Sharing Economy: the new economic institution

Economía Colaborativa: La nueva institución económica

Abstract
Sharing Economy is a new economic institution. This conclusion was reached from a thorough analysis of institutional theory and Schumpeter’s proposal on consumption and technological revolutions. This is not a minor issue given its current importance and users’ trend, due to its institutionalization, towards the use of digital platforms for obtaining products and services. These platforms, called peer to peer or p2p, reduce uncertainty and build trust between the parties, while providing decision elements and analysis information. The platforms one of the key elements of this institution. The text deals with the main authors on collaborative consumption, their institutional status and their existence as a mechanism that allows addressing the social optimum, the super decisive agent of Harsanyi and the forms of consumption.

Keywords
collaborative consumption, Sharing Economy, institutions, fifth technological revolution, Schumpeter, Veblen.

JEL Codes O3, B24, B25, B52, Z13.

Resumo
A economia compartilhada é uma nova instituição econômica. Esta conclusão foi alcançada a partir de uma análise aprofundada da teoria institucional e da proposta de Schumpeter sobre consumo e revoluções tecnológicas. Esta não é uma questão menor, dada a sua importância hoje e a tendência acentuada dos usuários, dada sua institucionalização, no uso de plataformas digitais para obter produtos e serviços. Essas plataformas, chamadas ponto a ponto ou p2p, reduzem a incerteza e criam confiança entre as partes, fornecendo elementos de decisão e analisando informações. Este é um dos elementos principais desta instituição. O texto trata dos principais autores sobre economia compartilhada status institucional e existência. Seu status institucional e sua existência como mecanismo que permite abordar o ótimo social, o sujeito super decisior de Harsanyi e as formas de consumo.

Palavras-chave
consumo colaborativo, economia compartilhada, instituições, quinta revolução tecnológica, Schumpeter, Veblen.

1 Introduction

The concept of Sharing Economy appears in the economic, political, and social contexts of most countries today. Its spread, motivated by the expansion of the digital platforms that support it, occurs in such a way that the related laws and academic studies are often overwhelmed by this expansion. In this regard, this document analyzes the Sharing Economy as a new economic institution.

Taking Sharing Economy as an institution is important to its formalization within states. This is necessary since the emergence of new forms of consumption and production constitute, in accordance with Schumpeter's theory, a new institution that is fostered by the technological revolution. Within this framework, the progress of the microprocessor is consolidated as a transcendental point in the development of the globalized economy.

The microprocessor, as a tool that facilitates the analysis of information, has allowed the emergence of technology-based platforms to foster communication among users. These platforms can be considered technological institutions, in the context of the theory of Veblen, that, complementing Schumpeter’s view of consumption and production, configure the new economic institution called Sharing Economy.

Here, the Sharing Economy term is used according to the four sectors that compose it. These are a) collaborative consumption; b) shared education; c) collaborative production and d) shared finance (Botsman, 2013).

This document is organized as follows: the first section, where institutions are considered as a key element for the proposed analysis, shows contributions from North (1984, 1992, 2006), Veblen (1898, 1966, 1998), Ekelund & Hébert (1991), Tello-Castrillón (2009), Ayala Espino (2000) and Barragán (2008), among others. In addition, topics such as game theory, social optimum, and rational choice are discussed.

The second part of the document discusses the theory of the economic development of Schumpeter and allows an introduction to the Sharing Economy. Here, consumption and production are taken as determinants of the new economic institutions. The principles of sharing economy and its main references are shown as well.

Subsequently, the main arguments that justify collaborative consumption as an economic institution are presented. To this end, what was said in the previous points is revisited, especially regarding to Veblen and Schum-
peter. Finally, the last section concludes that a) Sharing Economy meets the criteria to be considered a new institution and b) the internal systems of Sharing Economy constrain individual behavior and force it to adapt.

2 Institutions

The identification of the Sharing Economy within institutional theory requires a prior definition of institutions, and therefore several authors of institutional theory, game theory, the social optimum, and rational choice are presented.

Tello-Castrillón considered that the specific definition of institutions is complicated (2009, p. 20) although it has been established that, in economics, it arises from their recognition as alternative mechanisms to the market (Tello-Castrillón, 2006). However, broadly speaking, it is possible to mention that institutions refer to the rules established by a society to limit the behavior of individuals (North, 1984, 1992, 2006; Washington & Ventresca, 2004). Consequently, institutions a) relieve the subject from the burden of decision-making (Castoriadis, 2013); b) can be considered as an extra-organ composed of social guidelines for the human being to create behaviors (Gonzáles, 2018) and c) are invariant with respect to the rotation of people, the preferences and expectations of the idiosyncrasy and the changing circumstances of the environment (March & Olsen, 2006, p. 4). Given their characteristics, institutions lead to pre-forming decisions and making them automatic.

Institutions can be classified in line with two concepts: a) their formality status and b) their origin. According to their status, there are formal and informal institutions. On the other hand, according to their origin, there are political institutions and social institutions (Figure 1). Formal institutions come from a legal condition that covers certain jointly established agreements. Legality rests on the entities whose authority enforces the agreements. In turn, informal institutions result from the cultural imposition of agreements on the actor’s behavior within a specific society.

The transfer of behavior from one group of individuals to another, or from one generation to another, i.e., enculturation (Harris, 2001), guarantees the continuity of informal institutions. Even if they are not recognized as institutions, the members of a society are aware of the informal institu-
tions that shelter them. The study of informal institutions goes beyond the purposes of this text, which focuses on formal institutions in light of their capacity to regulate and legalize the activity of the Sharing Economy.

Figure 1  **Types of institutions**

<table>
<thead>
<tr>
<th>Formality status</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal</td>
<td>State</td>
</tr>
<tr>
<td>Informal</td>
<td>Social</td>
</tr>
</tbody>
</table>

*Source: Own elaboration based on Ayala Espino (2000, pp. 67–68).*

Every type of society is associated with different political and social institutions (Tello-Castrillón, 2009): political institutions – laws, sanctions, norms – and social institutions – cultural elements – are different from one State to another. Consequently, there are differences in the degrees of development between societies and between states (Tello-Castrillón, 2009). However, institutions change.

Institutional change has been explained by various authors. Inspired by Cultural Anthropology, Veblen studied economic behavior based on human behavior in 1899 (Ekelund & Hébert, 1991). Accordingly, the author affirmed that Economy is the study of the material aspect of human culture. As such, the economic system is a cultural by-product in permanent evolution and transformation.

Two relevant elements differentiate Veblen with respect to the thinkers of his time.: the evolutionary and non-teleological perspective of historical becoming and the conception of humans as beings with habits and instincts (Veblen, 1998). Regarding the first, Veblen argued that human society is not oriented towards any end and lives in permanent change.

The second element deserves a more extensive presentation. Veblen stated that “people are creatively curious and are creatures of propensities and habits” (Ekelund & Hébert, 1991, p. 483) instead of being rational individuals who constantly calculate their marginal ways to satisfy their necessities.

These instincts and habits are responsible for the existence of the institutions as the U.S. professor conceived them. Instincts occur in a unique time and place, are inherent to the human condition, and create forms of
relationship with the environment. For this reason, instincts interact with the individual conceptions of each person to generate forms of relationship and behavior that, at the social level, become ceremonial institutions (Ekelund & Hébert, 1991).

Along with ceremonial institutions, there are also technological institutions. These refer to forms of production, inventions, machines, and technology itself (Ekelund & Hébert, 1991). Technological institutions interact, albeit ambiguously, with human instincts. The instinct for efficient work, for example, introduces new forms of production.

The probability of social incorporation of such forms is variable. This is the basis for Veblen's proposal on institutional change. Sometimes the forms are assimilated with difficulty in society. Conversely, on other occasions they become necessary. The new technological institutions occur within an institutional framework and a specific time and collide with them. As time goes by, the new institutions become accentuated and inserted both in ceremonies and social conceptions as well as in technological elements.

For his part, Douglas North (1984, 2006) recognized that institutional change has two origins. On the one hand, it comes from the evolution of the institutions themselves. On the other hand, the change arises from the pressures exerted by the organizations to alter the institutions for their benefit. Subsequently, the activity that the actors develop within the institutional framework configures as both formal and informal institutional change (North, 1984, 1992, 2006).

Organizations create pressures for organizational change which they consider necessary to reach maximum efficiency. However, these are not always the most beneficial either for the organizations or for the society. Within this argument, North defined that institutions are not necessarily efficient (1984, 1992, 2006), a view that becomes aligned with Veblen's postulates even though the latter has based the inefficiencies on human instincts and habits.

2.1 Game theory and the social optimum

Institutions seek to perfect and to shape social behaviors to obtain the greatest possible benefit. However, institutions constantly clash with
human instincts. Therefore, society tries to rationalize human behavior through means such as constitutional blocks, laws and formal contracts, among others.

In a perfectly rational world, individuals have complete information. Consequently, individuals are fully aware of the intrinsic properties and extrinsic value of goods. With complete rationality, individuals easily recognize the advantages that a good or service offers them, the willingness of the other party to acquire it, and the estimate of how much they would pay for it. This recognition, as Smith (1996) and Marx (2001) put it, makes transactions possible.

In the Wealth of Nations, Smith assumed that market agents behave rationally. Therefore, the relationship between supply and demand always reaches the equilibrium point (1776/1996). For his part, Marx argued that economic agents rationally estimate the benefits of a good or service, and hence its exchange value gets established (2001). This exchange value is a differentiated concept from use-value that refers to the intrinsic properties of the good to satisfy a need. Such conceptual elements were predominant during the 19th century and the first half of the 20th century.

However, other authors have recognized that information asymmetry damages rationality. Asymmetry is the most frequent situation in markets (Commons, 1924; North, 1984, 2006; Simon, 1972, 1997; Veblen, 1998) and gives advantages to the parties of a commercial game (North, 2006). In this regard, Herbert Simon raised bounded rationality in decision-making (1997). The Nobel laureate started from the conviction that all the necessary information within an exchange is not available in all election systems. Years later, Akerlof (1987), would illustrate the situation in the classic article of the lemons market.

This metaphor, despite its name, refers to the purchase and sale of used vehicles, so-called lemons. The buyer knows what the vehicle will be used for, but does not know all its internal characteristics, performance, qualities, defects, its future and past, its manufacturing materials, its family or cargo use, and the physical relationship of the car with its environment. The buyer tries to reduce his ignorance by asking the seller. For his part, the seller does not know what the buyer wants to obtain, his context and past experiences with automobiles, and his value system vis-à-vis automobiles.

Both parties face information asymmetries. The ideas and values that the buyer has individually built are out of the reach of the seller. Similarly,
the seller dominates car properties that the buyer is unaware of. Information asymmetries intersect with property rights to influence the exchange value that each agent is willing to accept and offer for the vehicle. On this basis, the presence of insurance policies is justified.

Rational choices also face the problem of aggregation. From the classical point of view, it is assumed that the sum of the best individual choices builds the social optimum (Aguiar et al., 2008; Blázquez Vallejo & Gámez Jiménez, 2006). That leads to a tactical agreement between the parts of an exchange – or game. However, according to the Nash equilibrium theory (1950b, 1950a, 1951), some games offer the greatest benefit to the part that doesn’t comply with the agreement, while its counterpart complies with it. However, if the players colluded, the greatest benefit results at social level and there may be a utility to each player. Nash postulated that the social benefit appears when all the actors end at a point of greater benefits than the initial ones (Barragán, 2008). Institutional efficiency is expressed in the social capacity to reach that point.

Institutional efficiency can also be achieved through an agent that builds win-win agreements. That is Harsanyi’s decent agent (Barragán, 2008). It refers to a super decision-making subject whose initial function is the consolidation of individual preferences. Subsequently, it is responsible for the summation of all possible individual transactions to generate the maximum benefit to all parties. A decent agent moves away from irrational positions, is free from any emotional prejudice, and is a path for consolidating the institutions.

Figure 2 **Elements that deteriorate institutional efficiency**

<table>
<thead>
<tr>
<th>Information asymmetry</th>
<th>It makes impossible for actors to recognize and compute all the data which is evident within a representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional deficiency</td>
<td>Built from the perceptions of non-rational beings who are unaware of the consequences of the agreements developed, even if they are empirically corrected</td>
</tr>
<tr>
<td>Institutional nature</td>
<td>It does not seek development, nor the real acquisition of the maximum benefits by the actors, it only seeks that actors move to a point of higher profit than in the beginning</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

Institutions, formal or informal, are a platform for the transactional meeting. Those who are on the verge of a transaction have institutional basis to
keep on playing the game and being beneficiaries of the payment system. Even so, institutions do not always lead to maximum efficiency (Barragán, 2008) due to a) the asymmetry of information, which makes it impossible to recognize and compute all the transaction data b) the institutional deficiency which appears when the parties are unaware of the agreements and c) the institutional nature, which does not seek the highest profit for the actors but rather the balance of profits (Figure 2).

Institutional arrangements are expected to provide the necessary informational elements to overcome information asymmetries. In this way, they aim to overcome the prejudices born from limited rationality and internal decision-making systems of people (Barragán, 2008). However, such arrangements will always be insufficient as they do not provide all the information necessary to execute a transaction. That is, the institutional arrangements do not fully solve the problems of information asymmetries.

Information asymmetries come along with another major problem in market exchange: the ability to analyze information. However, some technologies facilitate the access and computation of information. Such technologies make up the fifth technological revolution, the information and telecommunication era, since the invention of the microprocessor in 1971 (Pérez, 2010).

The human mind does not have sufficient ability to compute massive volumes of data. The complicated work of relating all the variables of the information is always going to be superlative for the human mind. For this reason, the last technological revolutions attenuated the purpose of changing the forms of production and, progressively, moved to the analysis of data (Londoño-Cardozo & Pérez de Paz, 2021; Pérez de Paz & Londoño-Cardozo, 2021). Innovation diminished its status as an aggregate to production to become an aggregate to information.

The microprocessor has transformed the way of collecting and analyzing data. In Schumpeterian terms, the microprocessor configures the fifth technological revolution. In turn, the revolution is the reason that explains the change in the productive and social paradigm. The new context favors the analysis of information for decision-making and, therefore, strengthens the Harsanyi Super decision-maker subject. However, the strongest impact of the change falls on the emergence of a new form of consumption and a new economic niche: The Sharing Economy.
3 Innovation, technology, and Schumpeter

The Sharing Economy is articulated with the concept of innovation. Ramírez Meda considered that innovation "is the productive application of an invention" (2011), *i.e.*, innovation with production and knowledge (Ramírez Meda, 2011). Innovation implies a change which is introduced in the productive social including managerial and organizational – and institutional systems to increase the efficiency, quality and speed of production. Innovation, as a scientific and commercial research put into practice, becomes technology (Carvajal, 2006; Ramírez Meda, 2011).

At the beginning of the 20th century, research depended on scientific training. In contrast, innovation depended, in the previous century, on the empiricism of engineers and workers (Lewis, 1957). It was considered that technological innovations were developed hand-hand with the synthetic industries and the processing companies (Ramírez Meda, 2011).

**Figure 3 Theories that accompany the theory of economic development**

- **Science Pull**: Advances in science generate and drive innovation.
- **Demand Pull**: The market needs drive innovation.
- **Innovation as a goal**: Innovation is sometimes directly related to market needs and sometimes related to scientific research.

*Source: Own elaboration based on Ramírez Meda (2011) and Nelson & Winter (1977, 1982).* 

The discussion about innovation also raises questions about its origin. This is how questions arise such as: why does innovation exist? Is it just a product of scientific development? Is it a product of market needs? On the subject, three theories have been postulated: a) the science pull theory...
(Ramírez Meda, 2011); b) the demand-pull theory (Ramírez Meda, 2011) and c) a combination of the previous two (Nelson & Winter, 1977, 1982), see Figure 3.

The science pull theory states that scientific advance drives innovations. This theory considers that the publication of the advances of the scientific method provides the technological tools for social, economic, and business well-being. On the other hand, the Demand-Pull theory holds that market needs drive innovation. The business and administrative mind constantly seeks the solution/filling of needs. From a neoliberal position, this theory considers that the profit motive and profitability are good reasons to justify the work of the research and development departments of organizations. Finally, Innovation as an objective unites the two previous positions and affirms that innovation is the product, at some times, of market needs and, in others, of scientific advances.

Technological innovations determine the cycles which shape the Economic system (Schumpeter, 1997). During cycles, society a) consumes what it produces and produces what it consumes; b) creates networks between producers and traders and c) develops technological advances based on what the system dictates. Afterwards, the conduct of the company heads becomes idle, and the economic system reaches a passive period.

Schumpeter embedded passive periods as a part of the circular stream of economic life (1997). For the author, passive periods end only when a phenomenon of extra-economic origin appears, energizing the economy. That means, a process of economic development. When the phenomenon is institutionalized, it establishes a new dynamism that moves the balance point of the economy (Acosta, 2020). To Schumpeter, technological innovation is the true mobilizer of economic dynamism and social change remains in the background (Montoya Suárez, 2004).

Dynamism arises from the combination of material and immaterial elements (Schumpeter, 1997) where the management of companies stands out. The combinations are executed-by and materialized-in the companies. For this, company managers are endowed with enough power to make and manage decisions (Coase, 1996; Simon, 1997). The renewal of the combination dynamics depends on some of the following radical innovations which Schumpeter (1997) has presented in different sections of his book “The Theory of economic development” (see Figure 4): a) the introduction of a new product or a new quality of an existing product;
b) the introduction of a new production process; c) the opening of a new market; d) the development of a new source of input and e) changes in the industrial organization (Schumpeter, 1997).

These innovations are not sequential. On the contrary, they are alternative phenomena.

Figure 4 Combinations that generate economic development

Schumpeterian work line has raised five expressions of radical innovations. These go side by side with the technological revolutions (see Table 1) and their corresponding economic developments.

Table 1 Technological revolutions

<table>
<thead>
<tr>
<th>Technological Revolution</th>
<th>Popular name of the period</th>
<th>Country or countries of origin</th>
<th>Moment when the revolution started</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Industrial Revolution</td>
<td>England</td>
<td>Arkwright’s Mill Opening in Cromford</td>
<td>1771</td>
</tr>
<tr>
<td>Second</td>
<td>Age of steam and railway tracks</td>
<td>England and the United States</td>
<td>Test of the steam rocket created for the Liverpool to Manchester railway train</td>
<td>1829</td>
</tr>
<tr>
<td>Third</td>
<td>Age of steel, electricity, and heavy engineering</td>
<td>Mainly Germany and the United States</td>
<td>Carnegie Bessmer Steel Plant Opens in Pittsburgh, Pennsylvania</td>
<td>1875</td>
</tr>
<tr>
<td>Quarter</td>
<td>Oil Age, Automobiles, and Mass Production</td>
<td>United States and Germany, followed by the rest of Europe</td>
<td>The first model-T comes out of the Ford plant in Detroit, Michigan</td>
<td>1908</td>
</tr>
<tr>
<td>Fifth</td>
<td>Information age and telecommunications</td>
<td>United States (Followed by Europe and Asia)</td>
<td>Intel microprocessor in Santa Clara, California is announced</td>
<td>1971</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on Pérez (2010).
4 Introduction to the Sharing Economy

A Sharing Economy is a new form of economic exchange (Selloni, 2017) that “adds hundreds of billions of dollars to the global economy” (Köbis et al., 2021, p. 1). This is executed on the basis of, in Schumpeterian terms, a radical innovation: information technologies. These platforms allow the exchange of information between users. Thus, they facilitate their interaction and decision-making. In the traditional view of the Economy, families have been confined to consumption activity, asset ownership, and the labor supply to companies. The Sharing Economy expands the role of families by involving them in the production activity.

The Sharing Economy is a relatively new term in the economic field (Pouri & Hilty, 2021; Zvolska et al., 2019). The theoretical development began in the economic sciences and is currently the subject of transdisciplinary study that ranges from engineering to environmental sciences (Kraus et al., 2020). It is a commitment to collective help that is typical of a community specially developed for exchanging (Felson & Spaeth, 1978). The term underwent a reconstruction since the first decade of 2000 when information technologies changed the forms of relationship between individuals. In such a scenario, trust among the world’s individuals was positioned as the essential element of the good exchange (Botsman & Rogers, 2009, 2010a, 2010b; Cañigueral, 2015). Currently, various forms of exchange share interaction through digital platforms. In the academic context, the Gig Economy (Koutsimpogiorgos et al., 2020; Stewart & Stanford, 2017) and the Sharing Economy (Acosta et al., 2020; Agarwal & Steinmetz, 2019; Andreotti et al., 2017; Botsman, 2013, 2015; Londoño-Cardozo, 2020; Pouri & Hilty, 2021) are well recognized. The latter is a broad concept which includes subsectors (Botsman, 2013, 2015), while the Gig Economy only focuses on one type of work and people hiring (Barzilay & Ben-David, 2016; McKinsey Global Institute, 2016; Stewart & Stanford, 2017). The breadth of the term Sharing Economy (Acosta et al., 2020; Alfonso Sánchez, 2016; Botsman, 2013, 2015; Opciones, 2017; Ospina Díaz et al., 2020; Rodríguez Marín, 2016) covers a concept that is mistakenly confused with: Collaborative Consumption (Acosta, 2017; Belk, 2010; Cañigueral, 2015; Ertz et al., 2016; Zarifis et al., 2019). As outlined above, this paper focuses on the Sharing Economy.

The Sharing Economy can be defined as one that occurs when people (peers) (Codagnone & Martens, 2016) participate directly in economic
transactions. That is, the generation of value from surplus capacities that are shared (Laamanen et al., 2016), generally by using information technologies, through the exchange, barter or rental of goods or services or a generation of knowledge (Botsman, 2013; Wosskow, 2014). This exchange does not necessarily imply economic profit or the exchange of ownership (Comisión Europea, 2016). The Sharing Economy does not connect the consumer with the direct provider of goods and services in a community (Rodríguez et al., 2017; Voytenko Palgan et al., 2021). Instead, consumers themselves take on that role. Circular exchanges between consumers are conditioned by communication through digital platform (Ertz et al., 2016), known as Peer to peer (P2P) systems (Codagnone & Martens, 2016; Rodríguez et al., 2017), where the computers share data. As a result, consumption is energized. All of the above served as cultivation field that allowed the emergence of the subsectors that compose the Sharing Economy (see Figure 5).

![Figure 5 Subsectors of the Collaborative Economy](image)

<table>
<thead>
<tr>
<th>Collaborative Consumption</th>
<th>Maximum use of assets through efficient models of redistribution and shared access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative production</td>
<td>Design, production and distribution of goods and services through collaborative networks</td>
</tr>
<tr>
<td>Shared education or shared knowledge</td>
<td>Open education and person-to-person learning models that democratize education</td>
</tr>
<tr>
<td>Shared finances</td>
<td>Peer-to-peer banking and crowd-driven investment models that decentralize finance</td>
</tr>
</tbody>
</table>

*Source: Own elaboration based on Bostman (2013).*

The Sharing Economy is made up of four subsectors (Botsman, 2013): collaborative consumption; b) collaborative production; c) open and shared knowledge; and d) shared finance. Collaborative consumption is, perhaps, the most widely used and recognized subsector (Coto & Miranda Falces, 2017). Its implementation can be considered almost an industry divided into “three great practices” (Laín, 2017, p. 110): a) recirculation of goods; b) optimization; and c) reciprocal, parity, and multilateral exchange. In the first of these, Internet access and use reduces transaction costs and brings users closer together through a system of trust among the parties (Acosta, 2020). The second allows access to resource and generates a small income for the parties. Some of this represents cash and other intangibles.
obtained from the recognition or establishment of a brand. Finally, the third is represented as a kind of volunteering. People congregate around the same work, usually without the intention of receiving cash emoluments, to solve a common problem to any of the members of the society (Acosta et al., 2020).

Collaborative production, from the perspective of the sharing economy, is little addressed in the academic literature (Londoño-Cardozo, 2020). Here are some mentions about the benefits of sharing information between members of a supply chain (Huang et al., 2003). Generally, information sharing production is done through digital platforms. However, for this action to be considered within the framework of the collaborative economy, it must be in line with the generation of products or services that are directed towards the shared solution of needs or the reduction of transaction costs (Londoño-Cardozo, 2020). The main example that can be cited about shared production is free software.

Collaborative education is widely addressed by the academic literature. In general, two trends may be identified: a) the development of shared teaching methodologies in schools and b) the development of virtual platforms for collaborative education.

The first of these, widely accepted in the United Kingdom, dictates the development of shared or collaborative school methodologies (Gallagher et al., 2010), where it seeks the development of methodologies that allow schools to work together by integrating their curricula. The second is related to virtual platforms for collaborative education which is looking for: a) the generation of platforms to share knowledge or educational services and b) the generation of virtual learning environments where knowledge is made available in an unschooling way for all whoever wants to consult it. Collaborative research (Makel et al., 2019) that seeks to share research results and the integration of open knowledge networks (Lara, 2014) is part of this trend.

Shared finances, the last subsector of the Sharing Economy, is, next to the Collaborative Consumption, the most popular expression of this economy. They have as a standard-bearer the figure of Crowdfunding (Jovanović, 2019) where people come together to generate savings that will be used in a common cause. In shared finances, digital platforms appear that save people’s money, through P2P, without the intervention of large banks, their costs, and their procedures (Botsman, 2013).
Some authors argue that the consumption forms change depending on the historical context of every society (Bauman, 2000, 2000, 2007; Marx, 2001; Veblen, 1898, 1966). Bauman has interpreted consumption as an occupation of the human individual and consumerism as a reconversion of human desires into the main driving and operations force of society (Bauman, 2000, 2007).

Consumption is an essential figure within capitalist society. The economic cycle depends on the goods and services that companies produce and that will be used or exploited by families.

5 Schumpeter and Veblen: Technological innovations for institutional change

It is pertinent to establish a relationship between the sharing economy, the institutions, and the social development of Schumpeter to define this kind of exchange as a new economic institution. To this end, this section addresses, firstly, consumer and producer goods; secondly, the relationship between Schumpeterian theory and sharing economy; thirdly, the relationship between the institutional views of Veblen and Schumpeter; and, finally, the proposal of sharing economy as a new economic institution.

5.1 Consumer goods to producer goods

Sharing Economy mainly modifies consumption. Understanding the latter allows understanding of the former. For Veblen, consumption has two origins: a) survival instinct and b) conspicuous consumption. In a), people consume to satisfy their needs, while in b), people replicate and seek to surpass the lifestyles of the individuals in their environment and class. On a material basis, each society generates its own forms of consumption (Bauman, 2007; Marx, 2001; Veblen, 1898, 1998), thereby influencing the individuality of people.

Consumption relations, as forms of social relations, depend on material transformation (Marx, 2001, 2008; Veblen, 1966). That is, consumer relations are tied to the technological base. During the 21st century, the base underwent a revolution that has led to greater communication between
the individuals of various societies. It is an advance in the institutionalization of information technologies that constrain behaviors, establish prejudices, and alter perceptions of trust (Botsman & Rogers, 2010b; Hawlitschek et al., 2016; Zarifi et al., 2019). In this context, communication platforms including social networks, have emerged, encouraging a culture of transactional trust between unknown individuals.

Online Communication platforms represent a technological advance that generates new forms of Marketing and production and feeds the institutional change (Veblen, cited by Ekelund & Hébert, 1991). In such a scenario, technological advances collide with ceremonial institutions configuring new institutions. Two situations serve as examples. In the first place, the case of platforms such as Amazon, Mercado Libre, or OLX which have captured markets that were once the exclusive preserve of large retail chains and forced them to be more efficient and profitable. Second, public organizations which use these new technological tools as a strategy to improve both their provision of services and the control over their resources.

However, the 2008 economic crisis constitutes a good example of institutional change born from a technological advance, the online communication platforms. Subprime loans in the United States generated an economic and social crisis that reduced people’s purchasing power and consumption. Consequently, consumption for survival and consumption for ostentation were damaged and people gave/attributed new uses to their goods. In that sense, goods became the object of profit optimization, the search for the intrinsic benefits of resources arose, and there was a reduction of consumption. These means, the total coverage of good’s Opportunity Cost (Von Hayek, 2015). This type of event led consumers to become producers and to exchanges in spheres beyond government control.

The transaction of goods and services in the Sharing Economy is circumscribed in a particular context. It is an environment that raises the need to obtain pecuniary benefits from consumer goods. This is the topic that appears next.

5.2 Schumpeter and the Sharing Economy

The Sharing Economy represents a new mechanism to meet old needs. In this way, it breaks the circular current of economic life and develops,
through technological innovations, institutional changes in the socio-economic system.

For Schumpeter, the origin of technological innovations is exogenous to the market (1997). Innovations, historically, have arisen mainly within the innovation and development centers of companies as a response to economic crises. So, it might be said that innovations have arisen mainly in engineering in instead of great scientific developments.

The microprocessor is a sample of innovation that sustains a technological revolution (Table 1). This invention allows the development of current information technologies that serve as an input to the Sharing Economy. For this reason, the Sharing Economy per se cannot be classified as a technological revolution and, therefore, it does not seem to arouse the interest of Schumpeter’s followers (Montoya Suárez, 2004). However, the Sharing Economy can be framed in the Schumpeterian combinations that give rise to economic development.

The Sharing Economy fits all these combinations. First, the sharing economy offers a categorical change in the quality of existing products and services. The change is represented in remarketing or sharing pre-existing goods and services without having the previous formal institutional order to do so, e.g., the case of hospitality or transport services.

Second, it is recognized that digital platforms change the forms of production, distribution, and/or provision/supply of a product or service. The introduction of P2P and the evolution and democratization of communication technologies transform the traditional forms of production, consumption, and economic relations. In fact, nowadays, traditional forms of consumption have turned towards these technologies to remain competitive in the market. It can be noted that these are new practices in the process of institutionalization. Such is the case of the service of non-mass public transportation, an alternative to the taxi. These are contacted through smartphones and thus configure new transactional scenarios that fit into the third combination, the opening of markets. The recurrence of new transactions remains in the collective understanding and, therefore, is affirmed as an Institution.

Technology as an element that allows the provision of transport, food, and hotel services, among others, is not a novelty. But actually, providers which are not business organizations are a novelty: a private car in instead of a taxi, a private apartment instead of a hotel, reliance on transactional
history in instead of fiat currency. It can be noted that these represent a change in productive inputs, the fourth combination, which forces a change in orthodox organizational forms, the fifth combination.

The adjustment of the Sharing Economy to the combinations proposed by Schumpeter does not represent a great change that implies a social revolution. However, it is effectively configured as a new institutional form.

Under this premise it can be observed that Veblen and Schumpeter's claims about technological developments coincide. According to these, technology is the motive force that becomes institutionalized and generates economic changes. However, their positions on the social and institutional are divergent. An example of this is in the vision of cultural resistance to change generated by technological innovations and how this dichotomy between technology and culture forms new institutions.

If the 2008 crisis is recognized as the point of origin of the Sharing Economy, it becomes the result of demand (demand-pull) and not of research (Botsman, 2013, 2015; Botsman & Rogers, 2010a; Cañigueral, 2015, 2016). Such an explanation departs from Schumpeter's considerations and approaches Veblen's. The great global economic crisis results in the activation of platforms such as Uber, Airbnb, Zeepod, cryptocurrencies, among others, a set that represents the rise of new technological and ceremonial institutions in the Veblen style (Acosta, 2020; Acosta et al., 2020; Londoño-Cardozo, 2020) (see Figure 6).

Figure 6 Introduction of the Sharing Economy as an institution

Despite this, there is a meeting point with Schumpeter's theory, and which is that the new forms of social relations that occurred because of
the innovations are a demonstration of sub-revolutions that generate transcendental technological impacts.

5.3 **Sharing Economy is strengthened as an institution**

The institutional clash between the Sharing Economy and the companies of the traditional economy is strong. However, the new institutions become established even struggling against large power groups (commercial chains, public transport unions, hotel companies, and even central banks) which, as predicted by North (2006), exert pressure both to prevent institutional changes that may harm them or to promote institutional changes in their favor (North, 2006). Nowadays, some platforms that facilitate Sharing Economy models have a legal conflict in most countries where they operate. Therefore, these forms of collaborative consumption do not constitute legal institutions. Despite this, platforms are recognized as valid means of the transactional world. Because of this, the Sharing Economy is an informal institution or, in Veblen's terms, a ceremonial institution.

Technological platforms with the capacity to acquire and analyze computer data contribute to the reduction of information asymmetries between economic agents. This fact favors the use of the applications linked to such platforms, enables the appearance of the Harsanyi supra-decision-making agent, and improves the decision-making process of the agents involved in a transaction. For example, users of the Sharing Economy transport service, both the provider and the recipient, know the places they want to go, the approximate cost of the service, the travel history, and some access to the personal profile of their counterpart.

The approach configures a mutual qualification system between the agents which participate in the Sharing Economy. It is a system based on trust (Botsman & Rogers, 2010b; Hawlitschek et al., 2016; Yaraghi & Ravi, 2017; Zariﬁs et al., 2019) where the participation of an individual who does not abide by the rules is impeded. The community, through the accumulated rating, estimates the willingness of the rated to comply with the transactional agreements (Yaraghi & Ravi, 2017; Zariﬁs et al., 2019). This dynamic, beyond being a punitive element, works as a reward system which changes people's desires and modifies their behaviors.
In this way, the benefits are spread. The rewards are greater since participation in transactions becomes more feasible due to the fact that parties are recognized for their compliance with the established standards. Thus, it can be noted that the Sharing Economy behaves as an institution that constrains decision-making and value systems (Barragán, 2008) that determine the behavior of agents. In the end, this gives rise to a form of social self-regulation that, via human cooperation, alleviates the institutional shortcomings of state organizations.

6 Conclusions

Future research may study the relationship between the Sharing Economy and organizational social responsibility. This relationship may address a) the organizational harnessing of the flexibility and options offered by ICTs, especially digital platforms; b) the job insecurity that may arrive with ICTs; c) the responsibility of digitization companies related to the management of the data; and d) the legality of platform-based services.

In the same way, it is pertinent to assume the study of the organizational structures and cultures that are created under the Sharing Economy model. In particular, organizations which create and support platforms such as Airbnb and organizations created exclusively to participate in economic exchanges of consumption in the Sharing Economy.

Additionally, it is necessary for future studies to delve into the definition of the Sharing Economy models to avoid confusion with other emerging models, such as the Gig Economy or the Creative Economy. If the confusion persists, the main concept of the Sharing Economy will not be able to develop. To start these discussions, it is necessary to examine/explore/investigate the theory of the contract, including areas such as commercial and labor law existing in these economic forms.

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