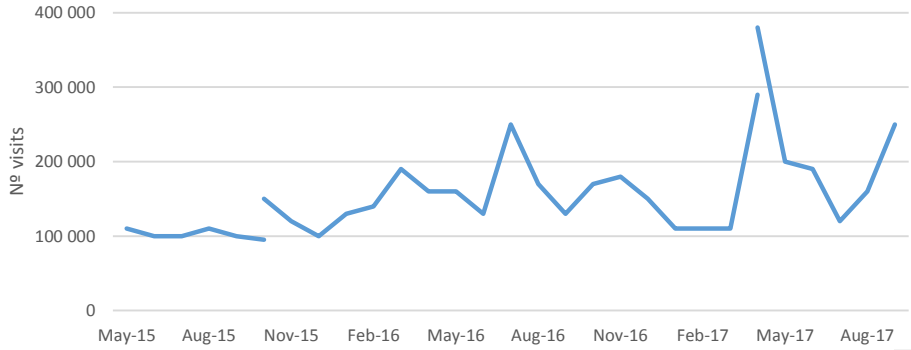

***Figure 36**: Number of visits in gumtree.com*

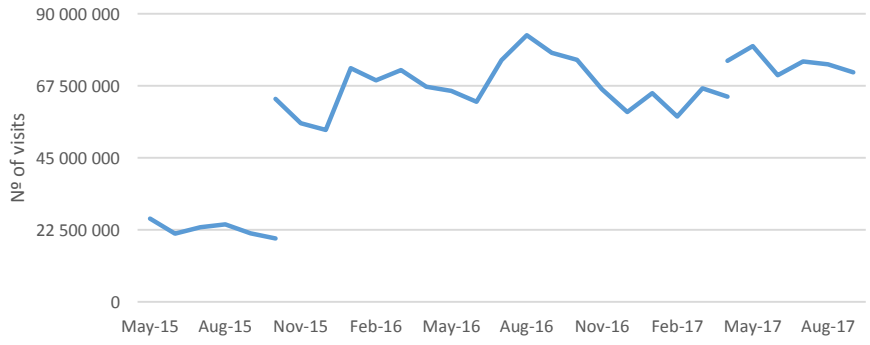

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***Figure 37**: Number of visits in quoka.de*

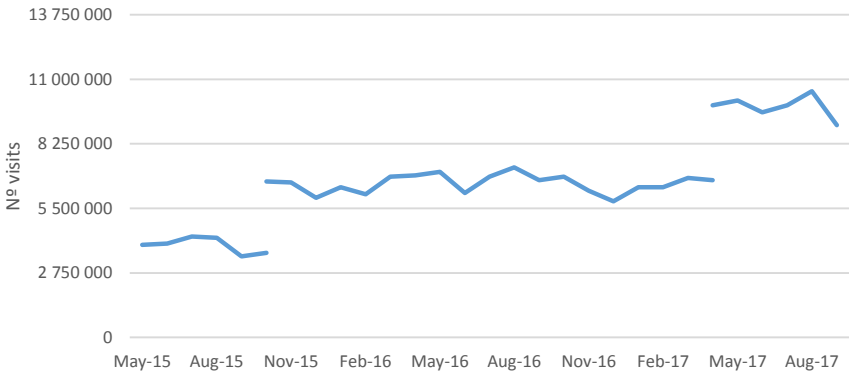

***Figure 38:** Number of visits in schoolofeverything.com*

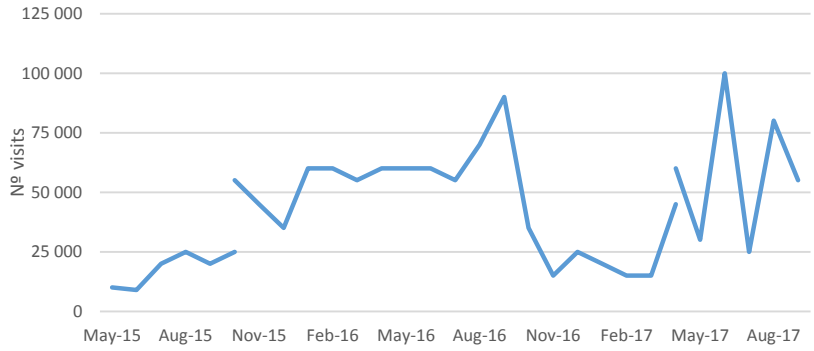

***Figure 39**: Number of visits in homeforexchange.com*

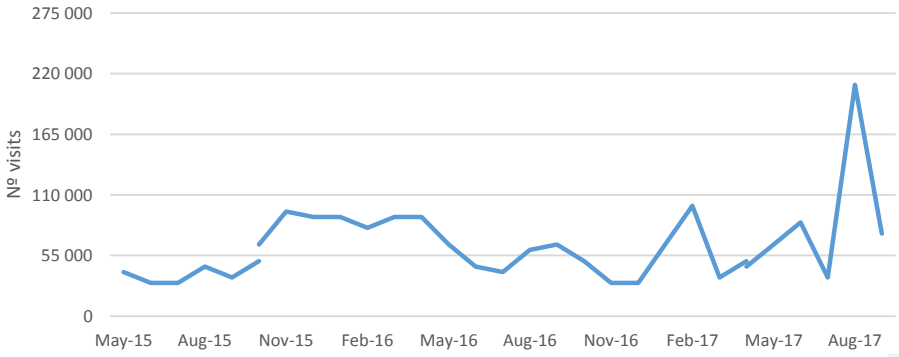

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Figure 40: Number of visits in liftshare.com

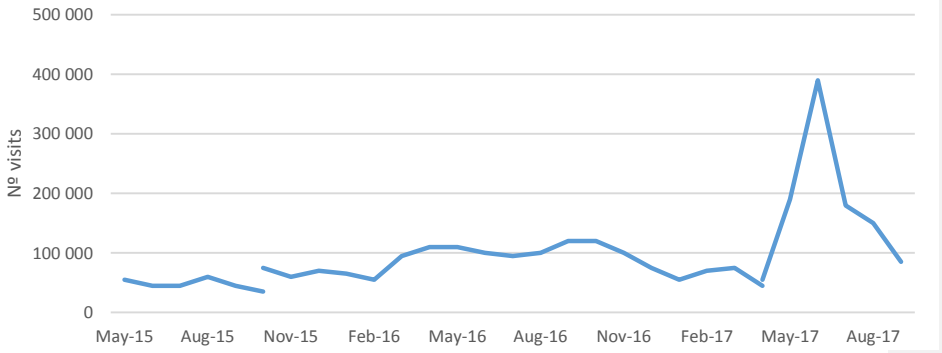

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***Figure 41**: Number of visits in lovehomeswap.com*

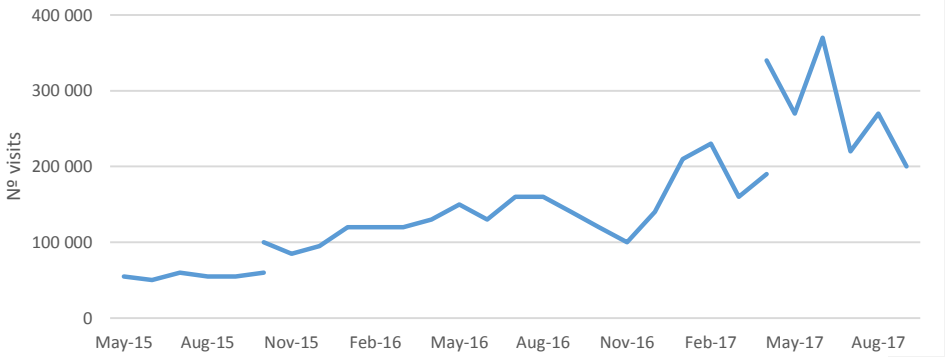

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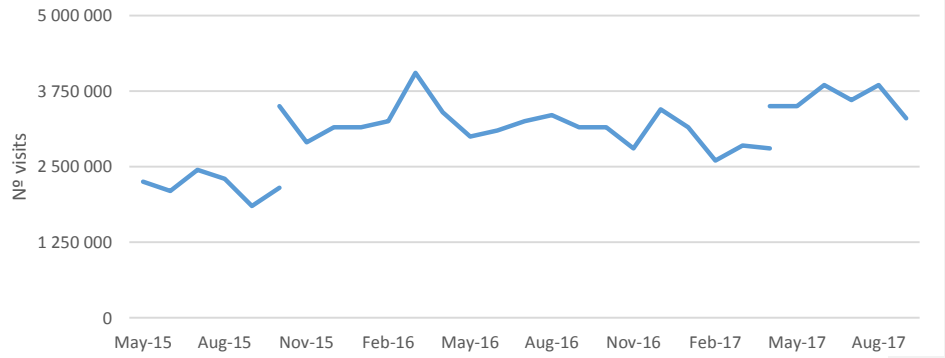
Figure 42: Number of visits in lendingclub.com



Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

***Figure 43**: Number of visits in timerepublik.com*

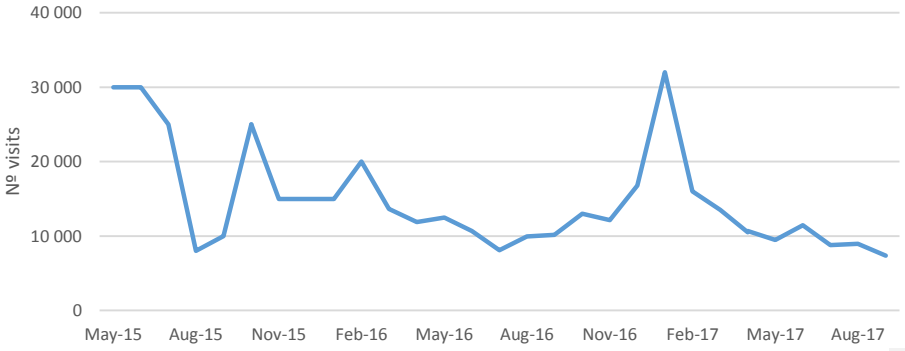


***Figure 44:** Number of visits in skillshare.com*

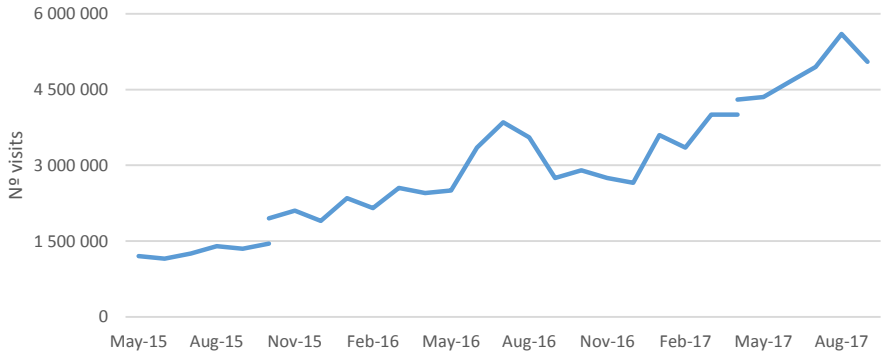


***Figure 45**: Number of visits in indiegogo.com*

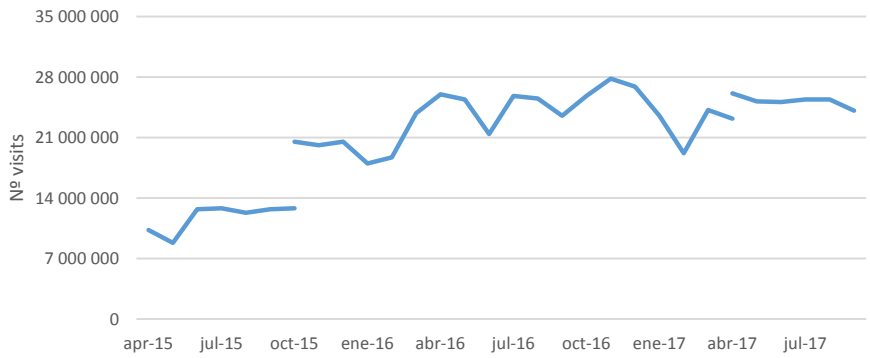


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***Figure 46**: Number of visits in kickstarter.com*

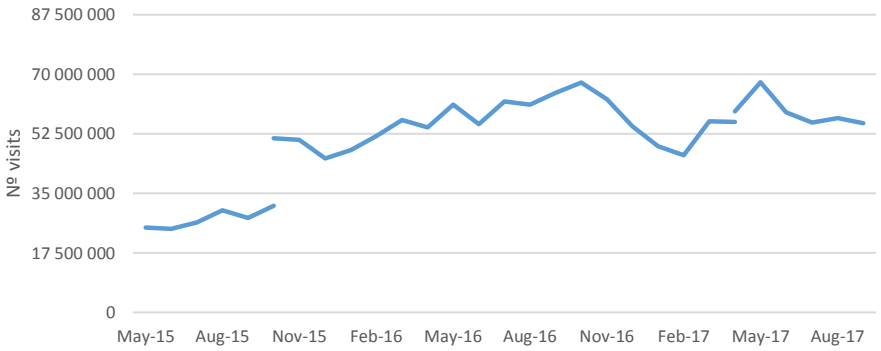


***Figure 47:** Number of visits in coursera.org*

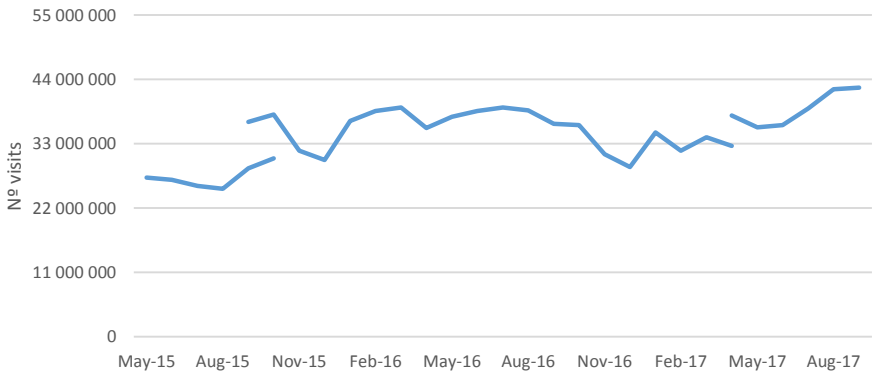
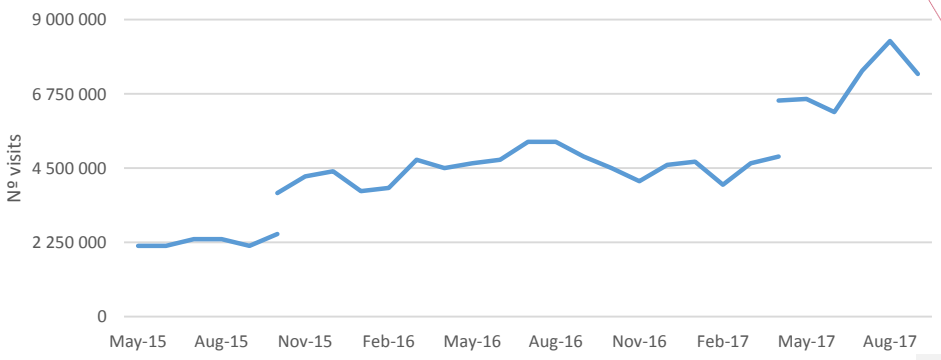


***Figure 48:** Number of visits in waze.com*



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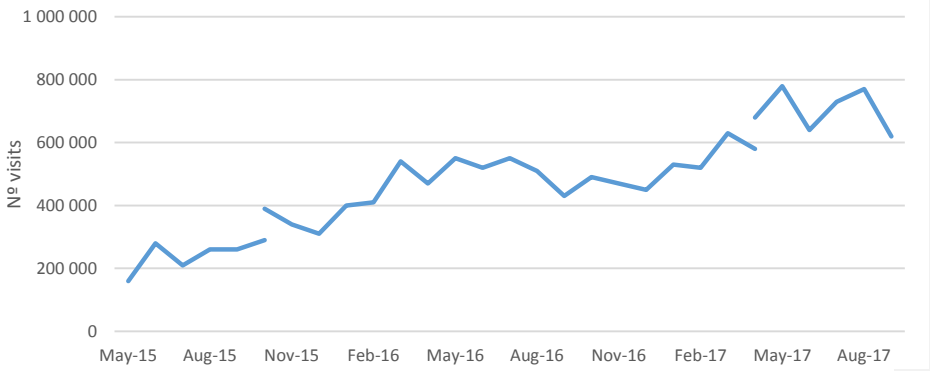
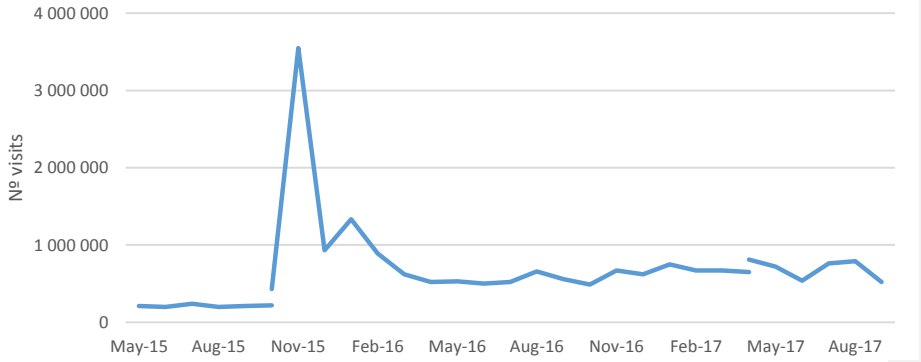
Naformátováno: Písmo: (výchozí) Times New Roman, Barva písma: Černá, Angličtina (Spojené království), Neprovádět kontrolu pravopisu ani gramatiky

Figure 49: *Number of visits in tutellus.com*



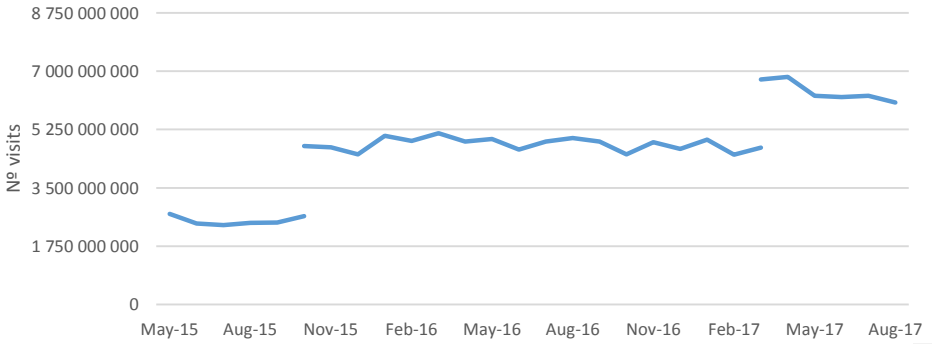
Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

Figure 50: *Number of visits in justpark.com*



Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

Figure 51*: Number of visits in wikipedia.com*



9.1 Main Findings

The exploration of 30 sharing economy platforms reveals some useful information that contributes to understanding to what extent new users might have joined such platforms, or why these platforms might have seen their community decrease. After having collected, organized and exposed the whole set of information in the form of graphics and a table, this study proceeds to enumerate its most notable findings:

- To begin, 21 out of 30 platforms (70%) have seen an increase in the number of visits during the research period. This fact indicates that in general terms the sharing economy, according to some of its best known companies, has achieved certain level of success when it comes to acquiring new users.
  - The growth trend of most of these successful platforms is mostly linear and not exponential as some authors have pointed out (e.g., Howard, 2015; Chase, 2016).
  - Some graphics present unusual picks, these might be given to PPC (pay per click) campaigns or other marketing strategies.
- On the contrary, 9 out of 30 sharing economy companies (30%) either have not achieved any success with regard to their visits or they have closed their platform. More precisely:
  - The network CouchSurfing nowadays maintains practically the same number of visits as in May 2015; its growth rate is nearly 0.
  - The platforms Knock, Relendo and Car4way have seen a considerable decrease in their number of visits, by the end of the research period these were obtaining less than 5,000 clicks per month. Time Republik, on the other hand, has observed that its visits have dropped, however it still obtains more than 5,000 clicks a month.
  - Four platforms are no longer active. First, Roomorama[40] ceased its operations in July 2017 due to "increasing competition and regulatory headwinds have made it even more challenging to operate in this industry" (Roomorama, 2017). Second, Mitfahrgelegenheit and Jizdomat were acquired by BlaBlaCar in April 2015 and January 2016 correspondingly. And last, Tamyca was bought by the Dutch competitor SnappCar in August 2017.

[40] http://roomorama.com/ (Retrieved 18–10- 2017)

Naformátováno: Standardní písmo odstavce, Písmo: Tučné, Angličtina (USA)

To conclude with this case study, it is important to highlight a main observation. The sharing economy, with regard to its pioneer platforms, represents a strong model of business that has a sizable number of users worldwide. This number appears to slightly increase every semester. However, it has been found through this analysis that large platforms have succeeded in acquiring new users while smaller and local initiatives have been either bought by direct competitors or they have had a notable loss in terms of user traffic. This fact would indicate that sizeable and already well-established platforms are performing a sort of monopoly that would greatly challenge the development of alternative initiatives.

10. Case study 2: Monitoring the user evolution of 13 buy/sell/trade Facebook groups in Europe.

Similar to the previous chapter, the second case study aims to observe the evolution in terms of users of sharing economy communities. However, in this case, particular websites are not addressed, but rather Facebook groups. Before beginning with the description of this exercise, it is necessary to clarify the reasons why Facebook groups are considered to be a part of the sharing economy.

During the last five years, a great proliferation of Facebook groups has been observed in different ambits. More precisely, what began as groups for sharing information, soon became online marketplaces where users could sell, swap, share or give away physical goods. These second-hand online markets have attracted the attention of Facebook; throughout the last three years, they have integrated several features to these groups in order to extract their maximum potential. For instance, from 2015 to 2017 the social network has improved its groups by adding location, price and description setups, and a search function. However, one of the greatest enhancement occurred in October 2016 when Facebook announced its new tool: Marketplace. This tool allows users worldwide to sell, buy or gift items by uploading a picture, setting the price, main characteristics and pickup location. Buyers can easily sort products by distance, category or price. This tool acts as a common space where items for sale, from any part of the globe, are smartly organized. In other words, Facebook Marketplace (Figure 52) centralises the numerous local buy/sell/trade groups (e.g., Prague Facebook group Figure 53) in one single tool.

Figure 52: *Facebook Marketplace (Retrieved 19-10-2017)*

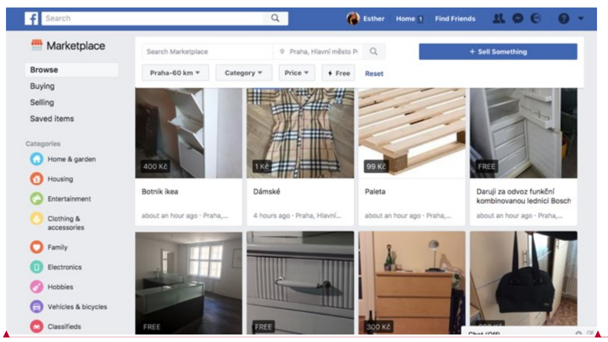


***Figure 53**: Facebook group: Prague Buy/Sell/Trade (Retrieved 18-4-2018)*

In fact, Owyang (2016) claims that Facebook officially joined the sharing economy after its tool Marketplace went public in October 2016. His thoughts soon took prominence when in March 2017 Facebook launched its new crowdfunding tool called Fundraisers (Perez, 2017). As a direct competitor to well-established platforms, like Kickstarter and IndieGoGo, this tool allows Facebook users to fund their initiatives by means of the economic contributions of other users. Thus, Facebook moved one more step towards the sharing economy.

Coming back to the focus of this chapter, Facebook as a p2p marketplace, there is an interesting event that raised a critical discussion among the members of the Facebook group Prague Buy/Sell/Trade in spring 2015. This study, after having periodically checked this community, found that several members complained about the administration of the group. Original administrators were eventually replaced by workers of the Czech company expats.cz, an English-language media source with miscellaneous information about Prague and the Czech Republic. Members of this community disapproved of the fact that a public Facebook group can become privatized. Some points were put into question such as: can a Facebook group be sold? What is implied by a private company administrating a public group? Would that lead to any kind of restriction or censorship? What kind of profit would a private company obtain when administrating a public Facebook group?

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Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

Facts mentioned above point out how Facebook is moving from being solely a social network focused on personal relationships to performing as a tool for commercial purposes. Indeed, these events also might suggest the possibility of Facebook expanding to several other fields.

Purpose: The main purpose of this exercise is to observe the evolution of 13 Facebook groups intended to buy, sell and gift goods in different European cities. The aim of developing this case study arose when in the very beginning of this research study it was observed that these sort of Facebook groups were acting as second-hand online markets, approaching therefore the sharing economy landscape. The aim is to answer the following research questions:

1. Are buy/sell/trade Facebook groups succeeding in terms of members during the research period?
2. What does the growth/decline curve look like?
3. Are these groups fully comparable to other p2p sharing economy platforms? To what extent are these groups approaching sharing economy principles and values?

Sample: This exercise is focused on exploring how main capital cities of Europe respond to these type of Facebook groups. Thirteen main cities have been selected to form the research sample according to the following criteria. First, vast cities like London and Paris have been dismissed due to after having researched their buy/sell/trade groups, it was found that groups are highly diversified in terms of territorial areas and types of products offered. And second, cities, where its main buy/sell/trade group has a small number of members are also not taken into account. Thus, after having analysed all European cities and their representative buy/sell/trade Facebook groups, it has been determined that the following 13 cities represent a valuable sample for this exercise: Prague, Vienna, Dublin, Rome, Madrid, Zurich, Budapest, Berlin, Athens, Copenhagen, Oslo, Brussels and Amsterdam. Then, from all groups found in the same city, the group chosen is the one that, first, allows the sale of any kind of product and second, it has a higher number of members (in July 2015).

Research method: In this case, SimilarWeb or any other analogous digital tools are not appropriate for counting members of Facebook groups. Thus, the tracking process must be executed manually. In order to obtain the desired data, it is necessary to enter each of

the 13 Facebook groups every 1st of the month and annotate the number of members that each group counts that day. All data is stored in excel tables. Once the research period is over, all tables are converted into visual graphics.

Risks: It is highly important to iterate one more time that each city has numerous groups that perform the same function. For instance, searching "Dublin buy sell" on Facebook results in more than 80 different groups that appear to be offering this specific service. Some are centred in concrete areas of Dublin and some cover the whole territory of the city. Some allow the sale of any kind of good and others are focused on particular products, for instance, baby clothing and toys. Thus, results provided by this exercise do not address the exact amount of people that sell or buy products via these groups in a specific city. There are individuals who might use the group selected by this dissertation or any other group. Besides that, the total number of members of a group does not imply that all of them are active participants in a sense that not all members buy or sell products. However, when joining these groups users present some interest regarding the services. If a member is no longer interested in receiving info about the group, they can leave the group at any time. So as it was said in case study 1, findings are based on approximate estimates.

Range of time: From July 2015 to October 2017.

Figures 54-66 show the number of members of each of the Facebook groups explored. Figure 67 makes a comparative analysis in which all groups are represented and Table 11 calculates the growth rate (%) that each group has experienced during the research period.

***Figure 54**: Number of members in the Facebook group: Segunda mano en Madrid, compra, venta, trueque, busco, en Madrid o Alrededores (Madrid, Spain).*

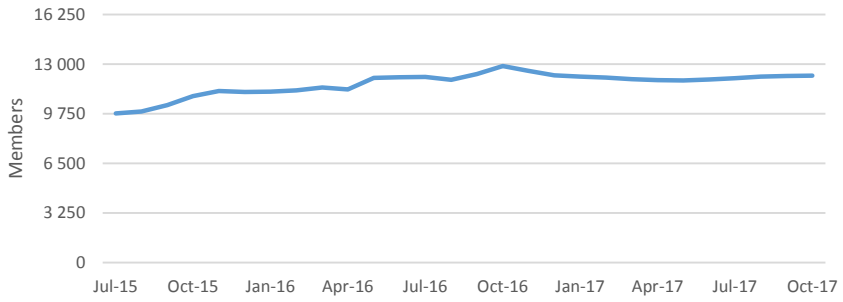

***Figure 55:** Number of members in the Facebook group: Prague Buy/Sell/Trade (Prague, the Czech Republic)*

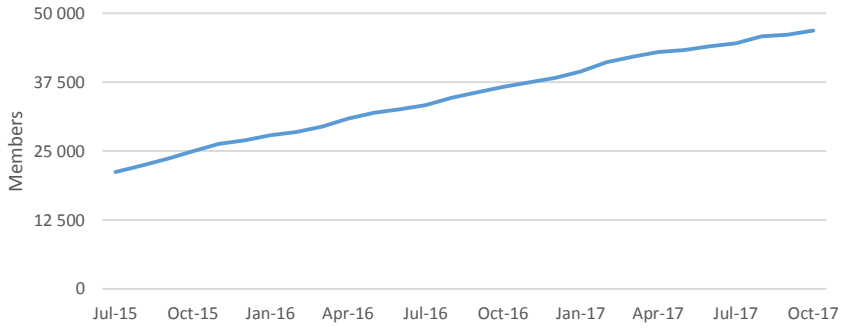

***Figure 56**: Number of members in the Facebook group: Oslo Classifieds - Buy, Sell & Trade (Oslo, Norway)*

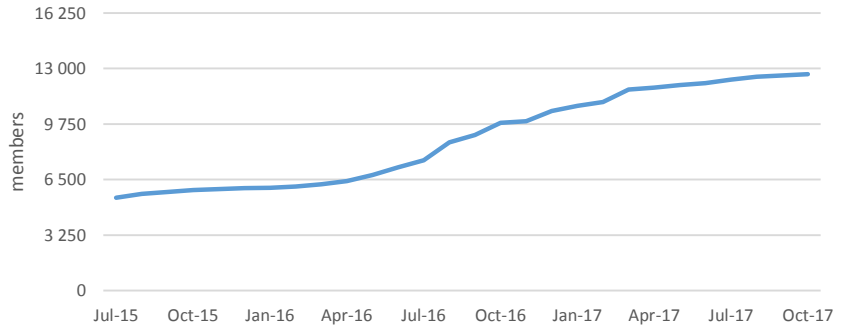

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Figure 57: *Number of members in the Facebook group: Buy and sell in Dublin (Dublin, Ireland)*

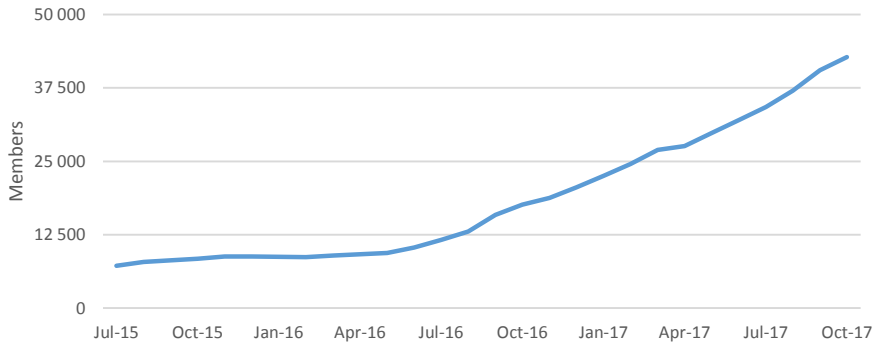

Figure 58: *Number of members in the Facebook group: Buy, sell, Trade, Giveaway - Athens (Athens, Greece)*

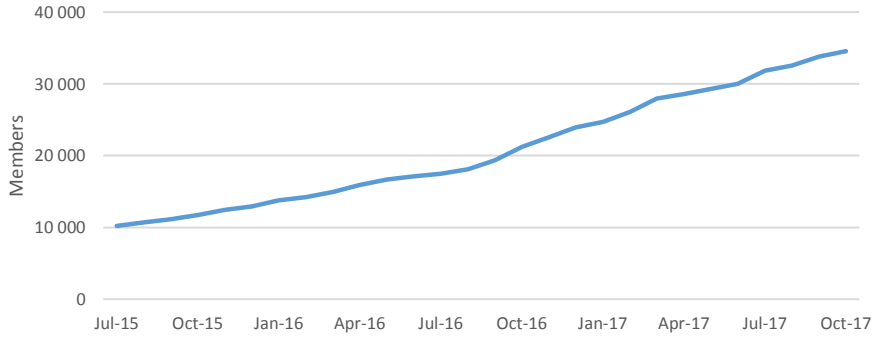

Figure 59: *Number of members in the Facebook group: Brussels sell/swap/want or give it away (Brussels, Belgium)*

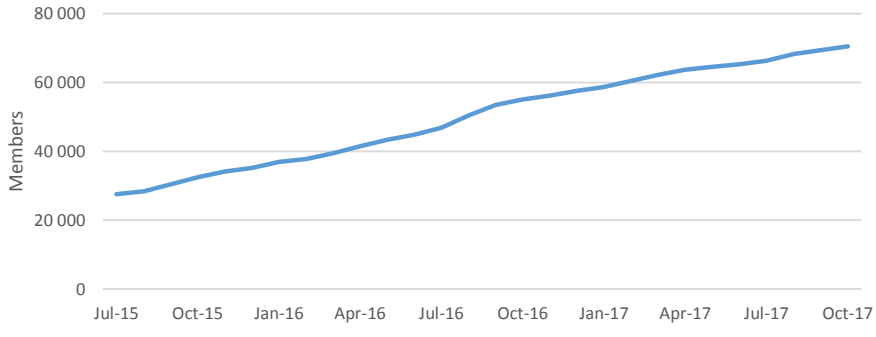

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Figure 60: *Number of members in the Facebook group: Mercatino dell 'usato compro, vendo, regalo, baratto (Roma, Italy*

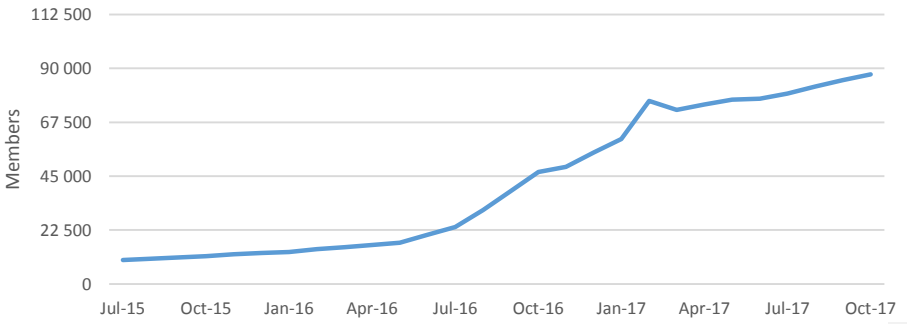

Figure 61*: Number of members in the Facebook group: Sell, buy, swap -easy and smart / Copenhagen (Copenhagen, Denmark)*

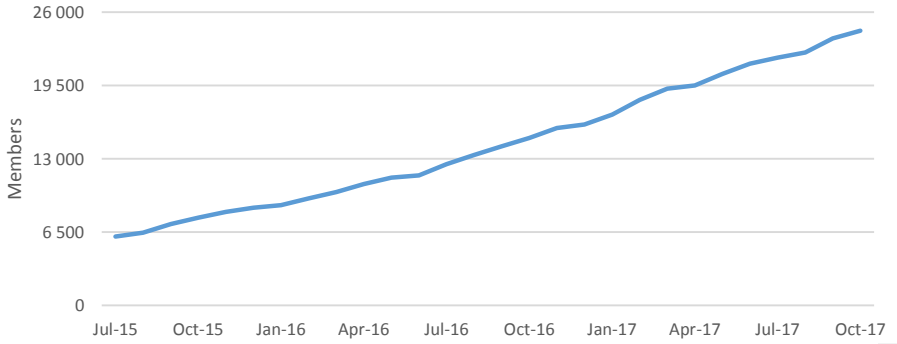

Figure 62*: Number of members in the Facebook group: ISN Amsterdam online market (Amsterdam, the Netherlands)*

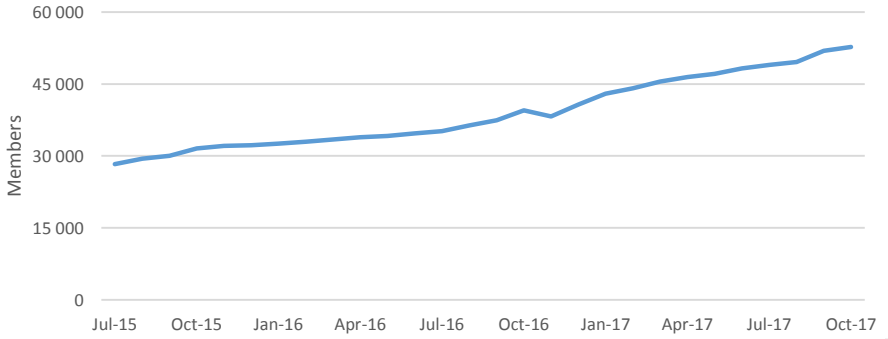

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Figure 63: *Number of members in the Facebook group: Buy & sell - Budapest (Budapest, Hungary)*

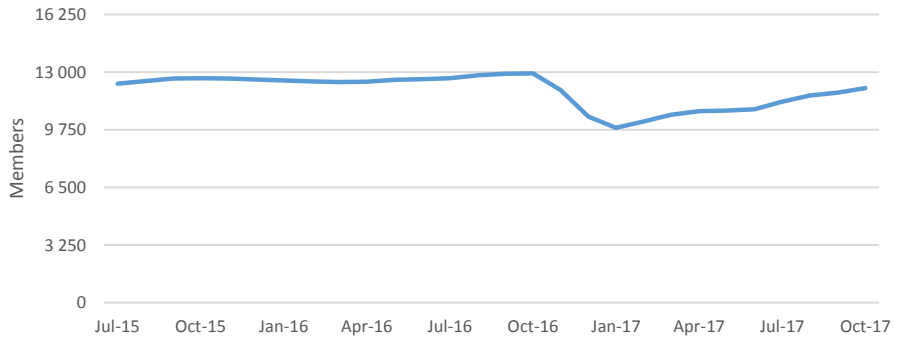

Figure 64: *Number of members in the Facebook group: Buy, Sell, Free or Exchange in Zug/Zurich/Lucerne (Zurich, Switzerland)*

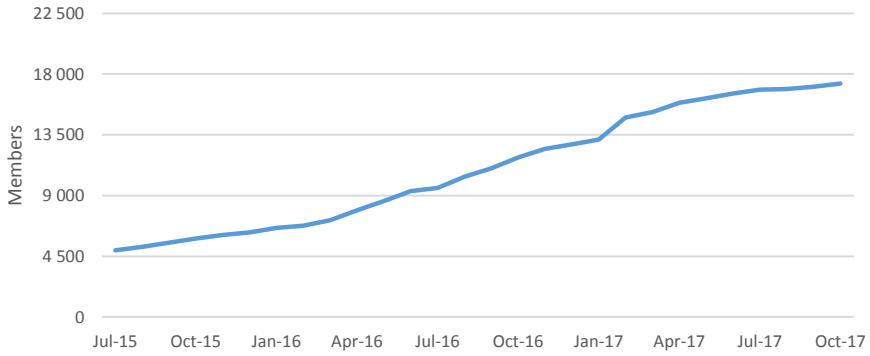

Figure 65*: Number of members in the Facebook group: Verkaufe, Verschenke, Verleihe Sachen in und um Berlin (Berlin, Germany)*

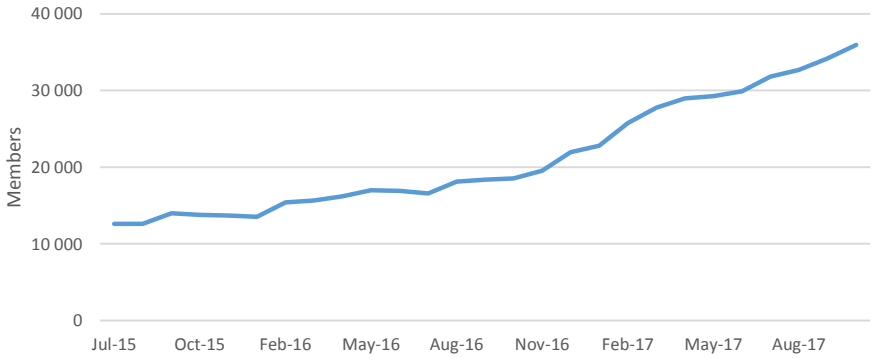

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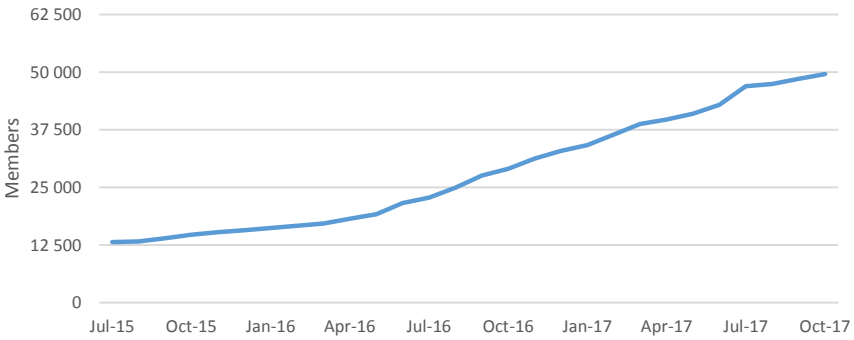
Figure 66: *Number of members in the Facebook group: Flohmarkt Wien (Vienna, Austria)*



Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

Figure 67: *Comparative graphic of the number of members of "buy, sell and trade" Facebook groups from: Prague, Vienna, Dublin, Rome, Madrid, Zurich, Budapest, Berlin, Athens, Copenhagen, Oslo, Brussels and Amsterdam.*

Naformátováno: Písmo: (výchozí) Times New Roman, Angličtina (Spojené království)

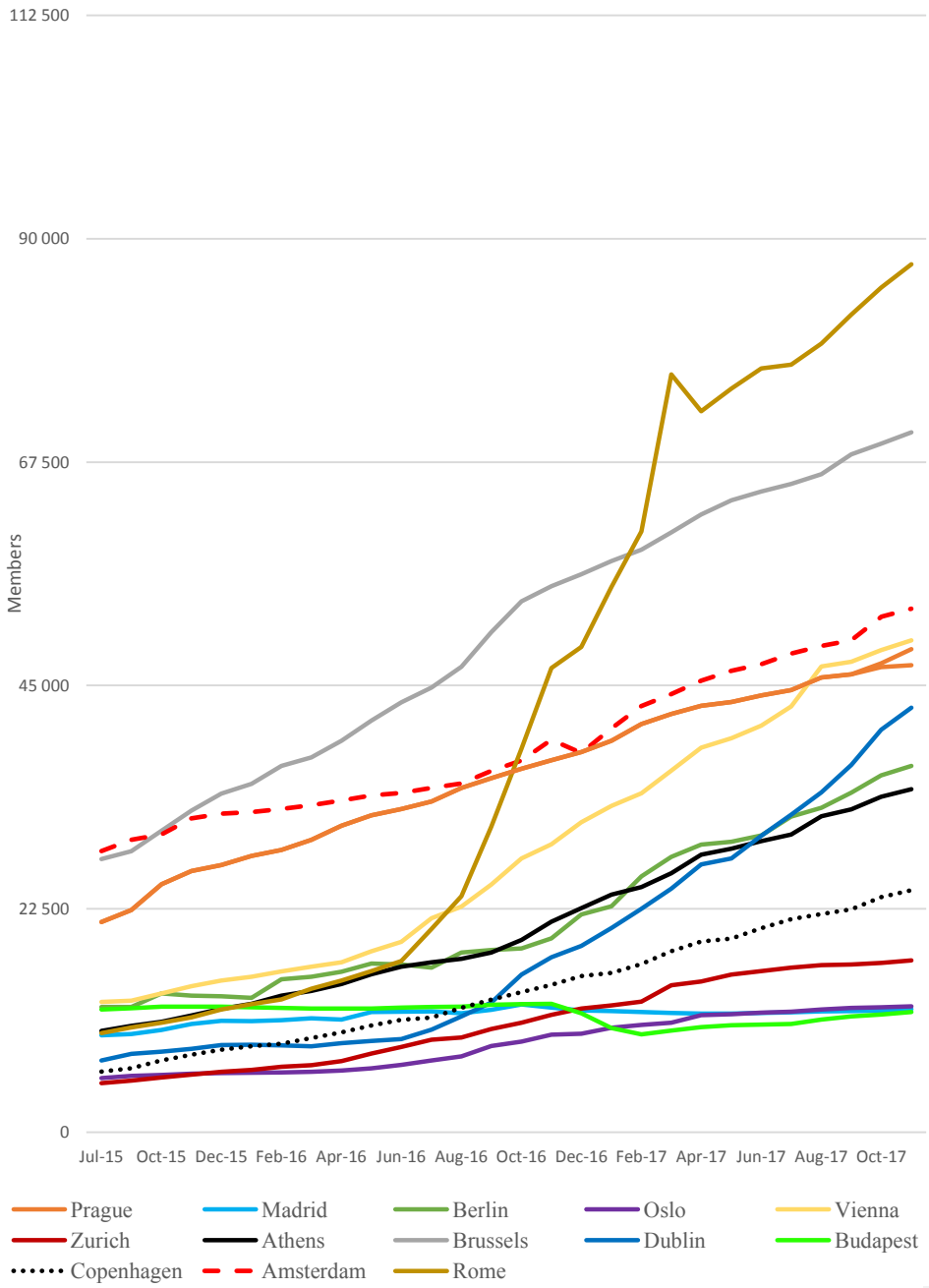


Table 11: *Growth rate (%) of "buy, sell and trade" Facebook groups in: Prague, Vienna, Dublin, Rome, Madrid, Zurich, Budapest, Berlin, Athens, Copenhagen, Oslo, Brussels and Amsterdam.*

City	Members in July 2015	Members in Oct. 2017	Growth rate (%)
Prague	21.160	46.124	117%
Vienna	13.121	47.393	261%
Dublin	7.212	37.003	413%
Rome	9.989	82.349	724%
Madrid	9.761	12.210	25%
Zurich	4.944	16.900	241%
Budapest	12.356	11.674	-5,5%
Berlin	12.606	24.189	91%
Athens	10.212	33.782	230%
Copenhagen	6.102	22.438	267%
Oslo	5.435	12.590	131%
Brussels	27.499	68.292	148%
Amsterdam	28.381	49.560	74%

The growth rate has been calculated using the following formula:

$$\%growthrate = \left(\frac{members\ Oct.2017 - members\ July2015}{members\ July2015}\right) \times 100$$

10.1 Main findings

Within this study case, 13 Facebook groups have been tracked by measuring their monthly number of members from July 2015 to October 2017. After having carefully analysed the data collected, three major findings have been identified - one per each research question:

- In general terms, it has been found that buy/sell/trade Facebook groups, which are defined by p2p commercial exchanges of second hand products, have flourished during the research period. Only one community out of thirteen, the one based in Budapest, has suffered a member decrease: 5.5% of its user have left the group during the research period. This fact might be for diverse reasons, for instance, individuals are no longer interested in buying/selling used products, or a similar but more popular group might

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have emerged attracting the attention of members from other groups. However, the overall study shows that these groups gain ground not only in terms of new users but also with regard to new features integrated by Facebook.

- Referring to the growth rate, it has been found that most of the groups (9 out of 13) have doubled their number of users throughout the research period. These groups, therefore, have experienced a considerable increase that seems to continue during the following months. From all European cities it is quite remarkable that the growth of groups in Rome and Dublin fundamentally follow an exponential growth curve. The rest of the cities undergo a more lineal growing process.

- With regard to the last research question, to what extent are these groups becoming part of the sharing economy landscape? the data presented in this case study confirm that Facebook is progressively approaching sharing economy values and principles. First, in solely a couple of years Facebook has not only integrated p2p marketplaces into its platform, but also it has periodically aggregated new features in order to improve these marketplaces according to the users' needs. Second, there are also Facebook groups announcing short-term rental accommodation services, similar to Airbnb, and as it has been already mentioned Facebook has already moved toward crowdfunding initiatives. In sum, Facebook might be considered a potential competitor of well-consolidated sharing economy platforms like Kickstarter, Airbnb, Quoka, Freecycle or even TaskRabbit.

11. Conclusions

It is important to highlight the purpose of conducting this research before moving into conclusions and summaries. The main goal of this investigation has been to explore the so-called sharing economy from its early origins to present times. In order to accomplish this goal a historico-sociological perspective as well as quantitative and qualitative methods have been used, such as literature review, personal interviews or web tracking systems. The collected and analysed data has allowed this study to understand how the sharing economy has emerged in the first place and how it has evolved from its very beginning until now. Accordingly, this study has managed well to theoretically and holistically document the brief history of the sharing economy.

In order to achieve significant conclusions, the data gathering for this research has been approached from four different areas. (1) The exploration of the technological and digital foundations of the sharing economy, from the first website to the early sharing economy platforms. (2) Both, the analysis of the most relevant sharing economy definitions published so far, but also the comparative study of similar concepts that in principle seem analogous to the sharing economy. (3) The exploration of how the sharing economy may have been originated, and lately shaped, by certain events and facts like consumer preferences, social drivers or challenges. And last (4), the monitoring of the number of online visitors in a chosen set of sharing economy platforms. The most relevant findings are presented below.

11.1 Main findings

Chapter 3 has shown that the digital innovations developed from the launch of the first website in 1991 have ultimately led to the formation of the sharing economy. As many authors reviewed by this research state, the rise of the sharing economy would not have been possible without the rise of the digital era. The sharing economy is, therefore, an act of traditional sharing and collaborative practices through digital platforms. In the first instance, the birth of the website, which was at that time freely available, with open license, public domain, decentralized and with the unique purpose of sharing academic works, marked a great step towards online collaboration. Only one year later, the website

got commercial, a fact that allowed not only the exchange of information but also the commercialization of physical goods. As such, in 1995, the first large p2p online market, eBay, was founded. This platform introduced a new concept of business, where independent buyers and sellers were able, for the first time, to make profit out of their properties through a virtual community. Later in 1996, it was Craigslist which also played an important role in the history of online platforms. Craigslist was launched as an entire self-managed, decentralized, open and transparent system designed for and by peers willing to advertise their services. However, it was not until 1999 when the pioneer p2p music sharing platform Napster largely disrupted traditional businesses, its philosophy "I need… you have…" allowed its users to share high-quality music files for free.

The second half of the 90's also had seen a transition from the static website to the dynamic and participative one known as Web 2.0. Throughout this period, users were progressively getting involved in the creation of the web itself, non professionals got on board and the unchangeable code was replaced by programmable networks. About the year 2000, the understanding of the web as platform took prominence and the first sharing economy platforms started to emerge, for instance, Carpooling (2001), CouchSurfing (2004), Zopa (2005) or BlaBlaCar (2006). Similarly, pioneer social networks also started to appear, such as LinkedIn (2003), MySpace (2003) and Facebook (2004).

Based on the evolution in recent time, this study believes that the emergence of the sharing economy has been technologically formed by the influence of three waves. The first wave was driven by sharing purposes; early information-sharing platforms developed the basic digital structures needed to freely share digital content. These structures were taken and improved by other for-profit platforms conforming, in turn, a second wave based on the commercialization of goods, spaces and services. These two waves led to the development of the very basic sharing economy system in which users were able to perform transactions from peer to peer. However, nowadays, sharing economy platforms have also appropriated features of a third wave, a wave based on social media interactions. Thus, it has been found that the current sharing economy is a hybrid system that embraces sharing structures, commercial purposes (in most of the cases) and social networking.

The exploration of the digital grounds of the sharing economy has allowed this study to shift its focus and analyse a more recent issue, to define the current sharing economy (Chapter 4). The lack of a proper meaning appears to cause confusion, doubts and controversy among users when talking about sharing economy practices. Thus, this study has paid a special attention when collecting, comparing and analysing a total of 30 different definitions in order to detect shared connections. As a result, six main characteristics have been found to be essential when defining the sharing economy. These characteristics and their corresponding share of weight are presented below.

First, the sharing economy aims to perform a better management of underused goods, spaces and services in order to maximize their functionality, this fact substitutes ownership by access (79,3%). Second, the sharing economy is primarily constituted from digital technologies, the internet serves as the skeleton of such economy (72,4%). Third, the sharing economy is a market-based system, therefore it would mainly function as a p2p digital marketplace where supply and demand are matched, either for economical compensation or for any other type of value exchange (51,7%). Forth, the sharing economy is based on global crowd-based communities (48,2%). Fifth, it normally performs over decentralized networks (41,3%). And sixth, it enables p2p transactions (41,3%). Combining all results, this study proposes the following statement as a proper and common definition of what the sharing economy means in current times:

The sharing economy is a global socio-economic system based on the better redistribution and management of underused goods, services and knowledge prioritizing collaborative-shared access over ownership. Peer-to-peer production, trading, swapping or renting is normally arranged by means of decentralized online platforms.

However, the digital economy has rapidly evolved into several hybrid forms that, at first impression, might lead the common user to erroneously identify them as if they were the sharing economy. This important issue has been addressed in Chapter 5 where similar concepts to the sharing economy have been explored and compared, these are; the circular economy, the gig economy, the gift economy, platforms economies - including platform cooperativism, platforms capitalism and public platform- and the blockchain technology. After careful analysis, this study concludes that, (1) the sharing economy embraces only a specific stage of the whole circular economy process, particularly the phase of

consumption and reutilization of assets. (2) The gift economy is comparable to the sharing economy solely when referring to platforms based on non-monetary rewards. (3) Sharing economy networks can be either privately governed which would be referred as platform capitalism; by sharing ownership, well known as platform cooperativism; or managed by governmental institutions acting as public platforms. (4) For-profit sharing platforms are usually run by gig workers. (5) The blockchain technology develops a more collaborative sharing economy by establishing fully distributed networks.

At this point, this dissertation shifts its focus to explore what sort of social drivers have made possible, in the first place, the appearance of the sharing economy. Particularly in Chapter 6, 16 publications have been carefully analysed in order to extract the main social facts for which the sharing economy took the initial prominence. As a result, four highlighted drivers have been found. Firstly, the entire literature reviewed agreed on the fact that the digital innovations have definitely marked the beginning of the sharing economy. Indeed, it can be said that the sharing economy is mostly a software-based system, platforms that collect, analyse and manage digital data provided by users. Besides that, other events like the launch of the iPhone in 2007, the spread of technologies like wireless systems, GPS signals, open data, the internet of things or the blockchain, as well as, the high-tech advances provided from Silicon Valley, have, all in all, greatly contributed to the formation and growth of the sharing economy.

Secondly, 11 out of 16 publications reviewed find a shift from individual ownership to a common access in the developed societies. This social shift points out that new generations would prefer to have the possibility to use and pay an asset for the required period of time only rather than privately own it. This social shift appears to be conditioned by two major events. On one hand, millennials have been the centre of this social transformation, they favour instant online access to goods and services while considering properties as unnecessary heavy burdens. Within this generation, autonomy and freedom have been replaced from ownership to access. And, on the other hand, the digitalization of physical goods has made possible instant or on-demand consumption without the necessity of ownership, individuals can easily consume from a variety of digital products, here and now, without the necessity of owning them.

Thirdly, approximately half of the literature analysed believes that the 2008 financial crisis boosted the sharing economy. Certainly, the global recession fostered a shift in terms of consumption patterns. Individuals affected by the crisis observed that access to any good would be more convenient from an economic point of view than owning it directly. Besides that, this moment of social discontent favoured digital entrepreneurs to create alternative business models based on sharing principles. More affordable existing manners of consumption like swapping, hitch-hiking, gifting or crowdsourcing took back prominence although this time reshaped under digital frames. However, contrary to some experts who state that this crisis was the real beginning of the sharing economy, it has been found that, this phenomenon emerged before 2008 and that this critical event worked as a great impulse for existing platforms to acquire a massive number of new users. Thus, supposing that the global recession would have never occurred, the sharing economy probably would have grown slower.

Fourthly, solely a 37,5% of the publications reviewed observe that a global environmental awareness has propitiated the emergence of more sustainable and collaborative practices of consumption. In the mid 20th century a chain of social and economic circumstances such as the flourishing of employment, the baby boom generation and the desire to achieve the American Dream shaped a culture driven by mass consumerism. In consequence, societies from developed countries experienced a progressive accumulation of underutilized goods. The sharing economy presumes to profit the idle capacity of goods by re-allocating them over multiple users, therefore, the excess of stuff which implies a negative ecological impact would be overcome by this phenomenon. However, this study considers that the sharing economy still weak on producing a real positive impact on the environment; possible results might be achieved at a long-term.

Chapter 7 complements in a way Chapter 6, almost the same four factors have been found to motivate users nowadays when engaging in the sharing economy, however with a different level of implication. After having asked 17 experts about what motivates most individuals when using this sort of platforms, nearly all of them (94,1%) have identified economic reasons as one of the major drivers. The fact that sharing economy communities usually offer the same services as traditional businesses, but for more affordable prices, seems to attract the attention of customers willing to save or gain money. The redistribution and reuse of existing products reduce consumption costs for clients, but it

also involves individuals to act as providers, allowing them to earn extra income by renting, swapping, selling or exchanging their underused assets. In the second place, 47% of the respondents have declared that peers who use sharing economy services experience positive feelings while consuming collaboratively. Users, therefore, would join sharing platforms because of their low cost services, but they would keep using them due to the positive feelings they have experienced. Subsequently, 41,1% of the interviewees have stated that the facilities and commodities provided by the digital technologies used by the sharing economy encourages individuals to take a participative role within these networks. It has been found that the users give a high value to aspects like online payments, instant bookings, live chats, rating systems and other digital tools that make access to any product easier and faster. And last, five respondents (23,5%) have declared that, even though there are other more notable motivations, the global environmental crisis has prompted people to change their consumption habits and choose more sustainable economic models.

Apart from social events and consumer drivers, this dissertation has looked at the challenges that this phenomenon may be facing in current times (Chapter 8). For that, 16 experts on the field have been asked to point out one or more issues that, in their opinion, hinders the optimal functionality of the sharing economy. As a result, five different barriers appear to challenge this system. First, legal dilemmas have been found to act as the major challenge in developing sustainable sharing economy practices. The 56,25% of the respondents and also my personal observations and impressions gathered while attending relevant conferences coincide attributing regulatory concerns to create controversy, disarray and discontent in some social groups. Second, 43,75% of the interviewees consider that a general social unawareness of what the sharing economy fundamentally means, implies and requires, constitutes a serious slowing down factor in the proliferation of this economic system. Third, 3 out of 16 experts have noticed that there is still a considerable level of distrust when it comes to use sharing economy platforms. This assumption indicates that peers are not comfortable enough when sharing their own goods with strangers and also when using other's. This study considers that aspects like social unawareness and distrust are mutually linked - lack of information normally causes distrust. Individuals who have no previous experiences, feedback from friends or close relatives, would generally lack trust towards new paradigms. And to

conclude, interviewees' responses have highlighted two other minor factors; fourth, the absence of financing (12,5%) and fifth, the scarcity of products to share (6,25%).

The last part of this dissertation explores two case studies addressed from a quantitative methodology, and it aims to measure the user evolution of a set of sharing economy platforms, including Facebook (2015-2017). The first case study (Chapter 9) has explored 30 relevant platforms according to their monthly number of *clicks*. The graphics obtained reveal that 70% of the platforms have increased their number of visits. This fact indicates that, in general terms, the sharing economy has achieved a certain level of success when it comes to engaging new users. On the contrary, the other 30% of the platforms either have not achieved any success with regard to their visits or, in the worst case scenario, they have closed the business.

Similarly, in the second case study, 13 European Facebook groups based on the p2p trading of second-hand items have been also monitored with regard to their monthly number of members. As a result, it has been found that, generally, buy/sell/trade Facebook groups have flourished during the research period. Only 1 community out of 13, the Budapest one, has suffered a decrease of a 5,5% in members.

11.2 Discussion

Several conclusive findings have been obtained bringing light to several specific issues attached to the sharing economy, however, at this point, this study proceeds to draw a holistic storyline in which those findings are chronologically argued.

During the 80's and the 90's two major events, although independent from one another, were highly influential in forming the very early pillars of what later would be the sharing economy. On one hand, the introduction of digital technologies in developed societies considerably started transforming human relationships, markets, cultures, and lifestyles. On the other hand, this time was greatly favourable for societies based on capitalist principles, economic wealth helped families to purchase properties and acquire abundance of goods. Decades of massive production and hyper-consumption caused in consequence a progressive accumulation of underutilized goods that later would be

exploited by the sharing economy. Meanwhile, the first millennial babies started to be born.

Early in the 21st century, advances in IT systems combined with more affordable devices and the advent of the smartphone facilitated the expansion of digital economies. At this point, Silicon Valley played an important role in developing disruptive initiatives. Young entrepreneurs took advantage of the benefits offered by digital environments. For instance, the IT costs required to launch an online business were greatly lower than those to build a brick and mortar company, also the risks were lower and solely a few developers were necessary to build the whole project. As a result, early sharing economy platforms began to appear across the U.S and Europe, for instance, Zipcar (2000) Carpooling (2001), FreeCycle (2003) or CouchSurfing (2004).

This chronological study stops in 2008 where certain circumstances appear to influence the course of the sharing economy. By 2008 the first millennials were at the age of 20-30. This generation, which grows hand to hand with the internet, has a completely new lifestyle based on social networks, instant access and digital devices. Contrary to their parents at the same age, millennials find that their iPhone provides them more freedom than a private car would do. The first symptom of the shift from individual ownership towards common access surges at this moment. It is however, in September 2008 after Lehman and Brothers went bankrupt, when some factors begin to change. The lack of monetary resources alongside with the cuts of social benefits and the raise of taxes led individuals to readjust their budgets. This circumstance forced financially affected consumers to find alternatives of consumption. The access to common resources gained even more weight and some *geek* entrepreneurs took advantage of it. In consequence, well-known California based companies like Airbnb (2008), TaskRabbit (2008) and Uber (2009) launched their platforms offering more affordable services.

Both, already existing sharing economy communities and the ones that joined during these years saw a great business opportunity in the global recession. On one hand, there is a young generation of consumers with great experience with Facebook, Google and Amazon willing to try new digital services. On the other hand, the shortage of economic resources invites customers to, instead of driving their car from one city to another, to book a BlaBlaCar seat and get the same service half-price. Therefore, in this period the

sharing economy flourishes thanks to these platforms which appear to fully cover millennials needs; it is cheaper, it is easily managed from the smartphone which implies "I can get whatever I want, whenever and wherever I want" and it eliminates the necessity to acquire properties.

There is another decisive factor that stimulates the development of sharing economy platforms, namely, an excess of assets. The abundance of assets served as a main ingredient for sharing economy communities to organize their businesses. It is important to remind that the largest part of the sharing economy redistributes existing assets, therefore, societies with excessive assets would be more likely to perform sharing economy exchanges. Thus, the abundance of goods resulting from hyper-consumption produced during previous decades was, in the early 21st century, greatly profitable for the rise of the sharing economy.

The years leading up to the financial crisis marked the spreading of the sharing economy worldwide, indeed several popular books were published claiming the benefits of this disrupting socio-economic system; What is Mine is Yours (2010), The Mesh (2010), Peers Inc. (2015), etc. In addition, the popular organizations OiuShare (2012) and Shareable (2009) were founded focused on promoting sharing economy initiatives.

Nowadays, however, the initial four factors explored have evolved in different manners. The economy seems to be recovering from its recession. Digital technologies continue experiencing an exponential public acceptance, online applications gain ground to traditional businesses. Millennials are preceded by the generation Z which is even more digitally oriented. And excess of idle assets still represents today an environmental concern that, up to date, the sharing economy has not been able to solve.

Additionally, it is remarkable how pioneer sharing economy platforms are progressively becoming what in fact they refused to be; large companies, centralized, profit-driven, with a tendency to monopoly, etc. If, in a way the sharing economy has opposed capitalist principles, it appears that large companies are definitely blurring this idea. Indeed, when analysing the history of the different definitions published so far it is notable to realise how the early ones were more focused on highlighting personal feelings and collaborative experiences while in the most recent ones predominate more market-based features.

However, the main principle, the better management of underused goods based on a collaborative consumption, has not been altered during this time; from the very first definition published in 1978 to the most recent statements.

To conclude, there is one last fact that, besides having been corroborated during this research period, it might have even become more significant. In 2014, when this study began, there was a moment of uncertainty and controversy about how the sharing economy would impact societies. Currently, in 2018, the situation seems to have worsened in a sense that several legal issues and social unawareness among other concerns are still unaddressed. Same as four years ago, the sharing economy, as the rest of digital economies, is still in its metamorphosis stage, which implies that what it is today might not correspond to what this phenomenon will be in the future. This system, in fact, has been rapidly spread over societies avoiding traditional and established parameters, if this process keeps repeating itself it might bring, in turn, modes of consumption completely unfamiliar to us today.

11.3 Further investigations

This research has brought light on a series of issues, that a few years ago were uncertain, by documenting not only the very beginnings, but also the evolution over the years of the sharing economy. However, this phenomenon seems to be here to stay, and as a result, it will certainly bring numerous issues which must be carefully considered, discussed and addressed. Taking the findings obtained from this study as a solid research base, I am interested in looking at how the sharing economy evolves during the following years including research subjects such as the emergence of new p2p business models, consumer responses, digital innovations and their social impact. My desire is to continue my research career pursuing a postdoc focused on the exploration of the sharing economy and continue documenting its history year by year. Besides that, I will maintain my position as one of the coordinators of the Collaborative Economy Research Network[41], as administrator of the community Sharing Economy OuiShare Prague[42] and also as sharing economy advisor of the blockchain-based car sharing platform HireGo[43].

[41] https://collaborativeeconomyresearch.wordpress.com/
[42] https://www.facebook.com/groups/1179565235393729/
[43] https://www.hirego.io/

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