Collaborative Economy Environmental Impact and Opportunities

Summary

This research explores the environmental impact of the collaborative economy: an emerging and varied phenomenon on which little information is available. The research focuses particularly on goods within the collaborative economy, but also provides a description of the entire collaborative economy landscape and its sustainability impact. The broad conclusion is that the sharing of goods has significant positive environmental impact because under-used capacity is exploited to accommodate consumption needs.

Defining the “collaborative economy”

The term ‘collaborative economy’ is often used to denote a wide range of “economic systems of decentralized networks and marketplaces that unlock the value of underused assets by matching needs and haves, in ways that bypass traditional institutions”. Within this broad definition, two movements of the collaborative economy are currently receiving significant attention. The first is the narrow definition of the collaborative economy, defined as an economic system in which consumers use others’ underutilised consumption goods, potentially in exchange for payment. The second is the ‘on-demand economy’, defined as an economic system where jobs, tasks, and services are connected with independent contractors, which results in work and services being offered as required, also often in exchange for a payment. However, the broad definition of the collaborative economy will be used in this research, unless otherwise stated.

Platform organisations with different structures (e.g. peer-to-peer, business-to-business, peer-to-business-to-peer), using a wide range of different forms of trade (e.g. buying, renting, borrowing, lending, giving, exchanging, swapping, sharing), and which operate in ten different markets (i.e. goods, space, transportation, energy, money, knowledge, services, healthcare, food & logistics) all fall in the scope of the collaborative economy. The collaborative economy markets of services, knowledge, and money are not included in this research as no direct environmental impact is expected from these.

The current and potential state of the collaborative economy

Through an online survey among sharing platforms, the current state of the Dutch collaborative economy has been mapped. The results confirm the widely held view that the majority of sharing platforms have only recently been founded, that a small number of platforms are experiencing an extremely strong growth, but that most platforms still have a limited number of users and transactions. International research and forecasts however, state that the collaborative economy has a huge potential: platforms can effectively and efficiently bring together supply and demand of existing capacity and create value, to an extent which centralised networks cannot provide.

Determining the environmental impact of the collaborative economy

As part of the process of assessing the environmental impact of the different markets of the collaborative economy, a set of criteria have been developed to determine an area of focus. These are based on three policy programmes from the Ministry of Infrastructure and Environment: Klimaat ('Climate'), VANG ('From Waste To Resource') and Modernisering Milieu Beleid ('Modernising Environmental Policy'). By applying the criteria to the seven collaborative economy markets, an assessment has been made of where and how the expected environmental impact of the collaborative economy would manifest. Economic and social sustainability effects were also briefly outlined (though these effects are not mentioned in the summary). On the basis of the outcomes of this initial testing phase, it was decided to focus on the goods market.

Environmental impact of sharing goods

At this moment, transactions as a result of sharing in the goods domain contribute little to making society more sustainable. Platforms are only beginning to emerge and, even with a rapidly growing number of users, the number of transactions are modest – especially when compared to other consumer activities.

However, if this domain expands in size then the collaborative economy can provide a significant contribution to making society more sustainable.

This is primarily achieved through the utilisation of existing capacity, for example, the enormous amount of goods that are unused or underused in people's homes and will eventually be discarded. A positive environmental effect can be realised if these goods are used to meet the consumption needs of others that would otherwise have bought a

similar product. For example, in this research, it has been calculated that, based on an efficient but realistic sharing model, more than six households could share one drill: therefore, there would be no need to produce the other five drills. The research uses mathematical models to estimate the efficient deployment of goods and the resultant savings.

Change in behaviour and mentality

For most consumers, sharing goods is not an unknown phenomenon. Research indicates that where consumer see their first experience of sharing as positive, sharing will lead to more sharing, and on other platforms in addition. Positive user experiences in the collaborative economy can contribute to a steady change in mentality. Consumers will break with current standard behaviour which is focused on purchase and ownership, and will grow towards an alternative behaviour that is focused on use. This not only provides possibilities for further transactions within the peer-to-peer collaborative economy, but also for the "peer-to-business-to-peer" concept and new renting concepts by companies and private individuals.

Environmental impact of other markets of the collaborative economy

Sharing transactions can also have a positive environmental impact in other collaborative economy markets. A clear example of this is car sharing – this theme has been addressed in the 'Green Deal Autodelen' ("Green Deal Car Sharing"). Other markets where it is expected that increasing sharing behaviour will have a positive environmental impact are sharing food, carpooling, energy, accommodation, work spaces, and parking spaces.

Environmental impact of other business models and new forms of trade in the collaborative economy

The most common business models in the collaborative economy is the peer-to-peer platform. In addition, on a smaller scale, enterprises rent each other's overcapacity via so-called "business-to-business" marketplaces. The broad definition of the collaborative economy also includes transactions where goods have changed owners as a result of a sale, giveaway, or exchange. These new forms of trade also have a positive impact on the environment as these goods have a longer life and/or will be used more during their life. Business-to-business sharing platforms (alternative organisation structure) and

second-hand marketplaces (alternative form of trade) are described briefly in the full report.

Potential negative effects

Negative environmental effects also occur in certain cases, alongside these positive environmental effects. A transaction could as a result of sharing have a considerable negative environmental impact because of the resultant packaging, distribution, and maintenance (e.g. cleaning). This can, for example, be imagined when borrowing clothing that will have to be packed, sent, and cleaned twice as a result of the transaction.

People could also start to consume more or use goods with a significant environmental impact more as a result of the possibilities arising from the sharing platforms. It is also possible that the money that is saved as a result of sharing will be used in a different, but not more sustainable way. For example, it appears that sharing accommodation leads to an overall increase in the number of short holidays taken, which often require environmentally detrimental trips by airplane.

Challenges in the collaborative economy

Sharing platforms and potential users of these platforms experience a number of barriers which inhibit the development of this market.

- The most important barrier is the lack of familiarity with the collaborative economy as well as with the platforms within it.
- It is also insufficiently known which rules apply to which platforms and users: are the transactions legal and safe? Who is responsible if something goes wrong? Do taxes have to be paid on the revenue generated? Will revenues be deducted from unemployment benefits? And so on.
- A different challenge is to create structural and effective cooperation: cooperation between sharing platforms themselves, cooperation between existing ‘normal’ organisations and collaborative economy organisations, and cooperation with the government.

Cooperation can help to identify and clarify issues, solve them, and communicate to all stakeholders.

Issues that require action by the government

There are several specific issues which require action from government in order to stimulate the positive environmental impact of the collaborative economy. Many of these issues are closely related to the policy programmes of the Ministry of Infrastructure and Environment mentioned above.

1. The first issue concerns providing room to experiment, to learn, and to provide information.
2. Furthermore, the government can stimulate sustainable sharing and limit the sharing of polluting goods.
3. Another issue which requires action concerns changing the behaviour of consumers, within the production chain and within the government, to be more sustainable.
4. The government can also facilitate cooperation between different actors and monitor developments in the collaborative economy.
5. The government can enhance the financing opportunities to support platforms with the potential to have a significant sustainability impacts in their first development phases.
6. Lastly, the government can make use of the capacity of the sharing platforms during adaptation to climate change and peak use.

Review of the environmental impact of future sharing initiatives

The collaborative economy is developing quickly. Every month, new platforms and initiatives appear while others disappear. A decision making tool has been developed for the Ministry of Infrastructure and Environment to determine whether new platforms and initiatives are expected to have a significant environmental impact. It also determines to what extent the government will have to take or wishes to take action on these.