Car sharing in the Netherlands
Significance, environmental effects and outlook on the future
Summary

Car sharing in the Netherlands: significance, environmental effects and outlook on the future

The amount of shared cars has been increasing for years. And since providers like 'peer-2-peer car sharing' (private persons who borrow their car for a certain price to another person, for example via an organisation such as Snappcar) the growth has further increased. Between March 2013 and March 2014 the growth was approximately 110%. This can be seen from the Dashboard sustainable and smart mobility of CROW-KpVV¹.

But what is the situation with the awareness and use of shared cars? Little is known about this. That is why TNS-NIPO have taken the initiative for the TNS NIPO Monitor Car sharing².

The questions that we wish to answer in this paper on the basis of this research are:

What does car sharing mean for those who do it?
Car sharing is currently still in its infancy. At this moment only a select group of pioneers are participating: young, well-educated people in urban areas and with an active and social life. Car sharing matches their social identity and their active lifestyle. In addition, it is financially advantageous, means less paperwork than an own car and gives a feeling of taking part in solving environmental issues.

To what extent and in which respect is there an environmental effect from car sharing?
No definitive statements can be made concerning the environmental effects on the basis of the TNS NIPO Monitor Car Sharing, but it appears that car sharing:
- encourages a part of the car owners to dispose of their car or to not replace it,
- prevents part of the car sharers without a car to purchase a car,
- supports a sustainable mobility pattern.

To what extent is car sharing the future in the Netherlands?
Car sharing is still a distant phenomenon for the general public. The majority of people only know about it from the media. Car sharing does have potential: the image is good and approximately one in five Dutch people from 18 years and older are open to the idea. This group sees itself shifting to car sharing if the own car becomes too expensive or has to be replaced. People also believe that car sharing is ‘something that suits me’ and people know more people than ‘the average Dutch person’ who do it. One third of potential car sharers have already become familiar with car sharing. The group of ‘potential car shares’ takes in terms of demographics, mobility behaviour and social life a middle position between car sharers and general public.

¹http://kpyvdashboard-4.blogspot.nl/
²http://tns-nipo.com/ons-aanbod/marktonderzoek/multiclientonderzoek/monitor-autodelen/
1. Introduction

In her book True Wealth\(^3\), Juliet B. Schor rejects the idea that we have to sacrifice ourselves for sustainability. She states that social innovations and new technologies can (further) improve our quality of life and can at the same time also protect our environment. Continuing with ‘business as usual’ (BAU), or work hard and spending much and quickly is unsustainable, both in terms of personal quality of life as well as in terms of damaging the environment. She contends that it is possible to create an economy where we reduce the damage to our environment and at the same time keep living the lives that appeal to us. Schor calls this economy ‘time-rich, ecologically light, small-scale and high satisfaction’. In other words: good for people and the environment. How can we achieve this? Schor notes a number of ways in her book. One of these is sharing. Sharing is smarter than buying. Why would one purchase things that you do not use so often? You can also use them together with multiple people. Then you can still live the life that appeals to you and you can save money too. At the same time, it is good for the environment because less products need to be produced.

In the Netherlands sharing is already well established: consider Airbnb, Thuisafgehaald.nl, Peerby and Snappcar. ‘Sharing is the new owning’ states online management magazine www.Baaz.nl among other publications\(^4\): “Thanks to the technological developments of recent years sharing things and services has been given a new significance. Traditionally one would lend their stuff to their neighbour or a good friend, but since technology made it possible to make and maintain online contact you can theoretically share things with people across the globe, also with people you do not know”.

When you think about the economy of sharing, car sharing quickly comes to mind. TNS NIPO recently carried out a survey in collaboration with CROW-KpVV among others into car sharing in the Netherlands: the TNS NIPO 2014 Monitor Car Sharing. The report shows that car sharing is currently still in its infancy. It is something which currently only a select group of people ‘participate in’. In this paper you read about the chances of car sharing being embraced by a larger group.

Car sharing has a sustainable reputation. Large municipalities such as Amsterdam and Utrecht believe in it and promote initiatives to encourage car sharing. Arguments: less parking congestions, less emissions and good for one’s finances\(^5\). In this paper we will also look to what extent the conviction that car sharing is sustainable, is supported by the findings from the report. We take sustainability broadly here, just as in the True Wealth book: so in the sense of the (positive) significance it has for the user, while at the same time causing less damage to our environment.

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\(^3\) True Wealth, Juliet B. Schor
\(^4\) www.Baaz.nl, Sharing is the new owning, 13 May 2014, by Sanne Ruhaak
The questions we wish to address in this paper:

1. What does car sharing mean for those who participate?
2. To what extent, and in which respect, is there an environmental effect from car sharing?
3. To what extent does car sharing have a future in the Netherlands?

2. The significance of car sharing for those who participate

In this chapter we look primarily at the significance of car sharing for the car shares themselves: both for the private individuals who share their cars as well as for the users of shared cars.

The questions we aim to answer in this chapter are:
- Who are the current car sharers?
- What does car sharing mean for them?
- Which benefits do they see in car sharing?
- Which benefits do they see and do the advantages outweigh the disadvantages?

2.1 Car sharers: (currently) a very select group

The figures from TNS NIPO 2014 Monitor Car Sharing show that car sharing is currently clearly just at the beginning: the percentage of Dutch people of 18 years and older that participate in one or more forms of car sharing, is just above 1%. Not only is the scope of the group still small, it currently concerns a very select group of pioneers: starters, in urban areas, often single or with a family with small children, well-educated, not owning a car and with an active and social life.

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1 Car sharers profile

<table>
<thead>
<tr>
<th>Profile</th>
<th>Car sharers</th>
<th>Dutch public 18+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 25-44 years</td>
<td>49%</td>
<td>27%</td>
</tr>
<tr>
<td>Lives in urban area</td>
<td>78%</td>
<td>47%</td>
</tr>
<tr>
<td>Is single</td>
<td>25%</td>
<td>9%</td>
</tr>
<tr>
<td>Has family with small children</td>
<td>25%</td>
<td>18%</td>
</tr>
<tr>
<td>Is well-educated</td>
<td>62%</td>
<td>27%</td>
</tr>
<tr>
<td>Does not own car, all car sharers</td>
<td>50%</td>
<td>9%</td>
</tr>
<tr>
<td>Does not own car, renting car sharers</td>
<td>54%</td>
<td>9%</td>
</tr>
<tr>
<td>Does many activities with friends</td>
<td>45%</td>
<td>23%</td>
</tr>
<tr>
<td>Uses public transport at least once a year</td>
<td>95%</td>
<td>64%</td>
</tr>
<tr>
<td>Has a public transport subscription</td>
<td>65%</td>
<td>35%</td>
</tr>
</tbody>
</table>

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6 More than half of car sharers (58%) rents a shared car from an organisation and 24% uses a car from a private individual (peer-to-peer). Of the group of car shares, an additional 25% hire out their own car, either via an organisation (10%), or directly (15%).

7 The percentages amount to more than 100% because it is possible to participate in multiple types of car sharing.
Car sharing seems to form part of a social identity. Many of the friends of car sharers are car sharers themselves (78% know someone in their circles who participates in car sharing). Car sharers believe far more than the average Dutch person that car sharing suits them (see figure 3). Car sharers also have a much higher than average affinity with the developments in the area of the participating society: almost 80% are very positive when it concerns the phenomenon of crowdfunding (43% in the general public).

2.2 Car sharing suits an active and social life

As we saw earlier car sharers have an active and social life. They undertake many activities with friends, go out relatively often and frequently visit a café or restaurant. Car sharing suits this lifestyle, it is one of the transportation options to social and active events such as a day out or a visit to family or friends. With daily transport, to and from work or school, a business trip or grocery shopping or going shopping, the shared car clearly loses out against the own car, public transport and cycling. Car sharing contributes, albeit in a modest way, to an active and social life for the group car sharers by increasing the travel options.

2 | Shared car for days out and visits to family and friends
2.3 Car sharers see benefits for themselves and the environment

Car sharers firstly see advantages in a functional area for themselves: it is financially beneficial and causes less paperwork than owning a car. In addition, people also have the idea to contribute to a better environment and to solve the parking problem.

3 | Car sharers see clear advantages in car sharing

[Bar chart showing advantages for car sharers and general public]

2.4 Advantages of car sharing outweigh the disadvantages

Aside from these advantages, in practice users of shared cars also experience serious disadvantages; seven out of ten car sharers can name one or more: the shared car is too far away from the living address, too little flexibility in the availability of the cars, the reliability of the mediating organisation and the high costs. However: overall, the car sharers who sometimes use a shared car are satisfied: three quarters would recommend others to hire a shared car.

2.5 Providers of private shared cars less satisfied than users of shared car

Hiring out your own car is more ‘out of necessity’ than using a shared car. While private individuals who hire out their own car partly do this because they believe car sharing is ‘a good principle’, they primarily hire out their car because of the financial and practical advantages. It generates income and is a way to maintain their own car. They struggle with privacy (other drivers in my car), have concerns about the condition the car will be returned in and sometimes doubt the insurance cover and the reliability of the mediating organisation. Overall, private individuals who hire out their own car are less satisfied than the users of a shared car: Only four out of ten would recommend others to hire out their own car.
3. Environmental effects

Large municipalities such as Amsterdam and Utrecht believe in car sharing and have introduced initiatives to promote this. The Amsterdam West District for example by offering the 'Slimmer Reizenpas' [Smarter Travel card] which offers various advantages for car sharers. Arguments: less parking congestion, fewer emissions and financially more advantageous.

In this chapter we will focus on the question of to what extent car sharing is good for the environment. We split this question into a number of sub questions:

- To what extent does car sharing lead to less cars being purchased (people do not purchase a car because of car sharing)?
- To what extent does car sharing lead to less CO2 emissions?
- To what extent does car sharing lead to people selling their car due to car sharing?

3.1 Car sharing appears to be a serious alternative for owning an own car

From the TNS NIPO Monitor Car Sharing it appears that three out of ten car sharers who currently do not own a car, consider the shared car to be a serious alternative for an own car. Prior to commencing car sharing, they used their own car for the transport for which they now use a shared car.

However the shared car does not only replace the car transport, but also public transport and bike transport and even transport which was done previously with a rental car. Depending on what mean of transportation is being replaced, car sharers can make more or less car kilometres.

3.2 The effect of car sharing on CO2 emissions is difficult to calculate

The question of to what extent car sharing leads to less CO2 emissions is rather complex. We need to know how many trips car sharers make per means of transportation, how long the trips take for each method of transport, which (shared) cars are driven and how the travel behaviour of the car sharer was before he or she commenced car sharing. Additional research is required to determine the effect when someone commences car sharing.

A calculation of CROW-KpVV gives an initial indication of the CO2 emissions of all journeys that a car sharer makes compared with the CO2 emissions of the average Dutch person. According to this calculation the emission of car sharers is an average of 0.9 kg CO2 per journey. This amounts to 814 kg a year. With the average Dutch person, this is

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1.4 kg per journey; 1245 kg per year. Therefore according to this indication a car sharer emits 35% less CO2 than a non-car sharer\(^9\).

### CO2-emissions from car sharers and non-car sharers (average per journey in kilos CO2)

3.3 Car sharers are more mobile, but have more sustainable mobility patterns

In the TNS NIPO Monitor Car Sharing research it is also apparent that car sharing suits a sustainable mobility pattern. Car sharers are indeed more mobile than the average Dutch person, they make more journeys than the average Dutch person (average of 333 per year compared to 280 per year for the average Dutch person\(^10\)). But this largely amounts to more use of bikes and public transport and obviously the various forms of car sharing. Public transport is particularly loved by car sharers: 44% uses it on a weekly or even daily basis. In comparison: only 15% of all Dutch people travel daily or weekly by public transport.

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\(^9\) This calculation assumes that a car sharer makes the same amount of journeys as a non-car sharer and that these journeys are of similar length. Not included in this calculation is that traditionally a shared car is newer, more compact and therefore cleaner than the average car in the Netherlands.

\(^10\) This estimation is based on the question ‘How often have you used the following means of transportation in the past 12 months?’
Car sharing suits a sustainable behavioural pattern

3.4 Car sharing unquestionably has a slowdown effect on purchasing an own car

One in 20 car sharers without a car would have certainly purchased a car if he or she had not commenced car sharing. A third would maybe have purchased a car. Car sharing therefore unquestionably has a slowdown effect on purchasing an own car. Currently the effect of this in amounts is not so large, but in view of the potential of car sharing this is certainly an interesting finding.

6 | Slowdown effect of car sharing on purchasing an own car
4. The future of car sharing

4.1 A phenomenon from a distance

Car sharing largely owes its reputation in the general public to reports in the media. Only 6% know someone in their immediate surroundings who participates in car sharing. This also shows that for many people (approximately 50%) it is still too early to have a clear opinion. People do believe that car sharing is financially advantageous, better for the environment and that it offers a solution for parking problems but if it concerns more specific issues it becomes increasingly tricky: people are not so sure that car sharing is easy. With people who do have a clear opinion, we see that the majority (65%) are positive about this concept. The general image about car sharing becomes more extreme when we ask people whether car sharing is something that suits them. Three quarters clearly stated that this was not the case. Car sharing therefore has a good image but has not caught on yet with the public at large.

4.2 A large group is open for car sharing

With approximately 1% car sharers are now still a relatively small group. However, the figures also show that there is much dynamic in the development; over 60% of car sharers commenced car sharing in 2011 or later. Both the supply side as well as the user side displays rapid growth. In the Netherlands there is also a rather large group which is open to car sharing in one form or another: 19% indicates being willing to use at least one of the three forms “under the right circumstances”. Hiring a shared car via an organisation is most frequently considered (13%), followed by hiring a car privately (7%) and renting out the own car via an organisation (4%).

Profile potential car sharers: in-between car sharers and the general public
In terms of profile, potential car sharers resemble car sharers in some respects: (relatively) young, often single. In terms of interests and activities there are also parallels: sports and activities with friends are popular. In many respects the potential car sharers adopt an intermediate position between car sharers and the general public: people live in a relatively urban area, are quite well-educated, are less likely to own a car and more likely to possess a public transport subscription, but this is even more the case with car sharers.
Positive overall perception, but do people actually take the next step?
Thus the question becomes increasingly interesting, weather and if yes under which terms and conditions, members of this group would switch to car sharing. Overall the attitude towards the phenomenon is in certainly positive:
- Two thirds is positive about hiring a shared car\textsuperscript{11}.
- Half (52\%) is positive with regards to hiring out their own car via an organisation.

The question is of course whether the attitude will also translate into behaviour. A section of the potential car sharers is looking into car sharing: one third (33\%) have looked into the possibility of car sharing\textsuperscript{12}, meaning that this is already becoming more concrete for this group.

Significant part of obstacles to rent a shared car are practical and doable
Hiring a car – whether via an organisation such as Greenwheels, or peer-to-peer via for instance Snappcar– is not necessarily faced with image problems but rather with purely practical obstacles which the potential car sharers experience. The most important reasons for potential car sharers to not participate (yet): “I have my own car” (40\%). However it is the question to what extent this really is a decisive argument to not participate with car sharing: many cars sharers (50\%) have access to at least one car in their household. What we also see is that a significant part of the reasons given for not participating in car sharing does not look unsolvable: it has not yet occurred (23\%) or people do not currently know enough about the possibilities (16\%) – together this amounts to 39\% of the potential car sharers. In this group there appears to be potential for commencing car sharing in the short(er) term.

Pull factors: also often of practical nature?
Under which circumstances would potential car sharers switch to car sharing? What tempts them to take the step? When asked about this we see primarily practical aspects: car sharing will mainly become a solution as the own car gets too expensive (46\%) or has to be replaced (26\%). Changes in the personal or work situation can therefore be a factor, but also the condition of the own car. We see that the functional aspects (financially beneficial, solution to parking problems, etc.) and environmental issues (better for the environment) are also seen by this group, in this they differ little from car sharers and the general public. For the activities where car sharers use a shared car most regularly (day out, visiting family/friends) this group often uses their own car (56\% resp. 60\%).

At the same time, we saw earlier that car sharers are often friends of other car sharers. Car sharing appears to be a phenomenon which takes place in a specific social group and maybe also spreads that way. What does this mean for potential car sharers? Of this group 36\% of the people already knows people participating in car sharing – remarkably enough a group which is comparable in terms of scope with the group which is already looking into car sharing. Via this route the phenomenon can likely spread in this group.

\textsuperscript{11} 66\% is positive about hiring a car from a private individual, 65\% is positive about hiring a shared car from an organisation
\textsuperscript{12} mostly via the internet (88\%) but also via friends/family (35\%).
What is also important in this context is the level in which potential car sharers feel comfortable with the car sharing phenomenon. The phrase “Car sharing is something that suits me” is seen as something very positive by 25% of potential car sharers\textsuperscript{13}, this is 53% among current car sharers, and only 6% in the general public.

Other factors also play a role. Frenken (2013) for example indicates\textsuperscript{14} a number of issues which may be decisive, such as:

- Increasing profits (more competitive prices and use by larger volume). In view of the current growth in supply and demand, this is a relevant factor.
- Low “switching costs”: no costs are charged when switching to or starting car sharing. The obstacle appears to rather be in social factors: is it something others do in my surroundings?
- Word of mouth advertising: information and advertisements via the social network. This matches what we have discovered. Also the fact that a provider such as NS plays a role in a car share construction (together with Greenwheels) in addition to its own range can reduce these obstacles: travellers who are happy to use public transport in some cases do not have to stop this and are informed of the possibility (with a reduction).

\textit{Providers: Greenwheels leading the way, hesitation with private renters}

When asked for spontaneous brand awareness of providers of shared cars we see that Greenwheels leads the way by far (34%), followed by Car2Go (9%) and SnappCar (7%). While the reputation of the providers is slightly better than with the general public, only Greenwheels has clear spontaneous brand awareness under the potential car sharers.

As we pointed out earlier hiring out the own car was perceived as being positive by approximately half (52%), but people also see drawbacks. Disadvantages such as insurance cover (57%), privacy – other drivers in car (54%) and the condition in which the car is returned (50%) were mentioned. Despite a positive general attitude there is sometimes the possibility of hesitation which can hinder the jump to this form of car sharing (renting from a private individual).

\textbf{5. Conclusions}

Everything considered, we can draw the following initial conclusions:

- Currently car sharing only occurs within a very select group: primarily with young, well-educated people who live in an urban area. For these people, who live a more than average active and social life, car sharing means that it increases the possibilities to live this active and social life, that it is financially advantageous and means less paperwork than with your own car, whilst having the feeling of ‘doing something good’ (environmental effects, less congested parking areas)
- There are also disadvantages for the users of shared cars: the shared car is located too far away from the living address, too little flexibility in the availability

\textsuperscript{13} They give >81 points on a scale of 100
\textsuperscript{14} \url{http://www.cvs-congres.nl/cvspdfdocs_2013/cvs13_009.pdf} by Koen Frenken
of the car, the reliability of the mediating organisation and the high costs. But the disadvantages outweigh the advantages.

- Private persons hiring out a shared car see more disadvantages than users of shared cars. They struggle with the privacy (other drivers in my car), are concerned about the condition of the car when it is returned and sometimes have doubts about both the cover of the insurance as well as about the reliability of the mediating organisation. Organisations that the private renters are connected to can play an important role to reduce the (perception of) these disadvantages.

- No definite claims can be made concerning the effects on the environment, but it appears that car sharing:
  o stimulates some car owners to sell their own car, or to not replace it,
  o prevents that some car sharers who do not own a car then purchase an own car,
  o supports a sustainable mobility pattern.

- There are indications which can turn out favourably for the future of car sharing. To start with, the scope of the group of Dutch people who indicate being open to car sharing (19%). There is also a positive attitude with regards to the various forms of car sharing. Finally, there is a significant group of roughly 20 to 35 percent who know people that car share, who are already looking into it and/or believe that car sharing suits them. However it remains rather speculative to make an accurate prediction on the basis of these factors which have been indicated by respondents themselves.
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