

Article

Is Sharing a Better Alternative for the Planet? The Contribution of Sharing Economy to Sustainable Development Goals

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Abstract: The sharing economy has been presented as a potential contributor to the UN Sustainable Development Goals (SDGs) due to the change it brings to consumption patterns. Although this potential has been identified in different papers, there is not, as far as we know, a single article that explains in detail all the possible platforms through which the sharing economy can contribute to the achievement of the SDGs. This paper addresses this topic by reviewing the existing literature involving the sharing economy and the SDGs, and by analyzing the main characteristics attributed to this business model, and how each one of them may in theory contribute to the SDGs. Our paper advances the field by establishing hitherto undiscovered relationships between the two concepts, while laying the foundations for corroborating our theoretical findings in future analytical studies.

Keywords: sharing economy; Sustainable Development Goals; sustainability; business model innovation



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1. Introduction

The new sharing economy (SE) has the potential to promote a shift from a consumer society to collective consumption [1], paving the way for a more streamlined and more rational use of resources and the allocation of their idle capacity. The increase in the use and popularity of the platforms working according to the SE (also called collaborative economy, peer-to-peer economy, or access economy [2–6]) is reinforced by an increasing momentum toward economic exchanges that incorporate social values and are more embedded in communities [7], reclaiming local values that have been marginalized in the trend toward globalization [8].

When the SE first emerged, it was expected to have a significant impact on the achievement of the Sustainable Development Goals (SDGs) [9] and offer new opportunities for value creation. Although the amount of research regarding the conflation of these two topics is still very scarce, scholars agree on the opportunity presented by the SE model to implement a change in consumer habits toward a more sustainable and rational model. The importance of analyzing this relationship stems from the state of emergency affecting the planet regarding sustainability and the search for better consumer alternatives that help to reduce the negative impacts generated by the current model. The SE has been identified as a potentially significant contributor to the SDGs [10–12], but, as will be shown in the following section, current research is focused on qualitative aspects without analyzing the true economic, environmental, and social impacts, whereby further investigation into this potential contribution is called for.

The SE's popularity has increased in recent years, undermining certain traditional business models and processes, and presenting an innovative consumption method that prioritizes access over ownership. This system has been well received by a large part of society, which is calling for a more efficient and sustainable way of consuming [13],

although it is seen as unfair by many companies [14]. Different industry sectors have been affected, ranging from equipment suppliers to service industries [15]. This increase in popularity has attracted the attention of users, companies, and governments, questioning not only the possible economic outcomes but also the environmental impact.

Although the research regarding sustainability and the SE has increased significantly in recent years, there is still a major lacuna regarding the SE and the SDGs, which will be addressed in this paper. This lack of research is justified by the novelty of the phenomenon [16], as well as by the lack of conclusive results regarding the effects the SE has on sustainability. The main research question behind this paper is therefore as follows:

RQ1 What are the sharing economy's potential theoretical contributions within the SDG framework?

Taking our starting point to be the bibliometric study conducted by Boar et al. [17] and our own previous research, this paper intends to go one step further and present a qualitative review of the state-of-the-art regarding the role played by the SE in the achievement of the SDGs. This analysis will be complemented by an exploration of the main characteristics attributed to the SE, and how each one of them may contribute individually. The current debate on this aspect is still in its infancy, with only a handful of studies addressing the SE's possible contributions to the SDGs, so this paper aims to help fill this research gap.

The importance of this research is justified for several reasons: first, and to the best of our knowledge, this is the first paper that makes a qualitative assessment of the general impact that the SE could have on the achievement of the SDGs within the different industries in which platforms operate. Second, we are advancing the field by detailing the theoretical influences that platforms could have in the achievement of the SDGs, providing a foundation of information for corroborating the real contributions made once these have been measured. Finally, this analysis helps to highlight the importance that the SE model is gaining within different industries and levels of sustainability. By so doing, a current snapshot of the field is presented, reviewing previous literature, and prompting new ideas for research.

The following sections include a review of the existing literature on the SE, as well as the main aspects underpinning the concepts of sustainability and the SDGs, including studies linking both concepts. This theoretical background is followed by an explanation of the methodology and the SE's potential contributions to the achievement of the SDGs. This study is based on a desktop review of international literature that investigates the SE and topics related to sustainability and SDGs. Finally, points 5 (discussion) and 6 (conclusions) are presented.

2. Theoretical Background

2.1. The Sharing Economy

In the 2000s, the "sharing economy" (SE) emerged as the proposed merger of different economic models, focused on changing production and consumption cultures, as well as interactions between producers and consumers [18]. It has been said that the SE represents a return, in a different context, to the pre-industrial era, when people lived in smaller agricultural communities and used to share their limited resources and tools based on mutual trust and long-term bilateral experience [19].

This phenomenon is characterized by changing the trend from hyper-consumerist spending to a sharing movement [20], being boosted by the increase in internet-based technology, the economic crisis, and the growing interest in sustainable consumption [21]. Sharing activities can stimulate lasting changes in consumer behavior by shifting personal choices from ownership to demand-fulfillment [1].

When it comes to defining what a "sharing economy" means exactly, there is still no agreement among scholars [22–25], although it has been attributed certain specific characteristics. Most scholars agree on the key role played by digital platforms as facilitators of transactions [26–29], as well as the reputation systems they support, which help to reinforce trust between users [29–31].

These exchanges are most commonly peer-to-peer [31–33], although some scholars contend that one party may also be a business [34–36]. Another point widely accepted by researchers is better and more effective resource allocation, eliminating any kind of idle capacity [30,37]. This is associated with users' preference for access over ownership [32,38,39]. Finally, major emphasis has been placed on the community built up around platforms, allowing users to relate to like-minded people [40–42].

All these characteristics are supported by the development of information and communication technologies (ICT) and online platforms, which have broken down the historical barriers of geographical and social distance, and economic exchange [8,9,23,43,44], providing new channels for sharing [9].

The SE has been posited as a significant contributor to the business transition known as servitization [45], whereby, a product's use or function is sold rather than the product itself, exploiting the digitalization of assets [46]. Accordingly, manufacturers are servitizing their range of products and services to generate growth beyond their goods base [45]. The SE has also been related to a product-service system (PSS), which has been defined as a mix of tangible products and intangible services, designed and combined to be jointly capable of fulfilling end consumer needs [47]. Although this is a recent concept, the academic interest in explaining this area is continuously growing [48]. One of the main challenges concerning PSS and the SE is understanding all the different stakeholders, their roles, and their influences within the system [49].

2.2. Sustainability, Millennium Development Goals (MDGs), and Sustainable Development Goals (SDGs)

Human activities have impacted upon the environment for centuries, with significant deleterious outcomes, such as pollution, climate change, transportation disorder, and exhausted resources [50]. As the world's population exceeds 7.8 billion, climate change has increasingly become a more serious and recognized issue, and as the limitations of the current economic growth model are ever more evident, companies are having to adopt new approaches in their business models [51].

For the past 20 years, international development has been dominated by two parallel trends, albeit differing in their focus and underlying philosophies. On the one hand, the agenda for reducing poverty in developing countries that found its expression in the Millennium Development Goals (MDGs), and on the other, the notion of sustainability that went on to inform the Sustainable Development Goals (SDGs) [52]. The majority of the MDGs refer to improvements in the well-being of individuals (education, health, and access to water), while the SDG agenda not only involves those goals but also refers to the preservation or establishment of shared global goals, such as clean air and biodiversity. SDGs affect both developing and industrialized nations.

Sustainable development was defined for the first time in 1987 as a type of “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*” [53]. To date, it continues to be primarily seen as a form of ecological modernization [54], based on the dematerialization and decarbonization of production [55], with the greater objective of supporting the SDGs.

The SDGs were adopted in September 2015 during the UN Sustainable Development Summit in New York. These 17 goals are related to poverty, inequality, climate, environmental degradation, and peace and justice, and are the cornerstones of the UN 2030 Agenda for Sustainable Development, which has been signed by 193 countries, and outlines the tasks needed to tackle the challenges the world currently faces.

These goals are defined by the UN as “*integrated and indivisible, global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities*” [56]. Specially, Section 67 of the UN resolution calls directly upon businesses, inviting them to apply their creativity and innovation to solving sustainable development challenges [57].

Traditionally, value creation has been understood through monetary exchanges [58]; however, the focus has increasingly shifted towards environmental and social value el-

ements [59]. Although the SDGs are considered objectives for governments and states, companies are also one of the main stakeholders [60].

2.3. *The Sharing Economy and Its Relationship with Sustainability and the SDG*

Some scholars [61,62] have proposed the SE as the path to sustainability, prompting a mind-shift in consumers. Although it may help to achieve greater sustainability, the SE does not arise from ecofriendly considerations, but instead from natural choices driven by consumer rationality with the support of ICT [63].

The sustainable value created by SE business models can be classified from an eco-perspective by increasing resource efficiency, responsible use of resources, reducing environmental impacts and emissions, and increasing environmental well-being in general; a social perspective by safeguarding health and safety, upholding laws and regulations, and the rights of employees and stakeholders, and reducing harmful impacts and increasing social well-being, and an economic perspective by increasing cost-efficiency, profits, business opportunities, operational stability, appeal, and economic well-being, and reducing risks [17,58].

The SE has a great potential to make highly significant contributions to sustainability [9], diminishing the total resources required and helping to reduce pollutants, emissions, and carbon footprints [1]. It can also help in lowering gender, education, and income inequalities, stimulating sustainable consumption and production practices, using sustainable energy, and transforming infrastructures and cities [64], while at the same time raising living standards and quality of life [65].

The increase in consumption with sharing does not appear to be proportional to the increase in resources required [65], which makes sharing more sustainable than a traditional business. It is therefore worth taking a closer look into how the SE may influence the realization of the tasks set out in the 2030 Agenda [66], as it may have promising outcomes for SDGs [9]. The expected impacts could potentially vary depending on the sector analyzed, as could the environmental impacts. According to the Environmental Impact of Products (EIPRO) [67], the areas of food and beverages, private transport, and housing are the ones with the greatest environmental impact. Among them, up to 80% of consumption's impact is justified. Extrapolating these data to the SE, and considering that these three industries (food, automobile, and accommodation) are among the most promising within the SE [68], the positive impacts are expected to outweigh the negative ones.

There are some studies [62,69] that have cast doubts about the effectiveness of the SE in environmental sustainability, arguing that there is a lack of community and environmental interest in it because the capitalist system prevails [62]. The SE's long-term effects on communities and incumbents are also questioned by regulators and governments [70].

These doubts may be justified by the fact that in recent years digital platforms have become the leading players in the SE, turning global corporations into intermediaries controlling and profiting from most transactions [9]. The main drawbacks are also due to falling levels of consumption, with demand likely to increase as the model does not naturally lead to a lower consumption of resources and greater environmental benefits [63]. This problem has also been identified within the PSS, recognizing its potential for reducing the need for material, but warning that a less careful use of resources could lead to a higher substitution rate [71]. According to the research by Wirtz et al. [72], sharing increases the frequency of travel and the length of stays, which may well lead to a negative impact on the environment.

The SE has been posited as a potentially significant contributor to the SDGs [10–12]. It has been said to potentially contribute to four of them in particular: SDG 8 (sustainable economic growth); SDG 9 (industry, innovation, and infrastructure); SDG 12 (sustainable consumption and production), and SDG 16 (peaceful and inclusive societies) [8]. The SE's economic, social, and environmental effects remain poorly understood [73].

In general, we could say that the SE's role in the achievement of SDGs has been focusing more on logical outcomes rather than empirical ones. Although some scholars

have attempted to measure these effects on environmental sustainability [74], there is as yet no research seeking to measure the real impact SE platforms have on the achievement of the SDGs. The novelty of the topics and the difficulty of establishing specific metrics are factors hindering their development. These issues could be solved by following a cost-utility approach. This analysis should compare the costs and the consequences of the use of platforms in relation to the targets set by each SDG. An alternative path could be to adapt the measurements used when analyzing sustainability's impact on the contribution to SDGs.

3. Data Collection and Methodology

The qualitative research here has involved a systematic literature review [75–77] to investigate the SE's impact on the SDGs. The first step was a bibliometric analysis of the SE. Dedicated SE- and SG-related papers were then extracted and analyzed in depth.

The search strategy was based on the bibliographic database Web of Science (WoS) Core Collection, as it is the most widely accepted and frequently used database for the analysis of scientific publications [78–81]. Although WOS data integrity has been questioned [82,83], the decision to use it was informed by the following:

- (1) It is the world's leading database for publications and reports of citations. Considering the novelty of the SE field, choosing this database ensured that only good quality papers were included in the sample.
- (2) It includes the necessary fields for obtaining and filtering the information.
- (3) It provides access to approximately 22,000 top-tier journals.

For the systematic review, we identified the research area and studied the scope and objectives, setting the SE as the central concept. The inclusion and exclusion criteria were then determined. All the articles and reviews in the database containing the keywords "sharing economy", "collaborative economy", or "platform economy" were retrieved. This approach yielded a total of 2215 results. The sample was downloaded and reviewed to remove duplicates and confirm their fit within the sample. The authors undertook this process manually, including 1790 papers in the final database. All the data available in WOS were retrieved for each article. This search was conducted in December 2020.

For this specific research, a subgroup of publications was analyzed, selecting from the previous sample those articles that relate the sharing economy with the SDGs. Again, the papers were individually reviewed by the authors to confirm their fit within the topic. Selected references from the articles identified were carefully screened for other relevant studies. In this case, as the SDGs were set in 2015 the previous sample was reviewed from that year on, as no previous papers relating to both concepts could possibly have been found. Three selection criteria were used for the papers, as shown in Figure 1.

After the initial query, the sample was personally revised by the authors to eliminate non-related papers and possible duplicates. The revised sample contained 1790 papers, and those published from 2015 on were selected and analyzed looking for those relating the sharing economy with the SDGs. Once this step had been undertaken, the remaining papers were analyzed in depth. Several new papers were included because they appeared in the bibliography of some of the selected papers and dealt with the topic in question. Finally, 21 papers were identified that studied the SE and SDGs. Among these papers, only one systematic literature review was found, conducted by Boat et al. (2020).

The final step consisted of the review and classification of the different contributions found in the final sample for their subsequent analysis. This process was supported by the quantitative analysis software Atlas.ti.

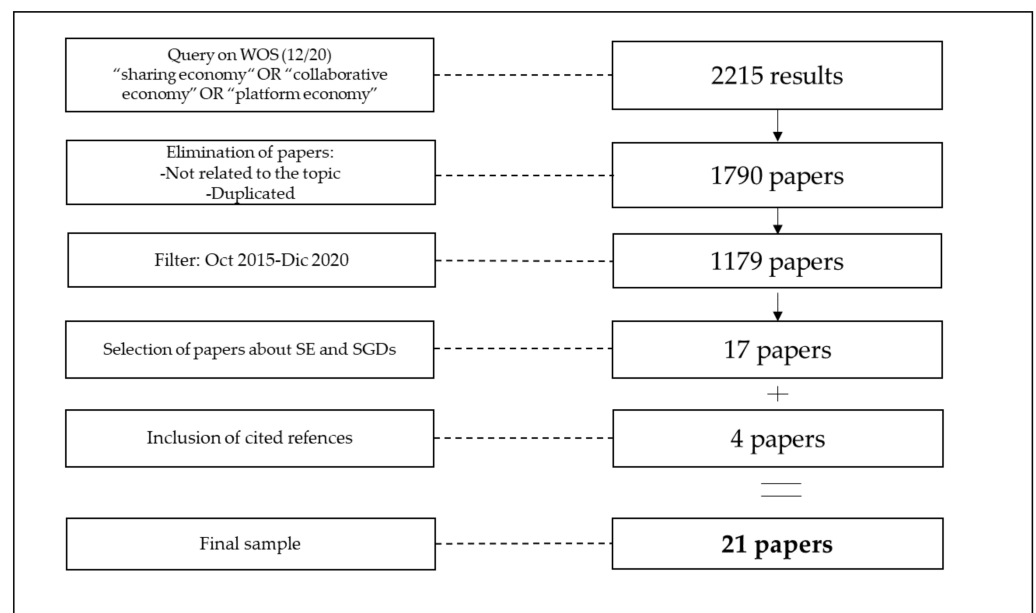


Figure 1. Criteria of selection of papers. Source: Own elaboration.

4. The Sharing Economy and Its Contribution to Sustainable Development Goals

There is currently a scarcity of literature that addresses the possible contributions the SE makes to the SDGs [84]. Although some studies relate the sharing economy with SDGs (see Table 1), and with sustainability in general, there is still a large gap to fill. Based on previous research, this study seeks to assess the impact of SE platforms on the achievement of the SDGs.

Table 1. Literature linking the sharing economy and the SDGs.

	Author/Year	Main Conclusions
	Gössling and Hall (2019)	The sharing economy has great potential to make significant contributions to the SDGs and sustainability.
	Cohen (2017)	The sharing economy has promising outcomes for the SDGs.
	Fioramonti, Coscieme, and Mortensen (2019)	The sharing economy has the potential to contribute to achieving all of the SDGs, relieving environmental pressures, promoting low-carbon emissions, reducing gender, education, and income inequalities, stimulating sustainable consumption and production practices, using sustainable energy, and transforming infrastructures and cities.
SE-SDG	Mi and Coffman (2019)	The sharing economy's benefits of increased economic efficiency and reduced information asymmetries can scarcely be considered untoward developments, but the need for better coordination of national and local government and a direct engagement with the firms themselves are key to addressing dislocations and negative externalities.
	Schaltegger, Beckmann and Hockerts (2018)	Collaborative entrepreneurs can help to achieve the SDGs and sustainable development in general.
	Aluchana (2018)	Sustainable models that adapt sustainability and the collaborative economy should foster innovation to address social or environmental challenges and focus on at least one SDG.
SE-SDG 1	Shereni (2019)	The sharing economy can support SDG 1 by providing opportunities to locals to earn income to sustain themselves.
SE-SDG 2	Fioramonti, Coscieme, and Mortensen (2019)	Some sharing economy models, such as urban gardens, have the potential to reduce hunger, and therefore contribute to SDG 2.
SE-SDG 3	Fioramonti, Coscieme, and Mortensen (2019)	The sharing economy can help to improve nutrition and sustainable agriculture practices, contributing to SDG 3.
SE-SDG 5	Shereni (2019)	Accommodation in the sharing economy assumes a leading role in ensuring that the previously marginalized members of the community benefit from the tourism economy, contributing to SDG 5.
SE-SDG 8	Gössling and Hall (2019)	The sharing economy can help to focus on decent job/job quality/living wage frameworks; not just the material reward of employment but also three other dimensions – the physical and intellectual efforts that work demands and the intellectual-emotional rewards that workers gain from it, contributing to SDG 8.

Table 1. Cont.

	Author/Year	Main Conclusions
	Aluchana (2018)	Sharing economy users can browse the tasks and decide on a voluntary basis which ones they want to do. For companies like TakeTask, the main purpose is to promote inclusive and sustainable economic growth, employment, and decent work for all, contributing to SDG 8.
	Shereni (2019)	Accommodation within the sharing economy reduces entry barriers for entrepreneurship, such as the need for a large initial capital outlay, allowing certain marginalized members of society to earn additional incomes, contributing to SDG 8.
	Gössling and Hall (2019)	The sharing economy focuses on building domestic ICT and industrial capabilities, contributing to SDG 9.
SE-SDG 9	Aluchana (2018)	The urgent need for sustainable solutions among users may become a bigger incentive to participate in those projects that deliver resilient infrastructure for a living, promoting sustainable industrialization, and foster responsible innovation (SDG 9) than in pure commercial cases.
	Shereni (2019)	The sharing economy is considered an innovative consumption model shaped by the rise in e-commerce, the growth of technology, social media influence, web communities, and increased customer awareness
SE-SDG 11	Aluchana (2018)	Shared mobility already has a transformative impact on many global cities and societies by enhancing transportation accessibility, while simultaneously reducing negative environmental impacts and private vehicle ownership.
	Fioramonti, Coscieme, and Mortensen (2019)	The sharing economy can help to create sustainable cities, and therefore contribute to SDG 11.
	Gössling and Hall (2019)	The sharing economy can contribute to changing socio-technological systems and social marketing, as well as the promotion of non-monetized exchange, helping to achieve SDG 12.
SE-SDG 12	Aluchana (2018)	Food sharing can promote alternative ways of responsible and sustainable consumption, thereby reducing food waste at home, helping to achieve SDG 12.
	Ma et al. (2019)	The sharing economy integrates the production and consumption processes, and this has a huge impact on the achievement of SDG 12, which emphasizes sustainable production and consumption.
SE-SDG 13	Fioramonti, Coscieme, and Mortensen (2019)	Shared urban gardens can also contribute to climate action, and therefore to the achievement of SDG 13.
SE-SDG 15	Fioramonti, Coscieme, and Mortensen (2019)	By enriching local biodiversity, the sharing economy can contribute to the achievement of SDG 15.
SE-SDG 16	Gössling and Hall (2019)	The sharing economy can contribute to the fulfillment of SDG 16 by strengthening public institutions and developing appropriate public-private partnerships.
	Shereni (2019)	The sharing economy can contribute to the fulfillment of SDG 16 by allowing deep interactions between guests and hosts through homestays. The accommodation sharing economy can hopefully forge trust and social understanding among people.

Source: Own elaboration.

We could therefore define the SE as a community of users for whom it is more important to access an asset than own it, and decide to use the idle capacity of goods owned by another member of the community instead of buying it. This access is usually facilitated by a digital platform on which each member's reputation is used as collateral.

To assess the SE's potential contribution to the achievement of the SDG, each one of the characteristics included in the previous definition will be analyzed, and its role in the different goals discussed. Generally speaking, the SE can support the SDGs by promoting a more rational and sustainable use of resources by allowing access to users who could not do so before, by offering employment opportunities to minority groups, and by creating communities in which people can collaborate and support each other.

4.1. Community of Users

One of the key aspects of the SE's success is the community of users that builds up around the platforms. A community is a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings [85]. Most scholars agree on the importance of this factor [26,28,33,40–42,86–89], due mainly to the possibility offered to connect with local people who share hobbies or beliefs, with this being one of the key reasons for using the SE [33,90,91]. By using this consumption system, the members of the community not only

have the chance to earn extra income from their spare resources or access those goods they need, but also connect at a personal level with other users.

These communities can contribute to the achievement of SDG 1 (no poverty), by connecting local people and creating value by allowing users to generate extra income by sharing their resources with others and by reducing the barriers to entrepreneurship. Platforms such as Eatwith or Meal Sharing, based on food sharing among members of the community, can contribute to the achievement of SDG 2 (zero hunger) by facilitating a better distribution of surplus food among members, at the same time reducing food waste. By relying on the community, better physical and mental health can be achieved by connecting with new arrivals with similar interests, which contributes to SDG 3 (good health and well-being). Communities formed around platforms such as Skillshare or Sharing academy contribute to knowledge dissemination, and therefore to the achievement of SDG 4 (quality education). Due to the no-discrimination policies most of the platforms have, opportunities previously denied to some collectives are now available, helping to achieve higher economic growth and supporting SDG 5 (gender equality) and SDG 8 (decent work and economic growth). Platforms such as Gridmates or Vandebroon help to reduce energy poverty, as well as facilitate access to renewable energies, contributing to a higher degree of sustainability and to SDG 7 (affordable and clean energy). By sharing the different resources among the members of the community, a smaller amount of these resources are needed to cover the same volume of needs, reducing inequalities by granting access without ownership (SDG 10: reduced inequalities), supporting more sustainable cities and communities (SDG 11), and more responsible consumption and production (SDG 12) by reducing the number of inputs needed for the same number of outputs. This reduction in the demand for resources leads to less pollution and cleaner industrial processes, contributing to SDG 13 (climate action). Finally, the communities created around SE platforms can contribute to the achievement of SDG 16 (peace, justice, and strong institutions) by favoring interaction among users and forging trust and social understanding.

4.2. Access over Ownership

The SE model prioritizes access over ownership, arguing that it is not necessary to be the nominative owner of an asset, but instead be able to access it whenever so required [6,31,32,38,39,42,92–94]. By accessing goods for a limited period of time and with no change in ownership [40,95], SDG 1 (no poverty) and SDG 10 (reduced inequalities) are supported by eliminating the need for the initial expenditure and subsequent maintenance costs of resources that may only be required from time to time. Granting access to a shared urban garden may reduce the risk of food shortages (SDG 2: zero hunger). Being able to access the renewable energy produced by someone else's facilities provides the benefits of this type of energy (both environmental and monetary) without owning them (SDG 7: affordable and clean energy). Enjoying access to a certain type of goods (e.g., vehicles or parking places) may mean more sustainable mobility within cities, contributing to SDG 11 (sustainable cities and communities). Generalizing this access to more fields may lead to more rational and sustainable consumption and production (SDG 12). Finally, this will all have a direct impact on climate change by reducing the amount of resources needed, and therefore produced (SDG 13: climate action).

4.3. Idle Capacity

A resource is said to have idle capacity when it is not being used to its full extent, and therefore a certain amount of it is being underused. Many scholars maintain that this is one of SE's main characteristics [28,30,31,37,94,96–100], whereby its overriding goal is to make better use of that spare capacity by granting other members of the community access to it.

This redistribution of the idle capacity of products or services may also generate an extra income for those sharing them if they should decide to charge for them. The other party to the deal, the one accessing the asset, is benefiting by not having to buy them. This helps to reduce poverty by generating an extra income and reducing inequalities by

granting access at a more affordable price, contributing to the achievement of SDG 1 (no poverty) and SDG 10 (reduced inequalities). Exploiting the unused capacity of vehicles, for example, through the use of free places on journeys, may reduce the amount of traffic and achieve more sustainable cities and communities (SDG 11). Finally, the use of the full capacity may lead to more sustainable consumption, and as a direct consequence, production will also be adapted to the new demand (SDG 12: responsible consumption and production).

4.4. Peer-to-Peer

The term peer-to-peer is used to define an organization built around a platform in which people can rent, sell, lend or share things with others without the involvement of shops, banks, or agencies [26]. This implies that both the service provider and recipient are individuals rather than businesses [32]. This activity is coordinated through community-based online services [33], building social relationships between peers [5,23].

Most scholars [26,31–33,37,101] consider that the sharing economy comprises individuals who transact directly with other individuals, while the marketplace platform is maintained by a third party [5]. This implies that people within the community created around these platforms can connect with other users whose hobbies and interests are the same, which can help to create a sense of community and forge more meaningful relationships. Several scholars have analyzed the main motivations behind the use of the SE. Apart from monetary ones, these motivations are related to the possibility of connecting with people with shared attitudes and beliefs [33,90]. This can help to achieve not only SDG 3 (good health and well-being) but also SDG 16 (peace, justice, and strong institutions).

4.5. Digital Platforms

Sharing has been a social activity for centuries, but the SE arranges these interchanges between people who do not usually know each other. This is possible thanks to the presence of digital platforms, as they operate as logistic centers for the redistribution of the idle capacity of the goods offered by users. The key role played by these platforms has been identified by previous literature [26–28,38,42,92,94,97,102–107]. This characteristic's main contribution to the SDGs comes from the innovation these platforms have brought to the industries within which they operate. By challenging traditional models, sharing platforms are boosting innovation in products, services, and processes, driving both sharing platforms and traditional companies to rethink their value creation systems and their business models, contributing to the achievement of SDG 9 (industry, innovation, and infrastructure).

4.6. Reputation

Finally, in order to create a trusting and secure environment in this new movement, most of the platforms have introduced a reputation system for users to evaluate their transactions [30,31,38,96]. Reputation in the SE reflects the community's perception of a user, usually through their longevity on a platform, contributions made, and outcome of past engagements, normally represented as a numeric score (usually from 1 to 5) or valence scores (emoji selection) [108].

For example, CouchSurfing has a multi-faceted reputation system that includes three components: physical verification, personal references, and vouching. This reputation system creates a community in which there is generalized reciprocity, especially by the vouching system, which is taken very seriously by all members and is essential to the network's integrity.

BlaBlaCar applies a trust framework that has evolved as the platform has grown, from simply disclosing the name and the photo to adding more features, such as ratings, background verification, social network connections, and online booking systems. At this moment, the platform has a two-way rating feature to ensure that fair and honest ratings are given. This trust framework is encapsulated in the acronym D.R.E.A.M.S., in which each letter represents one pillar of trust (Declared photo and name, Rated ratings, Engaged

“booking” box, Active activity box, Moderated verification box, and Social Facebook/LinkedIn connections).

These reputation systems can help to promote more meaningful interactions between users, leading to a better social conscience, and therefore contributing to the achievement of SDG 16 (peace, justice, and strong institutions).

5. Discussion

The SE has already been posited as one of the possible paths to environmental sustainability [10,62], due mainly to one of its fundamental characteristics, namely, the prevalence of access over ownership, which theoretically leads to a decrease in consumption, and therefore a lower environmental impact. This research has analyzed the SE model from different perspectives to corroborate this statement. The impact of each one of this model’s characteristics was analyzed to provide a detailed picture of the different contributions, which was then extrapolated to the whole model (Table 2). In line with previous literature, we therefore contend that the SE may potentially lead to greater environmental sustainability.

Table 2. Characteristics of the SE with an impact on the SDGs.

Characteristic	SDG
Community of users	SDG 1, SDG 2, SDG 3, SDG 4, SDG 5, SDG 6, SDG 7, SDG 10, SDG 11, SDG 12, SDG 13
Access over ownership	SDG 1, SDG 2, SDG 7, SDG 11, SDG 12, SDG 13
Idle capacity	SDG 1, SDG 10, SDG 11, SDG 12
Peer-to-peer	SDG 3, SDG 16
Digital platforms	SDG 9
Reputation system	SDG 16

Source: Own elaboration.

Following this argument, the SE not only improves environmental sustainability, as the analysis has shown that social and economic sustainability are also benefited. This redistribution system both reduces the necessary amount of goods and changes consumer perception regarding ownership. By prioritizing access over ownership, the SE provides its users with a better outcome in terms of both their goods and their available income, thereby making better use of available resources. These findings are in line with previous literature [11,12,61]. It may therefore be concluded that, by definition, the SE can potentially contribute to greater sustainability and, by extension, the SDGs.

Focusing on the contribution the SE makes to the achievement of the SDGs (Table 3), this model can facilitate the achievement of these goals by promoting a more rational and sustainable use of products and services, giving access to all kind of resources, offering employment opportunities to minority groups, and creating communities in which people can collaborate and support each other. These arguments confirm and complement the previous literature on this topic [1,9,64,109–111].

In order to further research the field, scholars should start looking for ways to address the empirical influences SE platforms have on each one of the targets within the SDG framework. Researchers should therefore collaborate closely with the managers of sharing platforms to obtain the necessary data and undertake practical investigations to analyze the real outcomes, and therefore investigate the true contributions made to each one of these targets. This future research will allow us to analyze the evolution of general business environments and how they are adapting their value propositions for a more sustainable planet.

This paper provides managers with the chance to further investigate the potential contributions their business can make to the achievement of the SDGs and work toward a more sustainable model that will not only make them more ecofriendly, but also help to improve their reputation. Not only “pure” sharing platforms can benefit from this

knowledge, but also companies with collaborative tendencies. By acknowledging which characteristics are present in their business model, they can choose the goals they could potentially target.

Table 3. The SE 's contributions to the SDGs

Sustainable Development Goal	SE Contributions
SDG 1. No poverty.	<ul style="list-style-type: none"> • Allowing users to earn extra income. • The opportunity for self-employment. • Enabling previously marginalized collectives to gain another source of income.
SDG 2. Zero hunger.	<ul style="list-style-type: none"> • P2P redistribution of food surplus. • Sharing of urban gardens. • Granting access to underused land. • Reducing food waste.
SDG 3. Good health and well-being.	<ul style="list-style-type: none"> • Allowing people to connect with likeminded others.
SDG 4. Quality education.	<ul style="list-style-type: none"> • Facilitating access to knowledge and educational resources through platforms.
SDG 5. Gender equality.	<ul style="list-style-type: none"> • Providing better employment opportunities for marginalized communities. • Equal opportunities.
SDG 7. Affordable and clean energy.	<ul style="list-style-type: none"> • Creating renewable energy networks. • Connecting people in need of energy and those willing to share theirs.
SDG 8. Decent work and economic growth.	<ul style="list-style-type: none"> • Promoting inclusive and sustainable economic growth. • Providing employment opportunities for all users. • Reducing barriers to entrepreneurship.
SDG 9. Industry, innovation, and infrastructures.	<ul style="list-style-type: none"> • Fostering responsible innovation. • Increasing customer awareness regarding sustainable solutions.
SDG 10. Reduced inequalities.	<ul style="list-style-type: none"> • Allowing owners of goods to benefit from extra income. • Allowing users to access goods without acquiring them. • Offering equal opportunities to all kinds of users, not discriminating by sex, race, or level of income.
SDG 11. Sustainable cities and communities.	<ul style="list-style-type: none"> • Enhancing mobility. • Reducing the negative environmental impact. • Reducing personal vehicle ownership.
SDG 12. Responsible consumption and production.	<ul style="list-style-type: none"> • Supporting a more sustainable consumption model. • Actively fostering the maximum use of resources. • Reducing the number of resources required. • Facilitating access to goods, rather than promoting their ownership.
SDG 13. Climate action.	<ul style="list-style-type: none"> • Promoting a more rational approach to consumption. • Reducing pollution.
SDG 16. Peace, justice, and strong institutions.	<ul style="list-style-type: none"> • Creating communities that favor interactions among users. • Forging trust and social understanding.

Source: Own elaboration.

This knowledge is also useful for the general public; environmentally mindful consumers are willing to choose between companies according to their sustainability level. This research presents a framework in which all kinds of stakeholders can easily identify the contributions these platforms make to the SDGs according to their unique set of characteristics. This helps managers' decision-making and consumers when deciding which alternative to use, and also policy makers and governments when making policy and regulatory decisions.

The SE is posing difficult challenges for government and policymakers. Many traditional companies are complaining about this model and their ensuing loss of income, calling for a regulatory framework that allows fair competition. Although some governments are more reticent, the SE's benefits are widely acknowledged. This research may help policymakers to make decisions, as a sustainable perspective is adopted and the contributions to the achievement of the SDGs are clearly stated. As indicated earlier, the UN 2030 Agenda calls for governments and states to move forward with a more sustainable model, which includes promoting those business models that contribute more to its goals.

6. Conclusions and Future Investigation Lines

This paper has addressed the SE's potential influence on the achievement of the SDGs. Although research is still scarce, previous scholars have already reported how this system, based on the preference for access over ownership, could promote a more sustainable and rational lifestyle.

We verified previous research by establishing the main characteristics of sharing platforms and analyzing, from a theoretical point of view, how each one of them could contribute to the achievement of the SDGs. This hitherto unexplored approach corroborated that the SE model can help to achieve SDG 1 (no poverty) [84], SDG 2 (zero hunger) [64], SDG 3 (good health and well-being) [64], SDG 5 (gender equality) [84], SDG 8 (decent work and economic growth) [9,84,111], SDG 9 (industry, infrastructures, and innovation) [9,84,111], SDG 11 (sustainable cities and communities) [64,111], SDG 12 (responsible consumption and production) [9,111,112], and SDG 16 (peace, justice, and strong institutions) [9,84]. By contrast, we were unable to find support for the contributions to SDG 15 (life on land) [64].

We have also stated that the SE model contributes to the achievement of SDG 4 (quality education) by facilitating access to knowledge and educational resources through platforms; to SDG 7 (affordable and clean energy) by creating renewable energy networks and facilitating the sharing of energy between those who have it in excess and those seeking a cleaner and more sustainable energy; to SDG 10 (reduced inequalities), by allowing owners of goods to benefit from the extra income, users to access goods without acquiring them, and providing equal opportunities for all kinds of users, without discriminating by sex, race, or level of income. Finally, our model assesses the SE's potential contribution to SDG 13 (climate action) by promoting a more rational form of consumption and by reducing pollution.

We have therefore reinforced the arguments made by previous scholars, whereby SE platforms contribute to the achievement of the SDGs, while at the same time providing ways in which this new type of resource redistribution system can support these achievements.

The main limitations here, and in general of this specific research field, are the shortage of available data and the scarcity of qualitative research, primarily focused on the topic's theoretical underpinnings, with a lack of quantitative analysis. Although an exhaustive literature review was undertaken, some information may be missing due to the variety of keywords used by scholars in the field. This paper only addressed the SE's contributions without comparing them to those made by traditional business models.

This lack of research entails both disadvantages, due to the difficulty of analyzing without a proper empirical and theoretical knowledge base, and openings for future research. The different outcomes in terms of sustainability between the sharing and the traditional model, the change in consumption patterns once the sharing model becomes even more popular, and its repercussions in terms of pollution or the evolution of the business environment in general as a response to environmental challenges, are only a few of the ways ahead.

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