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Is sharing really (car)ing? A quantitative study on the perceived benefits of access-based consumption

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Executive Summary

Changes in the perception of ownership are at the core of the sharing economy, which size is now estimated to be \$15 billion dollars. Consumers have realized that buying access to products for limited time periods can provide the same benefits as buying the product. Access-based consumption deprives consumers of maintenance cost and other burdens economic of ownership. Over 250 sharing economy services enable consumers to rent, share, donate, lend, or purchase goods from fellow consumers or corporate entities.

Previous studies on access-based consumption have focused on the antecedents for participation in sharing and rental services. The purpose of this thesis was to gain a greater understanding of consumer attitudes towards access-based consumption. We wanted to investigate if the perceived benefits from participation in sharing services, where consumers buy access to goods from their peers, differ from those of rental services, which take place in a business-to-consumer setting.

Using a quantitative between-subject design, we discovered large differences in attitudes towards rental and sharing services. While participation in sharing services is perceived to have economic, environmental, and social benefits, participation in rental services is only perceived to have social benefits. We also found differences in the perceived social benefits of the two services. Sharing services were perceived to create more social interaction and new friendships. In contrast, the greatest social benefit of participation in rental services was a sense of unity among the members. Additionally, our study found that sharing could be regarded as an enjoyable experience, rather than just another as a form of consumption

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1.0 Introduction

Six years have passed since Time Magazine named the sharing economy as one of ten ideas that will change the world (Time.com, 2011). The size and scope of the sharing economy has grown immensely in the following years. In 2015, PWC estimated the size of the sharing economy to be \$15 billion; this number is expected to grow to \$335 billion by 2025. These projections are based on five key sharing industries: car sharing, travel, finance, staffing, and music and video streaming (PWC, 2015). There are now over 250 services that enable consumers to rent, share, donate, lend, or purchase goods from fellow consumers or businesses (Hamari et al., 2015). According to a report from the Norwegian Ministry of Finance (2017), sharing economy services have so far, a modest prevalence in Norway, but have a significant potential for growth. In Norway, the sharing economy is expected to have the greatest impact on transportation, housing, and human capital (Norwegian Ministry of Finance, 2017).

The core of the sharing economy is a change in the perception of ownership (Chen, 2009; Botsman & Rogers, 2010; Gansky, 2010). Almost half of all Americans feel that ownership has become a burden (PWC, 2015) and consumers no longer gain status for what they own, but what they are smart enough not to own (EV World, 2013). Consumers have realized that value is created by the service a product provides, not the tangible good itself (Botsman, 2010). This new economic model based on access rather than ownership is called access-based consumption (Bardhi & Eckhardt, 2012; Belk, 2014). For this thesis, we will use “access-based consumption” to describe all forms of consumption without transfer of ownership such as sharing, renting and borrowing.

The sharing economy has been described as an ideological movement driven by environmental concerns and yearning for a community with tight-

knit relationships between individuals (Schor & Fitzmaurice, 2015). Headlines such as “Can Uber save the world? How the sharing economy can help solve the climate change crisis” (Medium.com, 2015) and “How the sharing economy could help repair our sense of community” (TheWeek.com, 2015) creates the impression these new services will make the world become a better place. However, it would be misleading to exclusively label the sharing economy as a benevolent moment. No published research has compared the usage motivations of renters with those of sharers. By comparing research on each group of consumers, you get the impression that consumers who share goods with their fellow peers are more altruistic than consumers who rent shared products from businesses. Participation in sharing services is motivated by economic, social and environmental benefits (Moeller & Wittkowski, 2010; Hamari et al., 2015; Tussyadiah, 2015). The economic benefits are saving time, reduction in costs, and the potential to increase one’s income. Social benefits include interacting with new people and building new friendships. Finally, environmental benefits include reduction in pollution and using fewer natural resources. Users of rental services have no desire to build friendships with other members, are not motivated by environmental benefits and do not actively reject ownership for ideological reasons, they are exclusively motivated by economic benefits (Bardhi & Eckhardt, 2012). This is in stark contrast to the sharing economy’s romantic image. The divide between idealism and utility raises the question of what the sharing economy should be. Is the purpose of the sharing economy to make the world a better place or is it simply a shift away from ownership and towards access-based consumption?

No published studies have considered the general public’s attitudes towards different forms of access-based consumption services, and how they might differ from each other. We have little knowledge of non-users’ attitude

towards access-based consumption, only a single study (Tussyadiah, 2015) has included participants who were non-users of access-based consumption. A greater understanding of the perception of access-based consumption could provide crucial information on how these services should be designed and marketed. The context of our study is car sharing and short-term car rental. These services are among the highest profile and well-developed access-based consumption practises in today (Botsman & Rogers, 2010; Bardhi & Eckhardt, 2012; PWC, 2015; Norwegian Ministry of Finance, 2017).

The purpose of our study is to (1) find out whether sharing and renting are perceived to be different forms of consumption, (2) explore the differences in consumers' attitudes towards sharing and rental services, and (3) compare these attitudes with the factors what motivates users of sharing and rental services. To answer this question, we will review existing literature on relevant academic topics within the sharing economy, ownership, and access-based consumption. Building on similar previous research, a study will be conducted to gain a greater understanding on attitudes towards sharing economy services. We outlined the following research question:

How do economic-, environmental-, and social benefits affect customers' attitudes towards sharing and rental services? To what extent are these antecedents affected by benevolence?

2.0 Literature review

2.1 The Sharing Economy

Services dominates the world economy, accounting for more than 70 per cent of the global GDP (Ghani & Kharas, 2010). This has not always been reflected in marketing and marketing literature. Historically, firms were focused on tangible goods (Shah et al., 2006). Marketing has now broken free from product marketing to a service-dominant view (Vargo & Lusch, 2004). This perspective defines value as value-in-use, where the consumer creates value by using a good or a service (Vargo & Lusch, 2004). The idea that value is created by usage has created the foundation for the sharing economy, where ownership is replaced with temporary access to products (Botsman, 2010).

The term “sharing economy” was introduced by Harvard Law Professor Lawrence Lessig to describe an economic system without monetary exchanges (Lessig, 2008). The size and scope of the sharing economy makes it virtually impossible to define in a satisfying manner, which includes all sharing economy services and simultaneously excludes traditional services. There is not an established definition of the sharing economy (Hamari et al., 2015) and proposed definitions are being bent out of shape to suit different purposes (Botsman, 2010). Hamari et al., (2015) conclude that the sharing economy is an umbrella term for economic and social activity involving online transactions. We concur with Hamari et al., (2015) sentiments.

Regardless of definition, sharing economy services could potentially change consumption forever by removing transfer of ownership as the primary form of consumption. Services, which are by many in part defined by the lack of transfer of ownership (Lovelock & Gummesson, 2004),

already dominate the modern economy (Ghani & Kharas, 2010). The sharing economy can be viewed as a further development of established services. Sharing economy services differ from traditional services as they are mediated by digital technology and rely more on self-service (Botsman & Rogers 2010; Gansky 2010). According to Lovelock and Gummesson (2004) transactions without transfer of ownership are distinctively different from those that do. Replacing ownership with temporary access to goods and services is a common characteristic shared by access-based consumption services (Belk, 2014). This form of access-based consumption has led to the creation of new services where consumers rent, rather than buy, products from businesses and share their own or common goods with other consumers. In this new form of consumption, private ownership is replaced with short-term access to products and goods.

2.2 Non-Ownership

Ownership expresses the relationship between an individual and an object called “owning,” where the object is called “personal property” or a “possession” (Snare, 1972). Ownership of a good entitles the owner to use or sell the good, change the shape or form, and retain the return yielded from the usage of the good (Furubotn & Pejovich, 1972).

The possession of goods has historically been perceived to represent one’s wealth (Lovelock & Gummesson, 2004). Ownership of goods and the consequent self-extension, possessions becoming parts of one’s personality, was considered “the most basic and powerful fact of consumer behaviour” (Belk, 1988, p. 1). Over a hundred and twenty-five years ago, William James (1890, p. 291-292) stated that "a man's self is the sum of all that he can call his, (...) his clothes and his house, (...) his lands, and yacht and bank account". This sentiment suggest that your character and worth is directly linked with the value of your possessions. This long held truth is now being

questioned. The financial crisis has made consumers re-evaluate their private economy and values (Gansky, 2010) and become more aware of their spending habits (Tussyadiah, 2015). Access-based consumption is perceived to offer more value at a lower cost (Botsman & Rogers, 2010; Gansky, 2010; Lamberton & Rose, 2012). This change away from private ownership is accelerated by fear of the environmental effects of overconsumption (Tussyadiah, 2015). Botsman and Rogers (2010) suggest that this change in perception of the importance of ownership could be as important as the industrial revolution.

Consumer researchers have neglected sharing as a form of consumption, leaving us with few historical perspectives and contemporary insights (Belk, 2010). Despite being oldest form of consumption, sharing was viewed as something that takes part between family members, not as an act of consumption organised by a marketplace (Belk, 2010). Historically, individuals who engaged in renting did it because they were unable to access products in any other way (Durgee & O'Connor, 1995). Several technological developments have simplified sharing between strangers and renting products from businesses on the internet, creating new, commercialised forms of sharing and renting (Hamari et al., 2015)

2.3 Access-Based Consumption

The aim of this paper is to create a better understanding of consumption without transfer of ownership. This subject has recently received much attention from researchers (Lovelock and Gummesson, 2004; Belk 2007; Chen, 2009; Botsman & Rogers, 2010; Moeller & Wittkowski, 2010; Bardhi & Eckhardt, 2012; Belk, 2013; Belk, 2014; Eckhardt & Bardhi, 2015; Tussyadiah, 2015; Hamari et al., 2015).

Sharing is undoubtedly linked to the sharing economy. Sharing is defined as “the act and process of distributing what is ours to others for their use and/or the act and process of receiving or taking something from others for our use” (Belk, 2007 p. 126). However, some researchers argue that the sharing economy is not about sharing, but access (Botsman, 2013; Eckhardt & Bardhi, 2015). According to Eckhardt and Bardhi (2015), when “sharing” between strangers mediated by a company and incentivized by profit cannot be called sharing. They further argue that the term “sharing economy” is a misnomer for what should be called “the access economy”, suggesting that consumers seek utilitarian and economic value, rather than social value.

Bardhi and Eckhardt (2012) introduced the term “access-based consumption” to describe acts where consumers are paying to access someone else’s goods or services for a period. Access-based consumption is defined as “transactions that may be market mediated in which no transfer of ownership takes place” (Bardhi & Eckhardt, 2012, p. 1). These transactions can take place between peers and between businesses and consumers. A competing term to describe these forms of consumption is “collaborative consumption” (Botsman, 2013). Belk (2014) argues that collaborative consumption and access-based consumption are different names for the same concept. We concur with this interpretation and the term “access-based consumption” (henceforth ABC) will be used in this paper to describe all forms of consumption without change of ownership, including sharing between consumers and business-to-consumer renting. We will use the term “renting” to distinguish transactions where the accessed good is owned by a corporate entity from “sharing”, where the accessed good is owned by a private individual.

2.4 Sharing and renting

Both sharing and renting are forms of ABC (Bardhi & Eckhardt, 2012). While similar, we propose that the differences between renting and sharing opens a debate on what the core of the sharing economy should be. Is the sharing economy a new economic model based on community where consumers share goods and services with their peers, or does it simply represent a shift towards access-based business models where consumers rent rather than buy goods from businesses? Or are consumers turning away from ownership and accessing products from whoever makes goods available? The answer to these questions could help entrepreneurs develop business models better suited the modern economy.

Most studies on ABC have focused on peer-to-peer sharing (Moeller & Wittkowski, 2010; Hamari et al., 2015; Tussyadiah, 2015) rather than business-to-consumer rental services (Bardhi & Eckhardt, 2012). No published studies have considered the similarities and differences in motivation for participation and attitude towards sharing and rental services. We can still gain a greater understanding of the differences by comparing the findings of different studies on participation in sharing and rental services with each other. However, comparing these studies will not provide additional information of attitudes towards ABC beyond the participants themselves nor compare how attitudes towards different forms of ABC differ.

We will first compare three different studies on participation in sharing services. In their study on members of a German peer-to-peer sharing network, Moeller and Wittkowski (2010) found that the members were motivated by hedonic values, regarding consumption as a source of entertainment and enjoyment. The members' preference for non-ownership were also caused by convenience and novelty-seeking, the desire to gain

information about new products (Manning et al., 1995). Their other proposed antecedents, price consciousness and environmentalism, had a positive, but not significant effect on the preference for non-ownership.

Tussyadiah (2015) discovered that user of Airbnb was motivated by environmentalism, social benefits, and economic benefits. The study also found that economic factors, such as reducing costs, could also serve as a deterrent if the perceived economic benefits were insufficient. Lack of trust, distrust towards strangers and technology, and inefficiency, not knowing how the service works or if the system was hard to operate, were also disincentives for use of sharing services.

Hamari et al., (2015) studied users on Sharetribe.com, a website dedicated to help people connect with their community and share possessions. The results of this study propose that the factors that create positive attitudes towards sharing services among users, are not necessarily the same factors which increase probability of participation. Environmentalism had a positive effect on attitude, but negative effect on probability of participation in sharing services. The opposite was true for economic benefits, which had a positive effect on probability of participation and negative effect on attitude. The study also found that users are motivated by hedonism, sensations experienced when using the service, as enjoyment has the greatest positive effect on both attitude and behavioural intention. The prospect of gaining an increase in reputation also increased behavioural intention, but had a negative effect on attitude towards sharing services.

We propose that users of rental services are less idealistic and hedonistic than their sharing counterparts. Bardhi and Eckhardt (2012) discovered that members of Zipcar, a short-term car rental service, used the service based on personal utility rather than emotional connections, such as meeting new people, or collective utility, such as reducing global warming. The users of

short-term car rental services were primarily motivated by reduction of expenses and convenience. The study found that Zipcar participants acted in their own self-interest, did not feel a connection to each other, and did not feel any responsibility towards other users of the car rental services and the vehicles. These results highlight the divide between idealism and utility as motivation for participation in the sharing economy as Zipcar's marketing at the time was focused on environmentalism and a sense of community.

2.5 Antecedents of access-based consumption

The studies (Moeller and Wittkowski, 2010; Bardhi & Eckhardt, 2012; Hamari et al., 2015; Tussyadiah, 2015) shows that there are clear differences in the behavioural motivations behind sharing and renting. Users of rental services are motivated by utilitarian benefits such as reducing costs (Bardhi & Eckhardt, 2012). In contrast, members of sharing services were motivated by hedonic benefits, such as meeting new people and having new experiences, and environmental benefits, such as reducing pollution and saving resources. Not surprisingly, the antecedents for usage of sharing services users are more in line with a more benevolent and idealistic view of the sharing economy. Sharing is viewed as an experience, with users inspired by a wish for social interactions and environmentalism, in addition to economic benefits. Rental services are, in contrast, seen as a utility and primarily motivated by economic benefits.

Previous research has focused on how economic, environmental, and social benefits affects intentions to use sharing and rental services. We now want to test if these benefits affect consumers' attitudes towards sharing and rental services. This will enable us to see if the behavioural incentives of users match the attitudes of consumers. By comparing attitudes and behavioural incentives, we hope to find out how sharing and rental service

better can develop their products and market themselves. Our hypotheses assume that there is a connection between motivations for consumption of a service and how consumers perceive the service. This is a reasonable assumption since participation in groups, including consumption-oriented groups, is an expression of personal values (Bhattacharya & Sen, 2003). The values of sharers and renters should therefore be correlated with how sharing and rental services are perceived. Next, we will compare the three antecedents of sharing and renting as forms of consumption.

2.5.1 Economic benefits

ABC enables consumers to reduce costs and increase their income (Bardhi & Eckhardt, 2012). Most of our possessions are rarely used. Consumers can increase their income by renting or sharing these goods with fellow peers. Costs are reduced for the renters when they no longer need to bear “the burdens of ownership” (Berry & Maricle, 1973). These burdens are product related costs that are uncorrelated with usage frequency. The costs include unsatisfactory product purchases, maintenance costs, and purchasing products that are seldom or never used (Berry & Maricle, 1973). This thesis will focus on consumers as renters and sharer, and will therefore concentrate on the cost reduction benefits of ABC. When consumers rent, or share goods, they are less bound to fixed costs and can connect expenses to product usage. This makes it possible for consumers to live on a monthly cash flow rather than on their net worth (Durgee & O’Conner, 1995). Finally, previous research (Hennig-Thurau, Henning, & Sattler, 2007; Lamberton & Rose, 2012; Tussyadiah, 2015) has found that consumer reject ABC services if the economic benefits were not satisfactory. We propose that the possible economic benefits create a positive perception of participation in sharing services. Therefore, we propose the following hypothesis:

H1a: Economic benefits have a positive effect on attitude towards using car sharing services.

We believe that the Economic benefits which create a positive image for sharing services, also apply to rental services. This belief is also based on the fact that financial gain is the sole motivation for participation in rental services (Bardhi & Eckhardt, 2012). We therefore propose the following hypothesis:

H1b: Economic benefits have a positive effect on attitude towards using car rental services.

2.5.2 Environmental benefits

Consumers express their social responsibility towards society through their purchase behaviour (De Pelsmacker et al., 2003; Meulenbergh et al., 2003). According to Tussyadiah (2015) consumers have become more aware of the negative environmental effect of overconsumption and are now using ABC services to become greener. ABC can reduce the environmental impact of manufacturing because it decreases the consumption of raw materials by reducing the number of produced goods (Botsman & Rogers, 2010; Moeller & Wittkowski, 2010; Tussyadiah, 2015). A great example of this is car sharing and rental services. Between 9 and 13 vehicles are removed from the road for each vehicle made available through ABC services (Shaheen & Cohen, 2007; Martin & Shaheen, 2011). These benefits contribute to give participants in sharing services a positive attitude towards ABC (Hamari et al., 2015; Tussyadiah, 2015). We propose that the environmental benefits and the desire of sharing service participants to be green makes consumers more positive towards car sharing.

H2: Environmental benefits have a positive effect on attitude towards using car sharing services.

In contrast, users of rental services have no intention to be green. Bardhi and Eckhardt (2012) found that customers of Zipcar, a short-term car rental service owned by Avis, did not believe nor care about the company's green profile. During one of their interviews a user stated that "Zipcar is trying to jump on the green bandwagon, being good for the environment. It's more of a marketing ploy; anybody can say they're eco-friendly" (Bardhi & Eckhardt, 2012 p. 13). Based on the sentiments of the users, we do not believe that the environmental benefits will cause consumers to have a more positive attitude towards of car rental services.

2.5.3 Social benefits

The goal of many sharing economy services has been the creation of social connections and social experiences (Schor & Fitzmaurice, 2015). Belk (2010) proposed that caring and love were the motivations behind sharing, even outside families. Participants in sharing services are motivated by the opportunity of developing friendships and meaningful connections (Botsman & Rogers, 2010; Tussyadiah, 2015). Tussyadiah (2015) suggests that peer-to-peer rentals foster direct interactions between the renter and the host, which could lead to potentially future friendship. Establishing a reputation through reviews and rankings has become more important in these services (Tussyadiah, 2015). Reputation ensures trusts between peers and has become a new way to gain recognition capital (Botsman & Rogers, 2010). We propose that social benefits, caused by the participants in sharing services desires for new friendships, increased social status and the possibility for new social experiences, makes consumers more positive towards car sharing.

H3: Social benefits have a positive effect on attitude towards using car sharing services.

Members of rental services have no interest to bond with their fellow peers and were embarrassed to have the company's logo plastered on the products (Bardhi & Eckhardt, 2012). This might be a natural consequence of renting products from a business rather than individuals, which eliminates social interaction. Brandi and Eckhardt (2012) found that sharing access to products with other consumers does not cause a sense of community like brand communities, nor does it create a sense of ownership for the shared products. Because of the anti-social sentiments of the members, combined with the lack of human interaction when renting from businesses, we do not believe that consumers have a more positive attitude car rental services due to possible social benefits.

2.5.4 Benevolence

We also want to test if benevolence influences the variables' effect on consumer attitudes. Park et al., (2014, p. 297) defined benevolence as "consumers' belief that a company is genuinely concerned with the preservation and enhancement of the welfare of society". Benevolence is one of the three components of trust. The two remaining components are ability, the belief that a company can effectively perform necessary business functions, and integrity, that the company consistently acts with high ethical and moral standards (Mayer, et al., 1995). Companies can demonstrate their benevolence by showing concern about the welfare of society (Park et al., 2014).

Sharing services often market themselves as something more than just a facilitator of transactions by creating the image of consumption as an experience. Some companies highlight their ambitions to connect people. Airbnb describe itself as "a community of individuals" (Airbnb.com, 2014), while TaskRabbit, a marketplace that matches freelance labour with local demand, claims to be "bringing back that old-time neighbourhood spirit" (TaskRabbit.com, 2012). In contrast, the marketing of rental services such

as Netflix and Hertz Bilpool focus on more utilitarian attributes, including the quality of the access products, affordability, and ease of use. The environmental benefits of rental services are occasionally mentioned, but rarely in a significant way.

Benevolence will in this study take the form of a moderator variable. A moderator affects the direction and/or strength of the relationship between an independent and dependent variable (Baron and Kenny, 1986). We believe sharing services are perceived to be closely linked to the sharing economy's idealistic image of enhancing society. In contrast, we believe that rental services are regarded as a further development of existing services. We therefore propose that the perceived economic, social and environmental benefits of sharing services will be enhanced by the benevolent image of sharing services.

H4a: Benevolence has a positive moderating effect on the relationship between the Economic benefits of car sharing services and attitude towards car sharing

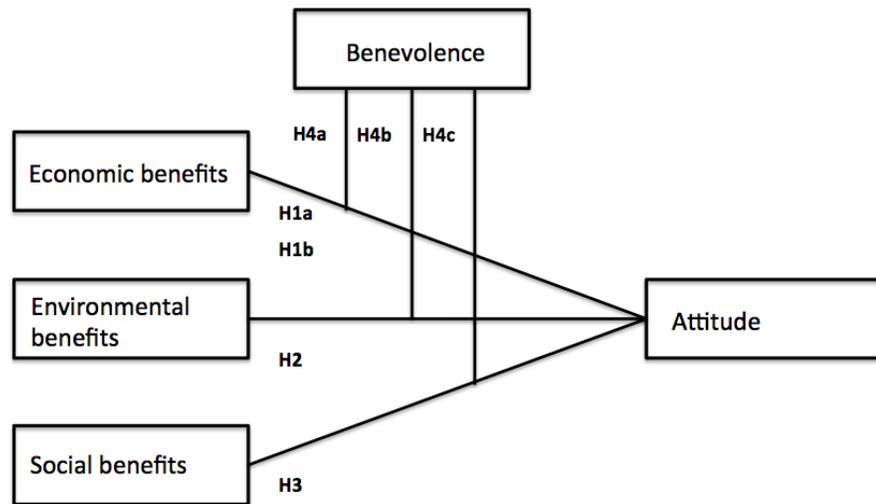
H4b: Benevolence has a positive moderating effect on the relationship between the Environmental benefits of car sharing services and attitude towards car sharing

H4c: Benevolence has a positive moderating effect on the relationship between the Social benefits of car sharing services and attitude towards car sharing

2.5.5 Attitude

This study will use attitude to measure consumers' perception of car sharing and car rental services. Attitudes are defined as "enduring systems of positive or negative evaluations, emotional feelings, and pro or con action

tendencies with respect to social objects” (Krech et al., 1962 p. 139). Attitude is a mix of hedonic and utilitarian attributes. The hedonic dimension is the sensations experienced when using the product while the utilitarian dimension is derived from functions performed by the product (Voss et al., 2003).



Figur 1 - The conceptual model

3.0 Methodology

3.1 Design

Our study has a quantitative between-subjects design. The between-subject design enables us to measure how manipulation of a variable affects the attitude towards ABC services. The respondents were first exposed to the article with different conditions, and were then asked to answer identical questions to investigate their attitude towards car rental or car sharing services. The variable manipulation has two levels, sharing and renting. With this design we aim to prove a cause and effect relationship between the independent variables (economic benefits, environmental benefits, and social benefits) and the dependent variable (attitude). Additionally, a moderator variable (benevolence) was added. The moderator variable determines whether the direction and/or strength of the relationship between an independent and dependent variable (Baron and Kenny, 1986). Further, we applied articles as researchers in the same field of study has used similar methods, Biehal and Sheinin (2007) used corporate messages to form judgments (attitude and beliefs) about products in the company's portfolio. Hence, using articles to influence the respondents' attitude towards sharing and renting were fitting for our study.

3.2 Population and sample

We wanted to collect our own data to ensure that the data used matches our study's objectives (Easterby-Smith, Thorpe & Jackson, 2012). Our sample reflected the consumers who participate in ABC. These consumers are young, urban, and professional (Moeller & Wittkowski, 2010; Bardhi & Eckhardt, 2012; Hamari et. al, 2015). Hence, the population of our thesis was the Norwegian population, ageing from 18 to 35 years old.

The population sample was recruited and collected by convenience sampling (Malhotra, 2010).

The author's social networks were applied to collect our sample through direct messages and public statuses. By applying this method, we could collect a satisfactory sample with restricted resources, and large sample is more generalizable than a minor one (Malhotra, 2010). Convenience sampling is a suboptimal form of data sampling. The sample will be representative for the authors' social networks, but not necessary representative for the target population. However, research based on convenience sampling can still be (Easterby-Smith, Thorpe & Jackson, 2012). Hence, we found convenience sampling to be adequate for our sampling method. Since, the survey was in Norwegian and the respondent had to affirm their age, we could control that the respondents were part of our target population.

3.3 Context of study

The context of our study is car sharing and car rental services. These services are among the highest profiled and well-developed access-based consumption practises in today (Botsman & Rogers, 2010; Bardhi & Eckhardt, 2012; PWC, 2015; Norwegian Ministry of Finance, 2017).

Car sharing in this context is categorized as peer-to-peer sharing, where a private individual owns the accessed good. We used Nabobil (Neighbourhood car) as an example of car sharing service. Nabobil is a marketplace where private individuals are linked together to share their cars with others. Nabobil is the largest provider of car sharing in Norway, with over 50 000 registered users and over 4900 cars, where 60 % of the shared cars are in Oslo and Akershus (Nabobil 2017). Car rental on the other hand, is a transaction where the accessed good is owned by a corporate entity. We used Hertz Bilpool as an example of a car rental service. Hertz Bilpool

allows consumers to have access to car, whenever they want. Hertz Bilpool is the largest provider of car rentals in Norway, with over 20 000 transactions in 2016 (mynewsdesk, press release, 2016).

3.4 Operationalisation

All statements in the survey are based on a 7-point Likert-scale that ranges from “strongly disagree” to “strongly agree”. Economic, Environmental, and Social benefits was measured through four different statements. Economic benefits are measured with statements adapted from Bock et al., (2005). The following four statements are: (1) “Such services can help me reduce my transportation costs”, (2) “Such services may be more economically advantageous than owning a car”, (3) “Such services are positive for the private economy”, (4) “Such services can help me save time”. Environmental benefits were measured through statements adapted from Hamari et al., (2015). Social benefits are measured with statements adapted from Smith and Zinkiewicz’ (2002) paper on sense of community. The statements used for measuring Environmental and Social benefits are stated in the table below, along with the rest of the statements. The statements were translated to Norwegian in a meaningful way for the reader in the survey.

Benevolence serves as a moderator for each independent variable. Benevolence are measured through three different statements: (1) “Companies offer such services to help me reduce transportation costs”, (2) “Companies offer such services to help increase community in society”, (3) “Companies offer such services to help me reduce environmental emissions”. The statements were adapted from Mayer and Davis (1999).

The dependent variable was measured by evaluation of services’ hedonic and utilitarian attributes towards car sharing and car rental. Attitude was

measured on statements developed by Voss et al., (2003), and was conceptualised through ten response items, five items for each dimension. The hedonic response items were (1) not fun/fun, (2) dull/exciting, (3) not delightful/delightful, (4) not thrilling/thrilling and (5) enjoyable/not enjoyable. The utilitarian response items were (1) effective/ineffective, (2) helpful/unhelpful, (3) functional/not functional, (4) necessary/unnecessary and (5) practical/impractical. See appendix 11 for full survey.

Construct	Reference	Question	Items name
Economical benefits	Bock et al. 2005	Such services can help me reduce my transportation costs	Economical benefits 1
		Such services may be more economically advantageous than owning a car	Economical benefits 2
		Such services are positive for the private economy	Economical benefits 3
		Such services can help me save time	Economical benefits 4
Environmental benefits	Hamari et al. 2005	Such services may be more environmentally friendly than owning a car	Environmental benefits 1
		Such services can help me reduce my environmental emissions	Environmental benefits 2
		Such services are positive for the environment	Environmental benefits 3
		Such services can help save the earth's resources	Environmental benefits 4
Social benefits	Smith and Zienkiewicz'2002	Users of such services have much in common with other users	Social benefits 1
		Users of such services experience a relationship with other users	Social benefits 2
		Users of such services take care of common assets	Social benefits 3
		Users of such services can lead to new friendships	Social benefits 4
Benevolence	Mayer and Davis 1999	Companies offer such services to help me reduce transportation costs	Benevolence 1
		Companies offer such services to help increase community in society	Benevolence 2
		Companies offer such services to help me reduce environmental emissions	Benevolence 3
		Effective	Attitude 1
Attitude	Voss et al. 2003	Helpful	Attitude 2
		Functional	Attitude 3
		Necessary	Attitude 4
		Practical	Attitude 5
		Fun	Attitude 6
		Exciting	Attitude 7
		Entertaining	Attitude 8
		Enjoyable	Attitude 9
		Thriving	Attitude 10

Tabell 1 - Construct, Questions & Items name

3.5 Validity

When performing a PLS-SEM analysis there is one validity, construct validity, which needs to be addressed. Construct validity consist of two measured by two forms of validity, convergent and discriminant validity. These validities will be measured to assess the interval validity of our model. Internal validity is the confidence with which we can draw cause-and-effect conclusions (Malhotra, 2010). Confirming internal validity is paramount to ensure the value of the results from this thesis. Hence, it is

essential to establish construct validity to complete the examination of the model (Wong, 2013).

According to Wilson et al., (2010, p. 56) construct validity refers to “the correct identification of the nature of the independent and dependent variables and the underlying relationship between them”. Convergent validity measures if two constructs that should be related, are in fact related, while discriminant validity tests whether constructs that are supposed to be unrelated, are unrelated (Malhotra, 2010). Average variance extracted will measure convergent validity (Bagozzi & Yi, 1988). The square root of average variance extracted will control if the discriminant validity is satisfactory (Fornell & Larcker, 1981). This will be further elaborated in chapter 4.3 Validity.

3.6 Reliability

The collected data will be analysed in a two-step process, during which the reliability of our analyses will be continuously measured. Reliability is the extent to which a scale produces consistent results (Malhotra, 2010).

First, an exploratory factor analyses will be performed on the data from each survey and a merged dataset. The analyses will enable us to confirm that the questions in our questionnaire properly measure our independent variables and moderator (Janssens et al., 2008). Cronbach's Alpha will be used to measure if the exploratory factor analyses have satisfactory reliability (Janssens et al., 2008).

Three partial least squares structural equation modelling (PLS SEM) analyses, using the constructs from the exploratory factor analyses, form the second part of the data analysis. When performing a PLS SEM analysis, it is important to check indicator reliability and internal consistency reliability

(Wong, 2013). Indicator reliability “(...) specifies which part of an indicator's variance can be explained by the underlying latent variable” (Vinzi et al., 2010, p. 694). This form of reliability is measured by the square of each of the other loadings in the PLS SEM analysis (Wong, 2013). Internal consistency reliability is the degree of consistency of the set of items forming a scale (Malhotra, 2010). Composite reliability will measure the internal consistency reliability (Bagozzi & Yi, 1988; Hair et al., 2012). This will be further elaborated in chapter 4.4 Reliability.

3.7 Pre-tests

Two pre-tests were conducted before data collection commenced. The first pre-test contained either the article on car sharing or the article on car rental. The test also included a series of questions on the articles' credibility and clarity and the respondents' attitudes towards sharing and renting. The goals of the pre-test were twofold; (1) to make sure that the texts were credible, clearly written, and contained enough information that the respondents could get an impression of car sharing and car rental services and (2) to confirm that the respondents regarded renting and sharing as two different concepts. The 18 respondents who completed the test were divided equally between articles. The pre-test confirmed that no major changes to the articles were necessary. However, some minor changes were made from the feedback.

To establish that the respondents had the right understanding of the article, we applied our own set of questions. For example: “*I perceive sharing and renting as two different concepts*”, and “*Sharing cars with other is different from renting cars form a car rental service.*” The questions were measured on a scale 7-point Likert scale that ranges from “strongly disagree” to “strongly agree”. The questions are presented in appendix 3

The pre-test confirmed that sharing ($m = 6.444$, $t = 26.61$, $p = 0.000$) and renting ($m = 5.778$, $t = 13.316$, $p = 0.000$) were perceived as two different concepts. The articles appeared as credible, for both datasets, Sharing ($m = 4.667$, $t = 8.854$, $p = 0.000$), and Rental ($m = 5.667$, $t = 12.851$, $p = 0.000$). This shows that the respondents perceived the rental article to be more credible than the sharing article. The sharing article still had a high mean, therefore no further changes were made (see appendix 3).

The second pre-test was conducted to get feedback on the questionnaire. As suggested by Burns and Bush (2009), the questionnaire was presented to potential respondents before publication. This pre-test ensured that the questions were clearly phrased, non-leading and contained no loaded wording or phrasing.

3.8 Procedure

The survey started by providing general information that the answers will be used as data for a master thesis. The respondents were told that the information they give will be treated anonymously. Further, two texts were written to examine if attitudes towards car sharing and car rental differ. Each respondent was only exposed to a single article and were assigned randomly. The texts were presented as newspaper articles on the growing popularity of car sharing or car rental services. The texts were identical except for word or terms related to sharing or renting. An example of either car sharing (Nabobil) or car rental (Hertz Bilpool) services was included in the text to help respondents understand the context of the article (see appendix 1 for sharing article and appendix 2 for rental article). Additionally, we found it important to distinguish the two concepts from each other by providing examples. This allowed it to be easier for the respondents to answer the questions and understand the context of the

article. The results from the pre-test showed that respondents could distinguish the two concepts from each other (See chapter 3.8 pre-test).

After reading the article the respondents were asked to rate a series of statements based on the conceptual models independent and dependent variables. The random orderly statements explored the respondents' attitudes towards car sharing and car rental services from an economic, social, environmental and benevolence perspective. The respondents' overall attitudes towards car sharing and car rental are measured by evaluation of services' hedonic and utilitarian attributes. Classification questions formed the final part of the survey. These questions included demographic questions, which will be used to form groups for our analysis. Demographic questions were last as some respondents may consider certain too personal which can cause a negative mind set (Burns & Bush, 2009).

3.9 Analyses

To answer our research question, we will apply the following analyses for our three datasets (merged, rental and sharing): explanatory factor analysis (EFA) in SPSS, structural equation modeling (SEM), and multi-group analysis in SmartPLS.

EFA was selected to confirm that the questions in our survey measured their intended construct. The PLS-SEM analysis were performed to estimate and visualize, the effect of the independent variables on the dependent variable, and the moderating variables' effect on these relationships' (Janssens et al., 2008). This is common used in marketing research, as it lets us test for "*theoretically supported linear and additive causal models*" (Wong, 2012). And at last, a multi-group analysis was executed to test for group-specific estimates (e.g., path coefficients, outer loading, and weights) are significant different from each other (Sarstedt et al., 2011).

4.0 Results

4.1 Analysis of the respondents

The two online surveys had 199 respondents. The survey on car sharing had 99 respondents, while 100 completed the car sharing survey. Many (75) respondents started the survey, but did not finish and were consequently removed. The large dropout rate, 24.4%, could be the result of respondents using multiple devices. For example, opening the survey on one device then opening it again and completing it on another device.

Most of the respondents were between 21 and 25 years old, with 85.9% of the respondents being younger than 30 years old. More females (60.3%) completed the survey than men (39.7%). Most the respondents lived in cities with more than 500,000 of inhabitants. Since almost all the respondents resided in Norway, this means that most respondents lived in Oslo. This young, urban sample matches the characteristics of participants in car sharing and rental services (Moeller & Wittkowski, 2010; Hamari et. al, 2015). The samples in the sharing and the rental surveys were virtually identical, except for a slightly higher average age among the car-sharing respondents than the car rental survey respondents. The clear majority of the respondents had an income between 100 001 - 300 000 (47.7 %), followed by the 300 001 - 500 000 interval (20.1 %). This also matches with the characteristics mentioned over.

The respondents had higher awareness and more extensive usage experience with car rental services than with car sharing. Almost all (95%) of the respondents had heard of car rental services, while 25% had usage experience. In contrast, 80% of the respondents had previously heard of car sharing, while 21% had usage experience.

4.2 Descriptive Analysis

4.2.1 Descriptive statistics of the rental dataset

The following descriptive statistics is based on a factor analysis performed after exclusion of variables (See table 2 for descriptive statistics and see table 1 for explanation of the variables). The overall mean of the variables varies from 3.69 to 5.95. The Economic benefit construct shares a high average mean, expect for *Economic benefits 1* ($m = 4.77$, $SD = 1.752$), which is approximately 1 point lower than *Economic benefits 2* ($m = 5.95$, $SD = 0,947$) and *Economic benefits 3* ($m = 5.62$, $SD = 0,993$).

The Environmental benefit construct has also a high mean average, as expected, varying from 5.34 (*Environmental benefits 2*) to 5.61 (*Environmental benefits 3*), and a standard deviation varying from 1.267 (*Environmental benefits 4*) to 1.540 (*Environmental benefits 1*).

The *Social benefits 4* variables has the lowest mean ($m = 3.95$, $SD = 1,493$) in the Social benefit construct. *Social benefits 1* ($m = 4.38$, $SD = 1.27$), *Social benefits 2* ($m = 4.3$, $SD = 1.487$), and *Social benefits 3* ($m = 4.55$, $SD = 1,344$) are close to each other in terms of mean average. This construct also averages approximately 1 point lower than Environmental benefits in terms of mean.

The benevolence construct shares a low average mean among the three variables. The mean of *Benevolence 3*, has the highest average ($m = 4.06$, $SD = 1.78$) of the construct, followed by *Benevolence 1* ($m = 3.93$, $SD = 1.653$), and *Benevolence 2* ($m = 3.69$, $SD = 1.495$)

Skewness measures if the right and left sides of the centre of the data distribution are symmetrical (Schumacker & Lomax, 2004). Except for *Social Benefits 3* (Skewness = 0.134) and *Social Benefits 4* (Skewness = 0.013), all variables have a negative skewness statistic. The negative skewness indicates that the data is skewed left and has a longer tail relative

to the right side. The opposite is true for positive skewness. The skewness is a result of a lack of symmetry in the frequency distribution of the results of our survey (Schumacker & Lomax, 2004). According to Wong (2013) SEM PLS analyses are a useful tool for datasets where the distribution is skewed. Hence, the skewness will not have a great effect on the analyses of our datasets.

Kurtosis statistics is a descriptor of the shape of a probability distribution. It measures whether the data are heavy-tailed or light-tailed relative to a normal distribution. Few of the Kurtosis statistics in this dataset are close to the ideal 3 level. Levels range from -1.207 (*Benevolence 3*) to 6.225 (*Economic benefits 2*). This tells us that there is a large variance in how light or heavy the data is distributed among the variables. For some constructs the frequency distribution has a high peak, most answers are of the same value, while other are flat, which indicates that there is a greater variance in the responses.

	Rental				Sharing					
	N	Mean	Std. Deviation	Skewness	Kurtosis	N	Mean	Std. Deviation	Skewness	Kurtosis
Economic benefits 1	100	4,77	1,752	-0,584	-0,734					
Economic benefits 2	100	5,95	0,947	-1,575	6,225	99	5,81	1,167	-1,506	3,112
Economic benefits 3	100	5,62	0,993	-0,751	0,897	99	5,58	1,179	-1,444	2,514
Economic benefits 4						99	3,88	1,757	0,212	-1,188
Environmental benefits 1	100	5,54	1,540	-1,321	1,171	99	5,99	1,182	-1,606	3,405
Environmental benefits 2	100	5,34	1,479	-1,029	0,435	99	5,34	1,605	-0,867	-0,161
Environmental benefits 3	100	5,61	1,325	-1,452	2,371	99	5,77	1,26	-1,234	1,695
Environmental benefits 4	100	5,54	1,267	-1,141	1,375	99	5,66	1,341	-1,313	1,905
Social benefits 1	100	4,38	1,27	-0,541	-0,346					
Social benefits 2	100	4,30	1,487	-0,344	-0,828	99	4,55	1,18	-0,681	0,885
Social benefits 3	100	4,55	1,344	0,134	-0,649	99	4,67	1,27	-0,566	0,153
Social benefits 4	100	3,95	1,493	0,013	-0,653	99	4,53	1,424	-0,712	-0,169
Benevolence 1	100	3,93	1,653	-0,187	-1,058	99	4,13	1,645	-0,299	-1,006
Benevolence 2	100	3,69	1,495	-0,210	-1,072	99	3,82	1,567	-0,292	-1,135
Benevolence 3	100	4,06	1,780	-0,312	-1,207	99	4,45	1,655	-0,593	-0,751

Tabell 2 - Descriptive Statistics - Sharing and Rental

4.2.2 Descriptive statistics of the sharing dataset

The following descriptive statistics are based on an exploratory factor analysis performed after exclusion of variables. Table 2 shows that there are large variations in the mean statistics of the variables in the sharing dataset.

The mean statistics range from 3.82 (*Benevolence 2*) to 5.99 (*Environmental benefits 1*) and thus cover almost half of the 1-7 measurement scale. The mean of *Economic benefits 2* ($m = 5.81$, $SD = 1.1679$) and *Economic benefits 3* ($m = 5.58$, $SD = 1.1179$) was far greater than the mean of *Economic benefits 4* ($m = 3.88$, $SD = 1.757$). The environmental benefits consist of a high average mean among the four constructs ($m = 5.34$ to 5.99 , $SD = 1,182$ to $1,605$). The Social benefits items also have a high mean, but varying a point lower than environmental benefits ($m = 4.13$ to 4.67 , $SD = 1.18$ to 1.424). *Benevolence 2* has a low average mean ($m = 3.82$, $SD = 1.567$), compared to *Benevolence 1* ($m = 4.13$, $SD = 1.645$) and *Benevolence 3* ($m = 4.45$, $SD = 1.780$).

Most of the items have a negative skewness statistic; the sole exceptions are *Economic benefits 4* (Skewness = 0.212). The negative skewness indicates that data skew left and has a longer tail than tail relative to the right side. All, but two variables had Kurtosis scores below the ideal level of 3. *Economic benefits 2* (Kurtosis = 3.112), *Economic benefits 3* (Kurtosis = 2.514) and *Environmental benefits 1* (Kurtosis = 3.405) are closest to the ideal level.

4.3 Validity

To assess the internal validity of our model we investigated two forms of construct validity, convergent validity and discriminant validity. Internal validity is the confidence with which we can draw cause-and-effect conclusions (Malhotra, 2010). Construct validity refers to “the correct identification of the nature of the independent and dependent variables and the underlying relationship between them” (Wilson et al., 2010, p. 56).

Convergent validity measures if two constructs that should be related, are in fact related (Malhotra, 2010). Average variance extracted (AVE) is used

to check convergent validity. According to Bagozzi and Yi (1988), AVE scores should be 0.500 or higher. All latent variables exceeded this limit, except for *Attitude* in the merged dataset and in the rental dataset. This suggests that the variables in the construct of *Attitude* are not ideally related (AVE = 0.441 and 0.36). This is expected since our Attitude variable consists of two dimensions (hedonic and utilitarian). These two dimensions is further elaborated in chapter 2.5.5 - Attitude. The problem was dealt with by dividing up *Attitude* into the two dimensions, and run the analyses in SmartPLS for the three datasets again. The new AVE numbers confirm that convergent validity is satisfied across the three datasets. The new AVE values for Attitude in the merged dataset were 0.602 (hedonic) and 0.641 (utilitarian). In the rental dataset, the new AVE values were 0.581 (hedonic) and 0.558 (utilitarian). This is illustrated in appendix 4. Furthermore, we also make the notion that CA and CR is well above the required value for Attitude in the two datasets. Hence, we can conclude that convergent validity is established.

The overall picture shows that CA and CR is well above the required value for Attitude in the two datasets, and therefore we make the notion to keep the variable. Furthermore, Attitude is our dependent variable and is therefore necessary to include for further analysis.

	Merged			Rental			Sharing		
	CA	CR	AVE	CA	CR	AVE	CA	CR	AVE
Attitude	0,856	0,886	0,441	0,79	0,843	0,36	0,894	0,913	0,514
Benevolence	0,808	0,886	0,722	0,794	0,878	0,71	0,822	0,892	0,734
Economic benefits	0,759	0,849	0,589	0,699	0,834	0,63	0,783	0,876	0,704
Enviromental benefits	0,878	0,916	0,731	0,883	0,918	0,74	0,879	0,916	0,733
Moderating Effect 1	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Moderating Effect 2	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Moderating Effect 3	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Social benefits	0,697	0,816	0,527	0,714	0,824	0,54	0,782	0,874	0,697

Tabell 3 - CA, CR and AVE - Merged, Rental and Sharing

In contrast, discriminant validity tests whether constructs that are supposed to be unrelated, are unrelated (Malhotra, 2010). Discriminant validity is confirmed if the square root of AVE is larger than other correlation values among the latent variables (Fornell & Larcker, 1981). Once again, all scores were satisfactory across the three datasets. This is illustrated in the table below.

Merged dataset	Benevolence	Economic benefits	Environmental benefits	Moderating Effect 1	Moderating Effect 2	Moderating Effect 3	Social benefits
Attitude	0,664						
Benevolence	0,465	0,849					
Economic benefits	0,566	0,378	0,767				
Environmental benefits	0,434	0,394	0,588	0,855			
Moderating Effect 1	-0,29	-0,123	-0,354	-0,286	1		
Moderating Effect 2	-0,228	-0,108	-0,29	-0,342	0,754	1	
Moderating Effect 3	-0,115	-0,164	-0,212	-0,179	0,609	0,525	1
Social benefits	0,479	0,373	0,343	0,3	-0,203	-0,174	-0,159 0,726
Rental dataset							
Attitude_	0,602						
Benevolence	0,581	0,840					
Economic Benefits_	0,396	0,346	0,792				
Environmental Benefits_	0,277	0,348	0,561	0,859			
Moderating Effect 1	-0,157	-0,028	-0,282	-0,195	1		
Moderating Effect 2	-0,003	-0,024	-0,221	-0,276	0,788	1	
Moderating Effect 3	0,025	-0,089	-0,134	-0,052	0,467	0,466	1
Social Benefits_	0,49	0,295	0,269	0,218	-0,117	-0,052	0,06 0,735
Sharing dataset							
Attitude_	0,717						
Benevolence	0,412	0,857					
Economic Benefits_	0,659	0,368	0,839				
Environmental Benefits_	0,587	0,444	0,574	0,856			
Moderating Effect 1	-0,39	-0,212	-0,482	-0,389	1,000		
Moderating Effect 2	-0,401	-0,2	-0,363	-0,405	0,695	1,000	
Moderating Effect 3	-0,178	-0,231	-0,264	-0,276	0,58	0,475	1,000
Social Benefits_	0,451	0,421	0,341	0,307	-0,289	-0,281	-0,432 0,835

Tabell 4 - Fornell & Larcker

Finally, the data is checked for multicollinearity. Multicollinearity arises when independent variables are highly correlated (Janssens et al., 2008). Variance inflation factor (VIF) values measures the presence of multicollinearity and should not exceed 5 to have this problem. A linear regression analysis performed in SPSS confirmed that none of the independent variables had a VIF value greater than the suggested level (See table 5).

	Merged	Rental	Sharing
	VIF		
Benevolence	1,347	1,419	1,278
Economic benefits	1,736	1,785	1,648
Environmental benefits	1,726	1,753	1,651
Moderating Effect 1	2,858	2,593	2,921
Moderating Effect 2	2,484	2,056	2,936
Moderating Effect 3	1,645	1,742	1,384
Social benefits	1,247	1,466	1,174

Tabell 5 - VIF - Merged, Rental and Sharing

4.4 Reliability

4.3.1 Reliability analysis for the EFAs

We also performed a reliability analysis for each of the constructs, which gave us the following results for the three datasets.

Cronbach's alpha (CA) need to be at least 0.600 to be reliable (Nunnally, 1978). In the Merged dataset the constructs *Economic benefits*, *Environmental benefits*, *Social benefits*, and *Benevolence* had a CA values of 0.707, 0.875, 0.698, and 0.807 respectively. By removing Economic benefits 4, the value would have been increased by 0.047 to 0.754. Since the value is not under the critical value, we choose to not exclude this variable (Janssens et al., 2008).

Next, we conducted a reliability analysis for the rental dataset. The constructs *Economic benefits*, *Environmental benefits*, *Social benefits*, and *Benevolence* had a CA values of 0.725, 0.881, 0.712, and 0.791 respectively. Eliminating variables would only increase *Social benefits*' CA value. However, the increase was so small (0.009) that we decided to keep all the variables.

Finally, in the sharing datasets no variables were eliminated after the reliability analysis. The constructs *Economic benefits*, *Environmental benefits*, *Social benefits*, and *Benevolence* had a CA values of 0.737, 0.870, 0.780, and 0.822 respectively. Removing the variable *Economic benefit - 4* would have increased the CA value to 0.894, but each construct needs a minimum of three items (Janssens et al., 2008) and was therefore not removed.

4.3.2 Reliability analysis for PLS SEM analyses

One must always check indicator reliability and internal consistency reliability when performing a PLS SEM analysis (Wong, 2013). According to Vinzi et al., (2010, p. 694) indicator reliability “(...) specifies which part of an indicator's variance can be explained by the underlying latent variable”. While an indicator reliability score of 0.700 is preferred, values greater than 0.400 are accepted (Hulland, 1999). All indicators had a satisfactory score across the three datasets (See table 17 - Internal Rel.).

Internal consistency reliability is the degree of consistency of the set of items forming a scale (Malhotra, 2010). Cronbach's alpha (CA) is used to measure this form of reliability (Bagozzi & Yi, 1988), but this measurement provides a conservative result. All three datasets had a satisfactory value over the required limit of 0.600 (see table 3). Prior research suggests using “Composite Reliability (CR)” as a substitute instead (Bagozzi & Yi, 1988; Hair et al., 2012). The values should be greater than 0.600. All latent variables had a satisfactory CR score, with the lowest score being 0.816 between the three datasets (See table 3).

4.5 Factor Analysis

We start our data analysis with three exploratory factor analyses (EFA) in SPSS. The EFAs will enable us to confirm that the questions in our questionnaire are properly measure our independent variables and moderator (Janssens et al., 2008). First, we will conduct one EFA with the merged dataset. Further, separate EFAs will be performed on the two surveys to check if questions properly measure the independent variables in both datasets.

4.5.1 Factor analysis of merged datasets

According to Janssens et al., (2008), there are three assumptions that needs to be satisfied to perform a factor analysis: (1) the measurements levels needs to be on an interval- or a ratio level, (2) the use of the variables needs to be standardized, and (3) the number of respondents present 10 times the number of variables. Our measurement levels were based on a 7-point Likert scale, which satisfies the first and the second requirements for performing a factor analysis. A 7-point Likert scale is essentially at an ordinal measurement level, but in this case, we treat our measurement level to be interval-scaled because of the “assumption of equal appearing intervals” (Janssens et al., 2008). The third assumption is also satisfied (199 > 10*15 items). All three assumptions have been satisfied. Next, we will determine if it is meaningful to perform a factor analysis.

4.5.1.1 Meaningfulness of factor analysis

The anti-correlation matrix confirms that underlying dimensions exist; therefore, it will be relevant to perform a factor analysis (Janssens et al., 2008). The lowest measure of sampling adequacy (MSA) value was *Social benefits 4* with a score of 0.767. This is well above the required level of 0.500. Subsequently, none of the items were excluded.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,842
	Approx. Chi-Square	1261,838
Bartlett's Test of Sphericity	df	105
	Sig.	0

Tabell 6 - KMO and Bartlett's Test - Merged dataset

The Bartlett's test of sphericity verifies that the items were satisfactorily correlated. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.842) was above the necessary 0.500 for an EFA (Janssens et al., 2008). The model was also statistically significant with a 0.000 p-value. The communalities from the principal component analysis suggest that two items were not very relevant for the definition of the factor. The items, *Economic benefits 4* and *Social benefits 1*, had an extraction value of 0.305 and 0.398 respectively. None of the items were excluded because we found all to be relevant at this point.

4.5.1.2 Determining the number of constructs

To determine the number of constructs, we will apply an exclusion rule of 0.450 for the first EFA. The number of construct will be determined by the illustration of the scree plot the "Kaiser criterion", which only keeps factors with an Eigenvalue greater than 1. The Kaiser criterion suggests that we should include four components. This is compliance with our pre-suggested independent and moderator variables. The elbow in the scree plot also suggests four constructs (see appendix 5). The four constructs explained 64.839% of the total variance. The first component explains the largest part of the variance (35,969%), the second component explains the largest part of the remaining variance (12.499%), and the third component explains the third largest part of the remaining variance (9.077%). Lastly, the fourth component explains the fourth largest part of the remaining variance (7.294%).

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5,395	35,969	35,969
2	1,875	12,499	48,469
3	1,362	9,077	57,545
4	1,094	7,294	64,839
5	0,897	5,982	70,821
6	0,751	5,008	75,83
7	0,671	4,472	80,301
8	0,628	4,187	84,488
9	0,496	3,309	87,797
10	0,387	2,579	90,376
11	0,371	2,474	92,85
12	0,356	2,37	95,22
13	0,302	2,012	97,233
14	0,216	1,443	98,676
15	0,199	1,324	100

Tabell 7- Total Variance Explained - Merged dataset

4.5.1.3 Correlation between the items and the constructs

To determine the correlation between the items and the four constructs, we will look at the rotated component matrix. All the items fell into their suggested constructs by following the pre-suggested exclusion rule. Consequently, none of the items were excluded as we found all items to be relevant.

	Component		
	Enviromental benefits	Economic benefits	Social Benevolence benefits
Environmental benefits 3	0,844		
Environmental benefits 1	0,819		
Environmental benefits 2	0,805		
Environmental benefits 4	0,727		
Economic benefits 3		0,840	
Economic benefits 2		0,820	
Economic benefits 1		0,583	
Economic benefits 4		0,499	
Benevolence 1			0,839
Benevolence 2			0,815
Benevolence 3			0,768
Social benefits 2			0,806
Social benefits 4			0,740
Social benefits 3			0,727
Social benefits 1			0,483

Tabell 8 - Rotated Component Matrix - Merged dataset

The component score matrix indicates that the values, which do not lie on the diagonal, are equal to zero, and therefore independent from each other. Overall, the exploratory factor analysis approves that the questions we used for each of the independent variables and moderator measured four different constructs.

Component	1	2	3	4
1	1	0	0	0
2	0	1	0	0
3	0	0	1	0
4	0	0	0	1

Tabell 9 - Component Score Matrix - Merged dataset

4.5.2 Factor analysis of the rental datasets

4.5.2.1 Meaningfulness of factor analysis

Next, we will perform an EFA with the data from the rental survey. The anti-correlation matrix confirmed that underlying dimensions existed and a factor analysis was therefore relevant (Janssens et al., 2008). The lowest MSA value was *Social Benefits 2* with a value of 0.693. Consequently, all MSA values were above the suggested 0.500 level. No items were eliminated.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0,823
Bartlett's Test of Sphericity	Approx. Chi-Square 645,619
	df 105
	Sig. 0

Tabell 10 - KMO and Bartlett's Test - Rental Dataset

The Bartlett's test of sphericity confirmed that our items were sufficiently correlated. The model was statistically significant with a 0.000 p-value. The KMO measure of sampling adequacy was 0.823, far above the necessary 0.500 score needed for an EFA (Janssens et al., 2008). The communalities from the principal component analysis indicated that one of the items was

not highly relevant for the definition of the constructs. The item, *Economic benefits 4* had an extraction value 0.288 lower than the second lowest item. The item was not excluded from the analysis at this point because of we found the item to still be relevant. This low value may indicate that the item will be deleted on a later occasion.

4.5.2.2 Determining the number of constructs

Next, we determined the number of constructs using an exclusion level between 0.450 and 0.550. The “Kaiser criterion” and a scree plot determine the number of constructs. Four of the components had an Eigenvalue greater than 1, which explained 66.337% of the total variance. The elbow of scree plot suggested that where five constructs (see appendix 6). We decided to use four constructs as this matches the number of independent variables and moderators.

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5,143	34,285	34,285
2	2,053	13,687	47,972
3	1,56	10,399	58,371
4	1,195	7,966	66,337
5	0,84	5,601	71,937
6	0,77	5,133	77,07
7	0,678	4,517	81,587
8	0,583	3,889	85,476
9	0,447	2,978	88,453
10	0,424	2,825	91,278
11	0,346	2,309	93,588
12	0,319	2,125	95,713
13	0,272	1,816	97,529
14	0,199	1,328	98,857
15	0,171	1,143	100

Tabell 11 - Total Variance Explained - Rental Dataset

4.5.2.3 Correlation between the items and the constructs

The rotated component matrix determines the correlation between the items and our four constructs. All but one of the items fell inn into their suggested

constructs. The exception, *Economical benefits 4* had a component score of 0.439, which lower than the suggested level of 0.550 (Janssens et al., 2008), and was consequently removed. All components for social benefits, environmental benefits, and benevolence constructs had scores above 0.550.

The component score covariance matrix shows that these four constructs are independent of each other. Overall, the EFA confirms that the questions we used for each of the independent variables and moderator measured four different constructs.

Component	1	2	3	4
1	1	0	0	0
2	0	1	0	0
3	0	0	1	0
4	0	0	0	1

Tabell 12 - Component Score Covariance Matrix - Rental Dataset

After the exclusion of the previously mentioned item, the analysis ended up with the following construct (See table 15).

4.5.3 Factor analysis of sharing dataset

4.5.3.1 Meaningfulness of factor analysis

A third EFA was then performed with the data from the sharing survey. The anti-correlation matrix confirmed that underlying dimensions existed and a factor analysis was therefore relevant (Janssens et al., 2008). The lowest MSA value was 0.753 and thus all values were above the suggested 0.500 level, consequently none of the items were eliminated.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,823
	Approx. Chi-Square	732,643
Bartlett's Test of Sphericity	df	105
	Sig.	0

Tabell 13 - KMO and Bartlett's Test - Sharing Dataset

The model was significant with a p-value of 0.000. The KMO score was sufficient at 0.823. The communalities from the principal component analysis showed that two items, *Social benefits 1* (extraction = 0.317) and *Economic benefits 1* (extraction = 0.483), were not highly relevant to the definition of the constructs. None of the items were excluded from the analysis, as we considered them to still be relevant at this point.

4.5.3.2 Determining the number of constructs

An exclusion level between 0.450 and 0.550 was again applied when determining the number of constructs. Four constructs fulfilled the “Kaiser criterion” (see table 14), while the scree plot suggested five constructs (see appendix 7). Four constructs were chosen to match the first analysis. As seen in table 13, these constructs combined explained 67.622% of the total variance.

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5,772	38,483	38,483
2	1,954	13,029	51,512
3	1,329	8,857	60,369
4	1,088	7,253	67,622
5	0,84	5,601	73,223
6	0,759	5,06	78,282
7	0,681	4,539	82,822
8	0,621	4,137	86,959
9	0,402	2,68	89,64
10	0,376	2,506	92,145
11	0,344	2,293	94,439
12	0,277	1,847	96,285
13	0,268	1,786	98,072
14	0,154	1,029	99,101
15	0,135	0,899	100

Tabell 14- Total Variance Explained - Rental Dataset

4.5.3.4 Correlation between the items and the constructs

In the rotated component matrix, most items fell into their suggested constructs. However, one item, *Social benefits - 1*, did not have a sufficient

component score for any of the constructs. Another item, *Economic benefits - 1*, had a sufficient component score, but fell under the *Environmental benefits* construct rather than its intended construct. Both of items were eliminated. The initial construct is visualized below among with the Rental construct.

	Rental				Sharing			
	Economic benefits	Enviromental benefits	Social benefits	Benevolence	Economic benefits	Enviromental benefits	Social benefits	Benevolence
Economic benefits - 1	0,688							
Economic benefits - 2	0,712				0,872			
Economic benefits - 3	0,804				0,838			
Economic benefits - 4					0,596			
Environmental benefits - 1		0,863				0,748		
Environmental benefits - 2		0,827				0,828		
Environmental benefits - 3		0,822				0,840		
Environmental benefits - 4		0,668				0,772		
Social benefits 1			0,716					
Social benefits 2			0,819				0,807	
Social benefits 3			0,704				0,761	
Social benefits 4			0,621				0,818	
Benevolence 1				0,835				0,831
Benevolence 2				0,786				0,830
Benevolence 3				0,779				0,780

Tabell 15- Rotated Component Matrix - Rental Dataset and the Sharing dataset

Additionally, the component score covariance matrix confirmed that the questions we used for each of the independent variables and moderator measured four different constructs. This is illustrated in the table below.

Component	1	2	3	4
1	1	0	0	0
2	0	1	0	0
3	0	0	1	0
4	0	0	0	1

Tabell 13 - Component Score Covariance Matrix - Sharing Dataset

4.6 Test for measurement model and structural model

We used partial least squares structural equation modelling (PLS -SEM) in SmartPLS to test our hypotheses. Structural equation models consist of two sub models. The inner model specifies the relationship between the dependent variable and the latent, or independent, variables. The outer

model specifies the independent variable relationships with the indicators used to measure the variable (Wong, 2013).

Our model has four reflective items between latent variables and a sample size of 65 is therefore required (Wong, 2013). The rental and sharing dataset consist of 100 and 99 respondents respectively and thus exceeds the necessary requirement.

4.6.1 Measurement models

The next part of the analysis is to examine the measurement model by evaluating the outer loadings of the model. The outer loadings show the correlations between the latent variable and the indicators (Wong, 2013). The loadings along with indicator reliability for each dataset are illustrated in the table below.

Indicators	Merged		Rental		Sharing	
	Loadings	Indicator Rel.	Loadings	Indicator Rel.	Loadings	Indicator Rel.
Economic benefits * Benevolence	1,257	1,121	1,321	1,149	1,257	1,121
Environmental benefits * Benevolence	1,240	1,114	1,180	1,086	1,348	1,161
Social benefits * Benevolence	1,205	1,098	1,156	1,075	1,376	1,173
Benevolence 1	0,836	0,914	0,840	0,917	0,858	0,926
Benevolence 2	0,852	0,923	0,861	0,928	0,812	0,901
Benevolence 3	0,862	0,928	0,821	0,906	0,898	0,948
Economic benefits 1	0,662	0,814				
Economic benefits 2	0,862	0,928	0,852	0,923	0,894	0,946
Economic benefits 3	0,868	0,932	0,831	0,912	0,895	0,946
Economic benefits 4	0,650	0,806	0,688	0,829	0,716	0,846
Environmental benefits 1	0,847	0,920	0,807	0,898	0,895	0,946
Environmental benefits 2	0,806	0,898	0,850	0,922	0,754	0,868
Environmental benefits 3	0,914	0,956	0,914	0,956	0,928	0,963
Environmental benefits 4	0,849	0,921	0,858	0,926	0,838	0,915
Social Benefits 1	0,645	0,803	0,767	0,876		
Social Benefits 2	0,807	0,898	0,798	0,893	0,851	0,922
Social Benefits 3	0,734	0,857	0,735	0,857	0,801	0,895
Social Benefits 4	0,706	0,840	0,629	0,793	0,853	0,924
Effective	0,646	0,804	0,615	0,784	0,663	0,814
Thriving	0,787	0,887	0,731	0,855	0,799	0,894
Helpful	0,703	0,838	0,687	0,829	0,710	0,843
Functional	0,708	0,841	0,652	0,807	0,725	0,851
Necessary	0,468	0,684	0,303	0,550	0,602	0,776
Practical	0,737	0,858	0,653	0,808	0,770	0,877
Fun	0,609	0,780	0,459	0,677	0,712	0,844
Exciting	0,583	0,764	0,494	0,703	0,679	0,824
Entertaining	0,589	0,767	0,462	0,680	0,707	0,841
Enjoyable	0,747	0,864	0,645	0,803	0,781	0,884

Tabell 14- Outer loadings for all datasets

Economic benefits 1 is only included in the merged model. This indicator was excluded from the rental and sharing dataset, during the EFA. *Economic benefits 2* and *3* are the most important indicators, with loadings of 0.862 and 0.868 respectively. *Economic benefits 1* had an outer loading of 0.662 and *Economic benefits 2* had the lowest value (0.650) compared to the other indicators in Economic benefits.

As shown in the table over, the *Environmental benefits* indicators are the same across all the datasets. Along with *Benevolence*, the *Environmental benefits* indicators have the highest loadings among the variables. Where, *Environmental benefits 3* is the most important indicator among the four indicators, with a loading of 0.914 (merged dataset), 0.914 (Rental), and 0.928 (Sharing) across the three datasets. *Environmental benefits 2*, is the least important indicator in the merged dataset and in the Sharing dataset, with a loading factor of 0.806 and 0.754 respectively.

The *Social benefits* indicators are the same across all the dataset, except for *Social benefits 1*, which was removed based on the EFA in the sharing dataset. *Social benefits 2* is the most important indicator across the three datasets with a loading of 0.807, 0.798, and 0.851 respectively. The *Social benefits 4* indicators in the rental dataset, have the lowest indicator loading across the three datasets, with a loading of 0.629. On the other hand, the indicator had the highest loading in the Sharing dataset, with 0.853.

Attitude 9 and *Attitude 10* were the most important indicator in the attitude variable. *Attitude 4* was the least important indicator across the three datasets, with a factor loading of 0.468 for the merged dataset, 0.303 for the rental dataset, and 0.602 in the sharing dataset. There is a notable difference among *Attitude 6*, *Attitude 7* and *Attitude 8* between sharing and rental. These indicators had a higher importance in the sharing dataset versus the rental dataset. *Attitude 6*, had a factor loading of 0.712 in the sharing dataset, in contrast to 0.459 in the rental dataset. *Attitude 7*, had a loading score of

0.494 in the rental dataset, contrary to 0.679 in the sharing dataset. Lastly, *Attitude 8*, the sharing dataset had a factor loading of 0.707, versus 0.462 in the rental dataset.

The indicators of *Benevolence* share a high importance across all the datasets. *Benevolence 3* is the most important indicator in the rental dataset, with a factor loading of 0.898. In the rental dataset, *Benevolence 2* had the highest impact, with a loading of 0.861. *Benevolence 3* has an average of 0.860 across the three datasets, compared to *Benevolence 2* and *3* with an average loading score of 0.845 and 0.842, respectively.

In conclusion, *Environmental benefits* has the highest correlations among the latent variables and the indicators. Compared to the other latent variables, *Social benefits* had a slightly lower average loading scores. The latent variable *Economic benefits* consisted of four indicators in the merged dataset and three indicators in the remaining datasets. The loading scores are similar for the three indicators, which are included in all datasets. *Attitude* had the largest variance in loading scores of the latent variables. This is a consequence of attitude composing of two parts, hedonic and utilitarian values. The indicators of benevolence had high loading scores across all datasets.

4.6.2 Structural models

4.6.2.1 Structural model for the merged dataset

The first PLS-SEM analysis was performed with data from the merged dataset. The construction of the model was based on the conceptual design (see figure 1). We added *benevolence* as an independent variable to be able to create the moderators. This is required by SmartPLS to be able to test for moderator effects. The moderators are calculated by multiplying *Benevolence* with the other independent variables (Economic, Environmental, and Social benefits). The same procedure was also applied

to create moderating variables for the rental and sharing dataset. The path coefficients of the independent, moderators and total model are summarized in table 18.

The inner model suggests that Economical benefits has the strongest effect on Attitude followed by Social benefits, Benevolence and Moderating effect 3.

Further, Bootstrapping enable us to test the statistical significance of various PLS-SEM results (SmartPLS.com, 2017). Based on the bootstrap analysis with 5000 subsamples, we found that the following variables had a significant effect on Attitude; Benevolence (Beta = 0.227, $t = 3.794$, $p = 0.000$), Economic benefits (Beta = 0.337, $t = 4.413$, $p = 0.000$), Social Benefits (Beta = 0.253, $t = 3.731$, $p = 0.023$) and Moderating effect 3 (Beta = 0.117, $t = 1.996$, $p = 0.046$). However, we found no significant evidence to support Environmental benefits (Beta = 0.049, $t = 0.714$, $p = 0.474$) and Moderating effect 1 (Beta = - 0.135, $t = 1.662$, $p = 0.097$) and Moderating effect 2 (Beta = 0.007, $t = 0.081$, $p = 0.935$) influenced Attitude. See appendix 8 for structural model.

	Original Sample	T Statistics	P Values
Benevolence -> Attitude	0.227	3.794	0.000
Economic benefits -> Attitude	0.337	4.413	0.000
Environmental benefits -> Attitude	0.049	0.716	0.474
Moderating Effect 1 -> Attitude	-0.135	1.662	0.097
Moderating Effect 2 -> Attitude	0.007	0.081	0.935
Moderating Effect 3 -> Attitude	0.117	1.996	0.046
Social benefits -> Attitude	0.253	3.731	0.000

Tabell 15 - Path Coefficients - Merged Dataset

4.6.2.2 Structural model for the rental dataset

We then performed a PLS-SEM analysis on of renting. The model was built with the data from the EFA analysis of the rental dataset. The path coefficients of the independent, moderators and total model are summarized in table 19. The results from this analysis will determine whether hypothesis H1b will be confirmed or rejected.

Benevolence had the largest significant effect on attitude followed by Social benefits and Moderating effect 2. Moderating effect 1 had a negative significant effect Economic benefits and Moderating effect 3 had positive, but insignificant effects on attitude.

A bootstrap procedure with 5000 subsamples was performed to confirm the significance of the model. The following variables had a significant effect on attitude: Benevolence (Beta = 0.455, $t = 5.186$, $p = 0.000$), Social benefits (Beta = 0.289, $t = 2.381$, $p = 0.017$), Moderating effect 1 (Beta = - 0.243, $t = 2.275$, $p = 0.023$) and Moderating effect 2 (Beta = 0.222, $t = 1.968$, $p = 0.049$). Economic benefits (Beta = 0.149, $t = 1.247$, $p = 0.212$), and Environmental benefits (Beta = - 0.014, $t = 0.135$, $p = 0.893$), Moderating effect 3 (Beta = 0.083, $t = 0.929$, $p = 0.353$) were not significant (See appendix 9 for structural model).

	Original Sample	T Statistics	P Values
Benevolence -> Attitude	0.455	5.186	0.000
Economic benefits -> Attitude	0.149	1.247	0.212
Environmental benefits -> Attitude	-0.014	0.135	0.893
Moderating Effect 1 -> Attitude	-0.243	2.275	0.023
Moderating Effect 2 -> Attitude	0.222	1.968	0.049
Moderating Effect 3 -> Attitude	0.083	0.929	0.353
Social benefits -> Attitude	0.289	2.381	0.017

Tabell 16 - Path Coefficients - Rental Dataset

4.7.2.3 Structural model for the sharing dataset

A new PLS SEM analysis was then performed with data from the second EFA on sharing. The model was built with the data from the EFA analysis on sharing. The path coefficients of the independent, moderators and total model are summarized in table 20. The results from this analysis will determine if hypotheses H1a, H2, H3, H4a, H4b, and H5c will be confirmed or rejected.

Economic benefits have the strongest significantly effect on attitude, followed by Social benefits, and Environmental benefits. Moderating effect 3 was positive, but insignificant. Finally, Moderating effect 1 and

Moderating effect 2 had insignificant negative effects on the dependent variable

The significant variables following the bootstrap analysis were Economical benefits (Beta = 0.396, $t = 4.425$, $p = 0.000$), Environmental benefits (Beta = 0.234, $t = 2.650$, $p = 0.008$) and Social benefits (Beta = 0.253, $t = 2.767$, $p = 0.006$). Four variables were not significant. These were: Benevolence (Beta = 0.066, $t = 0.765$, $p = 0.444$), Moderating effect 1 (Beta = -0.030, $p = 0.771$, $t = 0.292$) Moderating effect 2 (Beta = -0.113, $t = 1.124$, $p = 0.261$) and Moderating effect 3 (Beta = 0.152, $t = 1.912$, $p = 0.056$) (See appendix 10 for structural model).

	Original Sample	T Statistics	P Values
Benevolence -> Attitude	0.066	0.765	0.444
Economic benefits -> Attitude	0.396	4.425	0.000
Environmental benefits -> Attitude	0.234	2.650	0.008
Moderating Effect 1 -> Attitude	-0.030	0.292	0.771
Moderating Effect 2 -> Attitude	-0.113	1.124	0.261
Moderating Effect 3 -> Attitude	0.152	1.912	0.056
Social benefits -> Attitude	0.253	2.767	0.006

Tabell 17 - Path Coefficients - Sharing Dataset

4.7 Multi-group Analysis

For the last part of our analysis, we will perform a multi-group analysis to test if the pre-defined data groups have significant differences between their parameter estimates. We used the merged dataset to compute these estimates. To be able to perform this analysis, we distinguish the two datasets (Rental and Sharing) by adding a new variable called “dataset”. The respondents in the sharing dataset were given the value 1, and the rental respondents were given the value 2. Sharing was chosen as “Group A” and Rental as “Group B” in the analysis.

Since the two datasets have different constructs of variables, we choose the rental construct as our reference. This dataset excludes *Environmental benefits 1*. In the sharing dataset, EFA excluded *Social benefits 1*, but for

this analysis we included the variable to be able to perform the multi-group analysis.

The multi-group analysis also includes a bootstrapping procedure. To ensure stability of the results, we included a subsample of 5000. Additionally, we applied the Percentile Bootstrap as our Confidence Interval method to calculate the sample distribution. Further, the significance level is 0.05 and the test type is two tailed.

4.7.1 Results

We find significant differences between three of the variables between *Group A* (Rental) and *Group B* (Sharing). Values of 0.05 and lower indicate significance differences and values of 0.95 and higher indicate significance differences of the group specific PLS path model estimations.

The difference in Beta between *Group A* and *Group B* is 0.232 for the Environmental benefits to Attitude relationship ($p = 0.040$), 0.341 for the Moderating effect 2 to Attitude ($p = 0.985$), and 0.393 for the Benevolence to Attitude ($p = 0.997$). These results confirm the two previous PLS SEM analyses which found that Environmental benefits (Beta = 0.218, $t = 2.646$, $p = 0.008$) had a significant effect on Attitude in the sharing dataset, but in the rental dataset the same variable was not significant (Beta = 0.149, $t = 1.240$, $p = 0.218$). Further, the variable Moderation effect 2, also confirms the previously PLS SEM analyses, which was significant in the rental dataset (Beta = 0.222, $t = 1.966$, $p = 0.049$), but was not significant in the sharing dataset (Beta = - 0.119, $t = 1.238$, $p = 0.216$).

The overall result from the multi-group analysis in SmartPLS, confirmed the result from our prior analysis. Thus, we can conclude that Environmental benefits is significantly different from rental versus sharing, and Moderating effect 2 is significantly different from sharing, contrary to rental.

	Sharing vs Rental		Rental			Sharing		
	Beta	p	Beta	t	p	Beta	t	p
Benevolence	0.393	0.997	0.455	5.192	0.000	0.061	0.696	0.487
Economic benefits	0.225	0.066	0.149	1.240	0.215	0.374	4.132	0.000
Environmental benefits	0.232	0.040	-0.014	0.137	0.891	0.218	2.646	0.008
Moderating Effect 1	0.177	0.112	-0.243	2.274	0.023	-0.066	0.656	0.512
Moderating Effect 2	0.341	0.985	0.222	1.966	0.049	-0.119	1.238	0.216
Moderating Effect 3	0.125	0.152	0.083	0.919	0.358	0.207	2.482	0.013
Social benefits	0.008	0.489	0.289	2.364	0.018	0.297	3.614	0.000

Tabell 18 – Multi group analysis- SmartPLS

4.8 Hypothesis testing

The effect of the independent variables on attitude towards car sharing and car rental services from the PLS SEM analysis is shown in the table below.

Hypothesis	Path coefficients	Significance	Result
H1a: Economic benefits have a positive effect on attitude towards car sharing services.	0.396	0.000	Supported
H1b: Economic benefits have a positive effect on attitude towards car rental services.	0.149	0.218	Not Supported
H2: Environmental benefits have a positive effect on attitude towards car sharing services.	0.234	0.008	Supported
H3: Social benefits have a positive effect on attitude towards car sharing services.	0.253	0.005	Supported
H4a: Benevolence has a positive moderating effect on the relationship between the economic benefits of car sharing services and attitude towards car sharing	-0.030	0.770	Not supported
H4b: Benevolence has a positive moderating effect on the relationship between the environmental benefits of car sharing services and attitude towards car sharing	-0.113	0.257	Not supported

H4c: Benevolence has a positive moderating effect on the relationship between the social benefits of car sharing services and attitude towards car sharing	0.152	0.057	Not supported
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5.0 Discussion

The purpose of this paper was to gain a greater understanding of consumer attitudes towards access-based consumption. After a comprehensive review of contemporary marketing literature, we found certain topics had received little attention. While several researchers have explored access-based consumption, no studies had compared attitude towards different forms of ABC with each other or how the antecedents of usage compare with attitudes towards the different services. The following research question was formulated:

“How do economic-, environmental-, and social benefits affect customers’ attitudes towards sharing and rental services? To what extent are these antecedents affected by benevolence?”

The first four hypotheses (H1a, H1b, H2, and H3) addressed the first part of the research question. We found that Economic, environmental, and Social benefits had a significant positive effect on attitude towards sharing services, confirming H1a, H2 and H3. Economic benefits had the strongest effect on attitude follow by social benefits and finally environmental benefits. Conversely, economic benefits did not have a significant effect on attitude towards rental services. Consequently, H1b was rejected. Environmental benefits also had no significant effect on attitude. Social benefits were the only independent variable who had a positive effect on attitude towards rental services.

The remaining three hypotheses (H4a, H4b, and H4c) covered the final part of our research question. Our study finds that benevolence has little impact on the effect of Economic, Social and Environmental benefits on the attitude towards sharing and rental services. The hypotheses, which suggested that

benevolence would have a positive moderating effect on relationship between the independent variables and attitude, were all rejected.

5.1 Theoretical contribution

This is the first study that examines the differences in attitudes towards sharing and rental services. We found that there are clear differences between consumers' attitude towards sharing and rental services. Perceived Economic, Environmental, and Social benefits all have significant positive effects on attitude towards sharing services. This image corresponds with the antecedents of participation found by previous research, which suggest that users of these services are attracted by several different aspects (Moeller and Wittkowski, 2010; Hamari et al, 2015; Tussyadiah, 2015). Car rental services were only perceived to have social benefits.

Car rental services were not perceived to have economic benefits. This is surprising considering it is the sole motivation for users of these services (Bardhi & Eckhardt, 2012). This problem is most likely a consequence of marketing rather than pricing strategy. The prices of these services were never mentioned to the respondents in our study. The perception that car rental services do not have any economic benefits is therefore the result of the respondents' own assessment of rental services. This could be caused by the respondents thinking that businesses charge higher prices than private individuals, thus creating the idea that there are fewer economic benefits from rental services.

We did not expect rental services to be perceived to have social benefits. This image is in contrast with Bardhi and Eckhardt (2012) who found car rental users do not want to bond with fellow members nor felt a sense of community. We found that the strongest indicators of social benefits are a sense of unity and that the users of these services have much in common

with each other, while the chance of forging new friendships is the weakest indicator of social benefits. This implies that the social benefits gained from rental services are not new friendships, but a feeling of belonging. It seems that having access to the same products creates the appearance of a strong community externally, despite the lack of sense of community internally. This suggests that the marketing, helped by newspaper articles, blogs, and opinion pieces on the sharing economy, of rental services as communities are effective to non-users' despite being in contrast with the anti-social sentiments of their members.

Our study found interesting differences in the perception of environmental benefits between the two services. Despite being almost identical, there was a large difference in respondents' attitudes. Car sharing services were perceived to have environmental benefits, the same was not true for car rental services. The clear environmental benefits, such as removing 9-13 cars the road for each accessed car (Shaheen & Cohen, 2007; Martin et al., 2011), from car rental services were not sufficient to provide rental services with a green image.

No published research had previously investigated how benevolence affects the perception of the benefits of sharing economy services. We introduced benevolence as a moderator to gain a greater understanding of the idealistic nature surrounding the sharing economy. We expected benevolence to only have a positive effect on the perceived benefits of sharing services. However, Benevolence had little effect on the relationship between the perceived benefits and attitude towards either form of consumption. This could suggest that consumers do not view the sharing economy as an altruistic phenomenon but rather an economy in growth.

Our study contributes to ABC literature by highlighting a new area of study. Previous research has focused on what causes participation in ABC services. This study looks beyond antecedents of participation and into how consumer attitudes differ towards the benefits of sharing and rental services. By comparing users and consumers this study provides valuable insight into how sharing and rental services should be developed and marketed, which will be discussed in the following parts.

5.2 Managerial implications for rental companies

Managers of rental services should investigate if the users of their services have become more open to create a community. If there has been a change in attitudes, there are significant marketing opportunities given the positive perception of social benefits. Should the users remain uninterested in build a sense of community, managers would be better off by changing their marketing strategy towards economic benefits, which is the primary motivator for the users of rental services (Bardhi & Eckhardt, 2012).

The focus of rental companies' marketing communication should be that car rental services are more affordable than owning your own car, which is the best indicator of economic benefits. Rental companies should position themselves as being affordable and helping consumers removing the burdens of ownership.

Car rental services are not seen as environmental friendly. Since the users of these services are not concerned about the environment (Bardhi & Eckhardt, 2012), the companies themselves should not waste precious resources of trying to present themselves as green. Saving the earth's resources is the second-best indicator of environmental benefits. Cars accessed through car rental services are often new cars (Hertz Bilpool, 2017), which are bought and produced for this purpose. In contrast, cars

accessed through sharing services are not bought and built primarily to be accessed by consumers. The use of resources to build cars exclusively for rental might be wasteful, when existing cars remain stationary for large parts of the day. Thus, regardless of the usage motivations of their members, car rental services might never be able to compete with car sharing services in environmental friendliness. There are one-way car rental services can be greener than car sharing services. Reducing harmful emissions is also a powerful indicator for environmental benefits. On their website, Hertz Bilpool advertises that almost all their cars are less than 1.5 years old (Hertz Bilpool, 2017). If car rental services want to position themselves as green, they should also draw attention the reduction in pollution caused by driving new, eco-friendly and fuel-efficient vehicles.

5.3 Managerial implications for sharing companies

Sharing services are perceived to have Economic, Environmental, and social benefits. Accordingly, managers in sharing services should have a broad marketing perspective. The perception of these services matches the antecedents of usage motivations among their members (Moeller & Wittkowski, 2010; Hamari et al., 2015; Tussyadiah, 2015). A wide range of benefits give marketers more than one string to their bow, but it becomes harder to find the ideal marketing communication balance. Economic benefits have the strongest effect on attitude towards sharing services. Since sharing only takes place if there are sufficient economic incentives (Tussyadiah, 2015), these services should emphasise the financial gains of their services.

Social benefits had the second biggest effect on attitude towards sharing services. The strongest indicator of social benefits was the possibility of new friendships. In contrast, sense of community was the strongest indicator for rental services. This is probably an effect of the larger role played by

social interaction between consumers in sharing services than rental services. Fortunately for managers there are users of these services interested in meeting and bonding with other individuals (Tussyadiah, 2015). Should sharing services choose to market themselves as a place to meet new friends there are numerous members how can fulfil that promise. Sharing services are viewed as more fun, exciting, entertaining, and pleasant than rental services. This suggests that, compared to renting, sharing is more than just another service encounter. Participation in sharing services is regarded as an enjoyable experience and should be marketed as such.

Finally, environmental benefits also had a significant positive effect on attitude. Using a car accessed through sharing services is more environmentally friendly than using a car accessed through rental services. By using environmental benefits as a differentiating strategy, sharing services could achieve a competitive advantage over their competitors with rental business models. This should be reflected in the sharing companies' marketing communication.

5.4 Limitations

The findings in this study are limited by the data collection. The sample in our analysis is representative for our own social networks, but not the target population. However, the sample does share the young and urban characteristics of participants of ABC (Moeller & Wittkowski, 2010; Bardhi & Eckhardt, 2012; Hamari et. al, 2015). As previously mentioned, research based on convenience sampling can still be valuable (Easterby-Smith, Thorpe & Jackson, 2012). Since our sample is not representative of the population, the results cannot be generalized.

A large number, 75 of 274, of the respondents did not complete our survey. This might indicate that the respondents felt that completing the survey would be too time consuming. If true, there is a probability that some respondents did not take the necessary time to read the opening article and rushed to complete the survey.

Our study assumes that the respondents distinguish car sharing and car rental services. This was confirmed by our pre-test. However, it is not granted that all 199 respondents did not regard these two forms of consumption as the same when answering the questionnaire. This may have caused the results from the two surveys to be more similar than ideal.

Benevolence did not have a significant impact on our study. This does not necessarily mean that benevolence do not have an impact on sharing economy services. The design of the study could have affected the possible effects caused by benevolence. Benevolence took the form of a moderator, since we did not expect rental services to appear benevolent. However, as a moderator, benevolence failed to adequately affect the relationship of economic, environmental, and social benefits on ABC services. Alternatively, benevolence simply do not affect consumers' attitudes towards the benefits of attitude towards ABC services. There is a possibility that, if measured as an independent variable, benevolence could have a direct impact on consumers' attitudes towards ABC services.

Finally, the study is limited by the lack of previous research on attitudes towards ABC services. No previous studies had before considered if consumers have distinct attitudes to the different forms of ABC. This gave us little information to build our hypotheses and research design upon. For two of our independent variables, economic and environmental benefits, our study, which investigated the attitudes among both users and non-users, relied on questionnaires specifically developed for users of ABC services.

Similarly, the study assumes that our respondents' attitudes towards ABC services are formed by the same variables as the antecedents of usage motivation for current users of these services.

5.5 Further Research

Further research should consider how consumers view different forms of ABC. This study assumes that consumers regard sharing and renting as two different forms of consumption. The notion was confirmed by our first pre-test. However, regarding sharing and renting as different does not necessarily do not mean there are significant differences in opinions towards the two activities, nor does it explain what the potential differences are.

A greater understanding of how consumers view transactions without transfer of ownership will help firms develop their business model to better suit the consumers' needs. Researchers should further investigate if there are other perceived benefits from participation in ABC. Our study assumes that the perceived benefits of these services match the antecedents of participation. This could have caused us to miss other potential benefits which shape consumer attitudes towards ABC.

Further research should explore if our findings can be supported in other product categories. Car sharing and car rental are among the highest profiled sharing economy services, this might have affected the perceived advantages of these services. Personal transportation is also linked with pollution, and consequently environmentalism. It would be interesting to see if these services are perceived to have environmental benefits if products that are less connected to pollution.

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7.0 Appendices

7.1 - Appendix 1 - Sharing article

Bildeling blir stadig mer populært

Stadig flere velger å dele bil i stedet for å eie selv.

I dag er det over 2,6 millioner biler på norske veier. Gjennomsnittsbilen står stille mer enn 23 timer i døgnet. Dette er i ferd med å forandre seg.

Del av delingsøkonomien

Stadig flere velger å dele bil i stedet for å eie sin egen privatbil. Dette er en del av den fremvoksende delingsøkonomien hvor privat eierskap erstattes av tilgang til produkter og tjenester via nettportaler og apper.

Uttrykket «delingsøkonomi» blir stadig mer populært, men tjenestene som utgjør delingsøkonomien er fremdeles ikke særlig utbredt. Undersøkelser viser at rundt 13 prosent av befolkningen er medlem av en eller flere delingstjenester, mens bare 6 prosent er aktive brukere. Denne antallet vokser fort, spesielt blant bildelingstjenester. Det finnes over 3000 delte biler i Norge, dette utgjør 1,1 promille av alle registrerte kjøretøy i Norge.

Populært i byene

Det er mange, særlig i byene, som ikke har bil. Bor du sentralt, og synes kollektivtransporten fungerer tilfredsstillende, kan det bli dyrt å eie en bil man sjeldent bruker. En del steder kan det i tillegg være dårlig med parkeringsmuligheter. Hvis du bare sporadisk har bruk for bil, kan bildeling bli billigere enn å eie bilen selv.

Har du lappen og tilgang til nett eller mobil kan du enkelt leie en bil for korte eller lange tidsperioder. Bildelingstjenester som Nabobil.no skaper markedsplasser hvor privatpersoner som ønsker å leie biler blir koblet opp mot privatpersoner som ønsker å leie ut bilene sine. Om du ønsker å dra til hytta eller må på IKEA, er en delebil kun et par tastetrykk unna.

7.2 - Appendix 2 - Rental article

Bilutleie blir stadig mer populært

Stadig flere velger å leie bil i stedet for å eie selv.

I dag er det over 2,6 millioner biler på norske veier. Gjennomsnittsbilen står stille mer enn 23 timer i døgnet. Dette er i ferd med å forandre seg.

Del av delingsøkonomien

Stadig flere velger å leie bil i stedet for å eie sin egen privatbil. Dette er en del av den fremvoksende delingsøkonomien hvor privat eierskap erstattes av tilgang til produkter og tjenester via nettportaler og apper.

Uttrykket «delingsøkonomi» blir stadig mer populært, men tjenestene som utgjør delingsøkonomien er fremdeles ikke særlig utbredt. Undersøkelser viser at rundt 13 prosent av befolkningen er medlem av en eller flere delingstjenester, mens bare 6 prosent er aktive brukere. Denne antallet vokser fort, spesielt blant bildelingstjenester. Det finnes over 3000 leiebiler i Norge, dette utgjør 1,1 promille av alle registrerte kjøretøy i Norge.

Populært i byene

Det er mange, særlig i byene, som ikke har bil. Bor du sentralt, og synes kollektivtransporten fungerer tilfredsstillende, kan det bli dyrt å eie en bil man sjeldent bruker. En del steder kan det i tillegg være dårlig med parkeringsmuligheter. Hvis du bare sporadisk har bruk for bil, kan billeie bli billigere enn å eie bilen selv.

Har du lappen og tilgang til nett eller mobil kan du enkelt leie en bil for korte eller lange tidsperioder. Bilutleietjenester som Hertz Bilpool har mer over hundre leiebiler tilgjengelig for sine medlemmer. Om du ønsker å dra til hytta eller må på IKEA, er en leiebil kun et par tastetrykk unna.

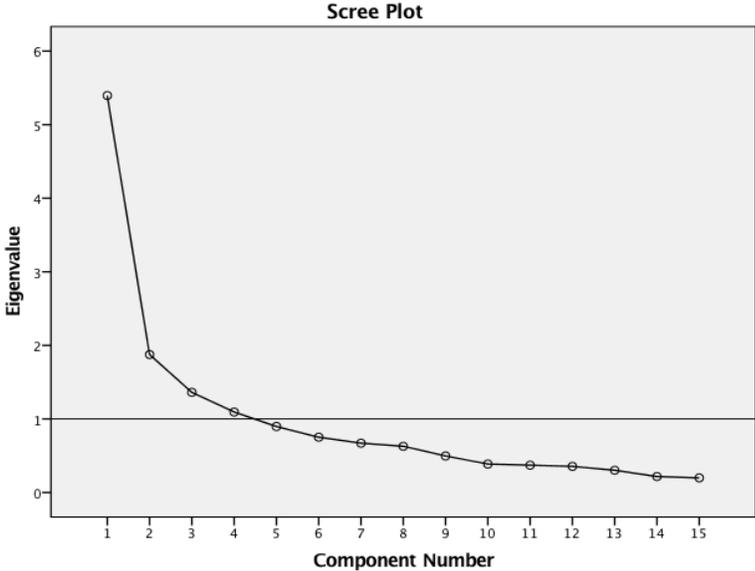
7.3 - Appendix 3 - Pre-test results

	Rental			Sharing		
	t	Sig. (2-tailed)	Mean Dif.	t	Sig. (2-tailed)	Mean Dif.
The text appears as a credible news article	12,851	0,000	5,667	8,854	0,000	4,667
It is clear what the text is about	24,042	0,000	5,667	12,04	0,000	5,222
The text is objectively written	7,766	0,000	4,667	7,276	0,000	5
The text gives me enough information to form an impression of such services	11,497	0,000	5,889	8,321	0,000	5
It is obvious that the article is about car sharing/rental	13,607	0,000	6	21,92	0,000	6,444
I perceive rental and sharing as two different concepts	9,168	0,000	4,778	23,45	0,000	6,111
I perceive it differently to share cars with someone other than renting a car of a car rental company	13,316	0,000	5,778	26,61	0,000	6,444
I consider it different to rent a car from a car rental company than to share a car with other private individuals through services such as Nabobil.no and Bilkollektivet.no	23,452	0,000	6,111	36,68	0,000	6,444

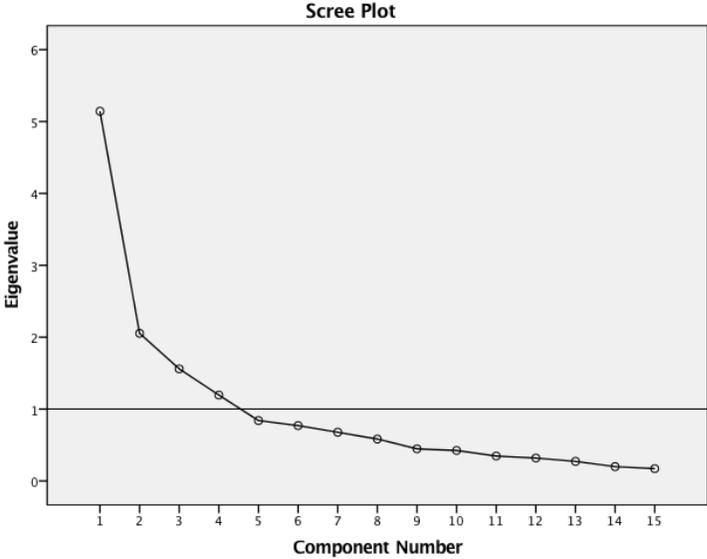
7.4 - Appendix 4 – New AVE Values

	Merged		Rental		Sharing	
	AVE		AVE		AVE	
	Hedonic	Utilitarian	Hedonic	Utilitarian	Hedonic	Utilitarian
Attitude _	0.602	0.641	0.581	0.558	0.614	0.710
Benevolence	0.722	0.722	0.707	0.705	0.730	0.737
Economical	0.586	0.592	0.621	0.627	0.703	0.705
Environmental benefits	0.732	0.726	0.739	0.720	0.734	0.729
Moderating Effect 1	1.000	1.000	1.000	1.000	1.000	1.000
Moderating Effect 2	1.000	1.000	1.000	1.000	1.000	1.000
Moderating Effect 3	1.000	1.000	1.000	1.000	1.000	1.000
Social Benefits _	0.505	0.528	0.508	0.543	0.688	0.695

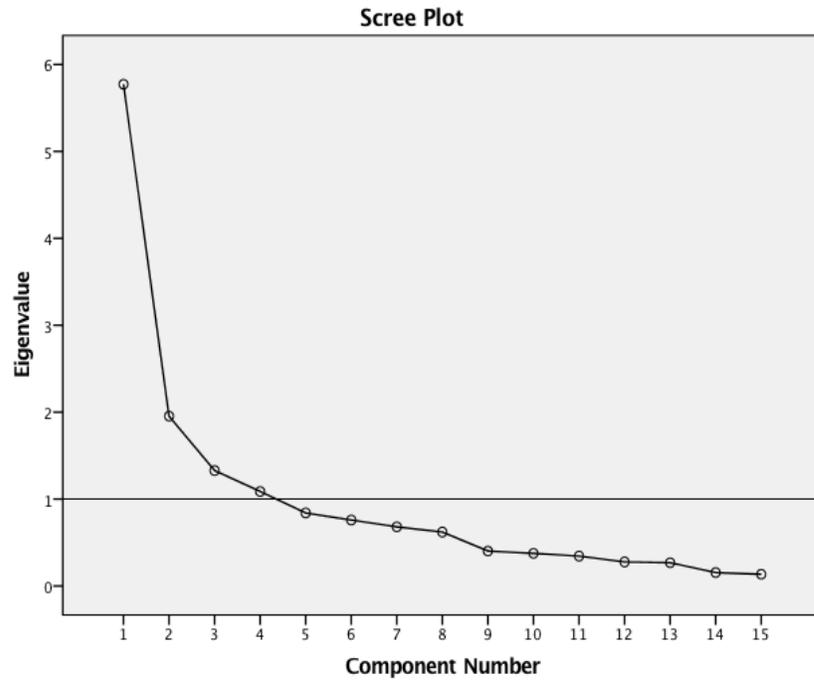
7.5 - Appendix 5 - Merged dataset - Scree plot



7.6 - Appendix 6 - Rental dataset - Scree plot

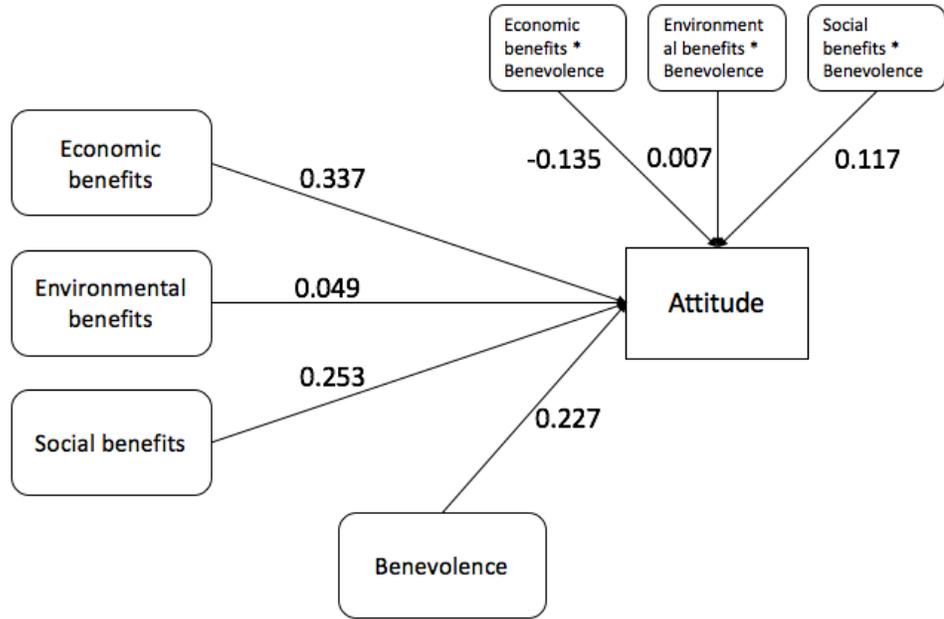


7.7 - Appendix 7 - Sharing dataset - Scree plot

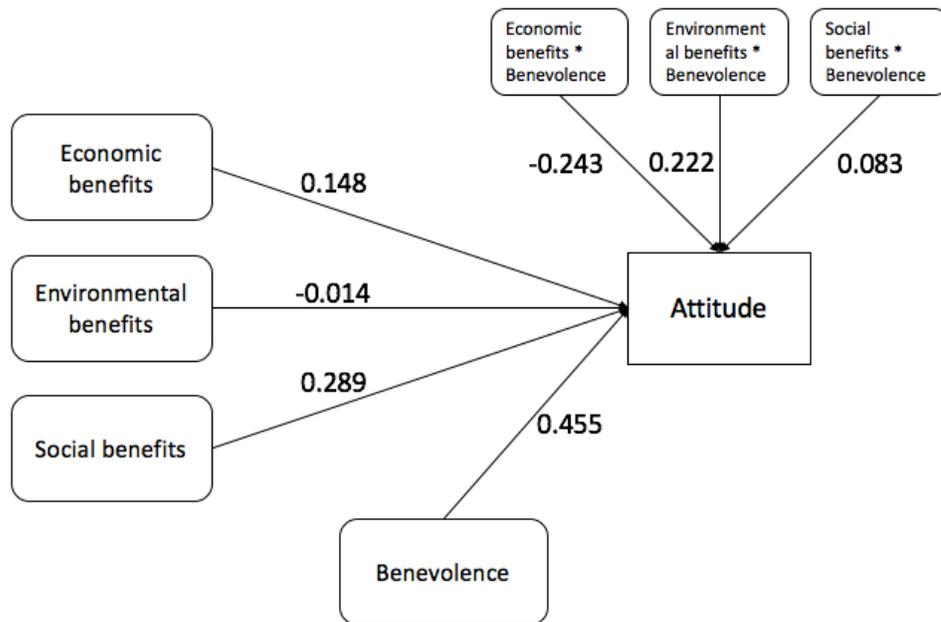


7.8 -

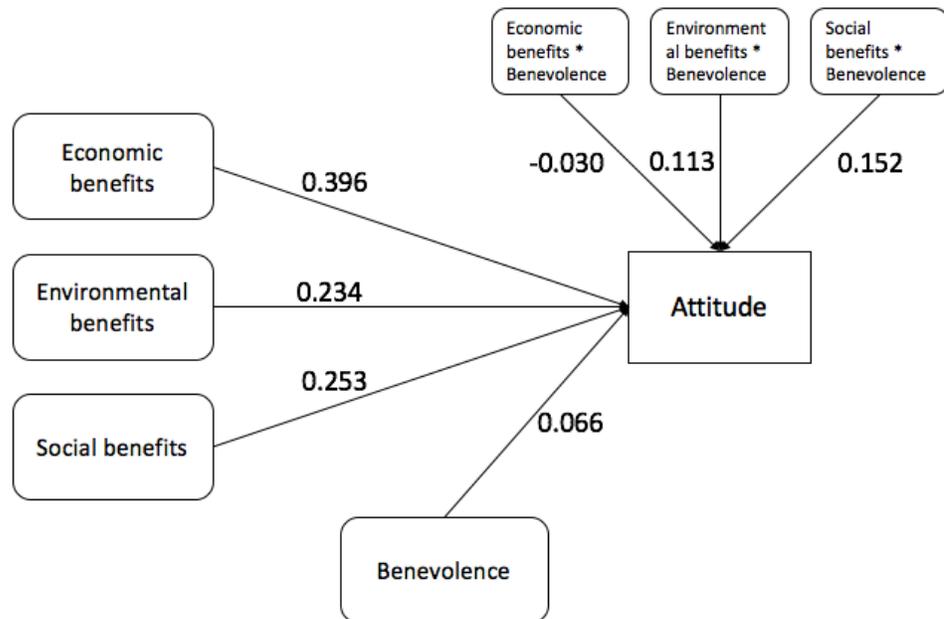
Appendix 8 - Merged dataset - Structural model



7.9 - Appendix 9 – Rental dataset - Structural model



7.10 - Appendix 10 – Sharing dataset - Structural model



7.11 - Appendix 11 - Survey - Rental/Sharing

Q1 - Denne spørreundersøkelsen er laget i forbindelse med vår masteroppgave ved Handelshøyskolen BI. Alle svar vil være anonyme. Vær vennlig å svar så ærlig som mulig, det finnes ingen rette eller gale svar. Undersøkelsen vil ta ca. 6 minutter å gjennomføre. Takk for at du deltar i undersøkelsen og hjelper oss med å samle inn data til vår masteroppgave. Simen Fjørtoft og Hans Kristian V. Hanssen

Q2 - Du blir nå bedt om å lese et utklipp fra en artikkel om bildeling. Det er viktig at du leser dette nøye før du går videre. (See appendix 1 and 2 for articles)

Q3 - Du vil nå bli bedt om å vurdere ulike utsagn basert på teksten du nettopp leste.

Q4 - I hvilken grad er du enig i følgende påstander:

	Veldig uenig (1)	Uenig (2)	Litt uenig (3)	Verke n uenig eller enig (4)	Litt enig (5)	Enig (6)	Veldig enig (7)
Slike tjenester kan hjelpe meg å redusere mine transportkostnader (1)	0	0	0	0	0	0	0
Slike tjenester kan være mer økonomisk gunstige enn å eie egen bil (2)	0	0	0	0	0	0	0
Slike tjenester er positive for privatøkonomien (3)	0	0	0	0	0	0	0
Slike tjenester kan hjelpe meg å spare tid (4)	0	0	0	0	0	0	0

Q5 - I hvilken grad er du enig i følgende påstander:

	Veldig uenig (1)	Uenig (2)	Litt uenig (3)	Verken uenig eller enig (4)	Litt enig (5)	Enig (6)	Veldig enig (7)
Slike tjenester kan være mer miljøvennlige enn å eie egen bil (1)	0	0	0	0	0	0	0
Slike tjenester kan hjelpe meg å redusere mine miljøutslipp (2)	0	0	0	0	0	0	0
Slike tjenester er positive for miljøet (3)	0	0	0	0	0	0	0
Slike tjenester kan bidra til å spare jordens ressurser (4)	0	0	0	0	0	0	0

Q6 - I hvilken grad er du enig i følgende påstander:

	Veldig uenig (1)	Uenig (2)	Litt uenig (3)	Verken uenig eller enig (4)	Litt enig (5)	Enig (6)	Veldig enig (7)

Brukere av
slike tjenester
har mye til
felles med
andre brukere
(1)

Brukere av
slike tjenester
opplever et
samhold med
andre brukere
(2)

Brukere av
slike tjenester
tar vare på
felles eiendeler
(3)

Brukere av
slike tjenester
kan føre til nye
vennskap (4)

Q7 - I hvilken grad er du enig i følgende påstander:

Veldig uenig (1)	Ueni- g (2)	Litt uenig (3)	Verk- en uenig eller enig (4)	Litt enig (5)	Enig (6)	Veldig enig (7)
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Selskaper tilbyr slike tjenester for å hjelpe meg å redusere transportkostnader (1)	0	0	0	0	0	0	0
Selskaper tilbyr slike tjenester for å bidra til økt fellesskap i samfunnet (2)	0	0	0	0	0	0	0
Selskaper tilbyr slike tjenester for å hjelpe meg å redusere miljøutslipp (3)	0	0	0	0	0	0	0

Q8 - I hvilken grad oppfatter du slike tjenester som?

	Veldig uenig (1)	Uenig (2)	Litt uenig (3)	Verken uenig eller enig (4)	Litt enig (5)	Enig (6)	Veldig enig (7)
Effektive (1)	0	0	0	0	0	0	0
Hjelpsomme (2)	0	0	0	0	0	0	0

Funksjonelle (3)	<input type="radio"/>						
Nødvendige (4)	<input type="radio"/>						
Praktiske (5)	<input type="radio"/>						
Morsomme (6)	<input type="radio"/>						
Spennende (7)	<input type="radio"/>						
Underholdende (8)	<input type="radio"/>						
Hyggelige (9)	<input type="radio"/>						
Trivelige (10)	<input type="radio"/>						

Q9 - Jeg har hørt om slike delingstjenester før?

Ja (1) Nei (2) Vet ikke (3)

Q10 - Har du brukt slike delingstjenester før?

Ja (1) Nei (2) Vet ikke (3)

Demografi

Q11 - Hva er ditt kjønn?

- Kvinne (1) Mann (2)

Q12 - Hva er din alder?

- < 18 (1) 18 - 20 (2) 21 - 25 (3)
 26 - 30 (4) 31 - 40 (5) > 41 (6)

Q13 - Hva er din sivilstatus?

- Singel (1) Kjæreste (2) Samboer (3)
 Gift (4) Annet (5)

Q14 - Antall innbyggere på bosted?

- < 10 000 (1) 10 001 - 30 000 (2) 30 001 - 50 000 (3)
 50 001 - 100 000 (4) 100 001 - 300 000 (5) 300 001 - 500 000 (6)
 > 500 001 (7)

Q15 - Hva er din yrkesstatus?

- Student (1) Ansatt på deltid (2) Ansatt på fulltid (3)
 Arbeidsledig (4) Student + Ansatt på deltid (5) Annet (6)

Q16 - Hva var din samlede inntekt i 2016? (inkluder evt. studielån)

- < 100 000 (1) 100 001 - 300 000 (2) 300 001 - 500 000 (3)
 500 001 - 700 000 (4) 700 001 - 1 000 000 (5)
 > 1 000 001 (6) Ønsker ikke å oppgi (7)

Q17 - Hva er din høyeste fullførte utdanning?

- Grunnskole (1) Videregående (2) Bachelor (3)
 Master (4) Doktorgrad (5) Annet (6)