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Business through Digital Innovation

THE SHARING ECONOMY: MAIN FEATURES, CHALLENGES AND
INTERRELATIONS WITH THE COOPERATIVE MODEL.

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ACADEMIC YEAR 2014/2015

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Introduction

The Internet and digital innovations have dramatically changed the way people live and relate to each other, the way they consume, the way they learn, the way they do business and the way they produce good, services, information and culture. The Internet has brought to light the social values that were dormant over the last years, and with the revolution of the Web 2.0 these values could be shared among users. The crisis of 2008 has certainly helped to awaken these values and has revealed the desire to help and collaborate with each other. Moreover, the innovative software platforms have extend the ability to coordinate economic changes that were optimized by the reduction of transaction costs due to the Internet. The sharing economy has spread so widely and quickly because it has been able to leverage all of these elements. The only thing missing is a globally accepted regulations.

The purpose of this thesis is to analyze the Sharing Economy and its limits and to propose the Cooperative Movement as a possible business model for it. The analysis of the writings of two influent scholars, Rifkin and Benkler, leads to the conclusion that this two model have some features in common, so a comparison could be possible. These models are created to similar needs but the diversities related to different development periods are very clear. The aim is to prove that, although with some differences and difficulties, these two models need each other in order to have a future in the new economic system that is emerging.

Chapter 1. The Sharing Economy

The 2012 and 2013 are considered the years of the deployment and major diffusion of the sharing economy and of the verbs related to it like participate, share, exchange, swap, and lend. The economic, social and environmental crisis in conjunction with digital technologies have boosted these new initiatives making them necessary in today's society. This service puts people directly in contact, eliminates the intermediaries and propose new patterns of consumption and new way to manage the resources. The evidence of the economic, political, environmental and social crisis on the one hand, and the spread and success of the Internet and social media from the other, are the causes that explain why collaborative digital services grew in these number and size between 2008 and 2010, to spread in the following two years. It is also the reason why this occurs simultaneously in different parts of the world. The crisis acts as an enabler because it awakens dormant consciences of people and forces them to look for alternative ways to consume, produce and manage their time, work and money. The mass adoption of the Internet and digital media allows opening new markets and simultaneously acts on people, turning them from simple users to aware and active individuals able to organize themselves.

The literature on sharing economy has emerged around six key topics: ownership, access, digital disruption and information technology (Internet), peer-to-peer community and

collaboration, social capital, and trust. For this reason, it has many appellations: sharing economy, collaborative economy, collaborative consumption, peer-to-peer networks, the mesh, commons-based peer production, social lending, and access economy. Many authors have tried to explain this phenomenon and the result was a large amount of definitions. A general definition talk about an economic model based on the sharing of what is not fully used by the owner, also called idle resources. The researchers with their contributions helped to know this new economic trend, but each of them found her interpretation for the phenomenon. In the end, four are the main common features among all:

- Idling capacity: fully exploit resources; optimizing the use of underused assets for which users are able to share the ownership of that good; they promote the sharing of assets and knowledge instead of the property;
- Use of the latest technology: the Internet allows an increase and facilitate the exchange and the number of users connected through online platform;
- No middlemen: elimination of the traditional intermediation structures; strangers can exchange goods and services establishing peer-to-peer relationship enabled by Internet;
- Share and trust: they invite to keep in touch, cooperate and trust in strangers, because are the people who populate the platforms.

The sharing economy is itself a disruptive innovation, because internalized the main pillars of the previous example like Google and Facebook, such as peer-to-peer network and the will to create benefit for the customers, to optimize the resources connecting people around the world. These internet-based platforms allowed individuals to disintermediate the traditional commercial channels, to reduce transaction costs, to allocate efficiently idle resources, to create new communities and a new way to consume.

The Sharing economy is a recent phenomenon that does not have a serious quantification of its real size and extent. Many think that is a transitory phenomenon but the numbers prove that this new economic model is expected to grow as time goes by. Airbnb has reached more than 10 million nights sold and 38,000 users worldwide in just four years after his departure. In 2013, Rachel Botsman reported that the peer-to-peer (or P2P) rental market had reached approximately \$26 billion (Botsman 2013) and also Jeremiah Oywang, a marketing consultant, estimated that in 2013 there were 200 companies with more than \$2B in venture funding.

The success of this phenomenon was driven by many factors among which the most important are: a growing environmental consciousness; ubiquity of Internet; information and communication technologies. All these make sharing possible at a global scale.

Despite the great success of the sharing economy, many criticize this phenomenon and after the occurrence of some incidents, it is more evident the urgency of solving these issues. The

low entry barriers to create a new sharing platform have made them more and more popular and numerous, and the need for a specific regulation is more and more compelling. Issues like new business model, safety, trust, consumer protection, insurances, tax evasion, become even more actual topics.

Chapter 2. “The Zero Marginal Cost Society”: Rifkin and the Collaborative Commons

Jeremy Rifkin is an economic and social theorist, activist, and an essayist. He is author of several books about the impact that the scientific and technological changes have on the economy, employment, society and environment. He described the sharing economy like the third industrial revolution because the affirmation of the sharing is a historic event. It will replace the two systems created in the nineteenth century, that is, capitalism and socialism. Rifkin called this Collaborative Economy and believes that the future economic model will find its bases on the economy of exchange and collaboration, which is grown around the world.

For the writer, the trigger that gave the birth to that is the zero marginal cost. Marginal costs are the principle that led the capitalism to the success, but also what led to its end. The paradox is that the collaborative commons emerged from the same principle. During the capitalist era, in the traditional market, business people had as main aim to find a revolutionary technology that could increase the productivity reducing marginal costs to near zero, making goods and services essentially free, priceless and beyond the economic market exchange. Now it is beginning to happen in the real world and it is possible thanks to the diffusion of the World Wide Web from 1990. With the coming of the latter, the consumers become prosumers because they used Internet for not only produce their videos, photos, blogs, but also sharing them with others at near zero marginal cost. Rifkin called this new Internet “Internet of Things” that it is composed by three main parts: Communications Internet, Energy Internet and Logistic Internet.

During his studies, Rifkin could reach the conclusion that Collaborative Commons had their beginning in the feudal society. The impossibility to use the abandoned old Roman roads for exchanging and trading, led the people to create closed and isolated localities. The farmers had to donate a large part of their harvest to the Lord and little remained for them. The peasants understood that the most efficient way for surviving was to “combined their individual plots into open fields and common pastures and farmed them collectively”¹. The transition from feudalism to capitalism was gradual and was imposed by the introduction of new technologies during respectively the First and the Second Industrial Revolutions. At the time, companies grew vertically integrated and in the nineteenth and in the twentieth

¹J. Rifkin, *The zero marginal cost society: the internet of things, the collaborative commons, and the eclipse of capitalism*, 2014, p. 28.

century this structure was the dominant business model. After this two industrial revolution Rifkin indicate as the Third Industrial Revolution the introduction of the Internet, and more specifically the Internet of Things. The main traits of this revolution are the creation of open sources and the profound changes that it has on human consciousness. Rifkin highlighted that the “new economy will optimize the welfare by way of laterally integrated networks on the Collaborative Commons, rather than vertically integrated businesses in the capitalist market”².

During the last industrial revolution, there was a re-born of the Commons enabled by the Internet. Numerous researchers like Hardin, Rose, Ostrom focused their studies on the Commons and on the Commons as a governing model. They thought that its principles and assumptions could be used for an economy where the control of commerce was decentralized, distributed, and facilitate the peer-to-peer production and the access to shareable goods was more valued than the property. Carol Rose and Crawford Macpherson have introduced the issue of privatization in the commons that is profoundly different from the capitalist model. He noted that individuals used to think about property as “the right to exclude others from the use or benefit of something”³, while in commons held the customary right to access to property, “the right to be included, to have access to one another, [...] is the right to participate “in common””⁴. Some years later, the economist Elinor Ostrom in her “The governing of the commons”, wrote the first comprehensive economic and anthropological analysis on the history of the commons, on the causes for the success and the failure of their governance, and her instruction for assuring the success of future Commons management. One of her findings in managing common-pool resources was to understand that individuals put the community’s interest before self-interest and the long-term preservation of the common resource above their needs and she and her colleagues, succeeded to outline seven “design principles” of commons.

Stallman introduced the main commons’ innovation. Stallman believed that privatize the new communications media was unfair, because software became quickly the way in which people communicate between themselves and with the things. With a consortium of the best software programmers, he developed GNU, an operating system of free software in which individuals could access, use and modify. Moreover, in line with the seven principles of Ostrom, he developed the manifesto of the GNU called GPL or General Public License, which give the possibility to everyone to use the software, distribute it, and make changes, but the resulting copies had to be entrusted again to the others under the same regulation. Six years later Linus Torvalds gave to the software a kernel, that he called Linux. The Internet, also with the emergence of social media, has taken on a new role: “a place where human beings create social capital rather than market capital”⁵ and and “the global

² Ibidem, p. 56.

³ Ibidem, p. 127.

⁴ Ibidem, p. 127.

⁵ Ibidem, p. 142.

democratization of culture is made possible by an Internet communication medium whose operating logic is distributed, collaborative, and laterally scaled.”⁶ Successively Stallman and Lessing founded the Creative Commons and Creative Commons licenses, in which the innovation was “some rights reserved” because the creators of commons combined freedoms and restrictions. These innovations became even more important with the increase of the amount of Big Data that people started to share and the latter contributed to form the collective wisdom. Yochai Benkler saw in the Internet and digital networks a “third mode of production”, calling it “Commons-based peer-production”.

Cooperatives

Rifkin included in his study the Cooperatives that are developed to operate as Commons and for accomplishing different goals. They are representing globally by the ICA, the International Cooperative Alliance that give a specific definition of the model: “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise”⁷. ICA revised the seven points created by the first example of cooperative, the Rochdale Society, and proclaimed them as the governance model for cooperatives. The rules are the following:

1. First, any individual is welcome to become a member of a cooperative regardless of race, religion, ethnicity, gender, or social or political affiliation.
2. Second, cooperatives are democratically run associations in which each member enjoys a single vote. Elected representatives, drawn from the membership, are responsible for management of the association and accountable to the membership.
3. Third, members contribute equitably and democratically to the capital of their cooperative. Part of that capital becomes the common property of the cooperative. Members jointly decide on how their funds ought to be used in the development and day-to-day operations of the cooperative.
4. Fourth, cooperatives are autonomous, self-help associations. Although they can and do enter into various business arrangements with other organizations, they do so in a manner that ensures their democratic control of the cooperative and its autonomy.
5. Fifth, cooperatives provide education and ongoing training for their members, managers, and employees to encourage their full participation in the programs, projects, and initiatives of the association.
6. Sixth, cooperatives are expected to broaden the networked Commons by providing an ever-expanding and ever-integrating space for collaboration and cooperation across regions and the world.

⁶ Ibidem, p. 142.

⁷ Ibidem, p. 169.

7. Seventh, cooperatives are tasked with the mission of promoting sustainable development within the communities they serve through the policies and programs they engage in⁸.

A very important trait of these rules lie in the fact that they epitomize the vision and practice of Commons management. Cooperatives provide a business model that give to small and medium- sized enterprise the same possibility of bigger company, because they can combine their financial resources to purchase raw materials and goods from suppliers to a lower cost, and in the same way, share marketing, logistics and distribution channels. . It is amplified with the advent of the Internet of Things but they must become able to use this global platform in order to draw benefits. “Cooperatives are the only business model that will work in a near zero marginal cost society”⁹.

The purpose of Rifkin throughout his book is to show that the will of sharing is embedded in human nature, and this is demonstrated by its ancient origins. People collaborate spontaneously and have always created technologies to do it in a more simple, fast and efficient way and spreading its horizon to become global. Moreover, the propensity to share is stronger and concrete in times of difficulty and crisis. Rifkin described many examples of collaborative commons: from feudalism to free software, to cooperatives and the Internet of things. In his opinion, this new economic model will replace the capitalism’ era and the cooperative model is the only one that can operate in a near to zero marginal cost society.

Chapter 3: Benkler and “Commons-based peer production”

Yochai Benkler since the start of its carrier in the 1990s was an active researcher in the field of “networked information economy” and he coined the term “commons-based peer production”. He focused on the role of information commons and decentralized collaboration to innovation, information production, and freedom in the networked economy and society, and on commons-based approaches to managing resources in networked environments. In “The Wealth of Networks: How Social Production Transforms Markets and Freedom” he argued that the new processes of network cooperation were undermining the traditional industrial model that structured the cultural production throughout the twentieth century. The whole book is based on the comparison between the industrial information economy and the emerging information economy that he called “networked information economy”. In this new model, the means of reproduction are accessible to a large number of individuals, due to the spread of digital technologies and the lower costs of distribution thanks to the networks. This will create the conditions to develop new means of production of knowledge even more cheap and easy to use. With the lowering costs of production and the easier access to knowledge are emerging

⁸ Ibidem, p. 170.

⁹ Ibidem, p.172.

information, culture, social practices and mechanism for sharing and cooperate. By the use of examples like GNU, Linux and Wikipedia, Benkler showed a phenomenon in which groups of volunteers are able to organize themselves, and the latter can build, in a horizontal and distributed way, relevant and reliable systems, much more performant of commercial productions. The breadth and depth of the changes that are triggering these processes, is also linked to the enormous amount ever-growing cultural actors. This process leads to a change in the concept of autonomy, which takes two main meanings: as a capacity to action individually, and as collaboration with others. In addition, it is based on the access to informational goods, on the ability to distribute in a horizontal and modular way skill and the possibility of intervention, using the model of peer production. Benkler also reveals the problem of lack of clear legislation, which is the major cause of disagreements between industrial production and peer production, and it is a big problem for the development of the latter.

Benkler observed the changes that the Internet revolution has led to people's daily life, analyzing what is at the basis of society: the information, culture and knowledge. The turning point that has driven the economy into the production of information and culture, in a less elitist and in a more collective ways, arrived since the birth of the Internet, who created a new communications environment. Adjustments in economic, social and cultural environment followed the technological changes that caused a transformation in how people create the informational environment, both as autonomous individuals and citizens as well as members of social and cultural groups. The characteristic elements of this new model are:

- Decentralized individual action: new and important cooperative and coordinated actions carried out through radically distributed, nonmarket mechanisms that do not depend on proprietary strategies;
- The declining price of computation, communication, and storage of data;
- The removal of the physical constraints and barriers on effective information production.

The diffusion of low-cost computers and the ability to connect in an increasing number of places were important things that led to the growth of the phenomenon and the growing adhesion of the people. Individuals are motivated to use and to make available to others their creativity and knowledge without expecting a monetary return. The persons who share their information, individually or in cooperative, were able to transmit it to millions of people all over the world, realizing a richer information environment. "The result is that a good deal more that human beings value can now be done by individuals, who interact with each other socially, as human beings and as social beings, rather than as market actors through the price system"¹⁰. Individuals are becoming active protagonists of their own lives,

¹⁰ Y. Benkler, *The wealth of networks : how social production transforms markets and*

having the ability to create information from their point of view continually confronted with others. For this reason, also Benkler recognized the Internet as an enabler of the democracy. It can be said that the culture become more democratic because the individuals are able to actively participate in the cultural changes, bringing out and participating in the development of a new popular culture.

The information is a “public good”

Benkler categorizes the information, culture and knowledge as public goods and they have the characteristic of being non-rival, therefore each person can use it without reducing its availability. His purpose is to make clear that as a public good, the information does not need patents and copyrights because they cannot work in the right way and are not effective. The term public good suggests that the market cannot produce them because they should be sold at a price equal to the marginal cost, which is zero. Moreover, the information has another peculiarity: “information is both input and output of its own production process”¹¹. The reason is that any new good or informational innovation is based on existing information. If patents and copyrights give the possibility to information’s owners to impose high prices, these can scared the innovators of today that can both lower the consumption of information but also the production of the latter. Increased patent protection increases costs that innovators have to pay for pre-existing knowledge. Since it cannot be produced by the market, Benkler offers two other options as producers of information: 1) non-commercial sources - public and non-state actors; 2) market players whose business models does not depend on the intellectual property rules. This technological revolution has made possible the radical reorganization of the production system in which now there are three major categories of input:

- Existing information and culture. Existing information is a non-rival good and its real marginal cost at any given moment is zero;
- Mechanical mean. They are used to analyze the environment, process data and communicate it the new information produced. This cost, which in the model Industrial was very high, the computer networks has drastically lowered;
- Human communicative capacity: the creativity, the experience and knowledge needed to draw information from existing cultural resources and turn them into new ideas, symbols or representations that become meaningful to others.

Commons-based peer production

The free software represent an example of a big phenomenon, a new model based on a horizontal and cooperative production. “It suggests that the networked environment makes possible a new modality of organizing production: radically decentralized, collaborative, and

Freedom, 2006, p. 6.

¹¹ Ibidem, p. 37.

nonproprietary; based on sharing resources and outputs among widely distributed, loosely connected individuals who cooperate with each other without relying on either market signals or managerial commands. This is what I call “commons-based peer production”¹². He used the term “commons” to allude to a particular institutional form of structuring the rights to access, use, and control resources, and to oppose it to the concept of “property”. They are commons-based because this expression is used to emphasize that the main feature of cooperative enterprises is not to be built on asymmetric exclusion typical of the property. The term peer production or horizontal production refers to a subset of the practices of production based on common goods. It refers to production systems that depend on the action individual self-determined and decentralized, rather than hierarchically assigned.

The free software, or open source, is an approach to software developing that based on the sharing of effort in a nonproprietary model. It depends on many individuals who work on a common project for different reasons and with no one asserts the rights of exclusivity on individual parts or the result. To regulate this innovation, Stallman created another great innovation represented by the GNU General Public License or GPL, which is the most important part of the free software movement. Another revolutionary example of peer production is certainly Wikipedia. Wikipedia combines three main features:

- It uses a collaborative authorship tool, Wiki. This platform enables anyone, including anonymous passersby, to edit almost any page in the entire project. All contributions and changes are rendered transparent by the software and database;
- Second, it is a self-conscious effort at creating an encyclopedia—governed first and foremost by a collective informal undertaking. An effort to represent sympathetically all views on a subject, rather than to achieve objectivity, is the core operative characteristic of this effort;
- Third, all the content generated by this collaboration is released under the GNU Free Documentation License, an adaptation of the GNU GPL to texts.

Social Production: items of success

Motivation: There are forms of psychological motivation and social relation that cannot be accumulated or exchanged with money. It is clear that some people are more interested in making money while others are more liberal; some are driven by reasons the position and social esteem, others from achieving well-being psychological. Social production thrives when succeed to connect people motivated by the same feeling of collaboration.

Horizontal production: The Internet succeeded to integrate the more dispersed contributions from many individuals. The projects that are developed combine the features of modularity, which is the property that describes the degree to which a project can be

¹² Ibidem, p. 60.

broken down into smaller modules, and granularity, refers to the size of the modules, in terms of time and work that each individual has to invest to produce them. In this way, each person can give his contribution when he wants and of each dimension.

Transaction cost: Instead of supporting the transaction costs of the market, it can be possible to establish social relations to overcome the inefficiencies. Social exchange does not require the same degree of precision. They require huge investment, socializing and maintaining relationships, just as happens with the markets or states. Once they have been put into operation, however, the social exchanges require the margin less detailed information. The individuals generate large amounts of human creativity and mechanical skills, and if they are exchanging through the price system, companies involves in high transaction costs. With the right institutional structures and control, and well modularized organization of work, social sharing has the potential to identify the best person among those available and put it in the conditions to work on a certain task using freely available informational input.

What Benkler wants to show is that social relationships and patterns of behavior have come to play a crucial role in motivating, informing and organize productive behavior at the heart of the economy information.

To conclude this chapter, it can be interesting to draw seven principles that emerge in the book about the thought of Benkler. The main principles are the following:

1. Individuals have taken an active role in information production. The diffusion of the equipment needed to produce and communicate information is now in the hands of an increasing number of people. The access to the network allowed the sum of individual actions to produce a new and a wider informational environment.
2. The structures of the public sphere in the network give to everyone a space to talk, question and investigate without the need to access the resources of large media organizations. The characteristic of production based on common goods is the freedom to interact with the resources and projects without having to ask anyone's permission.
3. The network environment makes possible a new way of organizing production: radically decentralized, collaborative and non-proprietary; based on the sharing of resources and outputs between individuals dispersed in space and variably connected, cooperating without depending either by the market or by the manager orders.
4. The networked information economy increases the effective capacity of individuals. They can do more things on their own and create individually, or they can establish temporary links with others. Moreover, with the decrease of the prices, people can purchase the computer, which is the tool through which they share their knowledge with the rest of the world. In this way, the production of information is financed individual that produces it: it is self-financing.

5. Having access to the network, people can actively communicate their thoughts, informing and educating millions of people around the world. There is a growing possibility of producing information, culture and knowledge through social relations non-proprietary and non-commercial, that is, through the horizontal production. The persons who share their information, individually or in cooperative, were able to transmit it to millions of people all over the world, realizing a richer information environment.

6. Removing physical constraints to the actual production of information, human creativity and information economy became the pillars of the economic structure of the network. The networked environment provides the means of communication able to expand its level of diffusion decentralizing the economic structure and make it global.

7. The GPL is fundamental for a sustainable development of this production system. It is the most important legal innovation of the phenomenon. The GPL requires to anyone who edits the software and distribute it, to release a modified version under the same type of license as the original software. In this way, everyone can contribute by preventing that anyone could appropriate of the different contributions or of the finished product in an exclusive form.

Chapter 4. The Cooperative Model

The problem of regulation is the main topics concerning the sharing economy. Two influential scholars, Rifkin and Benkler, suggested the cooperative model as an efficient model for regulating this new economic phenomenon. The cooperative model and the sharing economy have many common characteristics, but some differences remain. Other researchers like Curl, Mainieri and Orsi agree with the statement that the sharing economy and the cooperative model could be compared and combined together. In general, many agree that social enterprises, as well as collaborative services, are created as reaction to the inability of the traditional players to respond to the needs of the context in which they operate. Both movements are generated from below and the expression of social innovation. The latter is very evident in the cooperative model, while in the sharing economy is not so clear even if the services are offered with the purpose of creating benefits for society. Social enterprises, through the service model proposed by sharing economy platform, that enables people to exchange and share, may recover the relationship with the citizens which over time is partly lost, finding new business models, replicated on different territories his service and make a custom offer and easily accessible. While the sharing economy might find in the cooperatives the right business model to be able to put into practice the alternative economic model that is seeking to impose.

The cooperative can be defined as a company formed by natural or legal persons, characterized by a mutual purpose, which is the intent of providing goods, services and job opportunities to the members, under more advantageous conditions than they would get from the market. A cooperative is a business that requires the active participation of members to business decisions: the members affect everyone equally over company

decisions, because in the cooperative does not exist the owner/employee distinction. The cooperative movement has ancient roots. In feudalism, it can be found the characteristics belonging to the movement, as Rifkin said, but the first experiments date back to the first industrial revolution, and more as an integral part of the early labour movement. In this time, the cooperatives have expanded around the world, and in recent years their number has grown significantly, even for causes related to the 2008 economic crisis.

A cooperative, in the respect of the principles of democracy, fairness, equality, transparency, agrees to their application through criteria and rules of conduct, which are points of reference for everyone involved in a cooperative and, primarily, for those responsible for managing it. There are seven main principles of the cooperative model that have been corrected and adapted by the International Co-operative Alliance. They are guidelines by which co-operatives put their values into practice:

1. **Voluntary and Open Membership:** Co-operatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
2. **Democratic Member Control:** Co-operatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary co-operatives members have equal voting rights (one member, one vote) and co-operatives at other levels are also organized in a democratic manner.
3. **Member Economic Participation:** Members contribute equitably to, and democratically control, the capital of their co-operative. At least part of that capital is usually the common property of the co-operative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their co-operative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the co-operative; and supporting other activities approved by the membership.
4. **Autonomy and Independence:** Co-operatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative autonomy.
5. **Education, Training and Information:** Co-operatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation.

6. Co-operation among Co-operatives: Co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional and international structures.

7. Concern for Community: Co-operatives work for the sustainable development of their communities through policies approved by their members¹³.

Reinterpretation of the seven principles: comparison with the Sharing Economy

The seven principles of cooperatives are the starting point for a deeper analysis that highlight the similarities and differences between the cooperative movement and the sharing economy. These principles are compared with the principles of the first example of cooperative, called Rochdale Society, the principles of the thought of Benkler about the Commons and the Cooperatives, and the sharing economy.

Global open access: the individual is at the center of these movements, the cooperative one and the sharing economy. The sharing economy with its platforms, open the access to the people all over the world. Everyone is free to connect to the platforms and use the services.

Limited democracy: While co-operatives are democratic organizations, this concept in the sharing economy is linked more to the use of the Internet than in the companies themselves. The Internet is the tool that allows everyone to express their thoughts, and facilitates exchanges among peers. However, the sharing economy platforms still have a structure similar to the organizations of the past, with a distribution of power that does not reflect the principles they proclaim.

Boundaries to participation: The members of these democratic organizations “contribute equitably to the capital of their co-operative”¹⁴. Benkler described a non-proprietary production system, independent both by the market and by the managers. However, even today, the sharing economy companies are privately owned, venture-capital funded corporations.

Disintermediation: As Benkler said, the network environment increase the effective capacity of individuals to communicate and to establish links with others, to sharing their thoughts and their knowledge, to develop their projects on their own. The cooperative as well are autonomous organizations. In the sharing economy this autonomy and independence is proved by the disintermediation. The individuals can freely keep in touch with others without the need to interact with an intermediary.

Sharing knowledge: The fifth principle of the cooperative is to provide education and training to its members, and also Benkler recognize the value of information. The sharing economy platforms also has an important role allowing the peers to share their ideas, opinions and their culture. Companies like TaskRabbit, Tabbid and Oilproject have been

¹³ International Co-operative Alliance, <http://ica.coop/en/what-co-operative>

¹⁴ Ibidem, <http://ica.coop/en/what-co-operative>

developed with the aim of create a connection among people with different knowledge and experience, in order to place them available to the community.

Global expansion: The networked environment described by Benkler, provides the means of communication able to expand and make global everything. This occurred also with the sharing economy. Today people connect with others that come from many countries, because the Internet has the ability to make everything easier, everything closer.

Lack of an overall regulation: To make sustainable this innovation is necessary to find the right regulatory model. It is even more important to find the right connotation to these companies for the relevance that this phenomenon is taking today.

Rifkin and Rochdale Society	Benkler	Cooperative Movement	Sharing Economy
Affiliation	Individuals at the Center	Voluntary open membership	Global open access
Democratic Union	The Network provides Democracy	Democratic member control	Limited democracy
Commons	Decentralized, collaborative and non-proprietary production	Member economic participation	Boundaries to participation
Autonomy	Autonomous participation	Autonomy and independence	Disintermediation
Education	The role of information	Education, training and information	Sharing knowledge
Expanding network	Removing physical constraints	Cooperation among Co-operatives	Global expansion
Sustainable Development	Sustainable regulation	Concern for community	Lack of an overall regulation

Figure 16: Table of Seven Principles Comparison

In some principles, it can be notice a real evolution due the passage of the years and the development of new technologies. From the “affiliation” between the few people of a restricted region, to a group composed of people who are located in different parts of the world, which can connect with other similar groups to form a global network. The negative sides are related to inattention of governments and societies that have not recognized in the sharing economy an economic model able to establish itself in the market and to increase its size. All this has led to a partial development of the phenomenon, with consequences that are visible in the organization of the sharing economy companies. Now that they have become part of everyday life of the people, it is clear the need to find a solution to the problem of regulation. The resolution of this issue will also modify the other negative aspects such as limited democracy and the boundaries to participation.

Conclusions

The thesis start with the description of the sharing economy, its definition, the causes that led to the creation of so many platforms, and its dark side. Through the other chapters, this material has been enriched by the information derived from the writings of Rifkin and Benkler, until to have a complete picture of both the sharing economy and the cooperative model. Through A deeper analysis shows the main problems of the two movements. The sharing economy dark side, as said before, are:

- Lack of a specific regulation;
- Problems of safety and consumer protection that arise from the previous issue;
- Problems of trust among peers.

The downsides of cooperatives are as follows:

- The cooperatives work in the capitalist marketplace and over the years they have gradually taken over the competitive mentalities;
- Cooperatives tend to enclose their activities around their local or national areas: they tend to create a closed group by the rest of the world and by doing so become isolated from the innovations and opportunities coming from the surrounding environment.

In this scenario, the improvements that have to be made are clear. The cooperatives, in order to survive, have to open themselves to the progress and expand their boundaries in order to benefit of the opportunities that the sharing economy is now enjoying. The sharing economy has to undergo a transformation to move from words to action. If it really want to serve individuals, it must find the right business model to make them part of the decision-making process. The companies need to direct their attention to creating benefits for users and not for investors. The users could become the investors of the organizations, in order to have a voice in and participate actively in the management of the platform. Through the comparison with the seven principles of the cooperative movement, the common points and differences are highlighted, and these could become a starting point for future convergence of the two models. It can be said that these two movements are two sides of the same coin that should find the right balance in order to become what many expect, in other words, an economic model that will take the place of capitalism. We should find the right balance between the return to the roots, which consists in the application of cooperatives' principles, and the innovation introduced by the sharing economy.

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Business through Digital Innovation

THE SHARING ECONOMY: MAIN FEATURES, CHALLENGES AND
INTERRELATIONS WITH THE COOPERATIVE MODEL.

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ACADEMIC YEAR 2014/2015

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Introduction

“Human nature is not a machine to be built after a model, and set to do exactly the work prescribed for it, but a tree, which requires to grow and develop itself on all sides, according to the tendency of the inward forces which make it a living thing” (John Stuart Mill, On Liberty 1859).

The Internet and digital innovations have dramatically changed the way people live and relate to each other, the way they consume, the way they learn, the way they do business and the way they produce good, services, information and culture. The Internet has brought to light the social values that were dormant over the last years, and with the revolution of the Web 2.0 these values could be shared among users. The crisis of 2008 has certainly helped to awaken these values and has revealed the desire to help and collaborate with each other. Moreover, the innovative software platforms have extend the ability to coordinate economic changes that were optimized by the reduction of transaction costs due to the Internet. The sharing economy has spread so widely and quickly because it has been able to leverage all of these elements. The only thing missing is a globally accepted regulations.

The purpose of this thesis is to analyze the Sharing Economy and its limits and to propose the Cooperative Movement as a possible business model for it. The analysis of the writings of two influent scholars, Rifkin and Benkler, leads to

the conclusion that this two model have some features in common, so a comparison could be possible. These models are created to similar needs but the diversities related to different development periods are very clear. The aim is to prove that, although with some differences and difficulties, these two models need each other in order to have a future in the new economic system that is emerging.

Sharing economy and collaborative consumption are the two terms mostly used referring to the phenomenon: whatever it is called, it is a service that, by putting people directly in touch (peer-to-peer), eliminates the intermediary of the commercial, financial, institutional structures and proposes new patterns of consumption and new ways to manage the resources.

Some examples of collaborative services are the following:

- Airbnb connects those who have rooms or free houses, with those who look for them;
- RelayRides connects people looking for a car for a short ride, and who offers it;
- Etsy brings together those who sell an object, with those who want to buy it;
- Skillshare: who teaches with those who want to learn;
- TaskRabbit who has time with those who have none;
- Prestiamoci and Kickstarter, in different ways, connect moneylenders with who ask for them;
- Landshare brings together people who have a passion for homegrown food, connecting those who have land to share, with those who need land for cultivating food.

All these services have differences but also many values in common.

People recognize these services as a response to a specific need: to offer an alternative to a model of consumption and of life that no longer works. Craig Shapiro, founder of Collaborative Fund, a fund dedicated to digital collaborative services, affirmed that: "the planet's resources are finite and we must find ways to be more productive with fewer resources." Through the exchange, sharing and direct sales, collaborative services promote the full exploitation of the assets, offering new models of saving and earning, and encourage a different way of socializing.

The evidence of the economic, political, environmental and social crisis on the one hand, and the spread and success of the Internet and social media from the other, are the causes that explain why collaborative digital services grew in these number and size between 2008 and 2010, to spread in the following two years. It is also the reason why this occurs simultaneously in different parts of the world. The crisis acts as an enabler because it awakens dormant consciences of people and forces them to look for alternative ways to consume, produce and manage their time, work and money. The mass adoption of the Internet and digital media allows opening new markets and simultaneously acts on people, turning them from simple users to aware and active individuals able to organize themselves.

In the years of Web development, individuals moved from users into person, from consumers to co-creators of products and experiences, from a passive role to be an active proposer. Some years later, an additional change occurred: from people to habitants of a space in which they want to be leaders. These new citizens inhabit collaborative services.

The cities are the natural environment for the adoption of these platforms. Here are concentrated the collaborative services and the people who used them more. The development of these platforms takes the collaboration outside the territorial dimension and makes the latter global. This model allows to exchange with strangers coming both from the same neighborhood, that from anywhere in the world. It becomes handy since you can just open the computer or turn on an application on your smartphone and connect to a collaborative service. Neal Gorenflo, manager and founder of Shareable.net, influential magazine on the phenomenon, affirmed that "the best thing about this movement is that everything is needed is to start sharing; you can start wherever you are, with everyone around you and when you want. You do not need to meet someone, make a donation or asking permission from anyone."

The people who start to use this new economic model are mainly the Millennials and the digital native, but it is not refers to a specific target. Regardless of age, the main features of the users are:

- Individuals who know the digital technologies;
- People who do not believe that the crisis can be resolved from above and want to do something personally;
- Sociable people, who like to collaborate, participate and listen;
- Individuals who want to try new purchase experiences and do this in an innovative way.

1.2 Definitions of sharing economy:

The sharing economy is composite and heterogeneous, and to begin talking about it, it is important to understand in what this term pertains and which are its basic elements.

The term sharing economy is used to describe a new economic trend started approximately in 2008. Despite Martin Weitzman used as first this epithet in 1986 referring to the social welfare, its recent diffusion does not allow it to have a unique and standardized definition. The literature on sharing economy has emerged around six key topics: ownership, access, digital disruption and information technology (Internet), peer-to-peer community and collaboration, social capital, and trust (e.g., Bardhi & Eckhardt, 2012; Belk 1988, 2013; Botsman & Rogers, 2010; Gansky, 2010; Sundararajan, 2013). For this reason,

it has many appellations: sharing economy, collaborative economy, collaborative consumption, peer-to-peer networks, the mesh, commons-based peer production, social lending, and access economy. A common means and a common end tie these activities together and some commonalities are: distributed power, disruptive drivers, innovation and efficient asset utilization. Many authors have tried to explain this phenomenon and the result was a large amount of definitions. A general definition talk about an economic model based on the sharing of what is not fully used by the owner, also called idle resources.

Benita Matofska, Chief Sharer at The People Who Share, refers to the Sharing Economy as “a socio-economic system built around the sharing of human and physical assets. It includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organizations.”¹⁵



Figure 2: The people who share

¹⁵What is the Sharing Economy? <http://www.thepeoplewhoshare.com/blog/what-is-the-sharing-economy/>

For Belk “Sharing is an alternative to the private ownership that is emphasized in both marketplace exchange and gift giving. In sharing, two or more people may enjoy the benefits (or costs) that flow from possessing a thing. Rather than distinguishing what is mine and yours, sharing defines something as ours” and adds “the act and process of distributing what is ours to others for their use and/or the act and process of receiving or taking something from others for our use.” (Belk (2007, 126))

From is point of view, Jeremy Rifkin refers to the Participatory Economics like "The freedom of access prevail over ownership, sustainability supplants consumerism, and cooperation ousts competition [...]. An economy where the logic of the delegation is exceeded and all the actors interact and release new resources to identify and implement responses to their needs. "

“The sharing economy or collaborative consumption (CC) describes an emerging phenomenon that offers consumers an alternative to ownership of products and services by sharing, swapping, trading, or renting” (Botsman and Rogers, 2010). Moreover, the sharing economy is an “economic model based on sharing underutilized assets from spaces to skills to stuff for monetary or non –monetary benefits” (Botsman, 2013). In their article “The Sharing economy: Why people participate in collaborative consumption” the authors Hamari, Sjöklint and Ukkonen used this definition: “The sharing economy is an

emerging economic-technological phenomenon that is fueled by developments in information and communications technology (ICT), growing consumer awareness, proliferation of collaborative web communities as well as social commerce/sharing” (Hamari, Sjöklint and Ukkonen, 2015). Dan Schutzer in his study on sharing economy write: “The sharing economy (sometimes also referred to as the peer-to-peer, mesh, or collaborative economy) involves people lending and sharing assets and services directly with each other, coordinated by a sharing network usually running over the Internet.[...] It often results in new communities, organizations and business models. And it is not just for individuals, the web makes it easier for companies to rent out spare offices and idle machines” (Dan Schutzer, 2014).

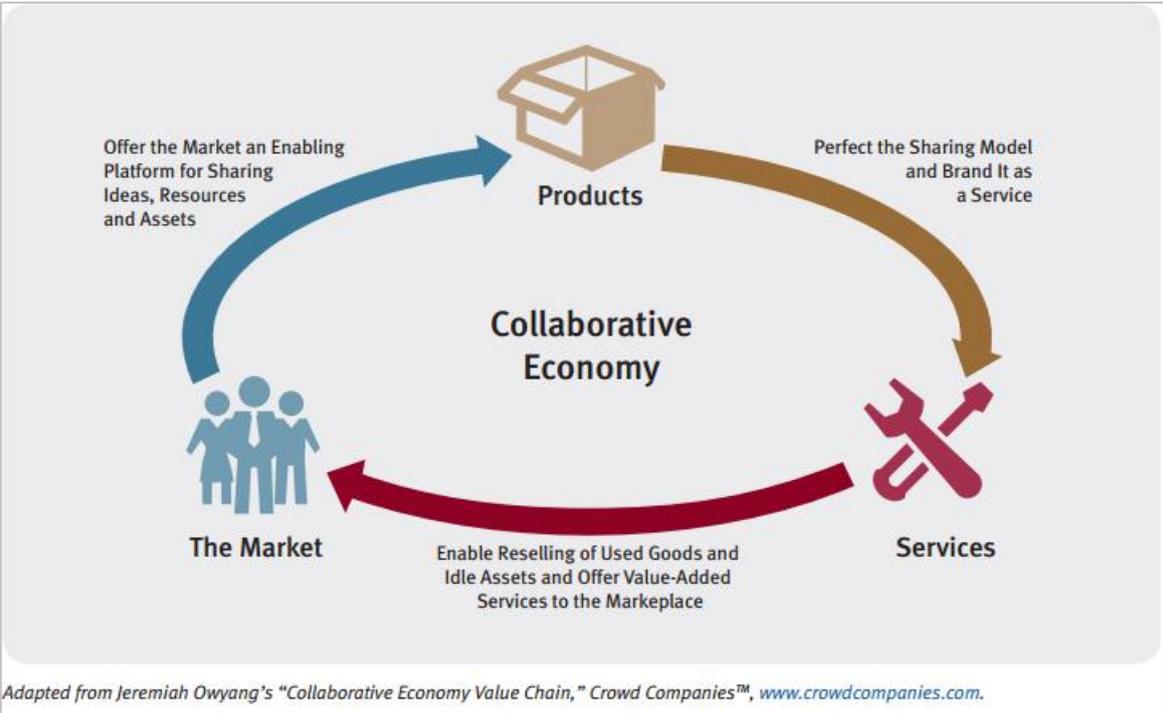


Figure 3: Structure of Collaborative Economy

The researchers with their contributions helped to know this new economic trend, but each of them found her interpretation for the phenomenon. All the previous explanations have the responsibility to show how it is difficult to find a unique definition based on a so confused literature about the sharing economy. In the end, four are the main common features among all:

- Idling capacity: fully exploit resources; optimizing the use of underused assets for which users are able to share the ownership of that good; they promote the sharing of assets and knowledge instead of the property;
- Use of the latest technology: the Internet allows an increase and facilitate the exchange and the number of users connected through online platform;
- No middlemen: elimination of the traditional intermediation structures; strangers can exchange goods and services establishing peer-to-peer relationship enabled by Internet;
- Share and trust: they invite to keep in touch, cooperate and trust in strangers, because are the people who populate the platforms.

1.3 Main reasons for sharing

The sharing has always been a part of society, but the main drivers of it changed over the past decade. However, there are some main motivations:

- Increasing penetration of the Internet and smartphones.

In the last years the Internet penetration across the globe has risen considerably, from a 0,6% of the world's population in 1995, to an estimated 39% in 2014 (KPCB research). In the same way, the mobile phone users increased from a 1% of the world's population, to 73% in 2014, which correspond to 40% of smartphone users. In addition, the figures 4 and 5¹⁶ show that people spend ever more time using digital media.

¹⁶Figure 4-5: <http://www.kpcb.com/internet-trends>

**Internet Users – 1995 → 2014...
 <1% to 39% Population Penetration Globally**

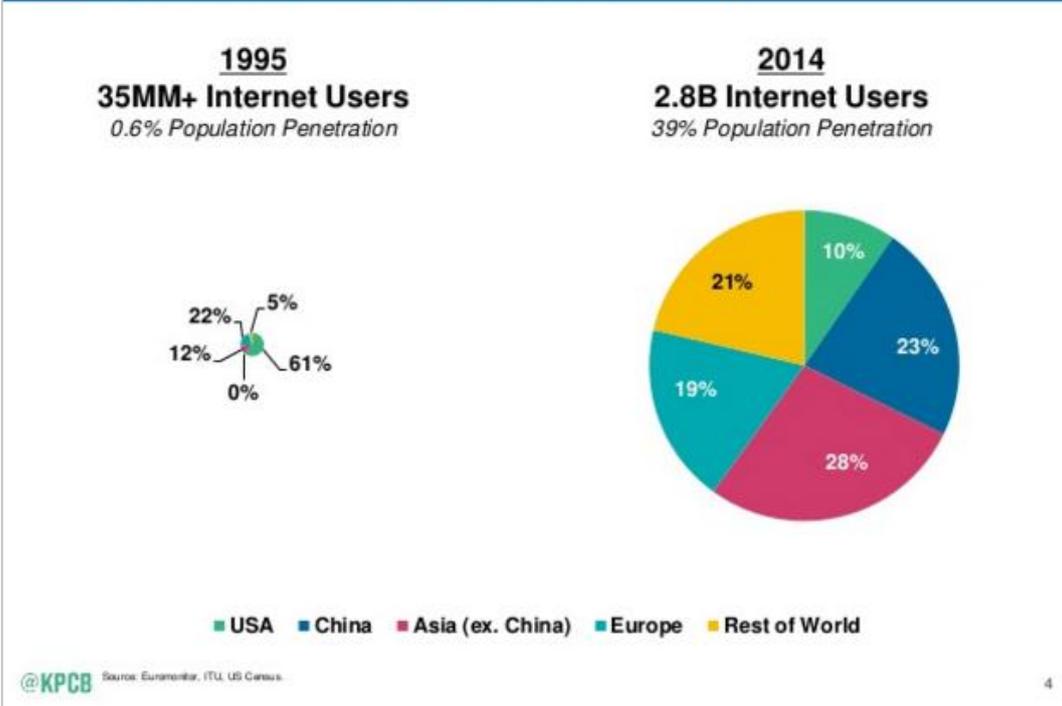


Figure 4: Internet penetration globally

**Mobile Phone Users – 1995 → 2014...
 1% to 73% Population Penetration Globally**

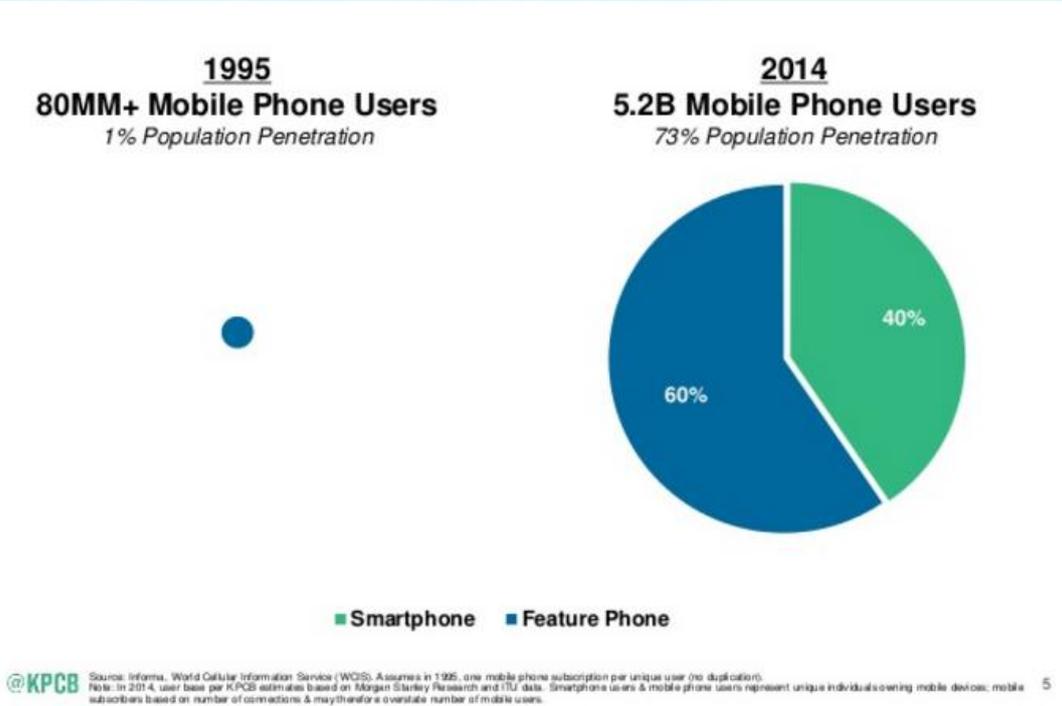


Figure 5: Internet penetration globally

- Technological advancements in areas such as information technology platforms and big data analytics.

These platform are underlying the development of this new economic form, because they allow people to get in touch directly, establishing peer-to-peer communication or individual-to-individual rather than firm-to-individual communication, and to use new technology not only for communicate, but for do business. The social network drive the interactions by peers, but also the firms like Airbnb and Uber mediate the communication among people. The figure 6 show the penetration of social network users around the world in 2014.¹⁷

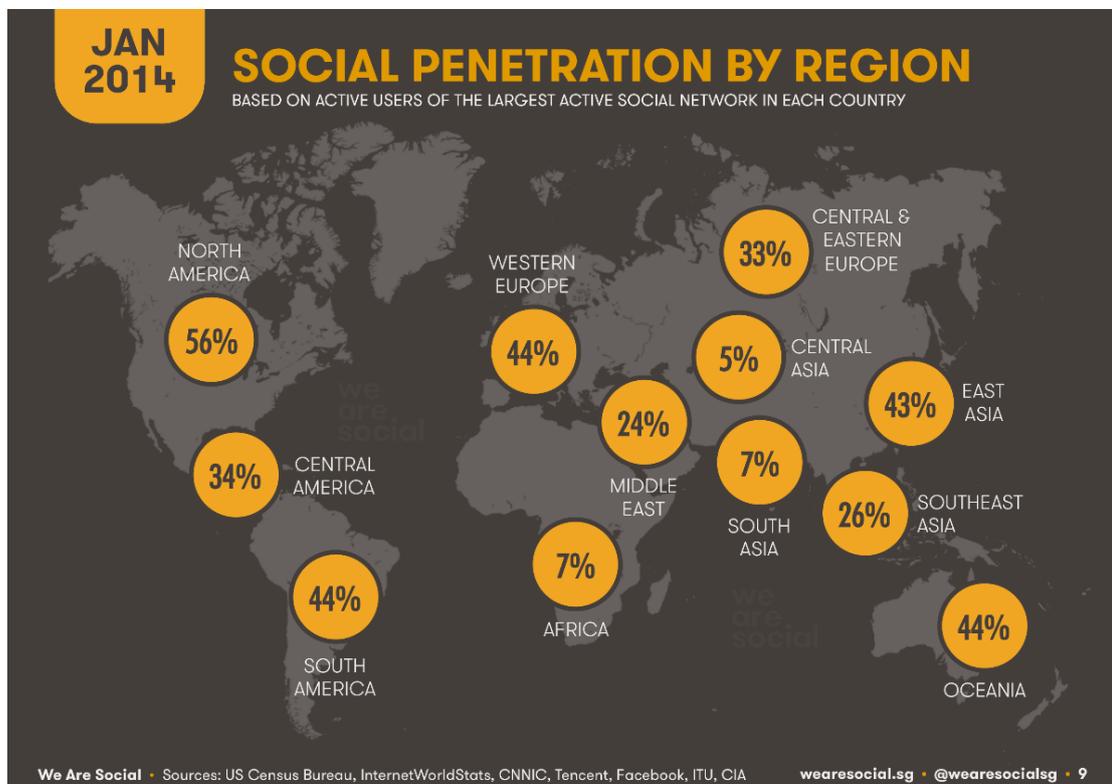


Figure 6: Social Network penetration

¹⁷ Figure 6: <http://wearesocial.com/uk/special-reports/social-digital-mobile-worldwide-2014>

- Falling entry barriers.

The digital technologies advancement have helped the lowering of barriers and consequently a major diffusion of sharing economy due to the even more possibilities of the peers to keep in touch with each other and the even more easier and cheaper modes to create a Sharing Economy service or platform. Moreover, the transactions costs decreasing because of the easier way to collect information and to interact directly without intermediaries. In this way, digitalization has developed a democratization of market in which there are less costs and less knowledge asymmetry. The internet penetration give a demonstration of the globally increase in digitalization. ¹⁸

¹⁸ Figure 7: <http://wearesocial.com/uk/special-reports/social-digital-mobile-worldwide-2014>

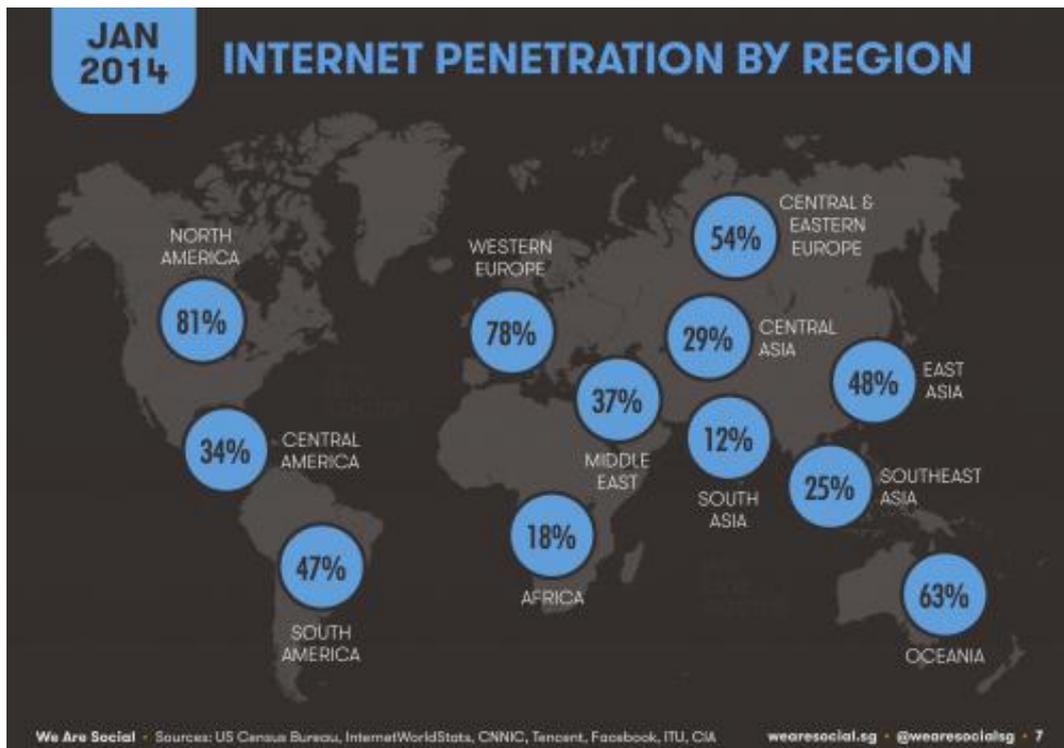


Figure 7: Internet penetration

- Increased ease of financial transactions.

Financial transactions have been greatly facilitated for two main reasons: advancements in digital payment solutions; people are more inclined toward online payments. The figure 8¹⁹ show the growth of e-commerce proves the increase of the financial transactions online.

¹⁹ Figure 8: <https://www.statista.com/chart/1358/us-retail-e-commerce-sales/>

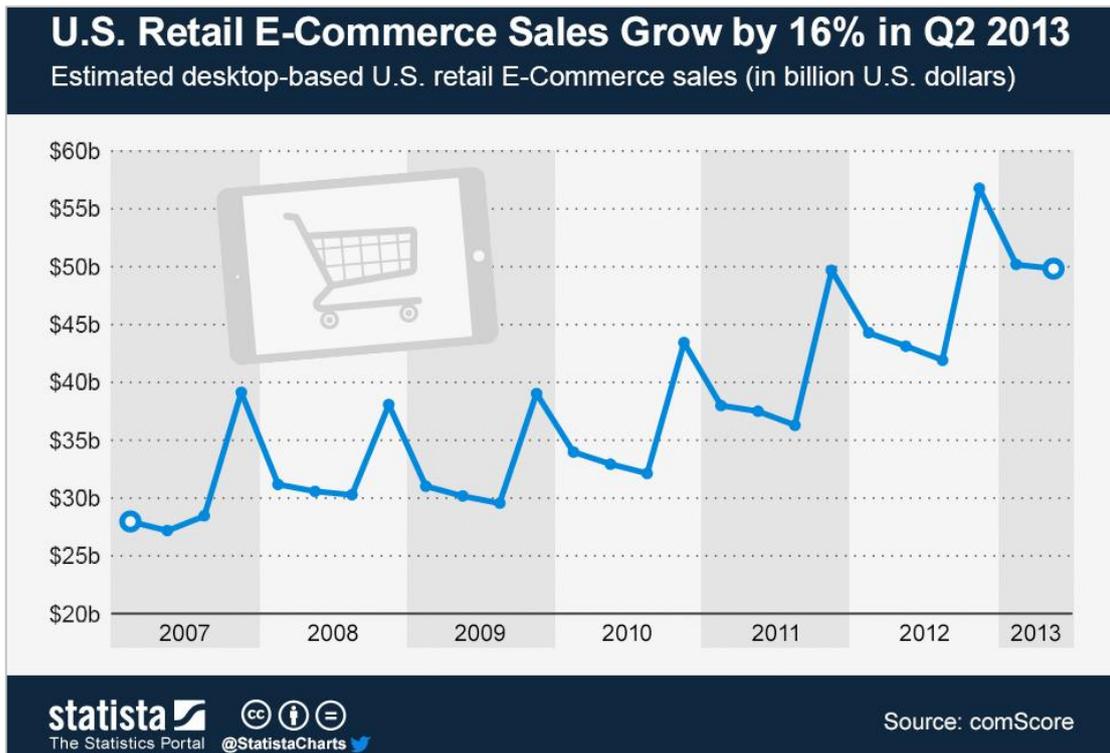


Figure 8: E-commerce sales growth

- The financial crisis.

Many people say that the crisis is one of the factors that most contributed to the emergence of this economic model. It drove people to reorganize their expenses, optimizing their earnings. In this period we moved from a consumer society, to a new attention to spend money. People do not want spend for items that they will use one time. They are now interested to have access to the product or service, to meet a need, to have new experiences. The crisis enabled people to earn from their idle resources and their knowledge. This new attention lead to new behavior in terms of recycling and sustainability.

1.4 Development of sharing economy: some information and numbers

1.4.1 Sharing Economy as a Disruptive Innovation

As Greg Satell said, “Disruption does not only destroy, it can also create.”

Disruption also helps to create important mental shifts and start thinking in a new and more creative way. Thomas Kuhn argued that a new model often incorporate the existing ones: a disruptive innovation create something that doesn't destroy what is existing but improved it developing simpler and affordable new products and services with the use of technology. Clayton Christensen, a professor in Harvard University, coined as first the term “disruptive technology” and in his book, named *The Innovator's Dilemma* and published in 1997, described the theory of Disruptive Innovation. The theory explains the phenomenon by which an innovation transforms an existing market or sector by introducing simplicity, convenience, accessibility, and affordability removing complications, difficult to use and expensive products. Initially, a disruptive innovation is formed in a niche market, but if this innovation is successful, the new product or idea completely redefines the industry. Disruptive innovations refers to something that create new markets by discovering new categories of customers. This is obtained by the use of new technologies but also by developing new business models and exploiting old

technologies in new ways. In his book, Christensen distinguished two types of innovation: disruptive innovation, what transform in a consistent way the old business; sustaining innovation, which simply improves existing products. Christensen argued that disruption is useful because it helps managers to see what is going on in the business environment, so they are able to make better choices in response to this.

After the disruptive innovation of the personal computer, another important innovation is made by Google, Apple, Facebook and Amazon, or GAFAnomics as Fabernovel, an international innovation agency, called them. Those companies revolutionized and transform the world economics' over the last two decades, and with a new business models redefined five traditional business notions like: customers, addressable market, value creation, core business and management. GAFA revolutionized the way to look at the customers developing something good and useful for them. They succeeded to create new business models that had better suit many people, obtaining massive user bases. In the last two decades, these companies deeply changed business models and enabled the development of other type of economy. The sharing economy, or collaborative commons, as Jeremy Rifkin called it, internalized the main pillars of this disruptive innovation, such as peer-to-peer network and the will to create benefit for the customers, to optimize the

resources connecting people around the world. These internet-based platforms allowed individuals to disintermediate the traditional commercial channels, to reduce transaction costs, to allocate efficiently idle resources, to create new communities and a new way to consume.

1.4.2 Development of Sharing Economy

The Sharing economy is a recent phenomenon that does not have a serious quantification of its real size and extent. Many think that is a transitory phenomenon but the numbers prove that this new economic model is expected to grow as time goes by. It difficult to see these services as a fad or something reserved to a niche for just a few. The results obtained by some digital collaborative services are surprising:

- Airbnb has reached more than 10 million nights sold and 38,000 users worldwide in just four years after his departure;
- Zopa, leader in social lending, granted loans for about £1.22 billion to over 150,000 people since 2005;
- CouchSurfing has a global community of 10 million people in more than 200,000 cities;
- Kickstarter since the launch on April 2009, financed \$2.1 billion to 10 million people and 98,473 projects have been successfully funded.

In addition to the milestones achieved by the single platform is the entire industry collaborative that is growing strongly.

Between the 2008 and 2010, almost simultaneously in different parts of the world, many digital platforms raised with the goal of connecting individuals of different countries, but early experiences date back to the early 2000s. After some years, these services are still growing both by number of users and for the more generous funding they receive from venture capitalists.

The first experiment with collaborative digital services arose in the early spread of the Internet. In 1995 Pier Omydar, after several attempts, founded eBay, an auction site for goods of all kinds, which is now present in 39 markets with more than 90 million users and has become part of the everyday life. In the same period Craig Newmark, observing systems as WELL and Usenet, where people help each other, decided to create a mailing list of friends where everyone can enter and report events. Today, Craigslist is the largest classified ads website in the world. Four years later, in 2003, CouchSurfing was founded and was the first service that connects travelers with those who offers free accommodation. Simultaneously was launched another peer-to-peer platform, Freecycle, today one of the largest, which allows you to "reallocate" for free what is no longer needed. These platforms have become widespread in all markets and Zopa in 2005 was the first platform of social lending, where

people can exchange money. From those years onwards, the platforms have grown as the number of users that use them, and became more and more social oriented. In 2008 was the turn of two American boys that transformed their idea into a profitable business. Airbnb revolutionized the way people travel, making it more practical and economical. A year later was founded Uber a private transportation company that connect drivers with passengers who need a ride along the same route. In this way both drivers and passengers can optimized their time and money. The latter has had great success and growth²⁰ that has led him to be one of the most popular, most used and the most discussed in the world of sharing platforms.

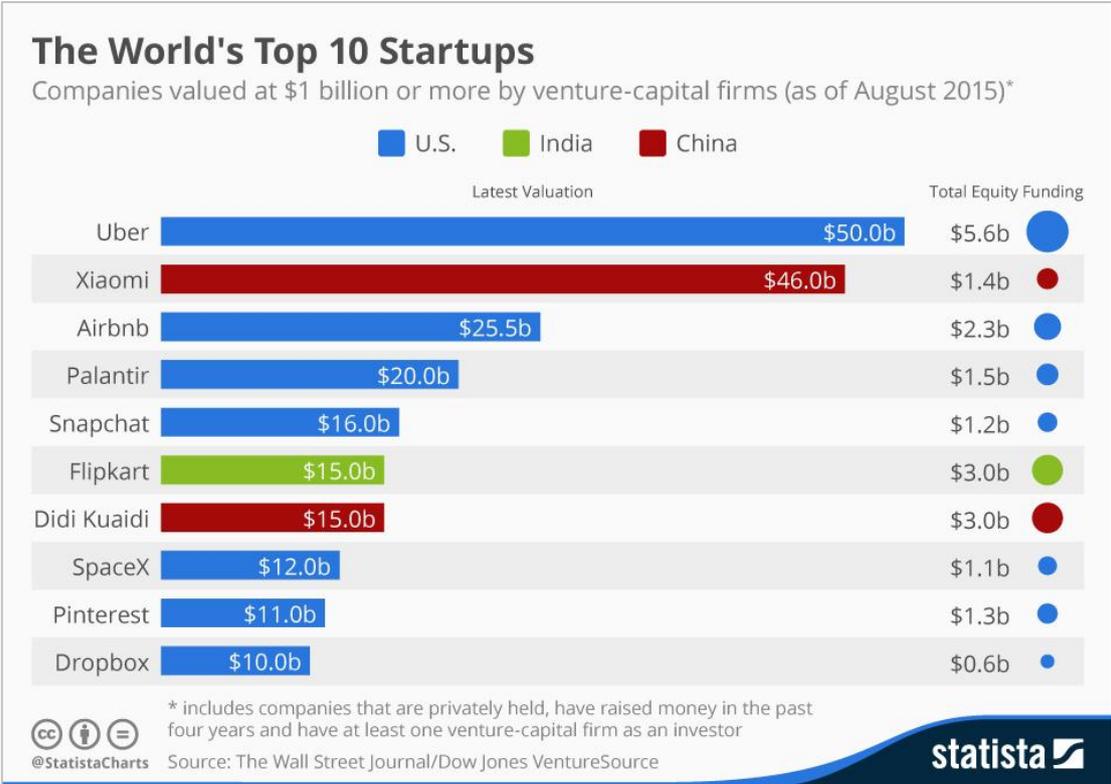


Figure 9: 10 most valuable global startups

²⁰ Figure 9: <https://www.statista.com/chart/1967/startups-valued-at-one-billion-or-more/>

Other examples of sharing economy platforms developed in the following years are: Kickstarter-crowdfunding; Roomorama-accommodation sharing; RelayRides and Getaround-car sharing; carpooling.com and BlaBlaCar-ride sharing; TaskRabbit-performing everyday tasks.

In 2013, Rachel Botsman reported that the peer-to-peer (or P2P) rental market had reached approximately \$26 billion (Botsman 2013) and also Jeremiah Oywang, a marketing consultant, estimated that in 2013 there were 200 companies with more than \$2B in venture funding (although this includes only for-profit sites and those that have advanced to the venture capital stage).

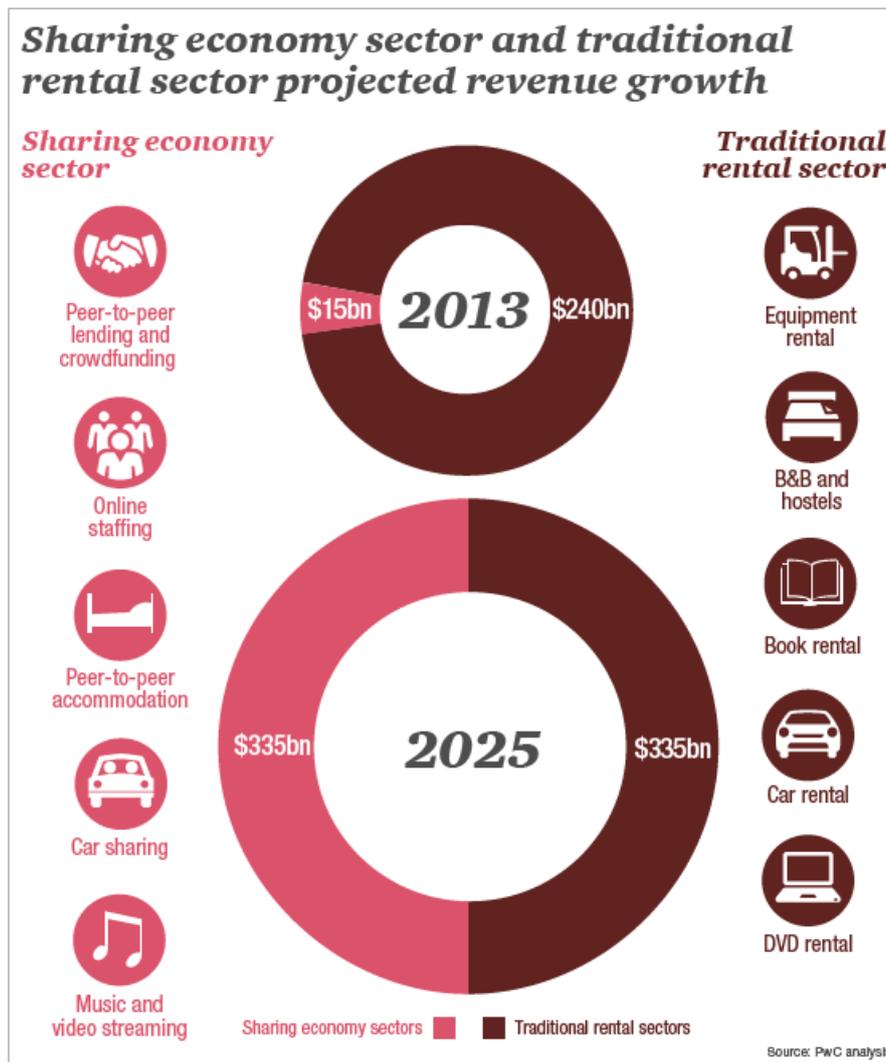


Figure 10: Growth of Sharing Economy sectors

As shown in the figure 10²¹, in 2013, the highest generating sectors within the sharing economy were peer-to-peer finance (money lending and crowd funding), exchange of space, transportation, services, and goods and their revenues are expected to have a large growth in the short term. From a faint appearance of the model, scholars expect significant growth in the next decade.

²¹ Figure 10: <http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/the-sharing-economy-sizing-the-revenue-opportunity.html>

The success of this phenomenon was driven by many factors among which the most important are: a growing environmental consciousness; ubiquity of Internet; information and communication technologies. All these make sharing possible at a global scale.

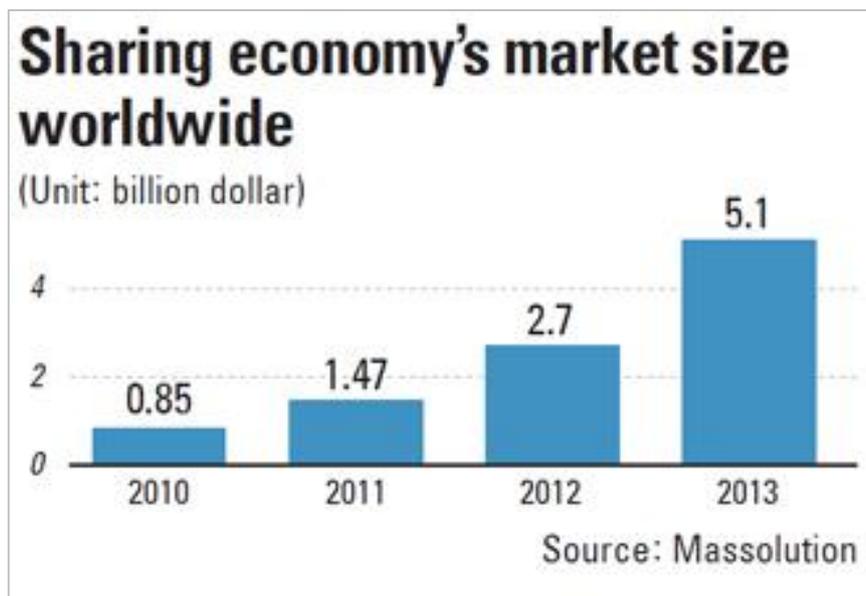


Figure 11: Sharing Economy market size

Sharing economy firms are disrupting traditional industries across the globe. Some example: Airbnb was valued at \$10 billion higher valuation respect the Hyatt hotel chain; Uber's worth is currently about \$18.2 billion relative to Hertz at \$12.5 billion and Avis at \$5.2 billion. The growth of the phenomenon is proved by the 1000 cities across four continents where people can share cars.

Not only the car sharing growth globally: the bike sharing²² is one of the first typology of vehicle sharing, and after some difficulties, it reached a high level of usage in a large number of cities around the world.

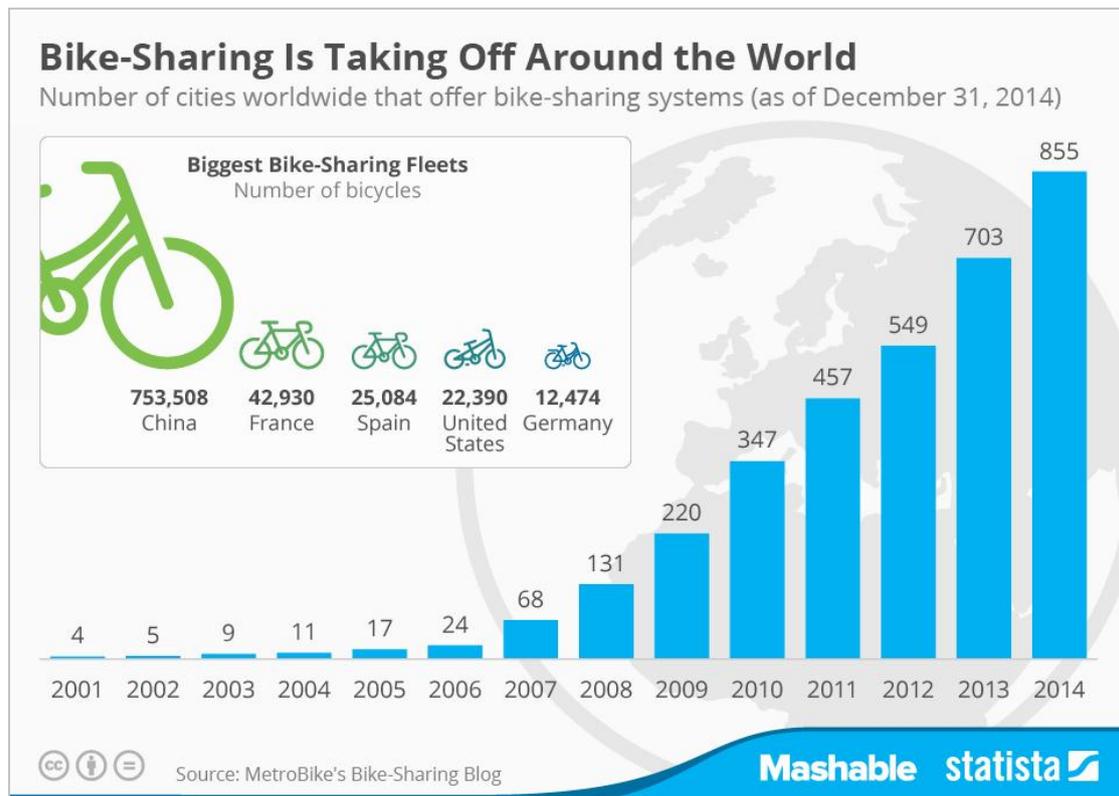


Figure 12: Bike-Sharing penetration worldwide

1.5 The dark side of sharing economy

We start to talk about sharing economy as a revolutionary economic model who is changing the way to do business and to consume. Some researchers questioning the positive sides revealing and focusing on the problems that are emerging by the use of this innovation. It has a real great earning potential,

²² Figure 12: <http://mashable.com/2015/04/07/bike-sharing-systems-worldwide/#Z5kd69TB0ZqI>

but problems abound. At times, they contest the efficacy of the phenomenon and are skeptical on its future; on other occasions, they criticize the risks and the lack of a specific regulation for these services. After the occurrence of some incidents, it is more evident the urgency of solving these issues. The low entry barriers to create a new sharing platform have made them more and more popular and numerous, and the need for a specific regulation is more and more compelling. Issues like new business model, safety, trust, consumer protection, insurances, tax evasion, become even more actual topics.

It is not easy to find the right regulation because these platforms do not operate as hotel or taxi companies. They consider themselves as a technology innovation or app solution that have the role of connecting people in a direct way through their platforms and to process all transactions among the peer. Grey areas are developed because the distinction between business and customer is not so clear and it does not easily comply with the existing regulations. Meanwhile the various governments develop laws suitable for the phenomenon, others are starting to find shortcuts to allow these sites to operate legally, given the growing public support. Amsterdam, in February 2014, became an “Airbnb friendly” city as San Francisco did in October, but the latter imposed some taxes and restrictions. In London, the British government modified a law that limited the short-term stay with the intention to become

the “global center for the sharing economy”. In the following chapters, the cooperative model will be analyzed as a possible model for the regulation of the phenomenon.

Chapter 2. “The Zero Marginal Cost Society”: Rifkin and the Collaborative Commons

2.1 Introduction to Jeremy Rifkin, his opinion and his book

Jeremy Rifkin is an economic and social theorist, activist, and an essayist. He is author of several books about the impact that the scientific and technological changes have on the economy, employment, society and environment. He is the president of numerous foundation: Foundation on Economic Trends of Washington; in 1969 founded the Citizen Commission to denounce the Americans war crimes during the Vietnam War; Greenhouse Crisis Foundation; President of the TIR Consulting Group, LLC. Many described him as an eclectic writer, provocative and visionary economist due to the themes of his study. He wrote about many arguments and his major books are: *The End of Work* (1995); *The Age of Access* (2000), *The Hydrogen Economy* (2002), *The European Dream* (2004), *The Empathic Civilization* (2010), *The Third Industrial Revolution* (2011) and his last book *The Zero Marginal Cost Society* (2014). He had an active role as advisor to the European Union since 2000 and to the leadership of the European Parliament and numerous heads of state. Nevertheless, his prestigious role, his work has also been controversial: opponents questioned the lack of scientific rigor in his statements as well as some of the tactics he has used to promote his views.

During a conference, Jeremy Rifkin opened his speech: "We are at the end of one of the great economic era of humanity, but at the same time, we see the beginning of something else."

The sharing economy is the third industrial revolution: according to the American economist, the affirmation of the sharing is a historic event. It will replace the two systems created in the nineteenth century, that is, capitalism and socialism. Rifkin believes that the future economic model will find its bases on the economy of exchange and collaboration, which is grown around the world. There will be a transition period with a hybrid system, in which the capitalist market-based economy and the sharing economy must coexist. Finally, as the new technologies, Internet and digital platforms will be developed and will enable the exchange economy to reduce almost to zero marginal costs, the share economy will grow more and more and will be able to compete on equal terms. Three are the main Rifkin's predictions:

- The sharing economy as the new economic model that will revolutionize the individuals' way to exchange and consume;
- A decentralized network of alternative energy sources will replace the existing vertically integrated, carbon-based industry;

- The elimination of human work, as the machines take over. This will allow people to have more time for the important things as collaborate with others and build “social capital”.

2.2 Overview of book’s intention

During the last years, a new economic system is emerging and Rifkin called it the Collaborative Economy. This is the first new economic paradigm to emerge since the advent of capitalism and socialism in the early 19th century, and it has long-term implications for society. For the writer, the trigger that gave the birth to that is the zero marginal cost. Marginal costs are the costs of producing an additional unit of a good and service after your fixed costs are covered. Business people are all aware of marginal costs, but the others individuals do not know how the latter are affected their lives in every aspect. Marginal costs are the principle that led the capitalism to the success, but also what led to its end. The paradox is that the collaborative commons emerged from the same principle. During the capitalist era, in the traditional market, business people had as main aim to find a revolutionary technology that could increase the productivity reducing marginal costs to near zero, making goods and services essentially free, priceless and beyond the economic market exchange. Now it

is beginning to happen in the real world and it is possible thanks to the diffusion of the World Wide Web from 1990. With the coming of the latter, the 40% of the population had the possibility to send audio, video, and texting each other at near zero marginal cost. In this way individuals from consumers became prosumers, because they were able to producing and sharing their own videos, their own news blog, their own entertainment, their own knowledge at near zero marginal costs and essentially for free bypassing the capitalist market. Initially industry watchers saw a good opportunity in this phenomenon thinking that the freemiums, or the possibility to have some items, like music or articles, for free, will stimulate people's appetite to want premiums with more customized information. This has not been achieved since people can have for free film, music, information and knowledge. Then economists made another error in thinking that this new zero marginal cost phenomenon on the Internet won't pass the firewall into the physical world of physical goods and services. In contrast to economists' forecasts, the revolution has arrived up to here, and Rifkin called it the Internet of Things.

distributed renewable energy; driverless automated vehicles, logistics and automated drones. The IoT allows people, small cooperatives, small business, and large companies, to have the same possibility and to have equal access like in the initial phase of the Internet.

2.3 From Feudal Society, to Capitalism System and Collaborative Commons

During his studies, Rifkin could reach the conclusion that Collaborative Commons had their beginning in the feudal society. The impossibility to use the abandoned old Roman roads for exchanging and trading, led the people to create closed and isolated localities. The feudal economy was organized around an agricultural life communally structured. The farmers had to donate a large part of their harvest to the Lord and little remained for them. The peasants understood that the most efficient way for surviving was to “combined their individual plots into open fields and common pastures and farmed them collectively”²³. It can be said that this are the born of the Collaborative Commons and the time in which the main traits are developed.

²³ J. Rifkin, *The zero marginal cost society: the internet of things, the collaborative commons, and the eclipse of capitalism*, 2014, p. 28.

In the 1500s, a new economic system rose from the England to spreading in other parts of Europe, and began what was called the “Enclosure Movement”. This movement is viewed as “the revolution of the rich against the poor”, because the latter were deprived of their lands and forced to become the new labor power in the medieval marketplace. The transition from feudalism to capitalism was gradual and was imposed by the introduction of new technologies during respectively the First and the Second Industrial Revolutions.

The First Industrial Revolution in the late Middle Age was characterized by the advent of the water and wind power and print revolution, by the urbanization and after some years by the invention of the coal-powered steam infrastructure. It was the first step toward a market economy that transform the economic paradigm and social construction of Europe. “The shift from a subsistence economy to a market economy, and from production for use to production for exchange, was a watershed event in the human journey”²⁴. Print revolution came in the form of printing press and the latter had an immediate effect on the day-to-day life that Rifkin compare to the Internet of today. Print had profound impact on the way individuals do business; signed the introduction of commercial contracts; print standardized maps, made

²⁴ Ibidem, p. 32.

them reproducible allowing commercial trade; provides versatile management tools; democratizes literacy. “The changeover to capitalism first began in the textile trade”²⁵. In the end of the sixteen century, small manufacturer brought together workers and machinery under one roof using the new source of power to take advantage of the economies of scale in the new profitable market. The figure of craftsmen turned into a new type of master called “the capitalist”. “Capitalism is a unique and peculiar form of enterprise in which the workforce is stripped of its ownership of the tools it uses to create the products, and the investors who own the enterprises are stripped of their power to control and manage their businesses”²⁶. Rifkin according to Weber affirm that the ideal capitalist enterprise “is a bureaucratic organization that rationalizes every aspect of commercial life under single roof”²⁷. In this scenario grew vertically integrated business enterprise that in the nineteenth and in the twentieth century was the dominant business model. The latter introduced new efficient tool that enabled to reach economies of scale and lowered marginal costs, in a way that cheap mass-produced goods stimulated mass consumer demand.

²⁵ Ibidem, p. 36.

²⁶ Ibidem, p. 39.

²⁷ Ibidem, p.40.

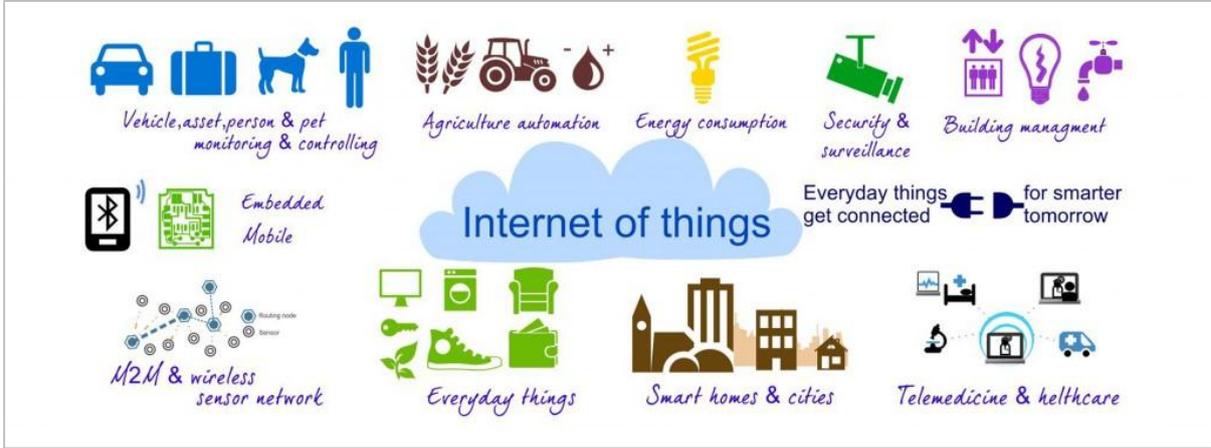
The Second Industrial Revolution found its origin in America and Europe. As the First, also the Second Revolution was characterized by two main inventions:

- The internal combustion engine has expanded the geographic area of economic activities and has made the transport of goods faster and more efficient;
- The introduction of the telephone that provide an agile communications medium for better managing economic activities.

Vertically integrated corporate enterprises become the most efficient because brought together supply chain, production processes, and distribution channels under a centralized management reducing transaction costs and lower marginal cost of production and distribution.

After this two industrial revolution Rifkin indicate as the Third Industrial Revolution the introduction of the Internet, and more specifically the Internet of Things. The main traits of this revolution are the creation of open sources and the profound changes that it has on human consciousness. "The Internet of Things will connect everyone and everything in a new economic paradigm

that is far more complex than the First and the Second Industrial Revolutions, but one whose architecture is distributed rather than centralized”²⁸.



Rifkin highlighted that the “new economy will optimize the welfare by way of laterally integrated networks on the Collaborative Commons, rather than vertically integrated businesses in the capitalist market”²⁹. The emerging IoT infrastructure is a threat for the corporate monopolies and the businesses successful in the twentieth century. New social enterprise can enter in the market using the IoT and “take advantage of its open, distributed, and collaborative architecture to create peer-to-peer lateral economies of scale that eliminate virtually all of the remaining middlemen”³⁰. “The compression dramatically increases efficiencies and productivity while reducing marginal

²⁸ Ibidem, p.56.
²⁹ Ibidem, p. 56.
³⁰ Ibidem, p. 56.

costs to near zero, enabling the production and distribution of nearly free goods and services”³¹.

2.4 The rise of the Collaborative Commons

During the last industrial revolution, there was a re-born of the Commons enabled by the Internet. Commons predates that “the capitalistic system and proved to be an effective governing model for organizing economic life during the feudal and medieval eras”³². Numerous researchers like Hardin, Rose, Ostrom, explained their own idea on the phenomenon. Hardin in 1968 focused his essay “The Tragedy of the Commons” on the relevance of trust in the model. Over the next 25 years, some scholars analyzed the Commons as a governing model. They thought that its principles and assumptions could be used for an economy where the control of commerce was decentralized, distributed, and facilitate the peer-to-peer production and the access to shareable goods was more valued than the property. In 1986, 18 years after Hardin’s essay, Carol Rose published her salvo entitled “The Comedy of Commons” in which she defended the governance of the latter and explained that not everything could be privatized like oceans, rivers, forests, mountains

³¹ Ibidem, p.56.

³² Ibidem, p. 125.

and so on. On the same topic participated also the professor Crawford Macpherson, one of the major academic of the history of property. He noted that individuals used to think about property as “the right to exclude others from the use or benefit of something that we have lost sight of an older conception of property”³³, while in commons held the customary right to access to property. Rifkin summarized in this way the thought of the scholar: “The right to be included, to have access to one another, which is the right to participate “in common,” is the fundamental property right, while private property, the right to enclose, own, and exclude is merely a qualified deviation from the norm”³⁴. Some years later, the economist Elinor Ostrom in her “The governing of the commons”, wrote the first comprehensive economic and anthropological analysis on the history of the commons, on the causes for the success and the failure of their governance, and her instruction for assuring the success of future Commons management. One of her findings in managing common-pool resources was to understand that individuals put the community’s interest before self-interest and the long-term preservation of the common resource above their needs. Ostrom and her colleagues, after research and studies on what makes commons work, succeeded to outline seven “design principles”:

³³ Ibidem, p.127.

³⁴ Ibidem, p. 127.

1. *“Clearly defined boundaries” on who is allowed to appropriate from the commons and who is not.*
2. *Establish appropriation rules restricting the time, place, technologies, and quantity of the resources to use, and setting up the rules on the amount of labor, materials, and money allotted to the appropriation.*
3. *Guarantee that those affected by the appropriation rules jointly and democratically determine those rules and their modifications over time.*
4. *The commons association should ensure that those monitoring the activity on the commons are the appropriators or are accountable to them.*
5. *Appropriators who violate the rules should be subject to graduated sanctions by the other appropriators or officials accountable to the appropriators, to guard against overly punitive punishment that sours their future participation and creates ill will in the community.*
6. *The commons association ought to build in procedures for rapid access to low-cost private mediation quickly to resolve conflict among appropriators or between appropriators and public officials.*
7. *It is vital that government jurisdictions recognize and condone the legitimacy of the rules established by the commons association. If government authorities do not provide a minimum recognition of the*

*authority of the commons association to self-manage and, in effect, treat it as illegitimate, the self-rule of the commons is not likely to be able to sustain itself over time.*³⁵

These rules appears in the communities all over the world, before and after the advent of the age of global communication.

2.5 Next step of Collaborative Commons

With the born of the Internet, there were the creation of communities based on the Commons. Stallman believed that privatize the new communications media was unfair, because software became quickly the way in which people communicate between themselves and with the things. In his opinion, the software should be distributed, collaborative and free: “free speech, not free beer”. With a consortium of the best software programmers, he developed GNU, an operating system of free software in which individuals could access, use and modify. In 1985, Stallman founded the Free Software Foundation with these principles: “The freedom to run the program, for any purpose. The freedom to study how the program works and change it so it does your computing as you wish. . . . The freedom to redistribute copies so you can help

³⁵ Ibidem, p. 130.

your neighbor. [And] the freedom to distribute copies of your modified versions to others. By doing this you can give the whole community a chance to benefit from your changes”³⁶. Then he created the free software manifesto called GNU General Public License (GPL) for protecting its freedom statement, and this “copyleft” license was an alternative to the copyright law. Its aim is to “give every person who receives a copy of a work permission to reproduce, adapt or distribute it and require that any resulting copies or adaptations are also bound by the same licensing agreement”³⁷. The most relevant point is that the license embodied the Elinor Ostrom’s principles.

Six years later Linus Torvalds, a student in the University of Helsinki, developed a free software compatible with the Stallman’s GNU. “The Linux kernel made it possible for thousands of prosumers around the world to collaborate via the Internet on improving free software code”³⁸. This software was the demonstration that collaboration can give better results than private one, and as Stallman asserted: “open source is a development methodology; free software is a social movement”³⁹. The Internet, also with the emergence of social media, has taken on a new role: “a place where human beings create social capital rather than market capital”⁴⁰; and “the global democratization of

³⁶ Ibidem, p. 140.

³⁷ Ibidem, p. 140.

³⁸ Ibidem, p. 140.

³⁹ Ibidem, p. 141.

⁴⁰ Ibidem, p. 142.

culture is made possible by an Internet communication medium whose operating logic is distributed, collaborative, and laterally scaled”⁴¹. Now the cost of communication on the Internet is near zero like oral one, but is shared among 2,7 billion human beings. Successively Stallman and Lessing founded the Creative Commons and Creative Commons licenses, in which the innovation was “some rights reserved” because as Lessing explained: “The creator can mix these freedoms and restrictions, resulting in six licenses, which come in three layers”⁴². This license became viral by 2008 and some big name like Flickr, YouTube and Wikipedia opted for it. Lessing believed that “copyright will remain a viable part of the coming era but will need to make room for open-source licensing in a world that will be lived partially in the market and partially on the Commons”⁴³. These innovations became even more important with the increase of the amount of Big Data that people started to share and the latter contributed to form the collective wisdom. Yochai Benkler saw in the Internet and digital networks a “third mode of production”, calling it “Commons-based peer-production” and explained that: “Its central characteristic is that groups of individuals successfully collaborate on large-scale projects following a diverse cluster of motivational drivers and social

⁴¹ Ibidem, p. 142.

⁴² Ibidem, p. 144.

⁴³ Ibidem, p. 145.

signals, rather than either market prices or managerial commands”⁴⁴. Moreover, in his book “The Wealth of Networks”, he explained that people would be able to benefit from Commons only with the creation of a common infrastructure: “To flourish, a networked information economy rich in social production practices requires a core common infrastructure, a set of resources necessary for information production and exchange that are open for all to use. This requires physical, logical, and content resources from which to make new statements, encode them for communication, and then render and receive them”⁴⁵.

2.6 Cooperatives

Rifkin in his book has also deepened the topic of cooperatives and specifically talked about the cooperatives’ renaissance. The latter are developed to operate as Commons and for accomplishing different goals. They are representing globally by the ICA, the International Cooperative Alliance that give a specific definition of the model: “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled

⁴⁴ Ibidem, p. 153.

⁴⁵ Ibidem, p. 155.

enterprise”⁴⁶. They are driven by cooperation and social commitments and as ICA explain: “cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity. [...] Cooperative members believe in the ethical values of honesty, openness, social responsibility, and caring for others”⁴⁷. Like the Commons, also the cooperatives had their born in old times, but the first example of cooperative dated back to the 1844 in England with 28 textile workers that called it Rochdale Society. The latter established seven main rules, then used like standard protocol for cooperatives. In the following years, those were revised and ICA proclaimed them as the governance model for cooperatives. The rules are the following:

- 1. First, any individual is welcome to become a member of a cooperative regardless of race, religion, ethnicity, gender, or social or political affiliation.*
- 2. Second, cooperatives are democratically run associations in which each member enjoys a single vote. Elected representatives, drawn from the membership, are responsible for management of the association and accountable to the membership.*

⁴⁶ Ibidem, p. 169.

⁴⁷ Ibidem, p. 170.

3. *Third, members contribute equitably and democratically to the capital of their cooperative. Part of that capital becomes the common property of the cooperative. Members jointly decide on how their funds ought to be used in the development and day-today operations of the cooperative.*
4. *Fourth, cooperatives are autonomous, self-help associations. Although they can and do enter into various business arrangements with other organizations, they do so in a manner that ensures their democratic control of the cooperative and its autonomy.*
5. *Fifth, cooperatives provide education and ongoing training for their members, managers, and employees to encourage their full participation in the programs, projects, and initiatives of the association.*
6. *Sixth, cooperatives are expected to broaden the networked Commons by providing an ever-expanding and ever-integrating space for collaboration and cooperation across regions and the world.*
7. *Seventh, cooperatives are tasked with the mission of promoting sustainable development within the communities they serve through the policies and programs they engage in⁴⁸.*

A very important trait of these rules lie in the fact that they epitomize the vision and practice of Commons management. Their business model based on

⁴⁸ Ibidem, p.170.

collaboration, equity and sustainability, may sound unreal, but more than 1 billion people are members of cooperatives and they employ 100 million people. They operate in many sectors as agriculture, food production, retail, health care, insurance, energy, transmission, credit unions and in countries like U.S., U.K., Germany, Italy, France, Netherlands, but also in India and China there are 400 million people members of cooperatives. “By operating as nonprofit enterprises in a shared Commons, outside the market, they could move goods and services to their members at low marginal cost because they were operating through a nonprofit business model”⁴⁹. Cooperatives provide a business model that give to small and medium- sized enterprise the same possibility of bigger company, because they can combine their financial resources to purchase raw materials and goods from suppliers to a lower cost, and in the same way, share marketing, logistics and distribution channels. It is amplified with the advent of the Internet of Things but they must become able to use this global platform in order to draw benefits. “Cooperatives are the only business model that will work in a near zero marginal cost society”⁵⁰.

⁴⁹ Ibidem, p. 172.

⁵⁰ Ibidem, p. 172.

2.7 From ownership to sharing

Today the Millennials grow up with a different idea of property: it is not more “the right to exclude others”, but as Rachel Botsman said, “what’s mine, is yours”.

Toward the years the notion of property and property rights, is changed and is constantly evolving. In the feudal society “all earthly things is made up God’s creation and were his exclusively to dispose of”⁵¹. The property was related to a theological vision of the property based on a series of trusts: “property was never exclusively owned, but rather divvied up into spheres of responsibility conforming to a fixed code of proprietary obligations”⁵².

The subsequent changes in the economic system have led to changes also in the nature of property relations, from conditional rights to exclusive ownership. “After centuries in which people belonged to the land, the land now belonged to individual people in the form of real estate that was negotiable and exchange in the marketplace”⁵³. Home, land and labor were transformed into a commercial resource and a form of exclusive property that could be exchange in the marketplace. The Enclosure Movement born in England gave rise both to the modern notion of private-property regime and

⁵¹ Ibidem, p. 28.

⁵² Ibidem, p. 29.

⁵³ Ibidem, p. 30.

to the legal system to settle it. During the eighteenth and nineteenth centuries, the governments had as main aim to develop rules to protect private property and market economy.

From the feudalism society, where the lands were sharing under the God will, to the modern economy, where the private property is the hallmark of that centuries, now the new sharing economy is experiencing another metamorphosed type of property.

Now the society moved to the importance of owned, to the freedom to access each good or service an individual needs. This is the revolutionary possibility that lie in this new economic model. For the new generation freedom is:

- *freedom means the ability to optimize one's life;*
- *Freedom is measured more by access to others in networks than ownership of property in markets;*
- *Freedom for an Internet generation is the ability to collaborate with others, without restriction, in a peer-to-peer world⁵⁴.*

“The privately owned automobile, the centerpiece of the capitalist marketplace during the Second Industrial Revolution, is falling victim to the distributed, laterally scaled opportunities of car sharing on a rising

⁵⁴ Ibidem, p.180.

Collaborative Commons better suited to optimize the general welfare of society. Rather than the market taming the Commons, it is the Commons taming the market [...]”⁵⁵. Rifkin takes the example of automobiles to show how the new economic model has changed the habits of the society. Amy Chozick conducted a research, “As young lose interest in cars”, in which 3000 millennials, born between 1981 and 2000, had to rank 31 brands according to their preferences: in the top ten appears the name of technologic companies like Google rather than cars brand. Today’s young prefer to pay what they consume, and not the cost of owning. In “The Age of Access”, Rifkin wrote: “it is likely that for a growing number of enterprises and consumers, the very idea of ownership will seem limited, even old fashioned, 25 years from now”⁵⁶. The sharing movement and the collaboration moved from a practice of a niche, of a limited group of people, to be a dominant model in the daily society, where the collaborative production and exchange are now common practices. Individuals now “buy less, save more and share what one has with others”; “runaway consumption would be replaced by a shareable economy”⁵⁷.

Together with these changes, also the figure of consumer is changed, and it is developed the figure of prosumer. The way in which individuals can keep in

⁵⁵ Ibidem, p. 183

⁵⁶ Ibidem, p. 186

⁵⁷ Ibidem, p. 187

touch with the other is even easier, and they are connected in peer-to-peer networks. “In a sense, consumers become prosumers by financing the means of production that deliver the end products they will consume”⁵⁸. If all consumers can be prosumers, this means that there are an unlimited number of goods and services that, with the Internet, become nearly free, because the marginal cost to produce and distribute the items shrink to near zero. This organizing mechanism goes against the principles of capitalism, that need of scarcity: if the goods and services are scarce, they can be exchanged and priced on the marketplace; but if they are free, this become meaningless. “The notion of organizing economic life around abundance and use and share value rather than scarcity and exchange value is so alien to the way we conceive of economic theory and practice that we are unable to envision it”⁵⁹.

2.8 Conclusions

The purpose of Rifkin throughout his book is to show that the will of sharing is embedded in human nature, and this is demonstrated by its ancient origins. People collaborate spontaneously and have always created technologies to do it in a more simple, fast and efficient way and spreading its horizon to become

⁵⁸ Ibidem, p. 192.

⁵⁹ Ibidem, p. 217.

global. Moreover, the propensity to share is stronger and concrete in times of difficulty and crisis. Rifkin described many examples of collaborative commons: from feudalism to free software, to cooperatives and the Internet of things. In addition to give concrete examples, he takes advantage of the research of scholars like Benkler, Ostrom, Rose and Macpherson. In his opinion, this new economic model will replace the capitalism' era and the cooperative model is the only one that can operate in a near to zero marginal cost society.

Chapter 3. Benkler and “Commons-based peer production”

3.1 Yochai Benkler

Yochai Benkler is the Berkman Professor of Entrepreneurial Legal Studies at Harvard Law School, and faculty co-director of the Berkman Center for Internet and Society at Harvard University. Since the start of his career in the 1990s, he was an active researcher in the field of “networked information economy” and he coined the term “commons-based peer production”. He focused on the role of information commons and decentralized collaboration to innovation, information production, and freedom in the networked economy and society, and on commons-based approaches to managing resources in networked environments. He showed also an interest in transaction costs, peer production and sharing economy. His most representative publications are: "Overcoming Agoraphobia: Building the Commons of the Digitally Networked Environment," 11 *Harvard Journal of Law and Technology* 287 (1998); "Coase's Penguin, or, Linux and The Nature of the Firm," 112 *Yale Law Journal* 369 (2002); “The Wealth of Networks: How Social Production Transforms Markets and Freedom” (Yale University Press 2006). The latter won academic awards from the American Political Science Association, the American Sociological Association, and the McGannon award for social and ethical relevance in communications. He has received other awards such as: the Public Knowledge

IP3 Award in 2006; the Electronic Frontier Foundation's Pioneer Award for 2007; the Ford Foundation Visionaries Award in 2011; a lifetime achievement award from Oxford University “in recognition of his extraordinary contribution to the study and public understanding of the Internet and information goods” in 2012.

3.2 Overview of “The Wealth of Networks: How Social Production Transforms Markets and Freedom”

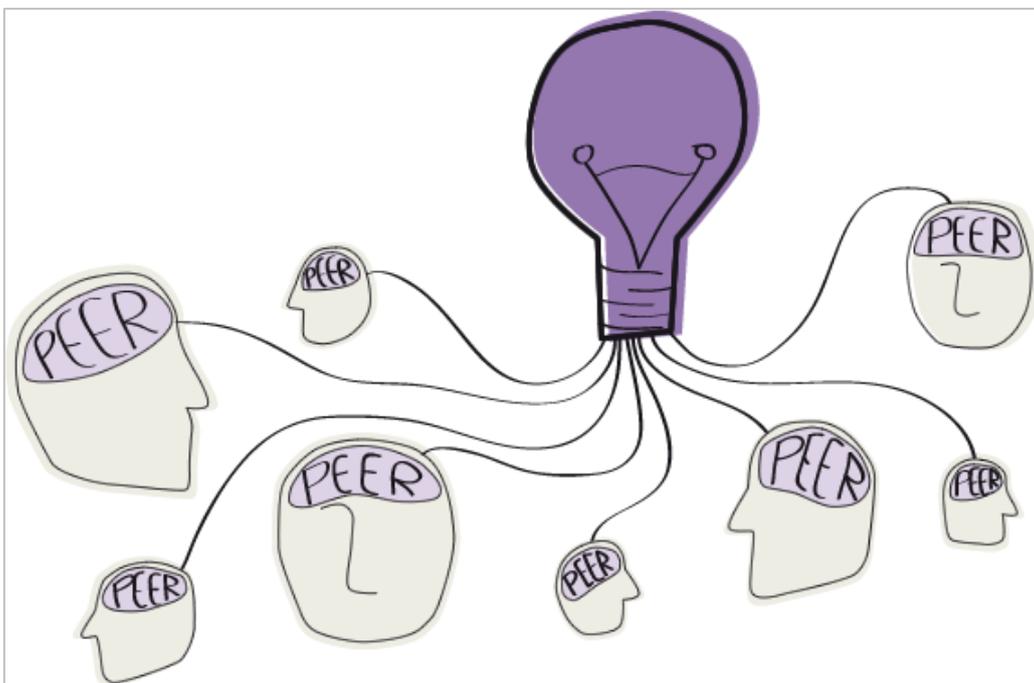
The goal of the book is to describe the mechanisms that are disrupting the production of information and knowledge, starting from the use of technology, especially of the network, and strategies for collaboration. He argued that the new processes of network cooperation were undermining the traditional industrial model that structured the cultural production throughout the twentieth century. All this will lead to the need to establish new standards for content protection and for the definition of an ecology of the digital environment. The whole book is based on the comparison between the industrial information economy and the emerging information economy that he called “networked information economy”. In this new model, the means of reproduction are accessible to a large number of individuals, due to the spread

of digital technologies and the lower costs of distribution thanks to the networks. This will create the conditions to develop new means of production of knowledge even more cheap and easy to use. With the lowering costs of production and the easier access to knowledge are emerging information, culture, social practices and mechanism for sharing and cooperate. By the use of examples like GNU, Linux and Wikipedia, Benkler showed a phenomenon in which groups of volunteers are able to organize themselves, and the latter can build, in a horizontal and distributed way, relevant and reliable systems, much more performant of commercial productions. The breadth and depth of the changes that are triggering these processes, is also linked to the enormous amount ever-growing cultural actors. This process leads to a change in the concept of autonomy, which takes two main meanings: as a capacity to action individually, and as collaboration with others. In addition, it is based on the access to informational goods, on the ability to distribute in a horizontal and modular way skill and the possibility of intervention, using the model of peer production. Benkler also reveals the problem of lack of clear legislation, which is the major cause of disagreements between industrial production and peer production, and it is a big problem for the development of the latter.

3.3 The role of information, knowledge and culture

Benkler observed the changes that the Internet revolution has led to people's daily life, analyzing what is at the basis of society: the information, culture and knowledge.

“Information, knowledge, and culture are central to human freedom and human development. How they are produced and exchanged in our society critically affects the way we see the state of the world as it is and might be; who decides these questions; and how we, as societies and polities, come to understand what can and ought to be done”⁶⁰.



⁶⁰ Y. Benkler, *The wealth of networks : how social production transforms markets and Freedom*, 2006, p.1.

The turning point that has driven the economy into the production of information and culture, in a less elitist and in a more collective ways, arrived since the birth of the Internet, who created a new communications environment.

The real development of the societies is associated with the industrial information economy, which characterized modern democracies in the last 150 years. Adjustments in economic, social and cultural environment followed the technological changes that caused a transformation in how people create the informational environment, both as autonomous individuals and citizens as well as members of social and cultural groups. Individuals have a more active role in the production and distribution of the information and they can choose to do it individually or in cooperatives. The changes caused by the networked information environment is profound and radically modify the production techniques, developing new opportunities for the creation and exchange of information, knowledge and culture. The main innovations are the nonmarket and nonproprietary production, and a strong bond of collaboration.

Benkler want to focus on the main features of this emergent new phase of the information economy, that he called “networked information economy”. “It is displacing the industrial information economy that typified information

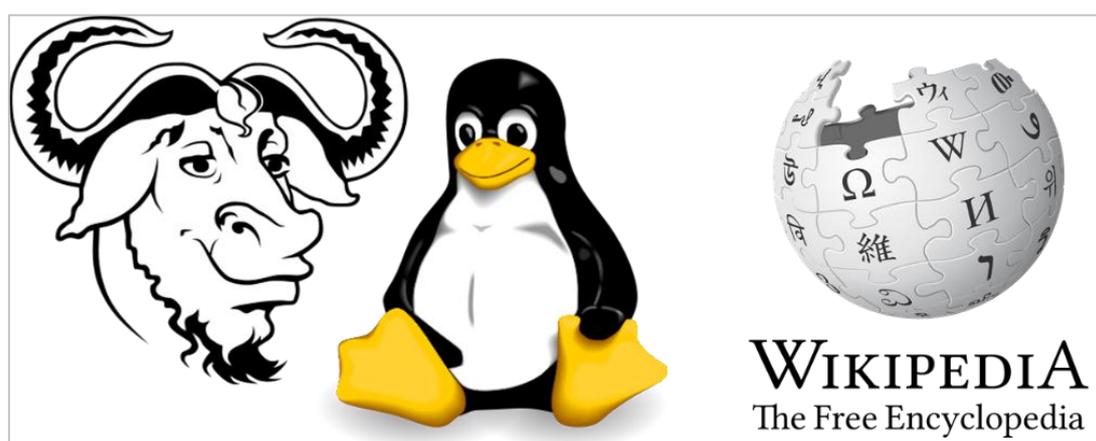
production from about the second half of the nineteenth century and throughout the twentieth century”⁶¹. The characteristic elements of this new model are:

- Decentralized individual action: new and important cooperative and coordinated actions carried out through radically distributed, nonmarket mechanisms that do not depend on proprietary strategies;
- The declining price of computation, communication, and storage of data;
- The removal of the physical constraints and barriers on effective information production.

The diffusion of low-cost computers and the ability to connect in an increasing number of places were important things that led to the growth of the phenomenon and the growing adhesion of the people. Individuals are motivated to use and to make available to others their creativity and knowledge without expecting a monetary return. In fact, education, art and science have always been linked to non-commercial and personal reasons and mainly imply the emotional and motivational side of a person. The persons who share their information, individually or in cooperative, were able to transmit it to millions of people all over the world, realizing a richer

⁶¹ Ibidem, p. 3.

information environment. All this was followed by the emergence of large cooperative projects dedicated to the horizontal production of information, knowledge and culture. These projects are characterized by the rise of free and open-source software and the use of the peer production. Among the major examples, there are GNU/Linux, Wikipedia and SETI@Home. It can be difficult understand what is the secret of the growth of these phenomena and the reason that is at the basis of cooperation between the volunteers. However, Benkler affirm that “we should try instead to see them for what they are: a new mode of production emerging in the middle of the most advanced economies in the world— those [...] for which information goods and services have come to occupy the highest-valued roles”⁶².



“The result is that a good deal more that human beings value can now be done by individuals, who interact with each other socially, as human beings and as

⁶² Ibidem, p. 6.

social beings, rather than as market actors through the price system”⁶³. These experiments prove the existence of a thriving non-commercial sector of the production of information, knowledge and culture, based on an environment of network and applicable to many other things. The resulting output is not treated as private property, but is then submitted to the ethic of open sharing, remaining available to all who want to build upon, extend the scope of, or create their own output.

3.4 The individual, the community and the social relations on the network.

In this new-networked information economy, people have new possibilities and capabilities that can exploit the way they want:

- Enhance their ability to do more on their own for themselves;
- Increase the ability to freely associate with others;
- Increase the capacity and ability of individuals to engage in organizations formal operating outside the sphere of the market.

“Individuals are using their newly expanded practical freedom to act and cooperate with others in ways that improve the practiced experience of

⁶³ Ibidem, p. 6.

democracy, justice and development, a critical culture, and community”⁶⁴. They can do more things on their own and create individually, or they can establish temporary links with others. When people realize to be able to work with people from all over the world in an increasingly simple way, the examples of cooperation become more numerous as the number of projects. They are becoming active protagonists of their own lives, having the ability to create information from their point of view continually confronted with others. In this way, the traditional mass media have less power and less influence on their choices. For this reason, also Benkler recognized the Internet as an enabler of the democracy. Some criticism were moved at this system for two main reasons:

- The “Babel objection”: the overload of information that come from a large number of people “when everyone can speak, no one can be heard”;
- There are sites most visited than others, which remain unnoticed also with a big number of individuals connected on the Internet.

To counter criticisms of the network, Benkler described the dark side of the commercial mass media and the new role of the public sphere on the Internet.

⁶⁴ Ibidem, p. 9.

The commercial mass media have been studied for a long time and have emerged a number of defects:

- Entrust their information collection in a limited group and too many observations are lost and overshadowed;
- Mass media give their owners an enormous power and they decide what are the insights and relevant information to be transmitted on the market.

This last point then flows into the choice of news more general and superficial to reach a greater number of people. On the contrary, the networked public sphere enables many individuals to communicate to others their observations and points of view, in order not to be controlled and guided in their choices and in their own thoughts, as is the case in the media. “Individuals become less passive, and thus more engaged observers of social spaces that could potentially become subjects for political conversation; they become more engaged participants in the debates about their observations. The various formats of the networked public sphere provide anyone with an outlet to speak, to inquire, to investigate, without need to access the resources of a major media organization”⁶⁵. Moreover, the networked public sphere began to develop techniques to manage the abundance of information that can be

⁶⁵ Ibidem, p. 11.

found on the internet, in order to provide reliable and truthful information. However, these filters are far from the model of the mass media and there are two the elements that characterize them:

- Relevance and accreditation are providing by a practices of mutual pointing and by techniques of peer review;
- Observation about the way users utilized the network, because the information flowing in a more orderly way than it can might imagine given the amount of people talking, and these latter are centered on specific communities of interest.

“It is more difficult to buy attention on the Internet than it is in mass media outlets, and harder still to use money to squelch an opposing view. These characteristics save the networked environment from the Babel objection without reintroducing excessive power in any single party or small cluster of them, and without causing a resurgence in the role of money as a precondition to the ability to speak publicly”⁶⁶.

The Internet does not favor democracy, but has introduced innovation in terms of technical infrastructure. On the Internet, it is more difficult to control the production of information as in the mass media, because there are many

⁶⁶ Ibidem, p.13.

manufacturers. “While this does not mean that introduction of the Internet will automatically result in global democratization, it does make the work of authoritarian regimes harder”⁶⁷. The mechanisms for filtering, accrediting and synthesize information are the basis of the role of the network but it does not have the power to derail the debate: no checkpoint can silence an observation or direct the attention for the decree or the power of money. With these new systems, the networked economy is solving the problems of excess information and the fragmentation of the debate without the distortions typical of the model media. Benkler affirmed, “we are witnessing a fundamental change in how individuals can interact with their democracy and experience their role as citizens”⁶⁸. “The network allows all citizens to change their relationship to the public sphere. They no longer need to be consumers and passive spectators. They can become creators and primary subjects. It is in this sense that the Internet democratizes”⁶⁹.

In this scenario, also the culture is changing, becoming more critical and reflective. In the past years, authors like Niva Elkin Koren, Terry Fisher, Larry Lessig and Jack Balkin, started to discuss about the democratization of the culture with the advent of the Internet. This latter makes the culture more

⁶⁷ Ibidem, p. 271.

⁶⁸ Ibidem, p. 272.

⁶⁹ Ibidem, p. 272.

transparent and more malleable. It can be said that the culture become more democratic because the individuals are able to actively participate in the cultural changes, bringing out and participating in the development of a new popular culture. “Following Manuel Castells and Barry Wellman, I suggest that we have become more adept at filling some of the same emotional and context-generating functions that have traditionally been associated with the importance of community with a network of overlapping social ties that are limited in duration or intensity”⁷⁰.

3.5 The information is a “public good”

Benkler categorizes the information, culture and knowledge as public goods and they have the characteristic of being non-rival, therefore each person can use it without reducing its availability. This means that when a “non-rival” good is produced, no other social resources must be invested to create more products to satisfy other consumers. His purpose is to make clear that as a public good, the information does not need patents and copyrights because they cannot work in the right way and are not effective. The term public good suggests that the market cannot produce them because they should be sold at

⁷⁰ Ibidem, p. 16.

a price equal to the marginal cost, which is zero. In 1962, Kenneth Arrow affirmed: “precisely to the extent that [property] is effective, there is underutilization of the information”⁷¹. A market is efficient only when can assigned a price to a good that must be equal to its marginal costs. This latter sentence proves that the information should be produce through a nonmarket production. This statement also shows that in markets based on patents and copyrights will form a trade-off between static and dynamic efficiency. In particular, these inefficiencies are the following:

- Who owns the information should give it away for free to others, but this is opposed to the laws on copyright, which always leads to the inefficient underutilization of information;
- However, without any kind of protection, without copyrights, no one would produce information if they should distribute it freely.

“In order to harness the efforts of individuals and firms that want to make money, we are willing to trade off some static inefficiency to achieve dynamic efficiency. That is, we are willing to have some inefficient lack of access to information every day, in exchange for getting more people involved in information production over time”⁷². Innovation and creativity are the

⁷¹ Ibidem, p. 36.

⁷² Ibidem, p. 37.

benefits originated by patents and copyrights but they have limitations. Patents and copyrights are not required to regulate the right of access to information if there are people and companies who do not care to earn or if they can receive remuneration for the production without having exclusive control on products.

Moreover, the information has another peculiarity: "information is both input and output of its own production process"⁷³. This feature is called "on the shoulders of giants" recalling a statement of Isaac Newton. The reason is that any new good or informational innovation is based on existing information. If patents and copyrights give the possibility to information's owners to impose high prices, these can scared the innovators of today that can both lower the consumption of information but also the production of the latter. The case of *Eldred vs Ashcroft*, the constitutionality of the 1998 Sonny Bono Copyright Term Extension Act (CTEA), provides the clearest proof of consent widespread among economists about whether the excessive protection of the "intellectual property" is economically harmful because the combination of the effect of non-rivalry with the effect "on shoulders of giants." "The efficiency of regulating information, knowledge, and cultural production through strong copyright and patent is not only theoretically ambiguous, it also lacks empirical

⁷³ Ibidem, p. 37.

basis”⁷⁴. Josh Lerner conducted a study in which he showed that with a strengthened legislation, investment in research and development (R & D) in local companies decreased. This achievement may seem strange, but when it is considered the interaction between the non-rivalry and effect “on shoulders of giants”, the results are consistent. Increased patent protection increases costs that innovators have to pay for pre-existing knowledge. Neither economic theory nor evidence empirical provide significant support to the idea that we can regulate the production of information, culture and knowledge with the tools of the intellectual property. Since 1981, the repeated surveys have shown that, in almost all industries, patents are not the major source of income.

Since it cannot be produced by the market, Benkler offers two other options as producers of information: 1) non-commercial sources - public and non-state actors; 2) market players whose business models does not depend on the intellectual property rules. This second actor might seem unusual, but there are also examples in the everyday life. No daily newspaper depends on copyright. Moreover, this technological revolution has made possible the radical reorganization of the production system of culture and information, penalizing commercial, concentrated business models, and enhancing

⁷⁴ Ibidem, p. 38.

nonproprietary appropriation strategies, in particular towards those noncommercial strategies that lost effectiveness during the industrial era because of the high capital costs of effective communication. The latter changed also the input needed to produce information. There are three major categories of input:

- Existing information and culture. Existing information is a non-rival good and its real marginal cost at any given moment is zero;
- Mechanical mean. They are used to analyze the environment, process data and communicate it the new information produced. This cost, which in the model Industrial was very high, the computer networks has drastically lowered;
- Human communicative capacity: the creativity, the experience and knowledge needed to draw information from existing cultural resources and turn them into new ideas, symbols or representations that become meaningful to others.

“Given the zero cost of existing information and the declining cost of communication and processing, human capacity becomes the primary scarce resource in the networked information economy”⁷⁵. Now the human capacity is at the center of the information production system. It is exchanged in the

⁷⁵ Ibidem, p. 52.

market as creative labor, but with the use of the Internet and without the constraints of the physical capital, the creative people can participate in the global production of a wide range of projects. They can undertake ideas, insights and opinions exchange with the creation of social relations. “In the physical economy, these relationships were largely relegated to spaces outside of our economic production system”⁷⁶.

“The promise of the networked information economy is to bring this rich diversity of social life smack into the middle of our economy and our productive lives”⁷⁷. The sources of knowledge and culture have changed radically, passing from the strong addiction of commercial media concentrations in a much more distributed model, which is based on many actors who are not driven the imperatives of advertising or the sale of entertainment goods. The competition has become tougher because there are more people who create information, but there are many more niche markets, as the cost of production has gone down, and everyone can deepen their knowledge about what they like, without having to know only what appeals to many.

⁷⁶ Ibidem, p. 53.

⁷⁷ Ibidem, p. 53.

In this scenario, the most important issue to focus on is the legislation. All of this economic system has evolved, except “the institutional ecology, the political framework (the lobbyists, the habits of legislatures), and the legal culture (the beliefs of judges, the practices of lawyers)”⁷⁸, that are also focused on the conditions’ optimization for the companies. Two alternatives are emerged: the ones described by Lawrence Lessing, with a society characterized by a permission culture, or, as Benkler suggests, “into a society marked by social practice of nonmarket production and cooperative sharing of information, knowledge, and culture [...] which I argue will improve freedom and justice in liberal societies”⁷⁹. He conclude, “We must understand these new modes of production. We must learn to evaluate them and compare their advantages and disadvantages to those of the industrial information producers. And then we must adjust our institutional environment to make way for the new social practices made possible by the networked environment”⁸⁰.

⁷⁸ Ibidem, p. 57.

⁷⁹ Ibidem, p. 57.

⁸⁰ Ibidem, p. 58.

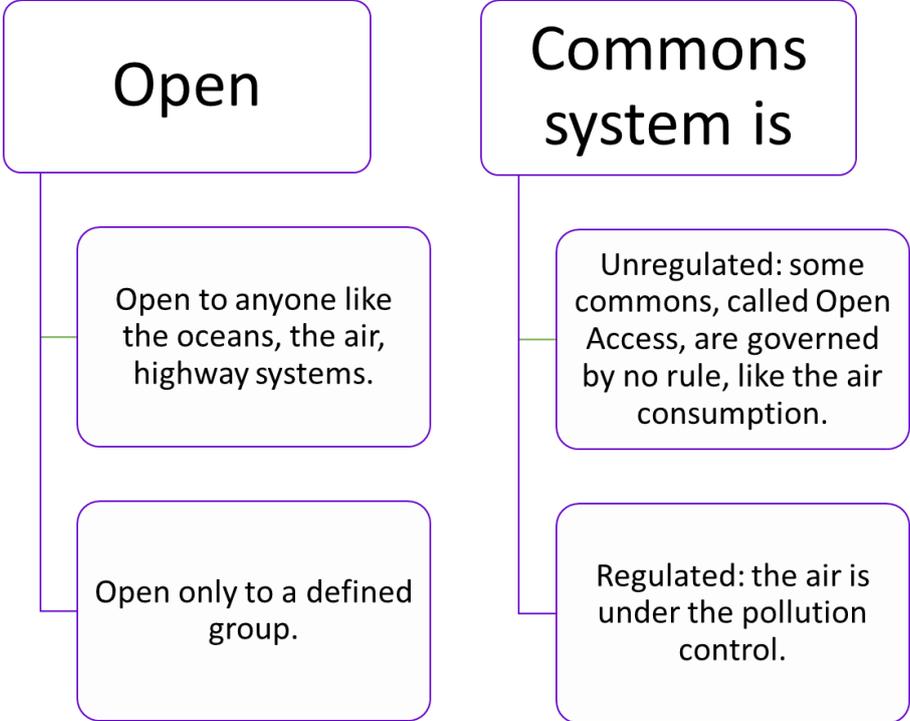
3.6 The Information in the Sharing Economy and in the Peer Production

The free software represent an example of a big phenomenon, a new model based on a horizontal and cooperative production. “Free software offers a glimpse at a more basic and radical challenge. It suggests that the networked environment makes possible a new modality of organizing production: radically decentralized, collaborative, and nonproprietary; based on sharing resources and outputs among widely distributed, loosely connected individuals who cooperate with each other without relying on either market signals or managerial commands. This is what I call “commons-based peer production”⁸¹.

Why are they commons? He used the term “commons” to allude to a particular institutional form of structuring the rights to access, use, and control resources, and to oppose it to the concept of “property”. A main feature of the commons is that no single person has exclusive control to the use of the resource. The commons are available to all those that fall in a given group of people, according to rules that can go to the "anything goes" in clear, detailed

⁸¹ Ibidem, p. 60.

formal rules. Commons can be divided into four types based on two parameter, as shown in the following table:



Elinor Ostrom and Carol Rose focused their studies on the good open to anyone or only to a defined group, and more generally on the study of the commons. Ostrom described the goods open to a defined group and she called them limited-access common resources, but for Rose is better to define them as good with a limited common property regimes. Based on the second parameter, the air can be taken as an example to explain the double value that have many goods. The air has an open access because nobody pay for it; but it is also a more extensively regulated commons in the shape of pollution controls.

Why are they commons-based? This expression is used to emphasize that the main feature of cooperative enterprises is not to be built on asymmetric exclusion typical of the property. “Rather, the inputs and outputs of the process are shared, freely or conditionally, in an institutional form that leaves them equally available for all to use as they choose at their individual discretion. This latter characteristic [...] is at the foundation of the freedom they make possible”⁸². Any production strategy that handles its input and its output as the commons arises outside the proprietary system, to enter in the context of social relations. The characteristic of production based on common goods is the freedom to interact with the resources and projects without having to ask anyone's permission.

Why are they commons-based peer production? The term peer production or horizontal production refers to a subset of the practices of production based on common goods. It refers to production systems that depend on the action individual self-determined and decentralized, rather than hierarchically assigned. Opposed to centralization, ““decentralization” describes conditions under which the actions of many agents cohere and are effective despite the fact that they do not rely on reducing the number of people whose will counts to direct effective action”⁸³. Charles Sabel in the last twenty years studied how

⁸² Ibidem, p. 62.

⁸³ Ibidem, p. 62.

to overcome a rigid pyramid structure of companies, starting to decentralize training, planning and execution of business functions to deliver them to individual employees or teams. Today the networked environment provide an efficient platform for the nonprofit companies structure, and for new mechanisms that allow dispersed users to adopt strategies of decentralized cooperation instead of using proprietary or contractual claims to decide prices or impose managerial decisions. “What we see in the networked information economy is a dramatic increase in the importance and the centrality of information produced in this way”⁸⁴.

3.7 The Free/Open-Source Software and other examples of peer production

The free software, or open source, is an approach to software developing that based on the sharing of effort in a nonproprietary model. It depends on many individuals who work on a common project for different reasons and with no one asserts the rights of exclusivity on individual parts or the result. Spagnoletti and Federici studied this phenomenon that they called FLOSS, Free/Libre Open Source Software. The latter introduced social themes and

⁸⁴ Ibidem, p. 63.

policy-making issues. They analyzed the relationships of social and technical aspect of an organization, and the influence that FLOSS could have on the structure of an organization, and they identified the public sector as a major growth area for it. They focused their studies on the adoption of the FLOSS not only by individual user's computers, but also by organization's infrastructures. To regulate this innovation, it was created another great innovation represented by the GNU General Public License or GPL, which is the most important part of the free software movement. It is a license about the use of the materials, with some constraints, that impede to the single programmer to appropriate of the whole project. The GPL requires that anyone who edits the software and distributes a modified copy, release it under the same type of free license as the original software. The free software is the innovation that prove the importance of the peer production, because it is a "is a functional good with measurable qualities". More than 85 percent of free software projects underway include a version of the GPL or a similar license. Apache, a free software, power the 70 percent of web servers, especially those of the sites of e-commerce. More than half of all the back office functions of electronic mail are based on a program or the other free software. Google, Amazon.com and CNN.com spin their servers with operating system GNU / Linux. "They do this, presumably, because they believe this peer produced

operating system is more reliable than the alternatives, not because the system is “free”⁸⁵.

Stallman is the creator of the movement and developed it in 1984. He wanted to create software that people could freely use to access information. He started to write a software and then developed a legal technique that allowed anyone to copy, distribute and modify the software at will. All that he asked to those who made the changes was to distribute it to others exactly at the same conditions. In this way, it invites all programmers to collaborate for creating a revolutionary innovation. He called the software GNU's Not Unix (GNU) and the license GPL. The next step came with Linus Torvalds that developed a fundamental component of the operating system: the kernel. On the foundation laid by Stallman, Torvalds built a production model based on voluntary contributions and recursive sharing. After ten years, the technology industry has recognized the value of free or open source software and its collaborative production methodology.

Another revolutionary example of peer production is certainly Wikipedia. Initially called Nupedia, this encyclopedia was based on a model of traditional production, where only the researchers could contribute to its constitution.

⁸⁵ Ibidem, p. 64.

The success came with the transition to an open model and peer produced.

Wikipedia combines three main features:

- It uses a collaborative authorship tool, Wiki. This platform enables anyone, including anonymous passersby, to edit almost any page in the entire project. It stores all versions, makes changes easily visible, and enables anyone to revert a document to any prior version as well as to add changes, small and large. All contributions and changes are rendered transparent by the software and database;
- Second, it is a self-conscious effort at creating an encyclopedia—governed first and foremost by a collective informal undertaking to strive for a neutral point of view, within the limits of substantial self-awareness as to the difficulties of such an enterprise. An effort to represent sympathetically all views on a subject, rather than to achieve objectivity, is the core operative characteristic of this effort;
- Third, all the content generated by this collaboration is released under the GNU Free Documentation License, an adaptation of the GNU GPL to texts⁸⁶.

Other examples of this production system are:

⁸⁶ Ibidem, p.70-71.

- Clickworkers: NASA experiment to evaluate the quality of the collective work of volunteers in opposite to the work of qualified scientists. The result shows that the labor of a few minutes of each volunteer could be compared with the full time work of a scientist. The Clickworkers project is a particularly clear example of as a professional complex task, it can be reorganized to be done by tens of thousands of volunteers who make such small increments that work can be done on a shoestring budget. The professionalism of the scientists has been replaced by a minute subdivision of the task in modules;
- Massive Multiplayer Online Games (MMOG). It is an example of a distributed production, in which the producer give to the users only the elements needed to play like the platform, the tools with which users write plots, prepare the set and recite the entire show, and the users will collaborate to build and tell the story in an active way. The MMOG allow the users to write the story as the living thus becoming coauthors. In 2003, a company called Linden Lab raised the level of this model, building a game environment online called Second Life. Within a few months, thousands of people live in a "world" which contained thousands of characters, hundreds of thousands of objects, different areas, villages and plots of interaction. Users have created by itself more

than 99 percent of all the objects present in the environment game, and all the plots and structures of interaction, such as villages or thematic groups.

3.8 Social Production: items of success

The growth and spread of this new mode of production raises some questions:

- Why do people participate in social production? Which are their motivations?
- Why now? Why here? Why is it considered as an important economic phenomenon, and opposed to a fad?
- Is it efficient to have all these people sharing their computers and donating their time and creative effort?

3.8.1 Motivation

The assumption that people's preferences can be expressed through money, is wrong, or at least does not reflect a universal description of human behavior.

People can be motivated by different feelings. Many researchers conducted studies to understand the different relationships that individuals have towards money. Traditionally the communities are animated by the feelings of togetherness and mutual bonds (Tonnies, 1955). Studies demonstrated that

“face-to-face relationships mediated by synchronous communication means are the foundation of the communities” (Spagnoletti et.al, 2015). However, the development of the Internet, through which the relationship are “mediated both through synchronous and asynchronous means of communication” (Spagnoletti et.al, 2015). A result of this interpersonal relation is the free-riding, or individual that acts for self-interest that prevail over common interest. Instead to apply additional property rights and privatizations, Wilkins and Ouchi in an articles affirmed that the social interactions cannot be governed only by bureaucracy or by the market, but also by clan. “In this view, a set of general assumptions and values enables the members involved in social interactions to identify the interests of their community and recognize that those community interests overlap with their personal interests” (Spagnoletti et.al, 2015). On Internet it is impossible to put a property rights on all the information produced, but “coordination occurs through self-organizing rather than through authority or price” (Spagnoletti et.al, 2015). “Members’ motivation, character, disposition, and willingness coupled with spontaneity and intangible incentives are the basis of participation in this type of interactions” (Benkler, 2002, 2006; Demil and Lecocq, 2006; Tapscott and Williams, 2008; Spagnoletti et al., 2015). Besides,

Titmuus, Arrow and Deci have conducted further studies, and in particular, Deci affirmed that individuals had two distinct types of motivation:

- “Extrinsic motivations are imposed on individuals from the outside”;
- “Intrinsic motivations are reasons for action that come from within the person, such as pleasure or personal satisfaction”⁸⁷.

The extrinsic motivations prevail over intrinsic ones because they:

- “impair self-determination—that is, people feel pressured by an external force, and therefore feel over justified in maintaining their intrinsic motivation rather than complying with the will of the source of the extrinsic reward;
- or impair self-esteem—they cause individuals to feel that their internal motivation is rejected, not valued, and as a result, their self-esteem is diminished, causing them to reduce effort”⁸⁸.

Bénabou and Tirole believed that a monetary incentive reflected the lack of trust in others. Other evidences show that in some circumstances to add the presence of money in an activity that previously did not provide for compensation does not increase but decreases the level of activity. The important thing is to realize that in every culture there are actions that are not

⁸⁷ Ibidem, p. 94.

⁸⁸ Ibidem, p. 94.

performed for money, but for improve their social status, gain recognition or maybe obtain a material benefit available only through a social transaction and not by the market. There are forms of psychological motivation and social relation that cannot be accumulated or exchanged with money. Transactions made through the price system may increase but also diminish the socio-psychological rewards, are they intrinsic or extrinsic, functional or symbolic.

It is clear that some people are more interested in making money while others are more liberal; some are driven by reasons the position and social esteem, others from achieving well-being psychological. Similarly, academic science and the private attract scientists who have similar training, but different preferences regarding the forms of reward. “For all of us, there comes a time on any given day, week, and month, every year and in different degrees over our lifetimes, when we choose to act in some way that is oriented toward fulfilling our social and psychological needs, not our market-exchangeable needs”⁸⁹. Social production thrives when succeed to connect this part of the human lives and the motivational structure.

⁸⁹ Ibidem, p.98.

3.8.2 Horizontal production

The control exercised by the users of all necessary inputs is the main technological contingency. The inputs belong to two groups and both are under the control of individuals:

- The human side: creativity, knowledge and life experience;
- The technical side: the computer processors, equipment for storage and data communication tools needed to create new forms of expression.

“Natural or contingent, it is nevertheless a fact of the industrial base of the networked information economy that individual users—susceptible as they are to acting on diverse motivations, in diverse relationships, some market-based, some social— possess and control the physical capital necessary to make effective the human capacities they uniquely and individually possess”⁹⁰. To become economically significant social production must be able to integrate the more dispersed contributions, from many individuals and machines. These contributions are heterogeneous in quality, quantity, scope, geographical location and time.

The great success of the Internet, and in particular of the horizontal production processes, is based on the adoption of technical and organizational

⁹⁰ Ibidem, p. 99.

architectures that effectively concentrate so different efforts. The main characteristics of the success of these companies are:

- The modularity: is the property that describes the degree to which a project can be broken down into smaller components, or modules, that can be produced independently and then reassembled into a coherent whole. If the modules are independent, individual members are put in the condition to choose how and when to contribute, independently of each other. This will maximize the autonomy and flexibility in defining the nature, magnitude and duration of participation in the project;
- The "granularity" refers to the size of the modules, in terms of time and work that each individual has to invest to produce them. The granularity of the model determines the smallest possible individual investment in order to take part in the project if the investment is low enough; the "incentives" can be of insignificant size.

In a study conducted by Spagnoletti, Resca and Lee focused on the digital platform, emerged the trait of modularity. The latter is an important feature also for the platform architecture. "Modularity, when combined with standard interfaces, allows for the product or service to evolve and change through independent actions by individual actors" (Langlois and Robertson, 1992; Spagnoletti et al., 2015). Besides, Prencipe with other scholars wrote papers

about modularity, firstly focused on it as an example of problem solving. In “Networks of innovation and modularity: a dynamic perspective” Prencipe with Chersbrough studied the role of modularity in a firm’s network. To be effective the modularity and the network of a firm have to evolve together: “we suggest that in order to accommodate the evolutionary dynamics of modularity, the typology and nature of innovation network relationships that a firm organises must also evolve accordingly” (Chersbrough and Prencipe, 2008). Moreover, they study this evolution according to the model innovation life cycle, identifying four phases “in the intertwined dynamics of modularization in technological development and of innovation network evolution” (Chersbrough and Prencipe, 2008). Benkler studied the role of modularity in the networked environment. A peer-to-peer production project on a large scale must be largely made up of modules of relatively fine granularity, but it is not necessary that each part or module is fine-grained. The free software is an example of horizontal production process in which each contribution, each module, has a different entity based on the ability, motivation and willingness of individuals. The independence of the websites is the feature that differentiates them from the horizontal production processes more organized, in which the contributions tend to be interdependent. Overall, the network does not need a formal cooperation structure. On the

contrary, in horizontal production processes generally it is necessary a certain degree of cooperation between the users. The cooperation in these production processes is made possible by a combination of technology architecture, social norms, legal rules and a hierarchy based on the technology, but validated by social norms.

It can be concluded that three features make possible the emergence of the production of information. First, the physical machine to participate in the production of information and culture is distributed virtually universal among the population of the advanced economies. Second, the raw materials of the information economy, the information, knowledge and culture, unlike those of the industrial economy, are public goods and their real marginal cost is equal to zero. Third, technology architectures, organizational models and social dynamics of production and exchange of information on the Internet have grown to manage problems in a modular way. These organizational models work both for independent creations that can coexist and converge into useful forms, and for interdependent cooperative enterprises in the form of horizontal production processes. Together, these three characteristics indicate that the patterns of social production of the digital network are not a fad. Indeed, thanks to the peculiarities of the information economy are a form of reasonable production. “The diversity of human motivation is nothing new. [...]

Neither is the public goods nature of information new. What is new are the technological conditions that allow these facts to provide the ingredients of a much larger role in the networked information economy for nonmarket, nonproprietary production to emerge”⁹¹. Moreover, Benkler affirmed, “As long as capitalization and ownership of the physical capital base of this economy remain widely distributed and as long as regulatory policy does not make information inputs artificially expensive, individuals will be able to deploy their own creativity, wisdom, conversational capacities, and connected computers, both independently and in loose interdependent cooperation with others, to create a substantial portion of the information environment we occupy”⁹².

3.8.3 Transaction costs

Benkler through its economic studies sought to show that the production based on common goods, and more generally social production, are sustainable and efficient forms of organization of production of information. The main elements for which need to find an optimal allocation are two scarce resources and a public good. The first scarce resource are creativity, time and attention of the people. The second are the calculation and communication

⁹¹ Ibidem, p. 106.

⁹² Ibidem, p. 106.

resources used for the production and exchange of information. In both cases the main reasons for the choice between proprietary and non-proprietary strategies and between market systems and social systems are transaction costs. The public good is the information, the knowledge and the culture. Markets, companies and social relations are three transactional distinct frameworks and Benkler explains them using a concrete example. "Imagine that I am sitting in a room and need paper for my printer. I could (a) order paper from a store; (b) call the storeroom, if I am in a firm or organization that has one, and ask the clerk to deliver the paper I need; or (c) walk over to a neighbor and borrow some paper"⁹³. The choice a) describes a market transaction. The alternative b) is an example of the company as transactional framework. Compare and improve the efficiency of a) and b) is the main problem of the transaction-costs organization theory. The alternative c) belongs to an alternative transactional framework. Instead of supporting the transaction costs of the market, can establish social relations to overcome the inefficiencies. "The point is that most of economics internally has been ignoring the social transactional framework as an alternative whose relative efficiency can be accounted for and considered in much the same way as the relative cost advantages of simple markets when compared to the hierarchical

⁹³ Ibidem, p. 108.

organizations that typify much of our economic activity—firms”⁹⁴. To be efficient, a market transaction must define very clearly the object of exchange, so that the price can be fixed without ambiguity. This price must be then paid using an equally clearly defined currency. Social exchange does not require the same degree of precision. In modern capitalist society, where money functions as a formal means of exchange and social relations are more fluid than in traditional societies, social exchange occurs as fuzzier transactional way. This does not mean that social systems have no costs, indeed. They require huge investment, socializing and maintaining relationships, just as happens with the markets or states. Once they have been put into operation, however, the social exchanges require the margin less detailed information. Both exchange systems, social and market, have high fixed costs, however, once we supported these initial costs, market transactions require other elements that are not present instead in social relations. The market and corporate hierarchies need clarity and precision to assign roles and prices, which, however, is impossible where to be evaluated is the human intellectual activity. An organizational model that does not require contractual specifications of the individual contribution to the company required collective and allows individuals to choose for themselves their own tasks, you will get better results than a system

⁹⁴ Ibidem, p. 108.

that requires specific indications. The widespread production model of information is more effective in identifying the person who can work in a certain part of the project, given the skills and the willingness to deal with a specific module in a specific time.

It must also consider the transaction costs due to allocation of the second scarce resource: the physical means that create the network environment. Until a few years ago, personal computers, wireless transceivers and connections were available in moderate quantities and were quite expensive. With the advancement of technology, prices have fallen and the quality of services has increased. These instruments are considered lumpy goods and may have different granularity. The personal computer is considered of average granularity. "It is the combination of the fact that these machines are available at prices (relative to wealth) that allow users to put them in service based purely on their value for personal use, and the fact that they have enough capacity to facilitate additionally the action and fulfill the needs of others, that makes them "shareable""⁹⁵. Since the social sharing does not require precise descriptions of each transaction, it enjoys a clear advantage in the reallocation of sharable goods excess compared to market-based mechanisms.

⁹⁵ Ibidem, p. 114.

Next to the market behavior, the individuals are generating large amounts of human creativity and mechanical skills. Exchanging these resources through the price system or companies involves high transaction costs. With the right institutional structures and control, and organization of work well modularized, social sharing has the potential to identify the best person among those available and put it in the conditions to work on a certain task using freely available informational input. Moreover, social sharing systems can take advantage of social psychological motivations that money cannot give or that, in a given transactional structure, could even destroy. “Because of these effects, social sharing and collaboration can provide not only a sustainable alternative to market-based and firm-based models of provisioning information, knowledge, culture, and communications, but also an alternative that more efficiently utilizes the human and physical capital base of the networked information economy”⁹⁶.

What Benkler wants to show is that social relationships and patterns of behavior have come to play a crucial role in motivating, informing and organize productive behavior at the heart of the economy information.

⁹⁶ Ibidem, p. 116.

3.9 The seven principles of Benkler

To conclude this chapter, it can be interesting to draw seven principles that emerge in the book about the thought of Benkler.

The underlying assumption is that individuals are becoming active creators of information. This new opportunity brings with it great promises: expansion of individual freedom; platform for a more participatory democracy; instrument for the growth of a more critical and self-reflective culture; and, in a global economy increasingly dependent on information, a mechanism human development worldwide. The main principles are the following:

1. Individuals have taken an active role in information production. The diffusion of the equipment needed to produce and communicate information is now in the hands of an increasing number of people. The access to the network allowed the sum of individual actions to produce a new and a wider informational environment.
2. The structures of the public sphere in the network give to everyone a space to talk, question and investigate without the need to access the resources of large media organizations. The characteristic of production based on common goods is the freedom to interact with the resources and projects without having to ask anyone's permission.

3. The network environment makes possible a new way of organizing production: radically decentralized, collaborative and non-proprietary; based on the sharing of resources and outputs between individuals dispersed in space and variably connected, cooperating without depending either by the market or by the manager orders.
4. The networked information economy increases the effective capacity of individuals. They can do more things on their own and create individually, or they can establish temporary links with others. Moreover, with the decrease of the prices, people can purchase the computer, which is the tool through which they share their knowledge with the rest of the world. In this way, the production of information is financed individual that produces it: it is self-financing.
5. Having access to the network, people can actively communicate their thoughts, informing and educating millions of people around the world. There is a growing possibility of producing information, culture and knowledge through social relations non-proprietary and non-commercial, that is, through the horizontal production. The persons who share their information, individually or in cooperative, were able to transmit it to millions of people all over the world, realizing a richer information environment.

6. Removing physical constraints to the actual production of information, human creativity and information economy became the pillars of the economic structure of the network. The networked environment provides the means of communication able to expand its level of diffusion decentralizing the economic structure and make it global.
7. The GPL is fundamental for a sustainable development of this production system. It is the most important legal innovation of the phenomenon. The GPL requires to anyone who edits the software and distribute it, to release a modified version under the same type of license as the original software. In this way, everyone can contribute by preventing that anyone could appropriate of the different contributions or of the finished product in an exclusive form.

“On the background of that dominant role, the possibility that a radically different form of information production will emerge—decentralized; socially, no less than commercially, driven; and as diverse as human thought itself—offers the promise of a deep change in how we see the world around us, how we come to know about it and evaluate it, and how we are capable of communicating with others about what we know, believe, and plan”⁹⁷.

⁹⁷ Ibidem, p. 33-34.

Chapter 4. The Cooperative Model

4.1 Introduction to the Cooperative Movement



The problem of regulation is the main topics concerning the sharing economy. Two influential scholars, Rifkin and Benkler, suggested the cooperative model as an efficient model for regulating this new economic phenomenon. This has emerged from an analysis of their book, “The Zero Marginal Cost Society” and “The Wealth of Networks: How Social Production Transforms Markets and Freedom”. The cooperative model and the sharing economy have many common characteristics, but some differences remain. And it is precisely about the overcoming of these differences that the researchers are focusing their efforts. Rifkin himself defined the cooperatives as “the only business model

that will work in a near zero marginal cost society”⁹⁸. Instead, Benkler refers to cooperatives in a less explicit, but believes that technological innovation has made possible a fast and effective communication with people very distant from each other. Moreover, he believe that the projects carried out in co-operation brings the best results. Also John Curl in his articles entitle “The Cooperative Movement in Century 21”, affirmed: “Cooperatives and social enterprises are the world’s best hope of achieving peace, prosperity, and social equity in this new century, and it is there that the eyes of the world need to turn”⁹⁹.In addition to them, many other voices agree on this issue. In one of her articles, Marta Mainieri explain how cooperatives and sharing economy can achieve benefits from each other. Social enterprises, through the service model proposed by sharing economy platform, might find a business model that allows it to evolve. The sharing economy services however, may find an audience in the cooperatives, which already used to share and a management model with a more inclusive legal type, capable of ensuring a fairer distribution of profits among members and platforms. In this way, users could enjoy more guarantees and security, which prevents the capitalist world to bring the sharing economy to the usual accumulation models in favor of a few, thus

⁹⁸ J. Rifkin, *The zero marginal cost society: the internet of things, the collaborative commons, and the eclipse of capitalism*, 2014, p. 172.

⁹⁹ J. Curl, *The cooperative movement in century 21*, *Affinities: A Journal of Radical Theory, Culture and Action*, Volume 4, Number 1, Summer 2010, (pp.12-29), p. 13.

losing its social value. At the same way, Janelle Orsi, on Shareable, affirmed that as long as the sharing economy sites will be built on the usual business models, they would not really change the economic system. “For now, these companies are privately owned, venture-capital funded corporations”¹⁰⁰. She proposes as a solution the “T Corporation”, as she called it. ““T Corporation” [...] it’s basically a way of saying “cooperative” without the cultural baggage that comes with the word “cooperative””¹⁰¹. She prefers this model because it embodies a very simple legal concept, which privileges all its members in the same way and does not enriches only a few. In fact, in the cooperatives, each member has one vote and the gain comes from a collective effort. Neal Gorenflo, the co-founder of Shareable, an award-winning news, action, connection hub for the sharing transformation, in an interview made by Marta Mainieri and Gea Scancarello, affirmed that there exist two types of sharing economy: the transactional and the transformational. The transformational sharing economy is a phenomenon in which social relationships change for the better. They build solid and lasting social ties based on mutual support and in the companies are created elements of Commons, namely the cooperatives. A collective and communal management of resources or the company itself

¹⁰⁰ J. Orsi, The Sharing Economy Just Got Real, 2013, <http://www.shareable.net/blog/the-sharing-economy-just-got-real>

¹⁰¹ Ibidem, <http://www.shareable.net/blog/the-sharing-economy-just-got-real>

characterizes these enterprises. Businesses built in this way, are intended to produce benefits for the community because the company itself is a community. An example is Mode, a Vancouver cooperative that offers car sharing services and where users coincide with the members of the cooperative. The transactional sharing economy and its processes strengthen existing social inequalities and are based on scarce and ephemeral social relations. The undertaking of this type is in fact a commodity that a small group of owners trying to place on the market obtaining the maximum. A clear example of this group is Uber.

In general, many agree that social enterprises, as well as collaborative services, are created as reaction to the inability of the traditional players to respond to the needs of the context in which they operate. Both movements are generated from below and the expression of social innovation. The latter is very evident in the cooperative model, while in the sharing economy is not so clear even if the services are offered with the purpose of creating benefits for society. Social enterprises, through the service model proposed by sharing economy platform, that enables people to exchange and share, may recover the relationship with the citizens which over time is partly lost, finding new business models, replicated on different territories his service and make a custom offer and easily accessible. While the sharing economy might find in

the cooperatives the right business model to be able to put into practice the alternative economic model that is seeking to impose.

4.2 Cooperative Model overview

The cooperative can be defined as a company formed by natural or legal persons, characterized by a mutual purpose, which is the intent of providing goods, services and job opportunities to the members, under more advantageous conditions than they would get from the market. A cooperative is a business that requires the active participation of members to business decisions: the members affect everyone equally over company decisions, because in the cooperative does not exist the owner/employee distinction. Mostly, members cover the same corporate role. Unlike what happens in other forms of companies, the accumulation of capital is bound, in the most part, for be reinvested in the organization; it is indivisible; the members are its operators, and constituted heritage is assigned to new generations of members. The International Cooperative Alliance, or ICA, is a non-profit international association established in 1895 to advance the co-operative social enterprise model, and described them as “autonomous association of persons united voluntarily to meet their common economic, social, and

cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.” ICA declared also their values: “Co-operatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility and caring for others.” It can be said that cooperatives are based on three main points:

- Cooperation finds its roots in the associated value of entrepreneurship;
- Research its development in the market;
- Its purpose is to improve the conditions, tangible and social aspects of their members and society as a whole.

The cooperative movement has ancient roots. In feudalism, it can be found the characteristics belonging to the movement, as Rifkin said, but the first experiments date back to the first industrial revolution, and more as an integral part of the early labour movement. In this time, the cooperatives have expanded around the world, and in recent years their number has grown significantly, even for causes related to the 2008 economic crisis.

ICA with the European Research Institute on Cooperative and Social Enterprises, or Euricse, annually draws up the World Co-operative Monitor, and the fourth edition of this report, which analyzes data referring to 2013,

highlights the size and importance of the cooperative sector globally. The data show how the cooperative sector has continued its growth in 2013, and the turnover of the 300 largest cooperatives is once again growing. The report takes into account cooperative enterprises from 76 different countries and it considers the 300 largest cooperatives. The latter are classified according to their turnover and by the ratio between turnover and gross domestic product (GDP) per capita, putting the turnover in relation to the purchasing power of the country in which they are located. In these 76 countries have been collected data on 2,829 cooperatives with a total turnover of 2.950,82 billion of dollars. The cooperatives are dispersed worldwide with a major concentration in Europe and the 40% of these 300 cooperatives is concentrated in the insurance sector¹⁰².

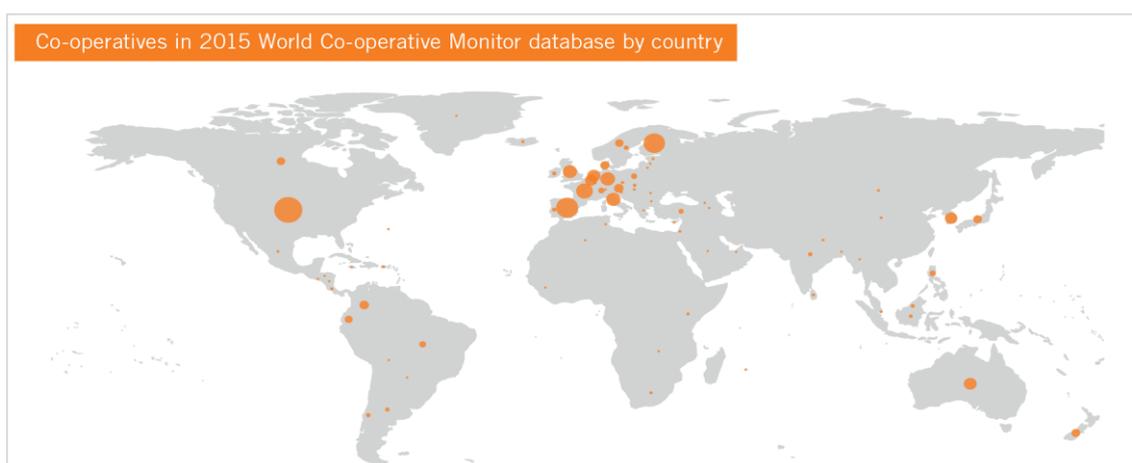


Figure 13: Co-operative penetration in 2015

¹⁰² Figure 13-14: Interational Co-operative Alliance, World Co-operative Monitor, Executive summary 2015,p. 1 and 3.



Figure 14: Co-operative by sector

4.3 Seven Main Cooperative Principles

A cooperative, in the respect of the principles of democracy, fairness, equality, transparency, agrees to their application through criteria and rules of conduct, which are points of reference for everyone involved in a cooperative and, primarily, for those responsible for managing it.



There are seven main principles of the cooperative model that have been corrected and adapted by the International Co-operative Alliance. They are guidelines by which co-operatives put their values into practice:

1. Voluntary and Open Membership: Co-operatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

2. Democratic Member Control: Co-operatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary co-operatives members have equal voting rights (one member, one vote) and co-operatives at other levels are also organized in a democratic manner.

3. Member Economic Participation: Members contribute equitably to, and democratically control, the capital of their co-operative. At least part of that capital is usually the common property of the co-operative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their co-operative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their

transactions with the co-operative; and supporting other activities approved by the membership.

4. Autonomy and Independence: Co-operatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative autonomy.

5. Education, Training and Information: Co-operatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation.

6. Co-operation among Co-operatives: Co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional and international structures.

7. Concern for Community: Co-operatives work for the sustainable development of their communities through policies approved by their members¹⁰³.

¹⁰³ International Co-operative Alliance, <http://ica.coop/en/what-co-operative>

4.4 Reinterpretation of the seven principles: comparison with the Sharing Economy

The seven principles of cooperatives are the starting point for a deeper analysis that highlight the similarities and differences between the cooperative movement and the sharing economy. Rifkin in his book included the first principles stipulated by the first example of cooperative, dated back to the 1844 in England, called Rochdale Society. Then can be taken into account the seven point of the thought of Benkler about the “networked information economy” and “commons-based peer production.” These latter together with the seven principles reexamined by the International Co-operative Alliance, are the basis for the development for a comparison with the sharing economy.

The analysis will be carried out for every single point to highlight the pros and cons, the strengths and weaknesses, and opportunities for development.

Global open access

As demonstrated by all the principles, the individual is at the center of these movements, the cooperative one and the sharing economy. In fact, the individuals, who could not find something that satisfies them in the market, develop these business models. People with the same needs come together to benefit of the services they need. The participations is “open to all persons

able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination”¹⁰⁴. The sharing economy with its platforms, open the access to the people all over the world. Everyone is free to connect to the platforms and use the services. Airbnb and Couchsurfing, together with other tourist accommodation sites, are examples of the global network of individuals connected with a specific need: travel and live new experiences in a more genuine way.

Limited democracy

In these systems focused on the individual, the latter has an active role in the activities’ execution. In the cooperatives, there is a democratic control where the members have equal power, all the decisions are taken according to the will of each, and they “actively participate in setting their policies and making decisions”¹⁰⁵. While co-operatives are democratic organizations, this concept in the sharing economy is linked more to the use of the Internet than in the companies themselves. The Internet is the tool that allows everyone to express their thoughts, and facilitates exchanges among peers. However, the sharing economy platforms still have a structure similar to the organizations of the

¹⁰⁴ International Co-operative Alliance, <http://ica.coop/en/what-co-operative>

¹⁰⁵ Ibidem, <http://ica.coop/en/what-co-operative>

past, with a distribution of power that does not reflect the principles they proclaim. Many sites are for-profit, have a more or less pyramidal organization in which the users can only interact with each other without take part to the decision system. Moreover, the latter have to pay a fee every time they share with each other. In Uber, these traits are clear: many have protested against this company because it establishes real working relationships and for each ride, that the driver makes, a percentage is retained. In this company appears very few features of sharing and cooperation as well as Rifkin and Benkler have described them.

Boundaries to participation

The members of these democratic organizations “contribute equitably to the capital of their co-operative”¹⁰⁶. Benkler described a non-proprietary production system, independent both by the market and by the managers. However, even today, the sharing economy companies are privately owned, venture-capital funded corporations. While in the cooperatives most of the funds are reinvested for the organization's activities, in the sharing companies, profits go to enrich investors, as happens in companies from which today the people want to move away. In a revolutionary perspective, users who use the platform, should fund it and then enjoy the benefits.

¹⁰⁶ Ibidem, <http://ica.coop/en/what-co-operative>

Disintermediation

As Benkler said, the network environment increase the effective capacity of individuals to communicate and to establish links with others, to sharing their thoughts and their knowledge, to develop their projects on their own. The cooperative as well are autonomous organizations that “ensure democratic control by their members and maintain their cooperative autonomy”¹⁰⁷ also if they enter into agreements with others. In the sharing economy this autonomy and independence is proved by the disintermediation. The individuals can freely keep in touch with others without the need to interact with an intermediary. The platforms enable the people to choose the right users to connect with and for accomplishing the exchange. The peers can take autonomous decisions without being influenced.

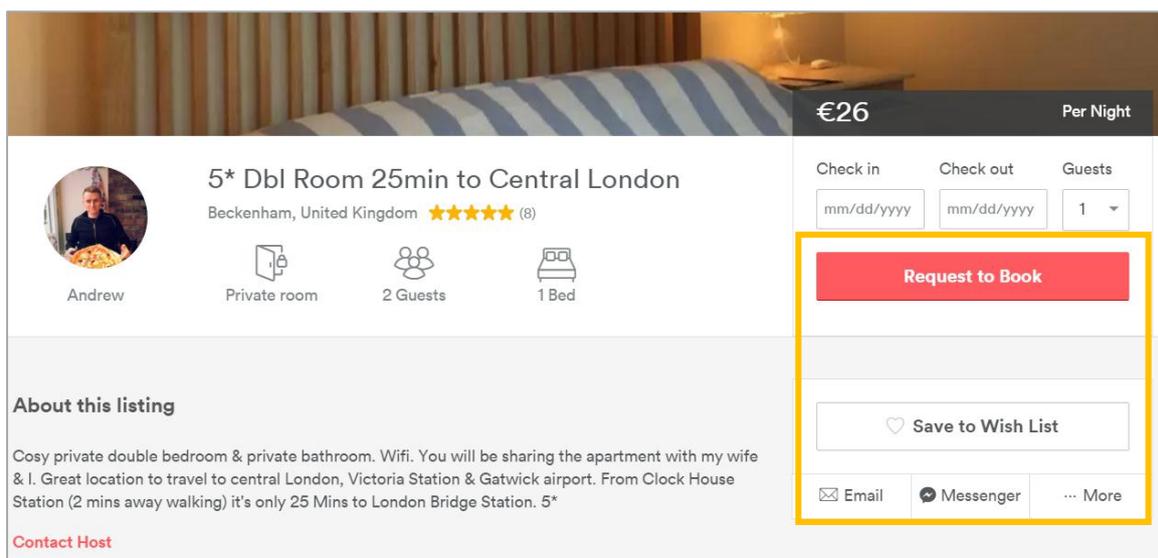


Figure 15: Airbnb system for renting a room

¹⁰⁷ Ibidem, <http://ica.coop/en/what-co-operative>

The figure 15¹⁰⁸ show the technique to book a room using Aribnb platform. On it, the host and the guest are put directly in contact to communicate with each other, exchange information they deem necessary and get to know each other better.

Sharing knowledge

The role of information has always been central in society, and with the introduction of the Internet, it has achieved greater significance, and a wider and global participation in the production as never before. The fifth principle of the cooperative is to provide education and training to its members, because the information and the knowledge are fundamental for the success of each project. It was not by a change that Benkler focus its studies on the new system to produce information. Benkler demonstrated that having access to the network, individuals share their thought and knowledge spontaneously for realizing a richer information environment. The sharing economy platforms also has an important role allowing the peers to share their ideas, opinions and their culture. Companies like TaskRabbit, Tabbid and Oilproject have been developed with the aim of create a connection among people with different knowledge and experience, in order to place them available to the community. In the case of TaskRabbit and Tabbid through the payment of the service, while

¹⁰⁸ Figure 15: Airbnb, <https://www.airbnb.com/>

on Oilproject, people can use the service for free. Tabbid and TaskRabbit are social network that allows people to delegate their daily tasks to other people who offer to carry them out in exchange for a financial reward. Instead, Oilproject is a platform that connects students with teachers of different subjects who want to share their knowledge for free.

Global expansion

Cooperation is a common feature between all the economic models described. “Co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional and international structures”¹⁰⁹. The International Co-operative Alliance is the apex organization for co-operatives worldwide, representing 284 co-operative federations and organizations across 95 countries. The networked environment described by Benkler, provides the means of communication able to expand and make global everything. This occurred also with the sharing economy. Today people connect with others that come from many countries, because the Internet has the ability to make everything easier, everything closer. An example can be Couchsurfing, a platform that connect a global community of 10 million people in more than 200,000 cities who share their

¹⁰⁹ Ibidem, <http://ica.coop/en/what-co-operative>

life, their world, their journey. This is the real strength of this phenomenon, which could be exploited by cooperatives.

Lack of an overall regulation

To make sustainable this innovation is necessary to find the right regulatory model. It is even more important to find the right connotation to these companies for the relevance that this phenomenon is taking today. The wave of criticism that have followed the development of the service proposed by Uber is the confirmation of the need for a unique regulation for the phenomenon.

Rifkin and Rochdale Society	Benkler	Cooperative Movement	Sharing Economy
Affiliation	Individuals at the Center	Voluntary open membership	Global open access
Democratic Union	The Network provides Democracy	Democratic member control	Limited democracy
Commons	Decentralized, collaborative and non-proprietary production	Member economic participation	Boundaries to participation
Autonomy	Autonomous participation	Autonomy and independence	Disintermediation
Education	The role of information	Education, training and information	Sharing knowledge
Expanding network	Removing physical constraints	Cooperation among Co-operatives	Global expansion
Sustainable Development	Sustainable regulation	Concern for community	Lack of an overall regulation

Figure 16: Table of Seven Principles Comparison

The table is a summary of the seven principles provides by the Rochdale Society mentioned by Rifkin, by Benkler through its book, by the ICA that

review the Rochdale Society rules, to arrive to formulate the main seven steps that identify the sharing economy today, stipulated taking into account the rules of the cooperatives.

In some principles, it can be notice a real evolution due the passage of the years and the development of new technologies. From the “affiliation” between the few people of a restricted region, to a group composed of people who are located in different parts of the world, which can connect with other similar groups to form a global network. The negative sides are related to inattention of governments and societies that have not recognized in the sharing economy an economic model able to establish itself in the market and to increase its size. All this has led to a partial development of the phenomenon, with consequences that are visible in the organization of the sharing economy companies. Now that they have become part of everyday life of the people, it is clear the need to find a solution to the problem of regulation. The resolution of this issue will also modify the other negative aspects such as limited democracy and the boundaries to participation.

Conclusions

The thesis start with the description of the sharing economy, its definition, the causes that led to the creation of so many platforms, and its dark side. Through the other chapters, this material has been enriched by the information derived from the writings of Rifkin and Benkler, until to have a complete picture of both the sharing economy and the cooperative model. Through A deeper analysis shows the main problems of the two movements. The sharing economy dark side, as said before, are:

- Lack of a specific regulation;
- Problems of safety and consumer protection that arise from the previous issue;
- Problems of trust among peers.

The downsides of cooperatives are as follows:

- The cooperatives work in the capitalist marketplace and over the years they have gradually taken over the competitive mentalities;
- Cooperatives tend to enclose their activities around their local or national areas: they tend to create a closed group by the rest of the world and by doing so become isolated from the innovations and opportunities coming from the surrounding environment.

In this scenario, the improvements that have to be made are clear. The cooperatives, in order to survive, have to open themselves to the progress and expand their boundaries in order to benefit of the opportunities that the sharing economy is now enjoying. The sharing economy has to undergo a transformation to move from words to action. If it really want to serve individuals, it must find the right business model to make them part of the decision-making process. The companies need to direct their attention to creating benefits for users and not for investors. The users could become the investors of the organizations, in order to have a voice in and participate actively in the management of the platform. Through the comparison with the seven principles of the cooperative movement, the common points and differences were highlighted, and these could become a starting point for future convergence of the two models. It can be said that these two movements are two sides of the same coin that should only find the right balance in order to become what many expect, in other words, an economic model that will take the place of capitalism. We should find the right balance between the return to the roots, which consists in the application of cooperatives' principles, and the innovation introduced by the sharing economy.

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