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Access versus Ownership: Consumers' Reactions to an Alternative Consumption Mode

Christoph Kai Baumeister

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Vorsitzender:	Univ.-Prof. Dr. Rainer Kolisch
Prüfer der Dissertation:	1. Univ.-Prof. Dr. Florian von Wangenheim, ETH Zürich / Schweiz
	2. Univ.-Prof. Dr. Frank-Martin Belz

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Summary

During the past century purchasing and ultimately becoming the owner of a good had been the dominant consumption mode by far. Today the situation on consumer markets has changed: A new form of consumption – *access* – has gained tremendous importance in various consumer goods industries. If a consumer fulfills his or her consumption needs via the access consumption mode, the user pays for a temporary right to enjoy the benefits of a good that is owned not by him or her, but by a third party that provides access to it. Consumer behavior in the context of access is not well understood yet as most marketing knowledge refers to purchased and owned goods and cannot be simply transferred to the increasingly relevant access-based consumption.

This dissertation takes two different perspectives on consumer behavior in situations where an access consumption mode next to ownership is available. In a first research project, a consumer's perspective is taken by investigating which perceptions cause consumers to prefer one or the other consumption mode. In a second research project, the perspective of a manager is taken by researching how a company should ideally market a new access offering. Neither of both research perspectives has been studied before in this breadth and depth. Existing research on consumption mode evaluation has worked solely by qualitative means, whereas there is only one publication yet that deals with one facet of the ideal design of access offerings.

Research project I comprises (a) the development of a formative measurement tool of consumers' perceptions and the resulting attitude towards access and ownership and (b) the results of its application to four different product categories and to consumers with and without access consumption experience. Based on literature review and qualitative interviews, a second-order formative model is conceptualized and validated in a mixed-methods approach. The results show that functional and

monetary perceptions are generally most important, followed by experiential and symbolic perceptions. On a more granular level, access offerings in different categories are perceived differently, highlighting the importance of multi-category studies. The contrast of experienced access users with inexperienced access users further shows that experience affects perceptions of consumption modes. Project I contributes to the marketing discipline by providing empirically grounded information about the perception of consumption modes and by advancing theory development on consumption mode choice. Furthermore, it contributes a standardized way for managers, policy makers, as well as science to measure and understand the nature of the factors that drive consumption mode choice – over time, over different product categories and over different access designs.

In a series of five experiments, research project II investigates (a) the importance of product brand and service convenience for the success of an access offering, (b) how current customers of a given brand react to the introduction of an additional access offering by their brand, and (c) whether the introduction of access ultimately harms or benefits an existing parent brand that used to solely offer the ownership consumption mode before. It is found that for consumers' attitude towards carsharing offerings the provided service convenience is important, whereas the car brand appears not to be important. However, for the behavioral intention the results are reversed. Similarly, in the fashion product category the product brand is generally found to be important for consumers' evaluations. Furthermore it is found that owners of a brand react differently to a new access offering by the respective brand as compared to non-owners: In case of access offerings that are based on low prestige brands, non-owners express a more positive evaluation as compared to owners. In case of access offerings that are based on high prestige brands, owners' evaluations are better as compared to non-owners – indicating that they perceive access not as a devaluation of their ownership, but rather as an extension of their options. Moreover, it is found that the introduction of an additional consumption mode does not negatively affect the parent brand. Overall, Project II contributes to the marketing literature by improving the understanding of how access offerings should be ideally marketed by taking different stakeholders into account.

On a general level, this dissertation contributes several important implications to the currently rather unexplored research area of consumption modes. Most importantly,

this dissertation is the first to show on an empirical basis that access offerings are fundamentally different as compared to ownership offerings. In addition, the results of this dissertation, which are based on simultaneous investigations in several product categories, highlight the need to be cautious when generalizing findings on access that are based on only a single product category. Besides, attitudes and behavioral intentions are found to differ which is most likely due to the influence of social norms and perceived behavioral control, which should be taken into consideration in future studies.

Future research could investigate access offerings other than the most common business-to-consumer offerings (which have been in the focus of this thesis) such as peer-to-peer sharing offerings, long-term leasing offerings, or fractional ownership models. Another promising but unexplored research area is the influence of different tariffs on the adoption of access offerings. Ultimately, longitudinal studies could explore whether companies are in the long run generally better advised to solely offer either consumption mode or both at the same time.

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ANCOVA	analysis of covariance
ANOVA	analysis of variance
B2C	business-to-consumer
C2C	consumer-to-consumer
e.g.	exempli gratia (for example)
i.e.	id est (that is)
L	loading
MANOVA	multivariate analysis of variance
MANCOVA	multivariate analysis of covariance
MIMIC	multiple indicators and multiple causes
n.s.	not significant
OTG	omnibus test of group differences
p.	page
P2P	peer-to-peer
PLS	partial least squares
REGWQ	Ryan, Einot, Gabriel and Welsch Q (test)
TPB	Theory of Planned Behavior
VIF	variance inflation factor
vs.	versus
W	weight
WOM	word-of-mouth

1 Introduction

1.1 Research Motivation

During the past century purchasing and ultimately becoming the owner of a good had been the dominant consumption mode by far. A *consumption mode* is defined as the circumstances under which a consumer fulfills his or her consumption needs. The ownership consumption mode typically comprises the transfer of the good as well as the associated property rights from one party to another in exchange of a certain amount of money (Chen, 2009).[1] Both sides – companies and consumers – supported the dominance of *ownership*. On the one hand, companies heavily promoted the importance of ownership in their advertisements: Products that are only rarely needed were advertised by a you-never-know-when-you-might-need-it-strategy (Botsman & Rogers, 2010). Furthermore, the wide spread of credit cards facilitated a buy now – pay later culture, which has accelerated mindless and greater spending than can be afforded. Consumers therefore got the chance to instantly afford goods which are ultimately too expensive for them (Botsman & Rogers, 2010). On the other side, consumers adopted cultural values that caused them to perceive ownership as the most advantageous form of consumption (Bardhi & Eckhardt, 2012). Historically ownership is associated with adulthood and is believed to be superior because it is cheaper than renting in the long run, it allows accumulating capital and provides one with independence and security (Bardhi & Eckhardt, 2012; Ronald, 2008; Snare, 1972): Ownership earned by labor had become the basis of our modern self-confidence (Rifkin, 2000).

Today the situation on consumer markets has changed. Ownership is no longer the only desired and viable solution to consumers' needs (Bardhi & Eckhardt, 2012;

[1] Instead of ownership, Chen used the term possession. As the term possession does not clearly differentiate between something that is permanently owned versus temporally possessed, I decided to use the term *ownership* instead because when you access something, you legally posses it during the access period but you do not own it.

Belk, 2013b; Botsman & Rogers, 2010; Chen, 2009; Walsh, 2011). Due to several factors, a new form of consumption called *access* has gained tremendous importance during the past decade – it has changed from being a niche solution to a consumption mode that can compete with the traditional ownership-based consumption. Access does not rely on the market-mediated exchange of ownership – the ownership rather stays with one party that simultaneously grants access to it. If a consumer fulfills his or her consumption needs via the access consumption mode, the user pays for a temporary right to enjoy the benefits of a good that is owned not by him, but by a third party that provides access (Chen, 2009). The topic has started to attract interest by scholars in marketing and consumer research (Bardhi & Eckhardt, 2012; Belk, 2013b; Chen, 2009; Lamberton & Rose, 2012), as well as other academic disciplines interested in major societal change and transformation (Humphreys & Grayson, 2008; Schaefers, 2013; Schrader, 1999).

Access-based consumption has been growing tremendously over the past few years in various consumer goods industries such as automobiles, bicycles, fashion, toys or media (Bardhi & Eckhardt, 2012; Geron, 2013; Lamberton & Rose, 2012). In all those industries incumbents are being challenged by start-ups that offer innovative short-term rental offerings, which disrupt the industry and could cause a decline in sales for those established businesses that purely rely on selling goods (Boesler, 2013). Consider successful access offerings such as carsharing (car2go, Zipcar), bikesharing (Vélib', Call a Bike), online fashion rental services (renttherunway.com), handbag rental services (bagborroworsteal.com), movie rental (Netflix, Lovefilm), or tool rental (zilok.com) as examples. The carsharing market in the USA is predicted to be a $3.3 billion market in 2016, while forecasts about Europe predict 15 million carsharing users until 2020 (Frost & Sullivan, 2010, 2012). There are not only promising forecasts, but there is also notable success that has already taken place: The carsharing provider car2go (a subsidiary of Daimler) has recently announced that its customer base now counts more than half a million signed-up customers and that it has already reached a profitable business case in some of the cities where it is offering its service (Daimler, 2013b; Handelsblatt, 2013). Also bikesharing has seen a remarkable increase in many cities worldwide: Each month already more than 2.2 million bikesharing trips are taking place (Sacks, 2011). The trend towards accessing goods rather than owning them is a major trend affecting consumers, society and

businesses likewise (Belk, 2013b; Lamberton & Rose, 2012; Lovelock & Gummesson, 2004).

As a consequence, consumers are increasingly facing the decision about how they prefer to consume a certain object. Some time ago consumers only had to decide whether to consume at all and what to consume. In the meantime, accessing goods by using a service has become a convenient, cost-efficient and environmentally friendly alternative to ownership in different fields, giving consumers the choice how to consume: Either by becoming the owner of the item in question or by accessing it through a service (Botsman & Rogers, 2010; Chen, 2009; Lovelock & Gummesson, 2004; Rifkin, 2000). The Time magazine even classified access as one of 10 ideas with the ability to "change the world" because it is a financially attractive and green alternative to the traditional and well-known ownership consumption mode (Walsh, 2011).

A better understanding of consumer behavior in consumption mode choice is also highly relevant for our society as access might turn out to be a well suited solution to cope with limited resources, environmental pollution and a rapidly growing global population living increasingly in densely-populated megacities (Lovelock & Gummesson, 2004). Thus, access has gained importance on political agendas for promoting more sustainable consumer behaviors (Lovelock & Gummesson, 2004). Furthermore, policy makers are interested in access because of its welfare implications as access offerings enable consumers to consume products that they cannot afford to buy (Bardhi and Eckhardt 2012; Lamberton and Rose 2012).

Furthermore, access has the potential to interrupt many firms' business models based on selling consumer goods (Belk, 2013b). So far it has remained unclear whether access may be a valuable additional source of revenue or more a threat to a firm's existing business model. Besides potential cannibalization effects, a firm with an access-based business model faces the risk of high capital requirements, a high labor intensity and a stretching of cash-flows over a longer period of time (Scholl, 2008). On the other hand, a company could gain advantages by more stable cash-flows, more direct and long-time customer contacts, the collection of valuable customer data from detailed usage data, the opportunity to gain a greener and more innovative image in politics and society, and the possibility to address new or previously lost market segments (Gansky, 2010; Scholl, 2008).

1.2 Research Questions

Despite the previously described increasing relevance of access, consumer behavior in the context of access is not very well understood yet. Most marketing knowledge refers to purchased and owned goods and it is not advisable to simply transfer research on ownership-based consumption because "marketing transactions that do not involve a transfer of ownership are distinctively different from those that do" (Lovelock & Gummesson, 2004, p. 34). Thus there is the need to rethink marketing for access offerings. Lately, scholars in marketing and consumer research have started to conduct research in the emerging field of access, too. However, this research has primarily focused on drivers and barriers of successful access offerings. Researchers widely agree that there are still vast gaps that require further research (Chen, 2009; Lamberton & Rose, 2012; Lovelock & Gummesson, 2004). This thesis addresses two major issues that have not been resolved yet but which are of high theoretical and managerial relevance (for an overview see Figure 1).

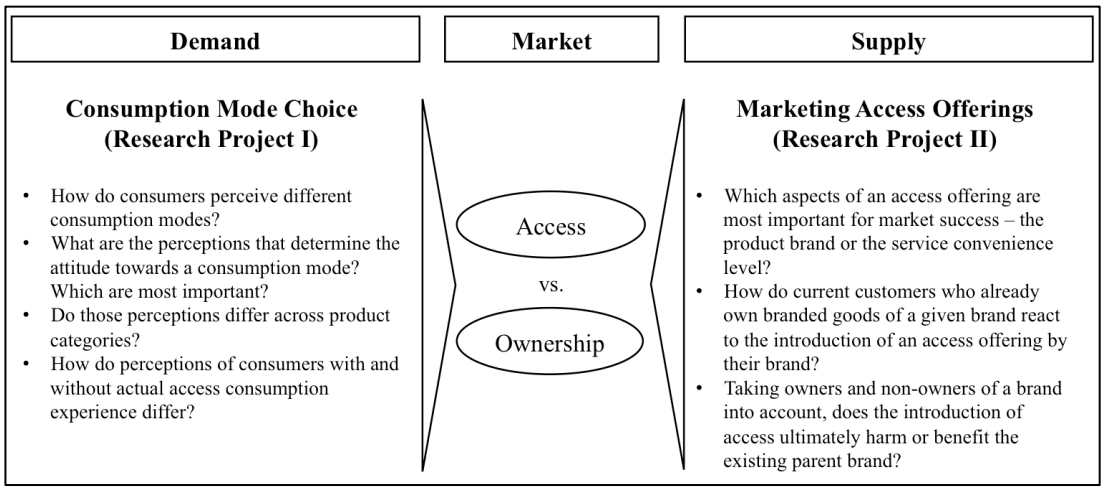

Figure 1: Overview of Research Projects and Research Questions.

In a first step the consumer's perspective is taken by investigating what makes consumers prefer one or the other consumption mode – this perspective is broader than previous research as it is not only focusing on the drivers of adoption of access or ownership in isolation (*project I*). A better understanding of consumption mode choice is not only important for managers and policy makers, but also highly beneficial for the scientific community because it leads towards a theory that explains consumption mode choice and usage behavior. Up to now there are only two qualitative studies that have started to investigate this topic (Chen, 2009; Durgee

& O'Connor, 1995). In this project, a formative measurement tool of consumers' perceptions and the resulting attitude towards access and ownership is developed and validated. Therefore a mixed methods approach is applied by conducting qualitative and quantitative studies to investigate how consumers feel about access and ownership in a given product category and what causes them to develop a favorable or unfavorable attitude towards a consumption mode. Applying this measurement model allows answering the following research questions: How do consumers perceive different consumption modes – that is, access in contrast to ownership? What are the perceptions that determine the attitude towards a consumption mode? Which are most important? Do those perceptions differ across product categories? And ultimately, how do perceptions of consumers with and without actual access consumption experience differ?

In a second step the perspective of a manager is taken who considers introducing an access offering to the market, but is wondering which features of the access offering will be most important for market success and beyond that fears potential negative feedback effects on the existing parent brand that used to solely offer the ownership consumption mode (*project II*). Both issues are highly important for managers, but have not been addressed by existing research to the author's best knowledge. This project experimentally researches how companies can successfully introduce access offerings into the market, while not hurting existing customer relationships or damaging the parent brand. Project II is based upon the idea that brand extensions and the introduction of an additional access offering share certain similarities that enable transferring research approaches common in the literature on brand extensions to the research on access. The project strives to answer the following research questions: Which aspects of an access offering are most important for market success – the product brand or the service convenience level? How do current customers who already own branded goods of a given brand react to the introduction of an access offering by their brand? And finally, taking owners and non-owners of a brand into account, does the introduction of access ultimately harm or benefit the existing parent brand?

1.3 Structure of the Thesis

The structure of this thesis is as follows (see also Figure 2). In chapter 2, the conceptual foundation of this thesis is presented. The chapter provides a definition of access, the drivers that have lately made access competitive with ownership, typologies of access offerings and a literature review on access-related research in marketing and consumer research.

In chapter 3, the development and empirical application of the differential formative measure of consumers' attitudes towards consumption modes is presented (project I). After motivating the research and laying out its theoretical foundations, the relevant perceptions of consumption modes are presented based upon qualitative studies and a literature review. Based upon these insights a formative measurement model is developed in order to investigate what causes consumers to prefer access or ownership. Subsequently, this model is empirically validated in two empirical studies. Finally, chapter 3 is closed by a discussion of theoretical and managerial implications.

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Figure 2: Structure of the Thesis.

In chapter 4, it is investigated how consumers respond to consumption mode extensions (project II). After briefly introducing the research questions and deriving the hypotheses, the methodology of a series of five experimental studies is described. Subsequently, the results of testing the hypotheses are presented. Similar to the previous chapter, chapter 4 closes with a discussion of the results from a theoretical and a managerial point of view.

Finally in chapter 5, the main findings of both projects are summarized, their overall implications discussed and limitations as well as avenues for further research in the context of access-based consumption are laid out.

2 Conceptual Foundation of Consumption Mode Choice

2.1 Definition and Demarcation of Consumption Modes

If a good is consumed that is not owned by oneself or someone close, but a third party that is being paid for providing access to this good, consumption takes place in the *access consumption mode*. This consumption mode gives the consumer a contract-based, temporary and paid-for right to use something (Durgee & O'Connor, 1995). In principal it is publicly available to every consumer – however, sometimes a membership may be required (Chen, 2009). In marketing communications this form of consumption is usually labeled as renting or sharing.[2] If the third party that owns the accessed good is a company, it is a business-to-consumer (B2C) transaction, if a private person owns it, it is a consumer-to-consumer (C2C) transaction. The latter is also called *peer-to-peer sharing*, but is not in focus of this study. This study solely focuses on access offerings in a B2C context. A generic term that is also often used in the context of access is *collaborative consumption* (Botsman & Rogers, 2010).[3] Following the classification by Botsman and Rogers, access is similar to one type of collaborative consumption, which they call *product service systems*. Unfortunately this term is already occupied in the marketing literature and rather broadly defined: It covers the idea of product leasing, renting and sharing, but also more product-oriented services and result-oriented services (Tukker, 2004). Thus, solely the term access will be used in the following.

In contrast to the access consumption mode, consumption takes place in the *ownership consumption mode* if the consumed good is fully owned by oneself or

[2] If a consumer borrows something from a family member or friend this is commonly also called *sharing* (Belk, 2007, 2010). In this thesis such a private pooling of resources that is not based on contracts nor any form of compensation is not regarded as access but rather as being similar to ownership as such borrowed items can be regarded as joint possessions (Belk, 2010, 2013b).

[3] Felson and Spaeth (1978) have used the term collaborative consumption even earlier, however they define it differently: They describe it as coordinated consumption in a group – but it does not contain the idea of consuming a good in form of a rental service (Belk, 2013b).

someone close (family, close friends). Ownership originates most commonly from purchasing, receiving a present, inheriting something, or finding something. It includes having a permanent or long-term right to consume a good. It is exclusively available to the owner and his or her joint-owners, if any (Chen, 2009).

Consequently, both consumption modes represent different circumstances under which a consumer fulfills his or her consumption needs. What both consumption modes have in common though is the consumption act itself – that is using a consumer good (Chen, 2009). Consumers are increasingly often offered two different consumption modes, which enables them to choose various options: They cannot only choose whether to own or not to own, but also whether to switch to access or to combine access and ownership by using both consumption modes – dependent on their personal needs and situational circumstances.

The distinction between these two alternative consumption modes is not contrary to the service dominant logic proposed by Vargo and Lusch (2004), but complements it with a customer's point of view that they do not address (Lovelock & Gummesson, 2004). The question here is not about contrasting products vs. services, but under what circumstances a consumer wants to experience a service: is it by permanently owning a good or by gaining access whenever there is the need?

Obviously not every product category is equally well suited to be provided via access. Access offerings are most suitable if the costs of the physical good are not too low so that the overhead costs do not render access uneconomically by becoming over-proportionally high, if the good is seldom used by the typical individual so that is has a large idling capacity, and if the demand is predictable. Furthermore the provider should be capable of providing a certain critical mass of rented goods in order to ensure a sufficient level of availability (Botsman & Rogers, 2010). That is why consumers cannot choose among access and ownership in every product category (yet).

However, there remains a grey zone of market offerings that are difficult to classify as either access or ownership (Lovelock & Gummesson, 2004). One example is *fractional ownership*. The basic idea is that several strangers collectively purchase an expensive good, such as a private jet or a boat, and then share its usage time. If fractional ownership is managed professionally, the operating company usually

manages more than one good and the customer de facto primarily buys a temporary usage right and cannot exclude anyone else from also becoming a customer of this company – even though being the proper owner of a fraction of the good, the attributes of such a solution resembles access more than ownership. However, if such an offering is provided on a small scale and is privately managed it is more similar to ownership that is shared among family, friends, or colleagues. Another market offering that lies in this grey zone is *leasing*. On the one hand, leasing is a temporally limited right that only allows usage, but no modifications. On the other hand leasing allows permanent usage over a long time period (typically several months or years), can be seen as an alternative to financing a good by credit, and the leased good is often perceived as being psychologically owned by the lessee (Lovelock & Gummesson, 2004). The demarcation of access and ownership is difficult for both – fractional ownership and leasing. However, this thesis focuses on cases where access is clearly different from ownership, which is in line with the majority of market offerings and all recent research on this topic (Bardhi & Eckhardt, 2012; Lamberton & Rose, 2012). When a common theory of consumption modes has been agreed on, this theory should be further refined for these market offerings in the grey zone between access and ownership.

2.2 Drivers of Access

Based upon the literature, there are four major reasons for the recent rise of access. They can be summarized under the following main topics: technological advances, the global financial crisis, urbanization and changing consumer attitudes.

First, access offerings are succeeding today because they are based upon recently matured technologies such as the Internet, wireless networks, smartphones, miniature sensors and GPS (Botsman & Rogers, 2010; Gansky, 2010; Lovelock & Gummesson, 2004). These technologies enable the provision of more convenient and cost-efficient access services as compared to classical rental offerings (Lovelock & Gummesson, 2004). They provide consumers with all relevant information at any place and therewith enable convenience, control and associations that are much closer to ownership (Botsman & Rogers, 2010). These technological advances also enabled peer-2-peer sharing of digitalized music and the success of online social communities, which have accustomed many consumers to these new technologies

and, most importantly, to the benefits that go along with sharing (Bardhi & Eckhardt, 2012). Technological advances enable access offerings to provide comparable benefits as ownership, while freeing the users of the hassles of ownership (see chapter 2.4).

A second aspect that appears to have nurtured the growth of access is the coincidence with the global financial crisis that began in 2008. Due to the crisis many consumers were forced to rethink their current consumption behavior because they lost their job, got paid less or wanted to save more money during these bad times (Bardhi & Eckhardt, 2012; Gansky, 2010). One cannot generally say that access offerings allow less expensive consumption because the financial benefit strongly depends on the desired usage frequency. However, access offerings enable consumers to be able to use expensive goods without having to bear high initial capital expenditures. Thus, consumers can, for example by the help of carsharing, still afford driving cars because they only pay by the minute while decreasing their overall usage intensity according to their available funds.

The third reason is the ongoing global urbanization trend (United Nations, 2012). People are moving into cities on a global level, which leads to scarce space. This benefits access offerings because they often do not require personal storage space and short distances within cities enable convenient access and return (Bardhi & Eckhardt, 2012; Gansky, 2010). Gansky (2010) even speculates that some emerging non-western markets, which are most affected by the trend towards urbanization, might skip the ownership phase and might directly implement access-based markets in order to manage upcoming urban challenges.

The fourth reason for the rise of access comprises changing consumer attitudes in various aspects. Politics and consumers are increasingly becoming aware of finite resources and are beginning to look for more sustainable ways of consumption (Botsman & Rogers, 2010; Lovelock & Gummesson, 2004). This increased environmental consciousness is favorable for the adoption of access models because it is an incentive to engage in them. Access offerings are believed to allow more efficient resource utilization by intensified usage of goods, shorter modernization loops that enable efficient technologies shorter time to market, more thoughtfully designed products, decreasing consumer demand and therefore less production and waste (Gansky, 2010; Schrader, 2001). Likewise some consumers desire to get rid of

conspicuous consumption and to simplify their lives in order to have more time to enjoy life and reduce waste (Lawson, 2011). On the contrary, some consumers live an increasingly transitory lifestyle that potentially increases stress. However, both groups could prefer access to ownership as it allows them to own less and to be more flexible. Also the consumers' experience orientation is believed to be increasing. Consumers' need for new experiences cannot be satisfied with owning goods anymore as only access is fast enough to allow a fast series of different experiences (Lovelock & Gummesson, 2004; Rifkin, 2000). It is also argued that the general attitude towards ownership is changing and losing some of the value formerly associated with it due to sociological changes. Nowadays the young generation in western markets does hardly know any scarcity at all and also their parents did not educate them to particularly value ownership because they themselves have been accustomed to affluence since their childhood. That is why the social status associated with ownership decreases as compared to older generations (Berry & Maricle, 1973; Durgee & O'Connor, 1995; Obenberger & Brown, 1976). Furthermore, the younger generation is more than any previous generation believed to be able to signal their social status by not owning physical objects, but by using virtual communities or access offerings (Botsman & Rogers, 2010; Gansky, 2010).

2.3 Typology of Access Offerings

Access offerings can come in many different forms, which demands a structuring. There have already been first approaches to cluster access offerings, which are presented next. However, authors also note the need for more detailed typologies (Lamberton & Rose, 2012). Subsequently to the presentation of the existing typologies, a new typology of access offerings is introduced. It is more comprehensive than previous ones and differentiates on the product category level as well as on the level of the specific access offerings.

2.3.1 Existing typologies of access offerings

Lovelock and Gummesson (2004) were the first to introduce five broad categories of *non-ownership services*. They intended to point out that not all non-ownership services share general properties. The categories they introduced are as follows: rented goods services (e.g. carsharing, power tools rental), place and space rentals

(e.g. a rented apartment, a hotel room, a seat in an aircraft), labor and expertise rentals (e.g. car repair, surgery, management consulting), physical facility access and usage (e.g. museum, spa, conference site), as well as network access and usage (e.g. utilities, telecommunications networks, banking). Particularly *rented goods services* and to a lesser degree *place and space rental* as well as *physical facility access and usage* correspond to the definition of access in this thesis as they enable consumers the consumption of physical goods, which are not owned by them but by a third party. Nonetheless this classification is very general and does not differentiate further than the type of accessed object.

In a recent publication, Bardhi and Eckhardt (2012) introduced six dimensions that can serve to categorize the wide range of available access offerings on a more detailed level: (1) temporality, (2) anonymity, (3) market mediation, (4) consumer involvement, (5) type of accessed object, and (6) political consumerism. *Temporality* encompasses the duration of a consumer's relationship with a provider and the length of object usage. *Anonymity* refers to the degree that something is either consumed exclusively in private (e.g. carsharing) or in public (e.g. gym equipment) – or is even shared with others (e.g. couch surfing). The level of *market mediation* labels whether an access offering is for profit or not for profit. *Consumer involvement* can be high or low and refers to the degree of co-creation the consumer has to take. The *type of accessed object* differentiates between experiential or functional objects as well as between physical and digital goods. Finally, *political consumerism* refers to the provider's motivation for offering an access service – ranging from ideological interests to filling a market gap.

2.3.2 A two-level typology of access offerings

The typology for access offerings that is suggested integrates existing ideas and adds new and important dimensions that have been overlooked in the past. Additionally it is suggested to separate between dimensions that depend on the product category and those that describe different forms of access offerings because some product characteristics have important implications for the design of access offerings.

To differentiate between product categories, four dimensions are proposed on the first level: *price level*, *visibility of consumption, durability of goods,* and *main consumption goal* (see Figure 3).

Price Level. This dimension refers to the general price level of ownership in a given product category. For example, a car is generally more expensive than a bicycle, which is generally more expensive than a book. The price of the product if it was owned is important because it strongly influences the economics of an access offering. Further it might be an indicator of the typical prestige value associated with a product category.

Visibility of consumption. The social visibility of consumption is considered to be important as it determines whether only the individual or a broader group of people has an effect on the consumer's behavior (Bearden & Etzel, 1982; Richins, 1994b). If social visibility is low then the product is consumed in private, while if visibility is high its consumption must take place in public. Thus this dimension contains aspects of Bardhi and Eckhardt's (2012) anonymity dimension.

Durability of goods. The typical durability of a good is defined as after what time period a good is typically abandoned. This is important for two reasons. First, it determines how long an access provider can monetize a given good. For example, seasonal products such as fashion do not score well on this dimension. Second, it defines the typical rebuy frequency. This can be a proxy of consumer involvement as well as how frequently a consumer might reconsider his consumption mode choice.

Main consumption goal. Some product categories are mainly used due to their functional benefits, while others are used primarily for their hedonic benefits. Purely functional and purely hedonic products are the two ends of a continuum as products can also contain aspects of both (Voss, Spangenberg, & Grohmann, 2003). Functional goods are valued for solving practical or functional needs. On the other hand, hedonic goods allow experiencing enjoyment, pleasure, or fun (O'Curry & Strahilevitz, 2001). Bardhi and Eckhardt (2012) as well as Chen (2009) have previously noted the importance to distinguish product categories according to the main consumption goal consumers associate with them.

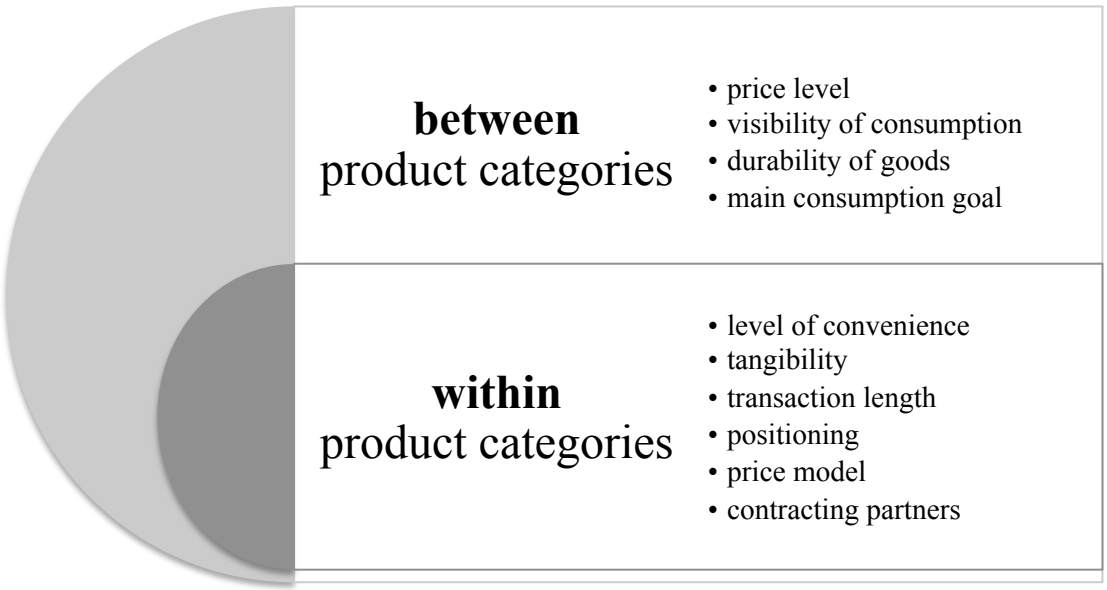

Figure 3: A Two-Level Typology of Access Offerings.

The second level in the proposed typology serves to distinguish access offerings *within* a given product category. Six dimensions to characterize access offers are proposed: *level of convenience*, *tangibility, transaction length, positioning, price model,* and *contracting partners.*

Level of convenience. It comprises the degree of service provided to the customer, which renders an offering more or less convenient. The less time and effort is necessary to use a service, the higher the convenience (Berry, Seiders, & Grewal, 2002). The higher the accessibility of the access offering (e.g. density of pick-up locations, speed of logistics, provision of upfront information, drop-off locations) and the more burdens the provider takes care off (e.g. maintenance, cleaning, fuel), the more convenient the offering for the consumer. Especially the latter addresses the same issue as Bardhi and Eckhardt's (2012) *consumer involvement* dimension. If a customer is required to be highly involved and to co-create a lot, the provider has fewer responsibilities. Thus the offering is less convenient per se.

Tangibility. This dimension distinguishes between offerings that are delivered in form of material goods versus those that are delivered digitally. This distinction goes along with either a sequential or parallel usage of goods. If access to material goods is provided (e.g. DVD-rental) the usage sequence among customers is sequential; if consumers get access to immaterial goods (e.g. streaming of digital movies)

consumption is parallel. This dimension picks up one of the two distinctions that Bardhi and Eckhardt (2012) suggest for their *type of accessed object* dimension.

Transaction length. This dimension is similar to the sub-dimension *duration of access*, which Bardhi and Eckhardt (2012) conceptualized to be one aspect of temporality. It is defined as the length of the rental period that is offered. Sometimes providers only offer either short-term or long-term rentals – sometimes they also offer both. Taking the example of cars, a very short-term rental is usually offered by carsharing companies, which allow rental by the minute. Car rental companies usually rent cars for a time period of one day till a few months. If someone wants to rent a car for an even longer time period, he or she has to lease a car. Leasing contracts typically allow possessing a car for a continuous time period of several years until it has to be returned to the leasing company. The longer the length of the rental period, the more similar access and ownership become (see also chapter 2.1).

Positioning. As all market offerings, also access offerings can be positioned in a certain way. Access offerings can be positioned in many different ways, e.g. as low-cost, premium, particularly sustainable or serving a distinct market niche. This can be achieved by the product brands offered for renting, the service design, the service quality and the provider brand. Furthermore the provider can decide how much variety, that is how many different product models, to offer.

Price model. Access offerings can also differ according to the price model(s) that are available. Most simply, the offer of one provider can be less expensive than the offer of another. This difference in price level can be due to positioning, level of convenience, or operational process skills. Offerings can also differ in terms of the flexibility they allow, e.g. an offering could offer high flexibility by charging no service fee and not imposing any minimum subscription duration. Finally, the billing mechanism can differ as for all services: It can be pay-per-use, a flat-rate or a combination of both (e.g. a three part-tariff with a monthly basic fee which covers an specific amount of usage; if this amount is exceeded a pay-per-use tariff applies).

Contracting partners. Finally the basic business model of access providers can differ. It either relies on renting out goods which are provided by a company to consumers (B2C business model), or it solely relies on providing a market place where

consumers willing to rent out can find other consumers willing to borrow some good (C2C business model).

2.4 Theories Related to Consumption Mode Choice

The very basic theory in the context of consumption mode choice is the *Property Rights Theory*. According to this theory, a person can have a maximum of four property rights related to a certain good. If this is the case, the person is the full owner of this good. The four property rights are (Alchian & Demsetz, 1973; Coase, 1960; Demsetz, 1967; Furubotn & Pejovich, 1972):

- the right to use the good (jus usus),
- the right to return the yield form using the good (jus usus fructus),
- the right to convert form and structure of the good (jus abusus),
- the right to transfer one or more of these rights to other persons (jus successionis).

These rights allow the owner of a good to regulate or deny usage from others, use it whenever and wherever he wants, retain profits, modify or sell it (Snare, 1972). In case of access, a consumer gets the right to use the good (jus usus) and the right to retain the benefit from using the good (jus usus fructus) – both are being paid-for and temporally limited to the renting period (Moeller & Wittkowski, 2010; Schrader, 2000). Thus access also gives a consumer the property rights to consume a rented good. However, the extent of these rights is limited as compared to ownership.

Berry and Maricle (1973) agreed that property is established by having certain rights, but they added that ownership also goes along with commitment and responsibilities, which should not be disregarded. These are called *burdens of ownership*:

- bearing risks with regard to product alteration and/or obsolescence,
- bearing risks with regard to making an incorrect product selection,
- being responsible for maintenance and repair of the product,
- bearing the full cost of goods for which a consumer has only infrequent use.

Those burdens as well as the *liabilities of ownership*, conceptualized by Schrader (2000, 2001), make up functional reasons for consumers to prefer access versus ownership. A good that is owned by a consumer comprises the following liabilities:

- the liability to use the good (in order to derive value of a good, it is necessary to not only purchase the good, but to actively use it),
- the liability to accommodate the good (a good has to be stored in such a way that it does not bother anyone),
- the liability to maintain the good (a good has to be maintained so that using it does not endanger others),
- the liability to re-alienate and dispose (to abandon ownership, the consumer has to correctly transfer all property rights to the buyer or to lawfully dispose the good),
- the cost and effort liability (the owner has to bear all monetary and non-monetary costs that are connected to purchasing and using the good).

Property Rights Theory, the burdens of ownership and the liabilities of ownership only explain the functional benefits and impediments that consumers are facing in case of ownership. Yet, the marketing literature agrees that especially the symbolic function of ownership is also very important in order to explain consumer behavior (Allen & Ng, 1999; Dittmar, 1992).

Purchasing and owning goods is not only done for the psychical benefits they provide, but also for their symbolic meaning (Ariely & Norton, 2009). The background for the existence of a symbolic meaning lies in the fact that we identify ourselves with our possessions, which thereby become part of our *extended self-concept* (Belk, 1988). In other words, the consumption behavior has an effect on the consumers' self-concept (ideal self and actual self). Kleine et al. (1995) also investigate the person-object relationship in consumer behavior, which they call *material possession attachment*. It is believed that possessions, to which we have a close relationship, reflect our personal lives. Frequently, the possible symbolic meanings are classified in those that are used in order to communicate to others (external meaning) and those guiding the development and refinement of the self-

concept (internal meaning) (Csikszentmihalyi & Rochberg-Halton, 1981; Richins, 1994b; Sirgy, 1982; Solomon, 1983).

Besides being relevant for self-reflection, ownership can *internally* also serve as a symbol of control. Perceiving and having control is important for consumers' well-being and is thus a motivator to seek ownership (Furby, 1991). Besides, ownership can serve as a storage of personal memories that give stability and security as well as the reification of values, interests or skills (Allen & Ng, 1999; Belk, 1988; Ger & Belk, 1996; Prentice, 1987; Richins, 1994a, 1994b).

The *external* symbolic meaning can be subdivided into vertical and horizontal consumption symbolism. The former stands for consumption in order to demonstrate prestige or social status – sometimes also referred to as *conspicuous consumption*, which means to be continuously trying to communicate a high social status by extensive and demonstrative consumption (Veblen, 1994). The aimed for social status can either be the current or the targeted position on society. Prestige objects only serve their purpose when they are scarce and thus sought-after. Horizontal consumption, on the other hand, refers to signaling group belonging. Its objective is to underline existing group membership by, for example, special clothes or living a certain lifestyle (Dittmar, 1992). The more extensive the required material equipment, the larger the effect on self-identity (Laverie, Kleine III, & Kleine, 2002).

What makes it difficult to apply those theories on consumption mode choice is that those theories do not clearly differentiate between (permanent) ownership and (temporal) possession (Scholl, 2006; Schrader, 2001). This fuzziness is due to the fact that the consumption mode had only recently been conceptually separated from the consumed items (Chen, 2009) and the linguistic term *possession* is "somewhat ambiguous" (Aikhenvald & Dixon, 2012, p. 2). In common language the terms *possession* and *ownership* are frequently used interchangeably. However from a legal point of view they are two distinct concepts (Aikhenvald & Dixon, 2012). In case of consumption mode choice, exactly this distinction becomes very relevant. Thus existing research cannot easily be transferred and so far it is unclear what kind of symbolic meaning persists in case of access.

Even though also services and experiences can contain symbolic meaning (Dodson, 1996; Schrader, 2001), it remains open whether access offerings can contain the

same type and level of meaning compared to ownership. In particular the person-object relationship and the personal attachment to objects due to feelings of familiarity or memories are expected to be generally lower for access due to the temporal and circumstantial nature of access (Chen, 2009) – however it could be a different case for the relationship to the provider as it lasts for a longer time period. On the external side, one can well imagine that group belonging is expressed by using the same access offering that the peer group uses. Thus common beliefs or values such as non-materialistic values or eco-consciousness could be displayed. When it comes to signaling social status it becomes more difficult. In principal ownership should be associated with more prestige because (at least) its acquisition requires more capital outlay. But one has to keep in mind that from an external point of view, it might not be recognizable whether someone uses an access offering or whether he or she also owns the good (Belk, 2013b). Depending on the visibility of the access offering, a third party might not be able to differentiate and thus the symbolic signal might be equal. Nevertheless, the person internally knows which consumption mode he or she is using and might even feel embarrassed about being mistaken as the owner of a good (Durgee & O'Connor, 1995).

2.5 Current Knowledge on Adoption of Access and Consumption Mode Choice

Research on the access consumption mode is still rather scarce and further research is considered to be required (Bardhi & Eckhardt, 2012; Chen, 2009). This section chronologically describes the advances that were made in the research on access and consumption mode choice until now – Table 1 gives an alphabetically arranged overview about all relevant publications on access.

Looking at the research that particularly focuses on access reveals that the early studies (as from 1995) have mostly either taken a conceptual approach or a qualitative research design in order to provide a more profound theoretical foundation. Building on this knowledge, quantitative studies (as from 2010) analyzed the antecedents of access acceptance. Recent experimental studies (as from 2011) investigate the effects of emphasizing certain aspects of an access offering in marketing communications as well as the impact of consumption mode choice on post-purchase satisfaction.

Relatively early, Durgee and O'Conner (1995) qualitatively investigated access-based consumption by focusing on the potentially different person-object relationship. They concluded that terminal materialism is associated with the desire for ownership, while instrumental materialism can be associated with the general desire for consumption – no matter by which consumption mode. Further they found consumers to show less personal attachment with rented goods than purchased goods. Similarly they found cognitive dissonance to be lower for rented goods. The major reasons for renting which they identified are: access is perceived to be more economical – this is considered positively either in order to save money or to get access to otherwise expensive goods; the increased variety that is inherent in renting; and not having to worry about storage and maintenance.

In his dissertation, Schrader's (2001) main contribution is the extensive set of potentially relevant indicators for preferring access over ownership that he finds.[4] He identified the following list of relevant offering and personal related indicators and empirically tested them in two product categories: property rights, burdens of ownership, loss of symbolic meaning, perceived risk, awareness of access, property status, socio-demographics, environmental consciousness, materialism, and innovativeness.

After early and singular research on access, it was Lovelock and Gummesson (2004), who introduced the *rental/access paradigm* as a new lens for services marketing and highlighted the importance for further research in this field. They challenged past services marketing theory by proposing "that market transactions that do not involve a transfer of ownership are distinctively different from those that do" (Lovelock & Gummesson, 2004, p. 34). Lovelock and Gummesson (2004) also propose several important implications. First, they assume that consumers' product brand preferences will become less important in case of access, while the service provider brand and the characteristics of its offering will gain importance (this implication is empirically tested in chapter 4). Second, they posit that access allows consumers to benefit from economies of scale that origin from sharing resources while still being able to enjoy separation or privacy. Furthermore, sharing resources leads to a more efficient allocation of the earth's finite resources. Third, time is supposed to become more

[4] The dissertation was written in German (Schrader, 2001). To the author's best knowledge there is only one English publication based upon his dissertation (Schrader, 1999).

important because access is usually only granted for a limited time frame. A related but untouched topic is convenience. If consumers need to spend a lot of time (and effort) to make use of a service they will not use it and try to replace it (e.g. by ownership). Fourth, pricing will not only be related to quality and value any more, but also to time. Besides time-based costing, a usage-intensity-based costing might also make sense for some offerings.

Also taking a purely conceptual approach, Scholl (2006, 2008) argues under which conditions consumers will be willing to replace ownership by access.[5] Based on different theoretical perspectives (new institutional economics, identity theory, practice theory), he develops a framework for successfully marketing access offerings. As he identified the lack of symbolic meaning of access offerings as their major drawback in contrast to ownership offers, he proposes eight possibilities to increase the symbolic meaning associated with access offerings. First, he suggests increasing the ease of access to the access offering by flexible hours, online reservations or delivery services. Second, he proposes to offer a large amount of rental goods to ensure availability. Third, he recommends offering a wide variety of rental goods to fit various user needs. Fourth, he advises to include only high quality products in the offering to enable high performance. Fifth, he recommends providing only products that are easy to use in order to minimize learning costs. Sixth, he suggests designing consumer interactions with the service provider as user-friendly as possible. Seventh, he proposes that an appealing and clear design of the physical surrounding will lead to a high level of perceived control. Eighth, he advocates branding the access provider in order to provide orientation, create trust and convey prestige. He reasons that a high level of functional quality will lead to internal feelings of control and to enable signaling others that one is using a high quality service instead of ownership.

In another qualitative study, Chen (2009) compared the desires and values of art collectors (ownership-based consumption) and exhibition visitors (access-based consumption). The objective was to identify drivers for consumption mode choice and to contrast the dimensions of perceived value in this special setting that is purely non-functional. She found that not everyone desires ownership. This is due to

[5] Scholl's dissertation is written in German (Scholl, 2008). However, most of the results are also lined out in the proceedings of a conference (Scholl, 2006).

different desires, which shape consumption mode choice. She also finds that the perceived value differs among art collectors and visitors to art museums. However in the case of arts, the consumption mode itself is not the key for satisfying desires. Satisfaction comes primarily form the art itself.

Weinert (2010) takes a different perspective and focuses on the perceived value of ownership against the background of access. In his dissertation he identifies and quantifies the importance of those dimensions that constitute the perceived value of ownership. In the context of owned vacation homes he conducted means-end interviews to identify a set of relevant value dimensions. Based upon those findings he quantified their importance by applying a best-worst-scaling technique. He finds that the following value dimensions are important to owners (in descending order): pleasure, enabling interpersonal relations, increased independency and privacy, functional benefits, appealing and modifiable design and style, financial aspects, symbolizing personal success in life, enabling spirituality and cultural expression, prestige value, and self-expression.

In the first quantitative study on the personal determinants of access adoption, Möller and Wittkowski (2010) investigate the influence of six personal factors on the adoption of rental offerings. Based on an online sample, they find that three of the six proposed determinants have a significant impact on access adoption ($R^2 = .16$). These are: importance of possessions (negatively correlated), convenience orientation and trend orientation (both positively correlated). They find non-significant estimates for experience orientation, price consciousness and environmentalism. When interpreting the results, one has to take into account that all personal determinants were measured on a global level rather than product category specific. Furthermore, their constructs were quite narrowly defined and thus they potentially missed important aspects. For example, importance of possessions is defined to solely relate to the importance of property rights – not taking into account any symbolic meanings. In addition to that, the items used to measure convenience orientation exclusively relate to the burdens of ownership but not to any inconveniences that can occur in access (e.g. need for a reservation, process of pick-up and return).

Table 1: Summary of the Literature Review on Publications About Access and Consumption Mode Choice

Publication	Study Context and Design	Research Focus	Key Findings
Bardhi and Eckhardt (2012)	Carsharing (user interviews; *n* = 40)	The nature of access-based consumption	Access users do not identify with the used items; rented goods are valued for their functional value, while access itself contains symbolic value; monitoring and regulations by the provider are perceived as necessary; users do not relate to the provider brand
Belk (2013b)	Conceptual	Comparing sharing and collaborative consumption and the implications for businesses	Being what one can access replaces being what one owns; Increasing uncertainty whether someone is the true owner of a good or not; established business can respond by diversifying out of the industry, legally fighting start-ups or adopting the new business model
Chen (2009)	Arts (interviews and self-reports from art collectors and art museum visitors; *n* = 116)	Drivers of consumption mode choice and value perceptions of consumption modes	Ownership is not the ultimate expression of consumer desire; the perceived value of access and ownership is different
Durgee and O'Connor (1995)	Any recently rented item (self-reports; *n* = 113)	The person-object relationship in case of access	Only terminal materialism is related to striving for ownership; personal attachment is lower for rental items; variety in rental allows self-exploration; perceived price advantage is the major reasons to chose access
Lamberton and Rose (2012)	Carsharing (survey; *n* = 369); cell phone minute sharing plan (experiment; *n* = 123); bikesharing (experiment; *n* = 105)	Understanding adoption of access offerings with different characteristics	The perceived risk of non-availability is a key determinant for sharing adoption; consumers are more likely to use access offerings if co-users are perceived to have dissimilar usage patterns; if usage is perceived to be similar, consumers are more likely to use access when their own usage intensity is low
Lawson (2011)	Any access service (user interviews I / user interviews II / survey; *n* = 12 / *n* = 11 / *n* = 232); movies & textbooks (experiment; *n* = 122)	Consumer motivation to use access; decision-making process in case of access; impact of consumption mode choice on satisfaction	Identifies six major reasons to use access; decision-making in case of access is associated with less choice commitment and more satisfying choice strategies; bad quality has a smaller effect on satisfaction in access as compared to ownership

Publication	Study Context and Design	Research Focus	Key Findings
Lovelock and Gummesson (2004)	Conceptual	Identifying a new perspective on services marketing	Introducing the rental/access paradigm along with several assumptions; product characteristics will become less important; access is cost-efficient and more resource-efficient than ownership; time becomes more important in access; access requires new pricing strategies
Möller and Wittkowski (2010)	Several unspecified rental offerings (expert interviews / online survey; $n = 6$ / $n = 461$)	Personal determinants of a preference for rental offerings	Identified six determinants; three of six were found to be significant: importance of possessions, convenience orientation, and trend orientation; no significant influence was found for: experience orientation, price consciousness, and environmentalism
Bardhi, Eckhardt and Arnould (2012)	Nomadic consumers (consumer interviews; $n = 16$)	The person-object relationships of global nomads	Nomadic consumers form rather circumstantial relations to their possessions; they prefer access over ownership
Weinert (2010)*	Vacation homes (interviews with vacation home owners / online survey; $n = 52$ / $n = 177$)	Dimensions of the perceived value of ownership	Dimensions of the perceived value of ownership (the order gives their importance ranking): pleasure, enabling interpersonal relations, increased independency and privacy, functional benefits, appealing and modifiable design and style, financial aspects, symbolizing personal success in life, enabling spirituality and cultural expression, prestige value, and self-expression.
Scholl (2006, 2008)	Conceptual	Characteristics that increase the acceptance of access offerings	Elements that should be used in order to successfully market an access offer: ease of access, high amount of rental goods, variety of rental goods, easy-to-use rental products, high quality rental products, interaction with the provider, physical surrounding, service provider brand
Schrader (2001)	Carsharing and washing services (conjoint and survey; $n = 366$)	Determinants of the acceptance of access	The major contribution is the set of identified determinants: property rights, burdens of ownership, loss of symbolic meaning, perceived risk, awareness of access, property status, sociodemographics, environmental consciousness, materialism, and innovativeness

* This dissertation also investigated further research questions, which are not reported here.

In her dissertation, Lawson (2011) investigated three topics related to access: the consumer's motivation to use non-ownership services, the decision making process for non-ownership consumption choices and the impact of the consumption mode on satisfaction after the good has been purchased or rented. The results of her consumer interviews contain six major reasons to engage in access: no burdens of ownership, cost savings, increased variety, social status as (normally too) expensive goods are used, environmentally friendly behavior, and the possibility to try before you buy. The decision making process about which non-ownership offering to use has been found to be associated with little choice commitment and the frequent use of satisficing choice strategies. Furthermore the last study showed that in case of low-quality outcomes, access leads to less dissatisfaction as compared to ownership in a movie rent vs. buy experiment.

Besides conceptualizing six dimensions on which access offerings can differ, Bardhi and Eckhardt (2012) investigated the consumption of carsharing by 40 interviews with Zipcar users.[6] They found very little identification or personal attachment between users and the rented objects, which led to the tendency to overuse the rented cars. The motivation to use access is primarily based on its functional value (cost savings and convenience). Sign value does only stem from the consumption mode itself: using access is thought to signal economical, convenient, flexible and green consumption behavior. The access provider is expected to monitor usage and to set up rules. Further they found no identification among users as well as the brand of the access provider.

Bardhi, Eckhardt and Arnould (2012) find that nomadic consumers (consumers with highly cosmopolitan, unpredictable and uncertain lifestyles) form only liquid relations to their possessions and prefer access to ownership. The value of possessions for those consumers is strongly dependent on current circumstances. They value functional value over symbolic value and prefer digital goods due to their flexibility. These findings challenge prior research that argued that consumers form long-lasting relationships and are strongly attached to their possessions especially in unstable life situations. Those insights further show that increased flexibility is one of the key benefits of access offerings. With the increase of nomadic lifestyles, an increase in demand for access offerings all over the world can be expected.

[6] Zipcar is the largest American carsharing provider.

In their empirical paper, Lamberton and Rose (2012) have focused on the drivers of access adoption. In their first study they tested a number of reasons to share – mainly inspired by Henning-Thurau et al. (2007) – on the likelihood to use carsharing instead of car ownership. Besides knowledge, cost-related and functional elements, the perceived risk of non-availability was found to have a significant influence on the likelihood to choose sharing.[7] However they noted that more research on the specific sources of functional and cost-related beliefs as well as different product categories is necessary. Moral and social benefits had no significant influence on sharing propensity in their sample. In study two and three they performed experiments and found that managers can influence perceptions of personal and sharing partner's usage patterns in order to influence the perceived risk of non-availability. The associated perceived risk was larger among similar und unspecified co-users than among users with dissimilar usage patterns. Consumers considering sharing with similar others were found to be more likely to do so when their own usage need is comparatively low. However, when interpreting the results, it has to be taken into account that the presented access offerings have been designed in a way that everyone is likely to save costs as compared to ownership.

In a recent conceptual study, Belk (2013b) suggested that the common wisdom that "you are what you own" (p.5) may need to be revised into "you are what you share" (p.5) due to the rise of access offerings on the supply as well as the demand side. He argued that this trend increases the uncertainty whether someone who possesses a certain good is its true owner. Furthermore he emphasized the implications for companies which are still solely offering the ownership consumption mode: Those companies that are challenged by new ventures should rather not diversify away into another industry or start legal fights against the newcomers, but adopt the trend by also providing access-based offerings themselves.

[7] Lamberton and Rose note that the importance of cost-related beliefs could be underrepresented because participants might not have done the mental calculations to realize the cost savings associated with sharing. They argue that this could have lead to an overweighting of the more intuitive risk of non-availability (Lamberton & Rose, 2012, p. 116).

3 Project I: A Differential Measure of Consumers' Attitudes towards Consumption Modes

3.1 Introduction

As a consequence of the increased competitiveness of access, more and more companies start providing access offerings as a stand-alone offering or in addition to ownership offerings (Bardhi & Eckhardt, 2012; Walsh, 2011). However, these companies are currently in a blind flight because they lack an understanding why consumers prefer one or the other consumption mode. These companies have started to offer access because they recognized a demand and the possibility to fulfill it. However, it is not well understood how consumers think about these competing consumption modes and why they prefer one to another.

In order to address this problem, it is not feasible to comprehensively benchmark both consumption modes in an objective way. Thus managers must understand the subjective perceptions of access and ownership in order to better understand consumption mode evaluations. To the author's best knowledge, industry, policy and science are currently lacking a tool to assess those subjective customer perceptions in a quantitative way. Managers would greatly benefit from such a tool that is suitable for improving access and ownership offerings, performing market segmentation, or tracking how consumers' opinions are evolving over time. The latter is also of high relevance to policy makers who could use such market data for supporting decisions about economic promotion programs. The scientific community also benefits by such a measurement model because it helps to advance the knowledge about consumers' perceptions of consumption modes and leads towards a theory that explains consumption mode choice and usage behavior.

In this research project, a new formative construct called *attitude towards consumption modes* is developed based upon qualitative research and the existing

literature. Perceptions of consumption modes, which are found to be relevant for the attitude towards consumption modes, are conceptualized to cause this new construct. The perceptions forming the construct as well as the construct itself are conceptualized as *difference scores* in order to enable a comparative examination of access and ownership.

The newly developed formative construct is then empirically validated in five empirical studies covering four different product categories (cars, bicycles, books and handbags). In the fifth study the formative measurement model is further validated with a sample of signed-up carsharing customers in order to demonstrate its validity with experienced access users, too. Applying the measurement model allows answering the following research questions: How do consumers perceive different consumption modes – that is, access in contrast to ownership? What are the perceptions that determine the attitude towards a consumption mode? Which are most important? Do those perceptions differ across product categories? And, how does experience with access offerings affect perceptions?

The purpose of this work is twofold: it aims at (a) the development of a formative measurement tool of consumers' perceptions and the resulting evaluation of access and ownership and (b) at understanding the differences between different product categories as well as between consumers with and without access consumption experience. The outcome of this work enables managers, policy makers and scholars to measure the perceptions of consumption modes in a standardized way in order to understand the nature of those factors that drive consumption mode choice.

The structure of this research project is as follows: First, a brief literature review and some theoretical foundations are provided. Second, the relevant consumption mode perceptions for determining the attitude are derived by combining qualitative insights with existing findings and theories. Third, the construction of the formative measurement model is described. Fourth, the results of the application of the measurement tool in five empirical studies are analyzed in order to answer the posed research questions. To conclude, the implications for theory and practice are discussed and important areas for future research are highlighted.

3.2 Theoretical Foundations

While chapter 2 presented definitions of access and ownership (chapter 2.1) and a general literature review (chapter 2.5), the focus of the following is on the direct contrast between those two consumption modes.

3.2.1 Consumers' perceptions towards consumption modes

So far, there has only been sparse research directly comparing consumers' evaluations of access and ownership. These research articles have either helped to build the conceptual foundation of this distinction (Belk, 2007; Lovelock & Gummesson, 2004) or approached the research topic solely by qualitative methods (Chen, 2009; Durgee & O'Connor, 1995). Lovelock and Gummesson have declared that access and ownership are "distinctively different" (2004, p. 34) from one another and that comprehensive in-depth analysis of customer behavior in this context is required. Belk conceptually contrasts sharing and owning, too. In his conclusion Belk (2007, p. 137) poses the question, "why own when you can share?". Durgee and O'Connor (1995) qualitatively analyzed the person-object relationships in both consumption modes as well as the reasons to choose access or ownership. Chen (2009), on the other hand, has contrasted both consumption modes in a qualitative study on museum visitors and art collectors. With the help of interviews and self-reports, she investigated the drivers of consumption mode choice and the perceived value of the respective consumption modes.

All remaining studies, which deal with consumers' evaluation of access offerings, have, to the author's best knowledge, solely focused on the determinants of access acceptance. The natural counterpart of access – ownership – has not been taken into account in those studies. On the one hand, Lawson (2011) as well as Bardhi & Eckhardt (2012) have qualitatively captured consumers' motivations to use access offerings. On the other hand, Schrader (2001), Möller and Wittkowski (2010) as well as Lamberton and Rose (2012) have empirically measured perceptions and personal determinants for their relevance for access acceptance (see also chapter 2.5. for a more detailed discussion of these publications).

3.2.2 Access versus ownership

A prerequisite for contrasting access and ownership is the recognition that marketing theory needs to separate the consumption mode (access or ownership) from the consumption object (a car, a bicycle, a book, etc.). Chen (2009) was the first to highlight this issue and to note that previous research has very often not conceptually separated those two entities. This is not surprising, considering the dominant role ownership played in the past, which also explains the little integration of access into marketing theory to date. However, a growing research community agrees on the fact that there are distinctive differences between access and ownership and that a separation of consumption mode from consumed objects is necessary (Bardhi & Eckhardt, 2012; Chen, 2009; Durgee & O'Connor, 1995; Lovelock & Gummesson, 2004).

Table 2: Contrast of Ownership and Access

	Ownership	**Access**
Market transactions	money for ownership	money for consumption time
Transfer of rights	full property rights	usage right only
Temporality	infinite	temporally restricted
Consumer-object relations	close relationships	distant relationships

Access and ownership differ in a number of features: market transactions, transferred rights, temporality, and consumer-object relationships (see Table 2). In case of ownership, money is exchanged for ownership between buyer and seller to complete a market transaction. In contrast, an access transaction exchanges money for consumption time, while the ownership stays with the provider at all times (Durgee & O'Connor, 1995). In case of ownership, the purchaser receives full property rights (Alchian & Demsetz, 1973; Coase, 1960; Demsetz, 1967; Furubotn & Pejovich, 1972). This enables the purchaser not only to use the object, but also to modify it, permit or prohibit usage by others, and to lend or sell the object to others. In terms of temporality, access is a temporal right, whereas ownership is a permanent right until it is transferred to another party (Chen, 2009). Against the background of ownership, various papers address consumer-object relationships and find that consumers strongly identify with their belongings and integrate them into their extended self-

concept (Belk, 1988) or that important possessions reflect the owner's values (Richins, 1994a). Contrasting the consumer-object relationship in both consumption modes, Durgee and O'Connor (1995) found less concerns about product features, a focus on functional aspects and less post-purchase dissonance for access. Chen (2009) found consumers who use the ownership consumption mode to desire strong self-identification with their objects, to build intimate relationships with these goods, and to desire possessing and controlling them. In case of access, consumers are found to not identify with the objects, to form rather distant and circumstantial relationships to the goods, and to appreciate sharing them with others.

3.2.3 The importance of perceptions for determining attitude

Well-known and frequently applied action theories like the *Theory of Reasoned Action* (Fishbein & Ajzen, 1975) or its advancement, the *Theory of Planned Behavior* (TPB) (Ajzen, 1991), provide the theoretical foundation for the relationship between perceptions and attitude. These theories are based on the idea that a set of beliefs about a specific action causes the overall attitude towards this action, which then causes the behavioral intention towards this action and finally the behavior itself.[8]

Even though Fishbein and Ajzen (1975) conceptualize attitude to be determined by an underlying belief structure (expectancy-value model)[9], these beliefs are typically aggregated into one unidimensional overall construct of attitude in empirical studies (Taylor & Todd, 1995). Returning to the original idea, several researches have successfully applied approaches to decompose attitude into multidimensional constructs (Bagozzi, 1981, 1982; Pavlou & Fygenson, 2006; Shimp & Kavas, 1984). These approaches help academics and managers to thoroughly understand which underlying relationships between perceptions and attitude are important to predict behavior (Taylor & Todd, 1995).

[8] As it is common practice in marketing science to use the term perception synonymous with the term belief, I follow this practice as well (Ahearne, Rapp, Hughes, & Jindal, 2010; Rossiter, 2011a). This interpretation is in line with the epistemological concept of perceptual beliefs, which are beliefs that are directly "grounded in our perceptional experience of the world" (O'Brien, 2013).

[9] The classical expectancy-value model contains the idea that certain beliefs weighted with their importance can be summed up to form a certain attitude. This approach also has the disadvantage that it requires an additional importance rating for each perception. This increases the amount of necessary items by factor two, but could be replaced by the importance derived from statistical analysis (Gustafsson & Johnson, 2004; Pavlou & Fygenson, 2006).

This research project builds upon the decompositional approach because it intends to explain what causes consumers to prefer access or ownership. To derive relevant perceptions, qualitative studies have been conducted that borrowed from Ajzen's (2006) proposed procedure for belief elicitation studies.

3.3 Relevant Perceptions of Consumption Modes

Proprietary qualitative investigations have been combined with existing research results in order to deviate a set of the most relevant perceptions for consumption mode attitudes. The structure of this chapter is as follows: First, the applied research methodology is described in terms of data collection, sample choice, and analysis methods. Subsequently, the results of the qualitative studies as well as the literature review are presented in combination.

3.3.1 Qualitative research methodology

In total, in-depth interviews with 46 consumers in Singapore and Germany as well as an online-survey with open-ended questions among 34 German consumers have been conducted. The vast majority of interviews were tape-recorded and fully transcribed (in six cases, notes had to be taken instead as respondents refused recording). Sampling was guided by the objective to gain a heterogeneous sample that differs in age, cultural background, and experience with access offerings. With an increasing number of interviews the amount of unique content per interview decreased until a level of saturation was reached after questioning 80 consumers in two different cultural contexts.

The procedure of the interviews took place at a location most convenient for the respondents – their workplace, their home, at a restaurant or on campus. The interviews lasted between 13 and 82 minutes (average: 47 min.) and were conducted between October and May 2012. The interviewees' age ranged from 20 to 72; 24 were students, 21 were working adults, one was a retiree; 17 of the participants were female, 29 were male; 21 interviewees have already had personal experience with access offerings (see Table 3).

Table 3: Description of In-Depth Interview Participants

ID	Gender	Age	Access experience	Interview location	Ethnic origin	Interview duration in minutes
#1	male	27	no	Singapore	Chinese	66
#2	male	25	no	Singapore	Chinese	56
#3	female	27	no	Singapore	Chinese	50
#4	female	25	yes	Singapore	Chinese	66
#5	male	26	no	Singapore	Indian	55
#6	male	28	yes	Singapore	Indian	59
#7	male	29	no	Singapore	Chinese	52
#8	male	22	yes	Singapore	Chinese	54
#9	male	23	yes	Singapore	Chinese	51
#10	male	28	no	Singapore	Chinese	65
#11	female	21	yes	Singapore	Chinese	60
#12	female	21	yes	Singapore	Chinese	56
#13	female	21	yes	Singapore	Chinese	54
#14	female	21	no	Singapore	Chinese	56
#15	male	22	yes	Singapore	Chinese	53
#16	male	40	no	Singapore	Chinese	56
#17	female	39	no	Singapore	Chinese	61
#18	male	35	no	Singapore	Chinese	63
#19	female	44	no	Singapore	Chinese	82
#20	male	23	no	Singapore	Bangladeshi	58
#21	female	22	no	Singapore	Chinese	49
#22	female	22	no	Singapore	Indian	57
#23	male	24	yes	Singapore	Indian	52
#24	male	21	yes	Singapore	Chinese	59
#25	male	23	yes	Singapore	Chinese	56
#26	female	20	yes	Singapore	Chinese	52
#27	female	20	no	Singapore	Chinese	55
#28	female	45	yes	Singapore	Chinese	62
#29	male	62	yes	Singapore	Chinese	68
#30	female	24	no	Germany	German	25
#31	female	56	no	Germany	German	28
#32*	male	33	yes	Germany	German	41
#33	male	26	yes	Germany	German	23
#34	female	20	no	Germany	German	18
#35	male	27	yes	Germany	German	20
#36*	male	22	yes	Germany	German	37
#37*	male	72	no	Germany	German	43
#38*	male	42	yes	Germany	German	30
#39	male	56	no	Germany	German	27
#40	male	24	no	Germany	German	25
#41	male	21	no	Germany	German	13
#42	male	23	no	Germany	German	16
#43	male	23	no	Germany	German	18
#44*	male	28	yes	Germany	German	36
#45*	male	24	yes	Germany	German	33
#46	female	23	no	Germany	German	33

Note. * Interviewee has not agreed to audio recording. Interviewer took notes instead.

The objective of the interviews was to learn as much as possible about how consumers distinguish consumption modes, which advantages and disadvantages they view, and what they regard as the major reasons for someone to use a certain consumption mode. The interviews were semi-structured and based on an interview guideline. The Singaporean interviews included projective methods such as sentence completion tasks, word association tasks and the third-person technique in order to stimulate associations and not directly accessible motives (Naderer & Balzer, 2007; Rook, 2006). The interviews in Singapore covered a broad spectrum of product categories, whereas the interviews in Germany had a more specific focus on carsharing.

Additionally, a total of 34 German consumers completed a self-administered online-survey that was conducted in order to confirm the results of the in-depth interviews (Theobald, 2010). The open-ended questions covered subjective perceptions of consumption modes in three different product categories.[10] To ensure a comparable knowledge among all respondents, the access offerings were described by a short text and a video at the outset. Then the respondents were asked to answer open-ended questions about advantages and disadvantages of access and ownership respectively. The average duration to complete the open-ended questions was 13 minutes. The interviewees were between 20 and 63 years old; 13 of 34 participants were female; 10 were still in education, 21 were employed and three retired.

The subsequent analysis and interpretation of the interview transcripts was conducted as suggested by Spiggle's (1994) overview of qualitative analysis techniques in consumer research. Each transcript was read individually and important statements were categorized by coding first. Continuously comparing coded text within a category and re-reading the transcripts was then used to iteratively refine the categories. These codes were then condensed into more abstract conceptual constructs, which were systematically compared to each other in tabulations. Eventually, 18 constructs could be classified into four dimensions as described in the next section.

[10] All respondents were asked about two product categories each – one of them always being carsharing. The second product category for women was handbag sharing, while men were exposed to a ski rental service.

3.3.2 Relevant perceptions of consumption modes

The analysis of the qualitative data resulted in identifying four internally homogeneous dimensions to which the 18 identified perceptions could be assigned: *monetary perceptions*, *functional perceptions*, *experiential perceptions*, and *symbolic perceptions*. The classification into these superordinate groups shares similarities with categorizations that have been introduced by various authors in order to classify aspects of *consumer perceived value* (Boksberger & Melsen, 2011; Richins, 1994b; Smith & Colgate, 2007).

Monetary perceptions

Total costs. The individual perception of how much monetary costs arise during the entire consumption process has frequently emerged as a topic in the interviews: the higher the perceived total costs, the less favorable the evaluation of the respective consumption mode (Berry & Maricle, 1973; Durgee & O'Connor, 1995; Lamberton & Rose, 2012; Lawson, 2011; Lovelock & Gummesson, 2004). The total costs comprise all monetary costs that are associated with a given consumption mode. That is initial, one-time costs (e.g. purchasing price, sign-up fee) as well as running costs (e.g. insurance, operating material, taxes, depreciation, usage fees, monthly membership fees). The perceived costs for one consumption mode and its perceived value-for-money ratio depend heavily on the individual usage intensity (Berry & Maricle, 1973; Nunes, 2000) and the preference for a certain temporal partitioning of payment flows.[11] Some consumers consider access to be financially advantageous or to facilitate the financing of a certain lifestyle, as these respondents (#19 and #28) stated:

> I think sharing would be cheaper. Given that you own it, you sometimes don't use it. You can share among more people – then the overall cost will be less. (#19)

> But if you lease a car or rent a car – if you don't need [it] then you don't have to pay. You pay as you use, so that is more practical. (#28)

However, consumers also believe that the price advantage of access can turn if the usage intensity or the usage period increases, as another participant (#18) said:

[11] An access and an ownership offering can provide the same core benefit; however they usually come with different payment models. Thus it usually depends on the frequency and the duration of the need to decide which consumption mode is cheaper. In general, ownership becomes the more economic the more it is used (Durgee & O'Connor, 1995; Moore & Taylor, 2009).

> If you are a regular user of a vehicle or something, quite often it is better to invest in it, rather than to rent it.

Predictability of costs. The degree of predictability is different from the *total costs,* as it does not refer to the total sum of costs but the ease of predicting the accruing amount of costs in advance. A high degree of predictability is expected to affect the evaluation of a specific consumption mode positively as it reduces financial uncertainty for consumers. An easy-to-understand cost structure facilitates this perception. To the author's best knowledge, this aspect has not been addressed in the literature before. In the interviews it frequently occurred that consumers had difficulties in estimating their total costs of ownership – especially for goods that require payments at various points in time such as cars. On the one hand, consumers value access because no unscheduled repair costs occur and consumers can predict their costs quite well as they only pay what they need, as one respondent (#18) explained:

> Renting is economical. I mean that it's good in the sense that I only rent when I need it. So of course my expenses are controlled in that sense.

On the other hand, consumers fear that renting costs could fluctuate and thus render access costs even less predictable than ownership, as another respondent (#5) stated:

> But if you rent it [a house], it [the lease] is very fluctuating. So I think at least in Singapore, owning is better than renting.

Functional perceptions

Transaction effort. The *transaction effort* is the one-off time and effort that is necessary to get started in a consumption mode. In case of ownership this encompasses making the purchase (product selection, supplier choice, purchase channel selection, waiting times) whereas in case of access registering with an access provider (provider selection, process performance of rental agents, registration forms) (Lamberton & Rose, 2012; Lovelock & Gummesson, 2004). This can also be illustrated by the interviews. For example, respondent #16 thinks loudly about consumption mode choice:

> If I want to purchase something, I have to do some research beforehand and need time to go buy it. If I rent it the provider has done the research for me but I also need to register before I can start renting.

This perception is similar to one of the service convenience dimensions identified by Berry et al. (2002), labeled decision convenience. According to their research as well as according to the conducted interviews, the higher the perceived *transaction effort*, the less favorable the attitude towards the consumption mode.

Pre- and post-usage effort. The *pre- and post-usage effort* can be defined as the necessary time and effort that incurs before and after each usage of the good. Again consumers naturally prefer as much convenience as possible: the lower the effort perception, the more positive a consumer's attitude towards the consumption mode. In case of ownership, effort *before* usage comprises retrieving or transporting the product to the site where it is supposed to be used; in the case of access this contains search effort for retrieving availability and locations as well as logistical effort to either receive the good or to arrive at the pick-up location (Durgee & O'Connor, 1995; Lamberton & Rose, 2012; Lovelock & Gummesson, 2004). Compared to ownership, where easy accessibility is usually given, in the case of access it appears to be crucial. A statement by respondent #14 exemplifies this issue:

> They [the carsharing users] maybe won't feel that they are in control of the car, as they always have to go through a sequence of steps so that they can get to the car that they want. Whereas when you have a car, you just get in and go. Whereas for carsharing, you've to find it and then you've to go through the registration, key in your pin and so on. (#14)

However, the level of convenience among access offerings varies. Consumers appreciate that for example some access offerings provide increased access convenience through delivery to the doorstep or short distances to pick-up locations. One of the respondents (#26) said:

> It [carsharing] is quite cheap as compared to taking a taxi and it's convenient like there's one car in walking distance and then you can park it on the streets even – I think that's really very convenient.

As this statement shows, time and effort are required both before *and* after usage. The effort *after* usage refers to either stowing or returning the good. Similarly, this effort is usually low in case of ownership, but can vary when it comes to access. When consumers perceive return convenience to be inappropriately low, they look out for alternatives – one strategy to avoid return inconvenience while still cutting costs is to shop on secondary markets, as respondent #12 reported:

> I buy second-hand DVDs from – I don't know – Cash Converters and stuff like that. Because I don't like the fact that if I rent, I have to go back to the shop to return it. It's taking too much time and I mean you have to pay for it anyway.

Alternatively one can use even more convenient service offerings that are provided by persons such as taxi drivers, as respondent #1 explained:

> With a taxi you can go to any place and get a drop off – that's it. But with carsharing you might have some restrictions that eventually you will need to go back and return the car in some place.

Maintenance effort. Another source of effort that consumers try to minimize is the time and effort associated with cleaning, maintaining and repairing a good (Durgee & O'Connor, 1995; Lawson, 2011). The *maintenance effort* is one of four issues that Berry and Maricle (1973) called the *burdens of ownership*. In contrast to ownership, these duties are typically part of the access provider's business. Respondent #28 explains how she experienced this burden:

> But if you own it, for the case of a car, sometimes owning a car can be a chore, can be a burden.

However, the extent of required maintenance depends on the industry: a car, for example, generally requires a higher level of maintenance than a handbag, which only needs to be cleaned from time to time. Reasons why consumers prefer not being responsible for maintenance includes a general preference to have more leisure time and the decreased personal financial risk in case of unexpected but necessary repair work. Respondents #45 and #19 explained those issues from their personal experience:

> Owning a car is a lot of effort: Maintenance, changing tires, insurance and so on. I definitely don't need such an effort besides my job. That's why carsharing is a wonderful alternative for me. (#45)

> For example, if you have a house then you own that place, you have to pay for all the incidentals that go with it. For example if there is a leak in the roof, you have to pay for it. But if you lease such a place, then in that case you don't have to. In that case, you can get the owner to do it. (#19)

Storage effort. The perceived *storage effort* is defined as the necessary effort that is associated with storing the good between two uses. Again the interviews and prior research showed that consumers prefer to minimize their effort (Durgee &

O'Connor, 1995; Lamberton & Rose, 2012). Consumers usually have to find a permanent storage solution when owning a product, whereas when they access a product it depends on the rental period whether a temporal or even not any storage place at all is required. If the rented good is returned directly after usage, it is the provider's responsibility to store the good. Consumers appreciate it if access providers take over this effort, as a statement by respondent #3 exemplifies:

> I think the positive aspect would be that I don't have to think about like where I need to have parking. Because when I return, I know that there are reserved parking spots – this would be the positive aspect.

Use limitations. The perception of *use limitations* is defined as the degree to which a consumer feels limited in his or her usage possibilities given a certain consumption mode. Limitations may comprise the way of usage as well as the usage location, point in time, and duration. The importance of this issue clearly emerged from the interviews, but has never been explicitly mentioned in previous literature. The interviews showed that consumers prefer the consumption mode with which they associate less use limitations. According to property rights theory, the owner of a good is not restricted in use except by law (Alchian & Demsetz, 1973; Coase, 1960; Demsetz, 1967; Furubotn & Pejovich, 1972). This is also the way most consumers perceive ownership on this dimension, as a statement by interviewee #4 shows:

> Good is that, you can do whatever you want to. Wherever you want to use it and whatever reason you want to use for – it is up to you. So you are not restricted, as compared to leasing.

However, even in the case of ownership, it might happen that the inherent characteristics of the owned good do not allow using it in certain cases – e.g. a long car trip with a very old car. Nevertheless, the limitations that go along with an access offering are typically perceived to be larger: the provider's terms and conditions might prohibit certain use cases limiting the variety; restricted opening hours might limit possible usage times; and product modifications are almost always strictly forbidden. Nonetheless there are cases where an access offering is able to provide even more usage possibilities than ownership: Free-floating carsharing schemes that allow one-way trips without returning the car to its original pick-up location, for example. That provides ways of usage that are not even possible in case of ownership.

Inflexibility. The perception of being inflexible is defined as the subjective feeling of having limited options because of having chosen a certain consumption mode. Having little flexibility is generally regarded as negative, especially when life circumstances are changing. Bardhi et al. (2012) showed that consumers with a highly transitory lifestyle prefer not being bound to physical objects but being flexible instead. But both, ownership and access offerings can contain a lock-in effect that leads to a loss in flexibility. In case of ownership, this happens because of its definitive character: the selected product might turn out to not match the user's needs or to become outdated, but the owner is bound to the product due to his or her investment. Both issues are also among the so-called burdens of ownership (Berry & Maricle, 1973). Conversely in case of access a long contract period might also lock a consumer into an inflexible situation. Thus in both consumption modes, consumers can feel being locked-in. Interviewee #28 described her thoughts about inflexibility as follows:

> It depends on the object you are talking about. If the object requires heavy capital investment, it can be very immobile. It's not as liquid as cash – you need to be sure that you're able to sell it quickly or you're able to convert it into cash if you need it in an emergency – unless the object can be used as a mortgage or as collateral.

One further facet of flexibility is the perceived scope of choice. Access offerings usually allow a new product selection from a set of products before each use, while the product selection for an ownership offering has to be made at the time of purchase and is permanent as from then (Berry & Maricle, 1973; Durgee & O'Connor, 1995; Lamberton & Rose, 2012). With a high need for flexibility in terms of variety, consumers appreciate access, as respondent #3 stated:

> Because the style of the handbag changes some people say they do not want to own it, that is, buy it and own it. This way they can change their handbag really frequently.

Risk of failure. The *risk of failure* is defined as the perceived probability of a technical failure or partial damage of the product during use. This particular aspect has not been described in previous literature on consumption modes and emerged from the interviews. Naturally, consumers prefer the consumption mode that goes along with fewer risks. The nature of access offerings naturally increases this perception because different persons sequentially use goods. Consumers fear the

tragedy of the commons (Hardin, 1968) that causes item conditions to be poor due to over-usage or free riders, as interviewee #10 stated:

> I believe something that I own is solely my own responsibility. So how good it is or how bad it is, is up for me to decide. Again, in sharing the quality of the object or the property tends to drop because responsibility gets diversified. So, it can work very well if both parties are really very concerned about the property. But it can also work very badly, because as I said, everybody's business is nobody's business.

In case of ownership, consumers also perceive the risk of failure but appreciate the personal knowledge of their product and thus feel more capable in estimating the risk, as respondent #28 reported:

> Why I own a car? Because I know my car and I know the condition of my car. I'm the only one who uses it – the reliability is there. I know the functions and no one actually has made anything to the car.

Risk of non-availability. The *risk of non-availability* is defined as the perceived risk that the desired good is not available at the time when it is needed (Lamberton & Rose, 2012). Lamberton and Rose (2012) found that the risk of non-availability is a key determinant of a consumer's sharing propensity and that mechanisms to lower its perceived existence leads to increased usage likelihood of access offerings. Non-availability can not only occur in access offerings, but also in owned goods – consider for example the good having a breakdown or being used by a family member or friend. However, consumers usually neglect those instances and assume completely unconstrained availability in case of ownership, as this statement (#32) exemplifies:

> It [the owned good] is simply there when you need it – also in the case of an emergency.

Whereas access offers have an inherent risk of non-availability because the access provider has usually less goods in its inventory than it has customers. In case of peak demand this can lead to non-availability, as respondent #23 described:

> You don't want to compromise on your luxury at the end of the day. Like after work at 5pm, carsharing has some restrictions. You can't just go out and have it when you want it. Most of the times you might clash with someone else's appointment. If they own a car and they want to go anywhere on the weekend they don't have to worry.

But also in the case of access offerings this risk can be lowered by the provider – e.g. by offering convenient reservation mechanisms (Lovelock & Gummesson, 2004).

Experiential perceptions

Absence of costs. The perception of an *absence of costs* is defined as the degree to which consumers have the feeling that no costs are incurring during the consumption process. The importance of this aspect and its positive impact on consumption mode evaluation arose from the in-depth interviews. The idea of the relevance of the presence of costs during consumption – also called *taxi meter effect* – has already been found to be an important antecedent of flat-rate bias in the pricing literature (Lambrecht & Skiera, 2006). It describes the degree to which the pleasure of using is reduced by thinking about the running costs during consumption. In case a product is purchased once and does not cause running costs, the perception of absence of costs is high. The picture changes for products that are owned but require continuous investments, such as cars. In case of access offerings it depends on the pricing tariff in place. In case of pay-as-you-go pricing the costs are highly present, whereas in the more unlikely case of a flat-rate tariff the costs could be neglected, too. That is why consumers generally perceive costs to be more absent in case of ownership, as the following statement by one respondent (#16) shows:

> Owning is great. If you pay your car fully, you basically have a better feeling. Then you don't have the boredom of paying installments or leasing or what so ever.

Environmental friendliness. The perception of *environmental friendliness* of a consumption mode can be defined as the degree to which consuming via access or ownership is considered to cause little harm on the environment. In my interviews as well as in interviews conducted by Lawson (2011), it emerged that the perception of eco-friendliness has a positive impact on the attitude towards consumption modes but is described more as a side-effect. For example, interviewee #9 made the following statement:

> Whereas if you share a car, you show that you don't actually need a car. And you also show that you're not so wealthy and you show to a small extent that you maybe play a part towards saving the environment. Because you only use it when there's a need.

It is generally agreed upon that access offerings have more potential than ownership with regard to successfully coping with limited resources due to the higher good utilization in access and incentives for producers to attach more importance on durability or to upgrade and refurbish rented goods (Berry & Maricle, 1973; Lovelock & Gummesson, 2004; Mont, 2002; Schrader, 1999). However, when looking at the big picture, the availability of access offerings might also cause additional consumption or lead to cost savings which consumers reinvest into even more harmful consumption practices – thus access is not necessarily more sustainable than ownership (Mont, 2004; Tukker & Tischner, 2006). Nevertheless, the interviews showed that consumers consider access – taken for itself – to be more environmentally friendly than ownership. The following statement shows respondent's (#35) view:

> There are so many cars that simply stand around idle. Maybe especially now, in times of climate and environmental change, I don't think it is wrong to think about not purchasing a new car or not using one's car as there are other cars around anyway.

Need for careful handling. The *need for careful handling* in a specific consumption mode is defined as the perceived degree to which a consumer feels obliged to ensure that he or she is handling the good with care. Feeling compelled to handle a good very carefully leads to a less positive evaluation of a consumption mode because it reduces the consumers' lightheartedness. In the literature, it has often been argued that access users handle items less carefully because they are not the owners (Bardhi & Eckhardt, 2012; Durgee & O'Connor, 1995). On the contrary, in the context of toy rental libraries it was found that parents place even more importance on careful handling when toys are rented rather than owned (Ozanne & Ozanne, 2011). Similarly the results of the interviews show that that at least some consumers feel more obliged to handle a rented good carefully because they fear being punished for non-compliance, as respondent #45 explained:

> I am more cautious in case of carsharing. I believe that in case of actual faults, I will face very high costs and I do not want to have the hassle with the rental company.

Fun while using. The perceived *fun while using* is defined as the extent of hedonic feelings that consumers experience while they are using a certain consumption mode. The interviews showed that the more fun a consumption mode is associated with, the

more positive its evaluation. The enjoyment that consumers feel when they use a certain channel has also been identified as one of the factors that influences the choice among multiple channels (Blattberg, Kim, & Neslin, 2008; Verhoef, Neslin, & Vroomen, 2007). The literature on perceived value also comprises *hedonic value* as one of the most important dimensions (Richins, 1994b; Smith & Colgate, 2007). In his investigation of the perceived value of ownership, Weinert (2010) identified pleasure to be the most important dimension. In the literature on access, Chen (2009) found that hedonic feelings are also highly relevant for the perceived value. Thus hedonic aspects are expected to be important for both consumption modes, but the in-depth interviews showed that the associated emotional feelings are different. In case of ownership, consumers especially regard individual freedom as providing pleasure (Durgee & O'Connor, 1995). For instance, this can be seen by the following answer from an interviewee (#7) to my question what most fun about owning a car is:

> I can go anywhere – freedom. Freedom, yep.

In case of access it is mainly the product variety that causes a lot of pleasure. Consumers enjoy using different kinds of products and being able to use up-scale models that they could not afford to purchase (Durgee & O'Connor, 1995; Lawson, 2011). For example see the following statement by respondent #3:

> I think it's good for those who are really into branded goods. Like, I don't know there are some girls that love to change branded goods – so I think it's good for them, and they get to save some money.

Symbolic perceptions

Being part of a community. The perception of *being part of a community* can be defined as the subjective feeling of belonging to a community when choosing a certain consumption mode. For consumers, the attractiveness of a consumption mode increases with social interaction between users of the same consumption mode and the possibility to identify with the consumption mode. Also in the multichannel literature it was found that the quest for social interaction is one of the factors that influences channel choice (Balasubramanian, Raghunathan, & Mahajan, 2005). In the interviews this aspect usually came up as a side effect. However, consumers tend to perceive this perception to be stronger in case of access as compared to ownership, as the following statement by respondent #23 exemplifies:

> I mean through sharing you can have more bond, a better bond between the people, between the groups. So like sharing a room or a house, or sharing a car – that they have in Singapore: carpool. And so it's about community involvement, community bonding which is lacking in Singapore to a certain extent.

Signaling one's personality. The perception of *signaling one's personality* when using a certain consumption mode is defined as the degree to which using a product via access or ownership is believed to signal one's personal values, beliefs, attitude, interest, and capabilities. It has been identified in previous research on consumer behavior in both consumption modes (Chernev, Hamilton, & Gal, 2011; Goodman & Irmak, 2013; Richins, 1994b; Schrader, 2001; Thompson & Norton, 2011; Weinert, 2010; Wilcox, Kim, & Sen, 2009). Such a symbolic meaning can be internally (that is for oneself) and externally (that is with respect to others) relevant. The analysis of the interviews revealed that consumers desire to express their identity also in consumption mode choice. Thus, the higher the possibilities to express one's personality, the more favorable the evaluation of the respective consumption mode. With the usage of access instead of ownership consumers associate signaling ecologically responsible behavior, flexibility and reasonable behavior. According to one respondent (#38), an access user wants to show his or her future-mindedness by behaving ecologically responsible whereas owners want to demonstrate their capabilities:

> Car owners frequently want to show how much money they have and carsharing users want to show that they behave with ecological awareness and forward-looking.

Owners also use the possibility of customizing a good in order to express their personalities, as the following interviewee (#26) stated:

> I think before I buy a car, I would do quite a lot of research online and then I will look very carefully at the aesthetic design and all, so the car which I buy, would somewhat represent me – sort of express my individuality by the design, the interior features, what I am looking out for: comfort or safety or whatever.

Personal attachment. In the context of consumption modes, *personal attachment* is defined as the perceived degree of psychological closeness to the specific good that is being used in a given consumption mode. Previous research in the domain of ownership found that personal attachment stems from a good representing personal memories or relevant interpersonal ties (Dittmar, 1992; Kleine & Baker, 2004;

Richins, 1994a; Scholl, 2006). Thus consumers perceive feelings of connectedness and familiarity. As those feelings are generally desirable, a positive link between this perception for a given consumption mode and the attitude towards it is expected. The results of the interviews suggest that the degree to which consumers feel personally attached to an accessed good is significantly less due to the small amount of time that is spent with one particular good, the fact that one is usually not using the exact same good the next time and knowing that the good is shared with others. These findings are also mirrored by the results of Durgee and O'Connor's (1995) and Bardhi and Eckhardt's (2012) qualitative investigations. They can also be illustrated by the interviews – for example, interviewee #35 explained:

> That is like a normal rental car. You simply pick-up the car, drive it, the seat is different, the steering wheel feels different compared to your own car, then you park it and that's it. The car is definitely a strange car to you.

In an early study, Durgee and O'Connor (1995) found that objects with high emotional attachment are even considered as "too personal to rent" (p. 99). Some of the interviewees shared this opinion, for example respondent #22 stated:

> If there is a clothing sharing service – similar to the carsharing – I don't think I will want to rent all the clothes or something because it's something very personal.

Impressing others. The perception of impressing others when using a certain consumption mode can be defined as the degree to which a consumer believes that it makes a good impression on others when he or she uses a certain consumption mode. The cause for deriving social prestige by using a particular consumption mode can be manifold: it might be very expensive, it might be very new and innovative, it might offer great flexibility, or it might be beneficial for the environment (Scholl, 2006). The interviewee's opinions about the social prestige associated to each consumption mode differed a lot – nonetheless this facet is expected to positively influence the attitude towards consumption modes as people generally strive to achieve social prestige (Eastman, Goldsmith, & Flynn, 1999). Impressing others or signaling one's status can not only be achieved by ownership but also by the way a good is used as several authors noted (Berry & Maricle, 1973; Bourdieu, 1982; Durgee & O'Connor, 1995; Schrader, 2001; Weinert, 2010). Some consumers were found to believe that access in general positively influences one's social prestige because it represents a reasonable consumption behavior as it is more economically and ecologically viable

– similar to results by Bardhi and Eckhardt (2012). If high prestige brands are accessed, some consumers believe that such a behavior nonetheless encompasses high social prestige, as one respondent (#2) answered to the question whether the social status would be changed if a luxury car was accessed rather than owned:

> Yes, it is the same. It is an expensive car. An expensive car will always reflect a high status. Even if you don't own the car.

However others believe that ownership is the only possibility to demonstrate one's social prestige, as this statement by another interviewee (#39) shows:

> In the moment when you own something, I can of course decide which car brand I want to buy. Well, that is of course related to my identity. If I buy a Porsche, I want to be able to drive fast and of course I have a certain status symbol as well.

The results of the interviews is that the majority of interviewees had the opinion that owning goods has more social prestige associated than accessing it, as the following statement (by respondent #8) exemplifies:

> I think it looks better when I own the thing. As in what they think of me. It's still status.

3.3.3 Summary of the identified perceptions

The previous description of perceptions is the most comprehensive collection of relevant perceptions for determining consumers' attitude towards consumption modes. It is based on extensive proprietary investigations and a meta-analysis of all related and relevant literature.

In the end, 18 different perceptions clustered into four dimensions have been identified (see Table 4). Three of those perceptions have not been mentioned in any related form in the relevant literature. The degree to which costs are deemed predictable, the risk of a failure during consumption and the degree to which costs do not come to the fore during the consumption process have been found to also be relevant in consumers' evaluations of consumption modes. The remaining identified perceptions confirm earlier findings, propositions or indirect hints.

Table 4: Identified Perceptions of Consumption Modes and their Definitions

Dimension	Perception	Definition
Monetary perceptions	Total costs	The individual perceptions of how much monetary cost arise during the entire consumption process.
	Predictability of costs	The ease of predicting the accruing amount of costs in advance.
Functional perceptions	Transaction effort	The one-off time and effort that is necessary to get started in a consumption mode.
	Pre- and post-usage effort	The necessary time and effort that incurs before and after each usage of the good.
	Maintenance effort	The time and effort associated with cleaning, maintaining and repairing a good.
	Storage effort	The necessary effort that is associated with storing the good between two uses.
	Use limitations	The degree to which a consumer feels limited in his or her usage possibilities given a certain consumption mode.
	Inflexibility	The subjective feeling of having limited options by having chosen a certain consumption mode.
	Risk of failure	The perceived probability of a technical failure or partial damage of the product during usage.
	Risk of non-availability	The perceived risk that the desired good is not available at the time when it is needed.
Experiential perceptions	Absence of costs	The degree to which consumers have the feeling that no costs are incurring during the consumption process.
	Environmental friendliness	The degree to which consuming via access or ownership is considered to cause little harm on the environment.
	Need for careful handling	The perceived degree to which a consumer feels to be required to make sure that he or she is handling the good with care.
	Fun while using	The extent of hedonic feelings that consumers experience while they are using a certain consumption mode.
Symbolic perceptions	Being part of a community	The subjective feeling of belonging to a community when choosing a certain consumption mode
	Signaling one's personality	The degree to which using a product via access or ownership is believed to signal one's personal values, beliefs, attitude, interest, and capabilities.
	Personal attachment	The perceived degree of psychological closeness to the specific good that is being used in a given consumption mode.
	Impressing others	The degree to which a consumer believes that it makes a good impression on others when he or she uses a certain consumption mode.

3.4 The Formative Measurement Model

For the purpose of linking the perceptions to the attitude towards a consumption mode, a *formative* measurement model has been constructed. Such a formative measurement model implies that the perceptions are the causes for the attitude. Similar to Richins (1994b), this approach is not focused "on measuring how much value [a certain consumption modes has, but] rather on the nature and sources of that value" (p. 505). This thinking is analogous to a decompositional approach to measure attitude (Pavlou & Fygenson, 2006; Taylor & Todd, 1995).

Even though the awareness of formative measurement specification has increased over the last ten years, *reflectively* specified constructs are still the norm in marketing and consumer behavior (Briggs & Grisaffe, 2009; Jarvis, MacKenzie, & Podsakoff, 2003). The key difference between the two approaches is the cause direction between the indicators and the latent construct: Reflective constructs are defined to cause their indicators, while formative constructs are defined to be caused by their indicators (Diamantopoulos, Riefler, & Roth, 2008; Diamantopoulos & Winklhofer, 2001; Jarvis et al., 2003) (see Figure 4).

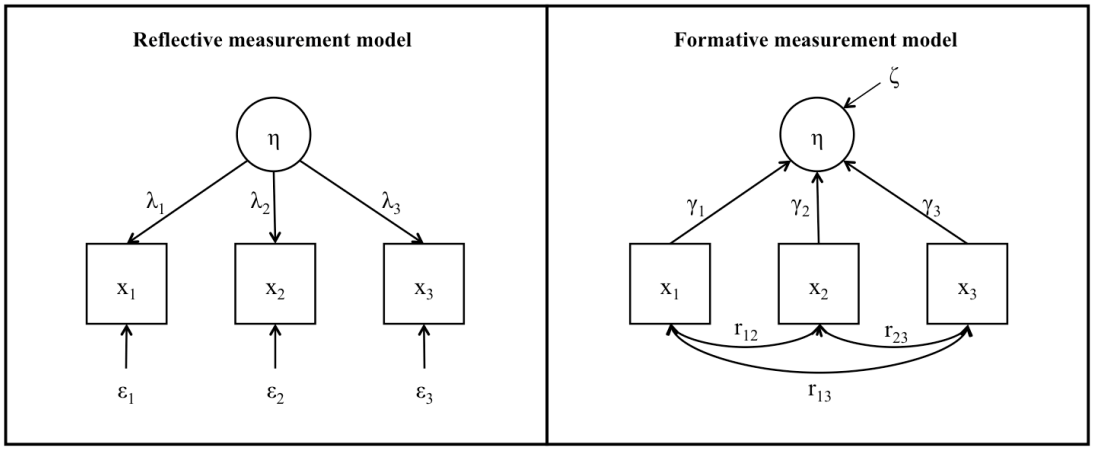

Figure 4: Reflective and Formative Measurement Models. Adapted from Diamantopoulos et al. (2008).

The criteria for developing a formative measurement model are different from those for reflective measurement models. Diamantopoulos and Winklhofer (2001) have pointed out four relevant issues for the construction of formatively specified constructs: (a) content specification, (b) indicator specification, (c) indicator collinearity and (d) external validity. The following chapters proceed along those four issues in order to outline the construction of the formative measure at hand.

3.4.1 Content specification

First, the latent construct to be measured has to be precisely defined in order to specify its scope (Diamantopoulos & Winklhofer, 2001; Rossiter, 2002). In this research project, the formative construct is labeled *attitude towards consumption modes*. Note that it is defined as a differential measure that directly contrasts the evaluation of access and ownership. If it takes positive values, the attitude towards access is more positive than the attitude towards ownership. Values close to zero indicate indifference between both consumption modes.[12] In turn, if the measure takes negative values, a consumer favors ownership over access. The reason to define the construct in a differential rather than an absolute manner was to increase parsimony and ease of interpretation by integrating both consumption modes into one model. The approach of using difference scores is similar to the specification of SERVQUAL. However, the intensively discussed concerns about difference-scales in the case of SERVQUAL (Cronin Jr & Taylor, 1994; Parasuraman, Zeithaml, & Berry, 1988, 1994) are not applicable to this case because here two alternatives are set in relation to each other, rather than comparing pre- and post beliefs of the same service.

The construct's domain of content is defined as all cost-related, functional, experiential and symbolic perceptions that cause the differential overall attitude towards consumption modes. The rated objects are defined as consumption offerings from a specific product category via access or ownership. The raters are consumers – independent of their current consumption mode behavior: it does not matter whether he or she currently accesses, owns, accesses and owns at the same time, or does not consume anything in the given product category.

3.4.2 Indicator specification

The indicators of a formative construct must capture all relevant perceptions in order to cover the entire scope of the construct (Diamantopoulos & Winklhofer, 2001). Each indicator is supposed to cover a different aspect, as all indicators taken together

[12] In the case of a differential definition some information is lost because the use of difference scores renders those two cases where both consumption modes are evaluated very positively or negatively to be undistinguishable. However the case that a consumer has a negative attitude towards both consumption modes is deemed rather unlikely, as this would mean complete anti-consumerism in the respective product category.

form the construct. Thus any left-out cause excludes a part of the construct itself and leads to an increase in measurement error (Diamantopoulos, 2006).

The specification of the indicators and their operationalization in this research has been based upon the proprietary qualitative pre-studies as well as the comprehensive literature review. The objective was to make the items applicable to both consumption modes (access and ownership) as well as to a wide variety of product categories.

The indicators are specified to reflect differential perceptions, just as it is the case for the overall construct. However, measuring the items is specified to take place in absolute form as this facilitates ratings for respondents and allows collecting the richest level of data.[13] Thus the corresponding items for access and ownership need to be subtracted from each other to derive differential indicators. The beliefs for access and ownership are measured simultaneously by placing the answer scales for both consumption modes right next to each other. Thus each respondent gives a within-subjects evaluation of an access offering and an ownership offering in one product category. It should further be noted that the proposed causes are perceptions *without* judgments, rather than evaluations of aspects of the overall consumption mode attitude.

The conventional guidelines for item formulation were followed. Wording clarity was achieved by using unambiguous, common language and formulating short and simple items (Netemeyer, Bearden, & Sharma, 2003). The employed answer scales are unipolar in nature and provide seven answer categories, which are labeled by numbers from 1 to 7. Each belief is represented by one measurement item because the beliefs are concrete and self-reportable (Ajzen, 1991; Bergkvist & Rossiter, 2007; Drolet & Morrison, 2001; Rossiter, 2011b).

[13] By measuring the beliefs in absolute form the respondent's absolute anchor points become obvious and it is still possible to derive relative scores by computation.

Table 5: Items for Measuring the Attitude towards Consumption Modes

Perception	Item (English Version)	Answer Scale
Total costs	For me, the amount of total costs will be…	a
Predictability of costs	I think that the incurring costs can be well predicted.	b
Absence of costs	You feel like incurring no costs while using.	b
Transaction effort	I believe the one-time effort for purchasing and registering respectively to be…	a
Pre-usage effort	I believe the required effort before each use to be…	a
Post-usage effort	I believe the required effort after each use to be…	a
Maintenance effort	I believe the effort for maintenance to be…	a
Storage effort	I believe the effort to find a suitable storage place to be…	a
Risk of non-availability	The risk that ___ is not available when I want to use it is…	a
Risk of failure	The risk of failure when using ___ is…	a
Use limitations	The way, duration and place of my usage is strongly restricted.	b
Need for careful handling	During usage one feels like having to be very careful.	b
Inflexibility*	The flexibility in different situations in life is…	a
Fun while using	Usage is a lot of fun.	b
Being part of a community	I have a feeling of belonging to other ____owners / access users.	b
Environmental friendliness	I consider using ___ environmentally friendly.	b
Signaling one's personality	Owning / accessing ___ strongly expresses my personality.	b
Personal attachment	I believe that one has a strong personal attachment to an owned / accessed ___.	b
Impressing others	It makes a good impression on others when owning / accessing a ___.	b

	Answer Scales
a	very low (1) … very high (7)
b	not at all (1) … absolutely (7)

Note. * reverse coded item. The breaks "____" need to be filled in with the respective product category.

The item development process itself was iterative in nature and based on three pretests. After each pretest improvements were made. The first pretest was done with seven marketing scholars who were asked to rate and comment content validity, applicability to both consumption modes and inter-independency. Subsequently the revised item set was tested with five potential respondents to investigate whether the instructions and the response format were clear and whether the items were easy to understand and non-ambiguous. After another revision, a large respondents pretest with 124 participants was conducted online. The setting was highly comparable to the conditions of the final survey. Pretesters' comments were used to make last refinements.

Table 5 displays the final items and the respective answer scales. The development of the item battery and the survey itself were done in German (see appendix A.1). The English translation has been validated by a back-translation procedure.

3.4.3 Indicator collinearity

One of the challenges when dealing with formative indicators is *multicollinearity*. A high degree of indicator collinearity makes it more difficult to distinguish the influences of separate indicators as formative measurement models are based on multiple regression analysis (Cenfetelli & Bassellier, 2009; Diamantopoulos et al., 2008; Diamantopoulos & Winklhofer, 2001). According to Diamantopoulos and Winklhofer (2001), multicollinearity is a particular issue for two reasons: First, excessive collinearity influences the magnitudes of the indicator weights, which serve as validity indicators for formative measurement models. Second, those indicators, which can be predicted by linear combinations of other indicators, are candidates for exclusion from the item battery because they contain no to little additional information.

In order to test for multicollinearity, it is recommended to analyze item-to-item correlations and the variance inflation factor (VIF). As an indicator of multicollinearity, the literature mentions various VIF cutoff values: They range from 10 (Diamantopoulos et al., 2008; Hair, 1998) over 5 (Hair, Ringle, & Sarstedt, 2011) to 3.3 (Diamantopoulos & Siguaw, 2006). In case of increased VIF value, the current literature recommends to eliminate items only if they show a high degree of correlation (e.g. .90) with another item and if it is conceptually feasible to delete one

of them (Cenfetelli & Bassellier, 2009; Diamantopoulos et al., 2008). If the degree of correlation between two indicators is more moderate (e.g. .80) and it is logically reasonable, it is recommended to combine both formative indicators into a composite index by calculating the mean and to use this index in subsequent analysis (Albers & Hildebrandt, 2006; Cenfetelli & Bassellier, 2009).

3.4.4 External validity

In contrast to reflectively specified constructs, it does not make sense to assess the reliability (e.g. by Cronbach's alpha) for formative measures due to the fact that the items are supposed to be independent from each other and to be causing the construct – rather than being uniformly caused. Instead, the focus is on assessing the validity of formative measures. The validity assessment should cover the following three issues: *indicator validity*, *construct validity*, and *nomological validity* (Diamantopoulos & Winklhofer, 2001; Jarvis et al., 2003).

First, the bivariate correlations between the proposed indicators and another variable measuring the content of the item battery at a global level should be analyzed. For indicator validity, the correlation should be significant in order to retain the indicator in the item battery (Diamantopoulos & Winklhofer, 2001).

Second, all items should be analyzed simultaneously in one set in order to test for construct validity. For that purpose a multiple indicators and multiple causes (MIMIC) model (Goldberger & Hauser, 1971; Jöreskog & Goldberger, 1975) can be used. The proposed indicators act as direct causes of a reasonably related latent construct, which is simultaneously specified by two or more reflective indicators. A good model fit (e.g. $R^2 \geq .30$) as well as significant and plausible indicator weights show construct validity (Chin, 1998; Diamantopoulos & Winklhofer, 2001). Based upon the results of the qualitative pre-studies, a second-order definition has been chosen for the MIMIC model (see Figure 5). Within the classification of multidimensional constructs by Jarvis et al. (2003), this specification is classified as type IV because both – first-order and second-order constructs – are specified in a formative way. A second-order construct is advantageous as it creates smaller pools of items that compete with each other for impact (Cenfetelli & Bassellier, 2009) and

it facilitates interpretation at a more abstract level (Edwards, 2001; Wetzels, Odekerken-Schröder, & Van Oppen, 2009).[14]

Third, the nomological validity of a formative measurement model should be assessed, by linking it to other theoretically related constructs that are reflectively measured. Those constructs can either be antecedents or consequences of the construct under development. If the theoretically justified relation can be empirically proven, nomological validity is given (Diamantopoulos & Winklhofer, 2001).

Finally, formative measurement models should also be cross-validated with further data sets after they have been constructed and tested for validity (Diamantopoulos & Winklhofer, 2001). In this research project, the cross-validation is achieved by testing the formative measurement with five different samples in four different product categories.

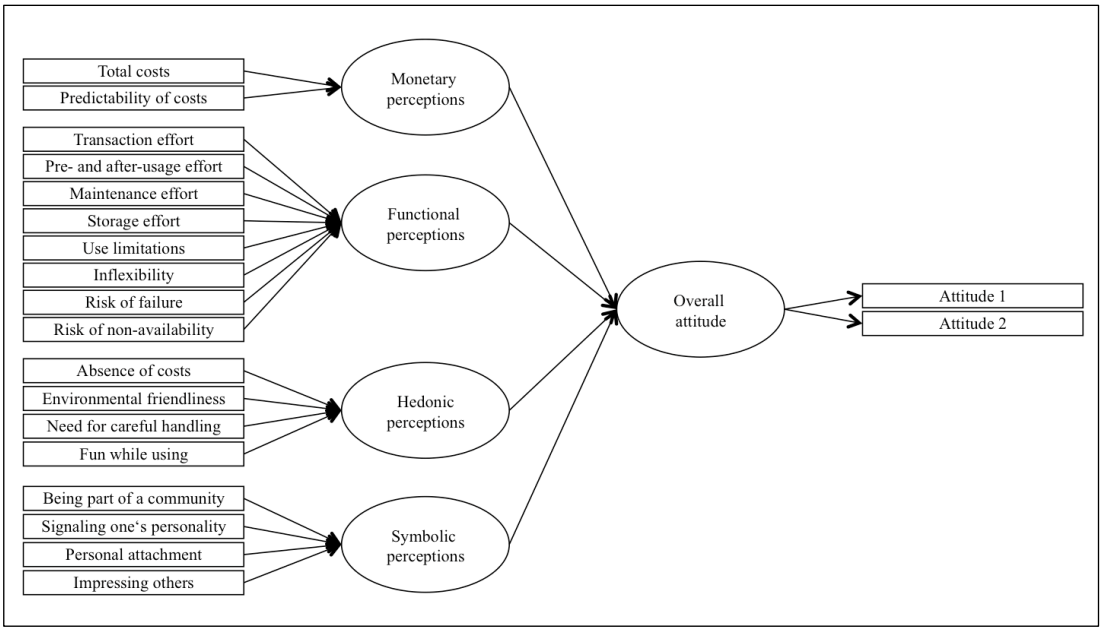

Figure 5: MIMIC Model of the Second-Order Construct Attitute towards Consumption Modes.

[14] Simply a large number of indicators (e.g. more than 10) leads to a greater likelihood of low and thereby non-significant indicator weights because indicators compete with each other for impact (Cenfetelli & Bassellier, 2009). In case of non-significant weights it is recommended to either consider removing these indicators (Diamantopoulos & Winklhofer, 2001), or nonetheless keeping all items to preserve content validity (Bollen & Lennox, 1991), or to create a second-order construct in order to create multiple, but smaller item pools (Cenfetelli & Bassellier, 2009).

3.5 Methodology of the Empirical Studies

3.5.1 Study design

To empirically assess the proposed formative measurement model for the attitude towards consumption modes, respondents of an online survey were randomly assigned to one of four conditions, which differed with regard to the product category that was presented. The four product categories were: cars, bicycles, books and handbags (the latter only open to women).

The assessment of the measurement model has been performed in several product categories because the field of access offerings bears a high degree of diversity. Differences between access offers do not only exist within a given product category but also between product categories (see chapter 2.3). Among the most important are: typical purchase price, durability, visibility of consumption, and main consumption goal (see Table 6). Due to possible differences among those dimensions, it becomes obvious that research on access should not cover one product category only, but rather include two or more product categories in order to derive more generalizable findings.

Table 6: Differences between the Investigated Product Categories

Category	Purchase price	Durability	Visibility of consumption	Main consumption goal
Cars	high	high	public	mainly functional
Bicycles	medium	high	public	mainly functional
Books	low	medium	private	mainly hedonic
Handbags	medium	medium	public	functional and hedonic

In all four conditions, the structure of the questionnaires and the general scenario described to the respondents was very similar. First, the respondents were told that they had heard about a new access offering available in their town, which they would be discussing with some of their friends. Subsequently, they were exposed to a detailed description of an access offering from the respective product category in order to provide everyone with the same information on the access offering. In terms of features and price, the description was designed to be as close to current market

offerings as possible. The description provided information on the registration process, the rent out process, pricing, and return of the rental good (see Figure 6 for an example and appendix A.2 for the remaining descriptions). No details were given on the product brands available in the access offering or on the brand of the access provider. The ownership consumption mode was not described in detail – owning a good of the respective product category was simply presented as an alternative option. Next, the respondents were asked to state their perceptions of both consumption modes by filling in the item battery that measured their perceptions of owning and accessing a good of the respective product category.

Figure 6: Description of the Carsharing Access Offering Used in the Survey.

3.5.2 Sample description

An external panel provider recruited the participants of this study and compensated them for their effort. The recruitment took place in Germany. All participants had to be older than 18 years. The survey was programmed in German, using the online-survey tool Unipark. At a completion rate of 79%, in total 2,552 persons completed the survey during the field period in Summer 2012 (median survey duration: 10m 40s). After applying a quality filter in order to exclude respondents with unrealistically short completion times (<7 minutes) and a bad quality indicator (<

.25), a sample size of 2,098 remained with a median survey duration of 11m 36s (see Table 7 for details on categories).[15]

Table 7: Sample Sizes in the Four Different Survey Conditions with and without Data Quality Filters (Project I)

	Cars	Bicycles	Books	Handbags	Total
All completes	773	765	508	506	2,552
Filtered completes	633	627	410	428	2,098

Note. Filtered completes are those that fulfilled the data quality requirements (duration ≥ 7 minutes and quality ≥.25).

In total the sample contains 54.2% female respondents. The median age is 45 years with a distribution ranging from 18 to 78 years. The level of education is above the average within the German population. About one quarter (26.2%) lives in single-households, which is below the average of the general population. The median of the monthly household net income is between 2,000 and 3,000€.

For a detailed comparison of the above reported criteria from the four samples that were randomly exposed to one of the four product categories, refer to Table 8. The table shows that the share of people currently owning a good from the respective product category is generally high (ranging from 84.4% for cars to 98.5% for books). However, the percentage of respondents currently using an access offering in the respective categories is comparably low: It ranges between 1.2% and 3.2% - while the books condition was an exception. As libraries have been around for a long time period, about one third (31.7%) currently uses such an access service.

[15] The critical value of duration was set to 7 minutes as pretest showed that not even reading through the whole survey was possible in that time period. The quality indicator is an indicator calculated by Unipark for the individual completion time of each page in comparison to the average page completion time of all respondents. The critical value used was .25.

Table 8: Sociodemographics and Consumption Mode Status for the Four Sub-Samples (Project I)

Criteria	Cars (n = 633)	Bicycles (n = 627)	Books (n = 410)	Handbags (n = 428)
Gender				
Male	55.8%	51.4%	69.5%	0%
Female	44.2%	48.6%	30.5%	100%
Age Groups				
18-29	18.2%	17.1%	13.7%	21.5%
30-39	20.6%	20.0%	17.1%	19.9%
40-49	23.3%	30.2%	27.8%	29.0%
50-59	25.6%	24.3%	22.9%	20.6%
60+	12.3%	8.5%	18.5%	9.1%
Highest Level of Education				
Basic secondary school or none	11.8%	12.9%	14.1%	13.8%
Middle secondary school	30.0%	34.0%	38.0%	41.6%
Higher secondary school	29.4%	28.1%	24.9%	25.5%
University degree or doctoral degree	28.7%	25.0%	23.0%	19.2%
Household Size				
1 person	28.3%	29.2%	23.9%	21.0%
2 persons	37.9%	36.2%	38.0%	37.6%
3 persons	17.5%	18.7%	18.3%	21.3%
4 and more persons	16.2%	16.1%	19.8%	20.0%
Monthly Household Net Income				
≤ 1,000€	11.7%	13.7%	11.2%	10.3%
1,001€ – 2,000€	27.6%	28.5%	24.4%	32.0%
2,001€ – 3,000€	21.8%	21.7%	24.1%	18.2%
3,001€ – 4,000€	12.6%	10.8%	14.1%	11.2%
4,001€ – 5,000€	7.0%	5.3%	6.6%	3.7%
> 5,000€	4.1%	2.7%	3.7%	3.5%
Not answered	15.2%	17.2%	15.9%	21.0%
Owners in Respective Category				
Yes	84.4%	85.3%	98.5%	96.0%
No	15.6%	14.7%	1.5%	4.0%
Access User in Respective Category				
Yes	3.2%	1.8%	31.7%	1.2%
No	96.8%	98.2%	68.3%	98.8%

3.5.3 Measures

The majority of the measures have already been presented in context with the specification of the construct's indicators in chapter 3.4.2. Thus, only the remaining measures are described in this section.

In order to fully specify the MIMIC model, in which the formative measurement model is tested, a global measure of the attitude towards a consumption mode is necessary, too. Similar to the perceptions, it has been measured in an absolute way. The *overall attitude* towards owning and accessing has been measured by two semantic differentials (very bad / very good; very disadvantageous / very advantageous). The answer scale was bipolar and ranged from -3 to +3.

Furthermore, the *behavioral intention* towards each consumption mode was measured in order to assess the formative measure's nomological validity. Two items measured the *behavioral intention* separately for both consumption modes, one asking for the intended usage probability within the next 12 months and the other asking for the intended usage intensity. Both were measured on an unipolar 7-point answer scale, which was labeled with probabilities, ranging from 0% to 100%. Again, measurement was performed for both consumption modes separately. Moreover, a set of control variables (socio-demographics, ownership and access behavior) was measured, too.

3.5.4 Data analysis methods

The data analyses have been performed with SPSS and SmartPLS (Ringle, Wende, & Will, 2005). The latter was used to perform all calculations for the formative measurement model.

I chose PLS for three reasons. First, it does not have any distributional assumptions, thus it does not require multivariate normal data. Second, there are no identification problems for formative measurement models. And third, PLS is more appropriate when the theory is at an early stage and the focus is more on theory development rather than empirical testing of an existing research model (Diamantopoulos, 2011; Teo, Wei, & Benbasat, 2003).

The chosen settings in SmartPLS were based on current recommendations in the literature on PLS: the PLS algorithm has been run with the *path weighting scheme*

(Hair et al., 2011), for the bootstrapping algorithm sign changes were allowed at the *construct level* (Tenenhaus, Vinzi, Chatelin, & Lauro, 2005), the number of bootstrap samples was set to *5,000* in all analyses (Hair et al., 2011), and the number of cases was always *equal to the number of observations* for all bootstrapping calculations (Hair et al., 2011).

3.6 Empirical Results

The results section is ordered into four parts. First, the absolute perceptions of access and ownership are contrasted in order to gain first insights into differences between the two consumption modes (chapter 3.6.1). Second, the proposed formative measurement model is evaluated. As from there on, all analyses are based upon difference scores. This evaluation goes hand in hand with determining the importance of the individual perceptions for determining the attitude towards consumption modes (chapter 3.6.2). Third, the model results are compared across the four product categories as the second step only covers separate evaluations (chapter 3.6.3). Fourth, the effects of experience with the access consumption mode are analyzed with an additional sample in order to highlight how perceptions change with increased usage experience (chapter 3.6.4).

3.6.1 Attitudes towards and perceptions of access and ownership

In order to gain a better understanding of how access and ownership are perceived and to facilitate the interpretation of successive results, this section reports the means differences for all attitudes and perceptions. To contrast the perceptions of the two consumption modes, *t*-tests for paired samples were calculated for all product categories. Figure 7 and Figure 8 give an overview of the results by displaying the differences between the means of the access and the ownership condition.[16] If the mean difference is positive, the perception for access is stronger, if it is negative, the perception for ownership is more pronounced.

Results for overall attitudes

Looking at overall attitudes first, the attitude towards access is found to be consistently worse than the attitude towards ownership across all product categories. The smallest difference is found in the case of books ($\Delta_{books,\ att1}$ = -1.09 and $\Delta_{books,\ att2}$ = -0.88), while the largest difference is found in the case of handbags ($\Delta_{bags,\ att1}$ = -3.51 and $\Delta_{bags,\ att2}$ = -3.22). In order to get a better impression of the data distribution it is good to know how many respondents have a more favorable attitude towards ownership, how many are indifferent among access and ownership, and how many

[16] Table 29, Table 30, Table 31, Table 32, and Table 33 in the appendix provide more detailed results for each product category.

prefer access.[17] In all categories except books, respondents have a more favorable attitude towards ownership than access (60% – 83%). In case of books, the majority's attitude is indifferent (55%). The ratio of respondents whose attitude is more favorable towards access than ownership, ranges from 2% in case of handbag rental and bikesharing to 9% in case of libraries (see Table 9 for a quick overview and Table 34 – Table 37 in the appendix for the detailed crosstabs).

Table 9: Respondents Grouped According to their Differential Consumption Mode Attitudes

Clusters	Cars	Bicycles	Books	Handbags
Ownership better than access	60%	63%	37%	83%
Indifferent between access and ownership	33%	34%	55%	15%
Access better than ownership	7%	2%	9%	2%

Note. Those being indifferent were defined as having answered the sum of both attitude scales with a maximum deviation of ±2.

Results for monetary perceptions

The differences in perception for *total costs* vary among the investigated categories. In the case of cars there was no significant difference, $t(632) = 0.84$, $p \geq .10$, $\Delta = 0.08$ (see Figure 7 and Figure 8). However, bicycles, $t(626) = 22.09$, $p \leq .001$, $\Delta = 2.16$, and handbags, $t(427) = 21.10$, $p \leq .001$, $\Delta = 2.64$, are perceived as more expensive in the access condition, whereas books are perceived as cheaper when they are accessed rather than owned, $t(409) = -17.41$, $p \leq .001$, $\Delta = -2.06$. The *predictability of costs* is perceived to be higher for ownership offerings in three of four categories – books being the exception with a small difference in favor of access, $t(409) = 4.04$, $p \leq .001$, $\Delta = 0.44$.

Results for functional perceptions

The initial *transaction effort* is perceived to be greater for ownership than for access only in the case of cars, $t(632) = -6.30$, $p \leq .001$, $\Delta = -0.64$. In case of bicycles and handbags access is believed to cause more effort, while in case of books the perceptions concerning the initial effort do not differ significantly ($t(409) = 1.24$, $p = .21$, $\Delta = 0.13$). *Pre- and post-usage effort* are perceived to be greater for access in all product categories. The *effort to maintain* the product is perceived to be lower in case

[17] Those being indifferent were defined as having answered the sum of both attitude scales with a maximum deviation of ±2.

of access for cars and bicycles (Δ_{cars} = -1.72, $\Delta_{bicycles}$ = -0.83), but higher for books and handbags (Δ_{books} = 0.51, Δ_{bags} = 1.75).

The perceived *storage effort* is believed to be higher for access in all cases – except books, $t(409) = -5.02$, $p \leq .001$, $\Delta = -0.63$. Consistently across the four product categories, access offers are perceived as coming with significantly more *use limitations* and more *inflexibility*. The perceived *risk of non-availability* and the *risk of failure* are perceived as being higher in case of access. The differences in means are comparatively large: ranging from Δ_{books} = 2.14 to Δ_{bags} = 3.53 for *risk of non-availability* and from Δ_{cars} = 1.69 to Δ_{bags} = 3.23 for *risk of failure*.

Results for experiential perceptions

The perceived *absence of costs* is found to be greater for ownership than for access – books are again the exception, $t(409) = 5.81$, $p \leq .001$, $\Delta = 0.85$. The results for *environmental friendliness* are also inconsistent: Access is only perceived to be more environmentally friendly than ownership for cars ($\Delta = 0.87$) and books ($\Delta = 1.86$) – in the product categories bicycles ($\Delta = -0.11$) and handbags ($\Delta = -0.86$) it is the other way around. Consumers perceive a greater *need for careful handling* in access than ownership. Ownership is expected to allow more *fun while using* in all categories, too. However the spreads for *fun while using* are comparatively small (ranging from Δ_{books} = -0.57 to Δ_{cars} = -1.25).

Results for symbolic perceptions

The differences between access and ownership for the perception *being part of a community* is only significant for books – in all other product categories the perception does not differ significantly across access and ownership. *Signaling one's personality*, being *personally attached*, and *impressing others* are perceived to be more distinctive in case of ownership for all four product categories; however the differences between the consumption modes are mostly small. The perception of *personal attachment* is an exception as the analysis revealed rather large differences (ranging from $\Delta = -2.27$ for books to $\Delta = -3.12$ for handbags).

Results Summary

To summarize, the comparatively negative attitude towards access is also mirrored in the perceptions – given the direction of the predicted cause-effect relationship turns

out as hypothesized in the next chapter. In case of cars, 13 out of 18 perceptions turn out to be less favorable for access in comparison to ownership (see Figure 7 and Figure 8). Disregarding the ties, only the effort for the initial *transaction effort*, *maintenance effort* and the *environmental friendliness* turn out to be more favorably perceived for access than for ownership. In case of bikesharing, even more perceptions turn out unfavorable: In 15 out of 18 perceptions access is evaluated worse. Only the perceptions of *maintenance effort* and *environmental friendliness* are more positive for bikesharing than for a personally owned bicycle. In case of books only 11 out of 18 perceptions are rated less favorable. *Monetary related perceptions*, *absence of costs, storage effort*, *being part of a community*, and *environmental friendliness* are evaluated better for libraries than for owning books for oneself. In the handbags product category, the rental service has less favorable perceptions attached in every dimension – except for a tie in *being part of a community*. In most of the cases the expectations based on the interview results can be fulfilled, however some unexpected results occur, too: The perceptions of *predictability of costs* and *storage effort* are only better for access in case of books. Access is perceived to be more *inflexible* in all product categories and the *environmental friendliness* is only evaluated to be better for access than for ownership in two out of four product categories.

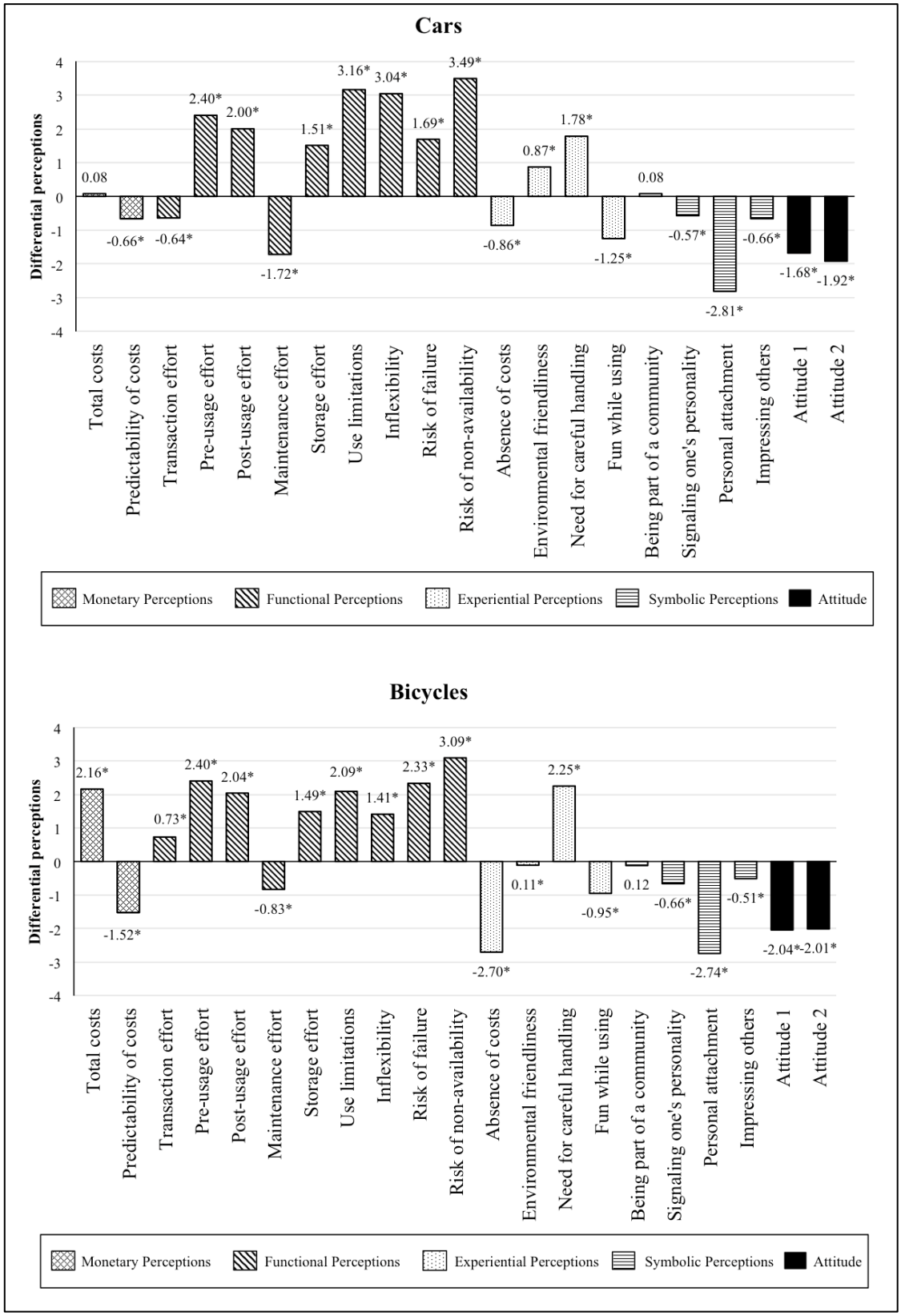

Figure 7: Differences between Access and Ownership Perceptions and Attitudes in Case of Cars and Bicycles. *Note.* The differences have been calculated by subtracting the ownership perception from the corresponding access perception. * indicate significant differences on a 5%-level based upon paired samples *t*-tests.

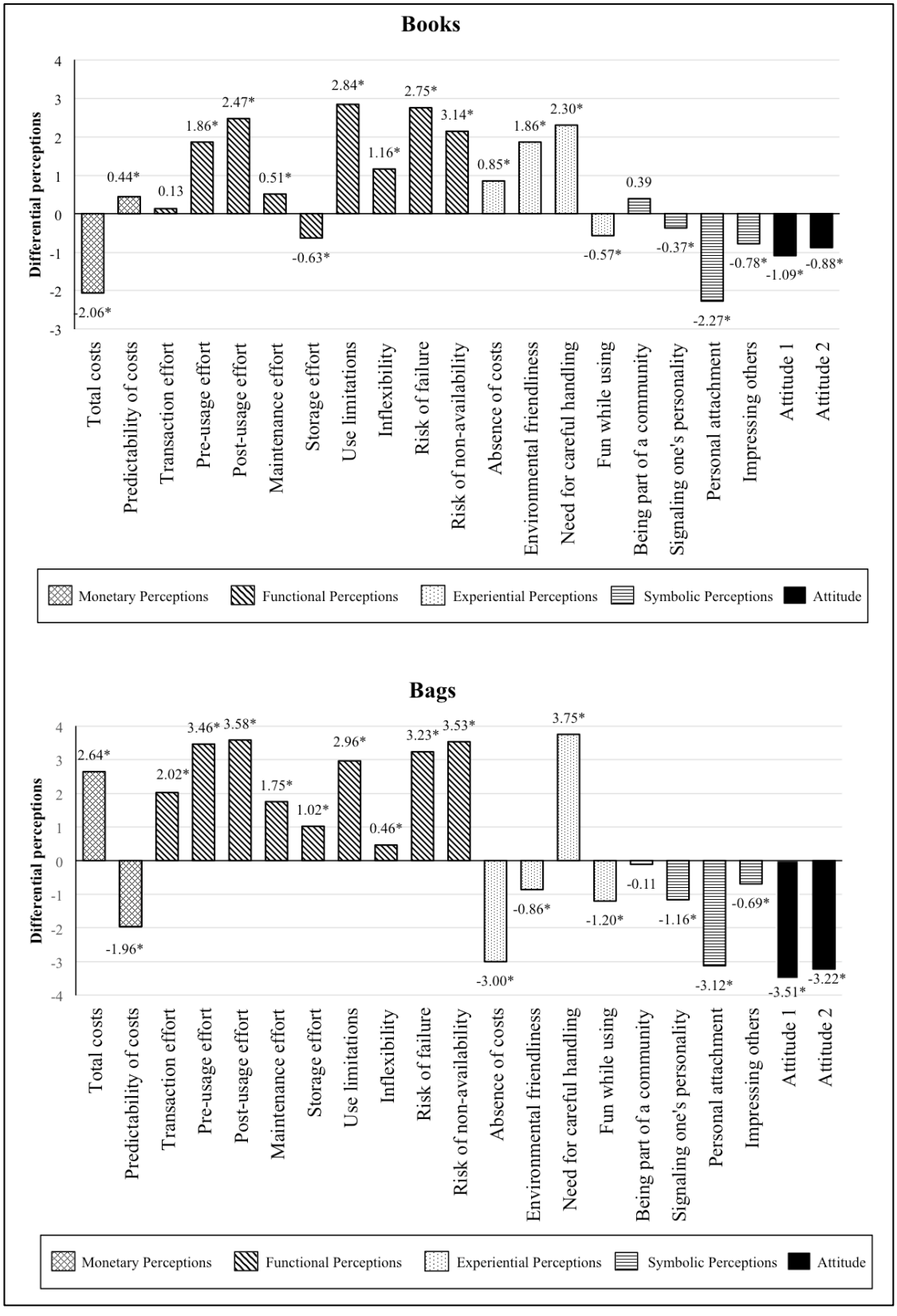

Figure 8: Differences between Access and Ownership Perceptions and Attitudes in Case of Books and Handbags. *Note.* The differences have been calculated by subtracting the ownership perception from the corresponding access perception. * indicate significant differences on a 5%-level based upon paired samples *t*-tests.

3.6.2 Assessment of the validity of the measurement model

The validity evaluation goes hand in hand with determining the importance of each perception for causing the overall construct. As described in the section on formative measurement models (see chapter 3.4), indicator collinearity has to be investigated before the external validity can be assessed.

Assessment of indicator collinearity

The results of the multicollinearity analysis indicate mostly nonhazardous (≤ .70) item-to-item correlations, denoting that indicator collinearity is no major problem (see Table 22 and Table 23 in the appendix). Only the two items *pre-usage effort* and *post-usage effort*, which have been measured separately as pretest participants had found it easier to judge them separately, showed noticeable statistical values. The correlations between *pre-usage effort* and *post-usage effort* are high (ranging from .72 for books to .82 for handbags). Further, also the VIF indicators exceed the (most conservative) cutoff value of 3.3 that has been proposed by Diamantopoulos and Siguaw (2006). The observed values range from 2.4 to 3.9 depending on the product category. Given its logical feasibility, the two critical items were combined into a joined indicator – *pre- and post-usage effort* – that has been calculated as their average.

Assessment of external validity

For assessing the external validity of the formative measurement model, it is necessary to specify it as a MIMIC model (see Figure 5). The 18 indicators are specified to cause their associated first-order construct. The latter then cause the second-order construct *overall attitude towards consumption modes*. To complete the MIMIC model, two reflective indicators specify the second-order construct. The results of the analysis can be found in Table 10, which provides the most relevant information in one place (more detailed analysis can be found in Table 24, Table 25, Table 26, and Table 27 in the appendix): Loadings (L), weights (W), variance explained (R^2), and predictive relevance (Q^2).[18] The indicators' *loadings* and their significances show each indicator's absolute importance. It is equal to the zero-order

[18] Q^2-values are derived by a procedure called blindfolding. Those measures are cross-validated redundancy measures, which should be reported for each reflectively measured endogenous construct (in this case the reflectively specified overall attitude). Values > 0 indicate predictive relevance.

correlation and is used to assess indicator validity (Hair et al., 2011). The indicators' *weights* show the importance of each indicator relatively to all other indicators – thus it is a measure of the perception's importance. Jointly with the model fit this information is used to assess construct validity (Hair et al., 2011).

The results lead to the conclusion that indicator validity is given as the vast majority of items shows significant loadings (when testing two-sided on a 5%-level). Only the items *environmental friendliness* in case of bicycles and *being part of a community* for books are found to be non-significant.

As expected, not all items with significant loadings also show significant weights. This means that there is a relationship, but the indicator does not contribute beyond the influence of other indicators in the item set (Cenfetelli & Bassellier, 2009). Six indicators have significant weights across all four investigated product categories: *total costs*, *predictability of costs*, *absence of costs*, *need for careful handling, fun while using*, and *personal attachment*. Only the perception *risk of non-availability* is surprisingly not found to have a significant weight in any product category. However, this perception has not been removed from the item battery, following Cenfetelli and Bassellier (2009) methodologically, because its loadings are significant, logical feasibility is provided, and prior evidence by Lamberton and Rose (2012) is given, too. The remaining perceptions have significant weights in one to three product categories. Those perceptions, which have significant loadings and weights, all have plausible signs that turned out as expected.[19] The explained variance exceeds the threshold of a good model fit ($R^2 \geq .30$) in all categories ($R^2_{cars} = .44$, $R^2_{books} = .34$, $R^2_{bags} = .37$), except for bicycles ($R^2_{bicycles} = .24$) (Chin, 1998; Diamantopoulos & Winklhofer, 2001).

Taking a more abstract point of view by looking at the path coefficients of the four product categories, one can see that the functional perceptions path coefficient is comparatively large and significant in all product categories.[20] Monetary and experiential perceptions' path coefficients are significant in three out of four cases with medium size. The path coefficients of symbolic perceptions are only significant in two out of four cases and are comparatively small in size.

[19] To receive the sign of a perception, one needs to calculate it by multiplying the sign of the weight with the sign of the respective path-coefficient.
[20] Paths denote the link between the first-order constructs and the second-order construct.

In order to test the hierarchical measurement model for nomological validity, the second-order construct *overall attitude towards consumption modes* has been replaced by a relatively specified construct that represents the *behavioral intention to use consumption modes*. Again, this construct is specified by two reflective items. PLS analysis reveals a good fit in terms of variance explained (R^2_{cars} = .28, R^2_{books} = .41, $R^2_{bicycles}$ = .18, R^2_{bags} = .22) and mostly significant path coefficients linking the first with the second-order constructs with signs as expected (for more details please refer to Table 28 in the appendix).

Additional analyses showed that including the constructs social norm and perceived behavioral control (which are typically part of TPB-models) into the model substantially increases the amount of variance explained. If attitude, social norms and perceived behavioral control predict the behavioral intention the R^2 are as follows: R^2_{cars} = .53, R^2_{books} = .55, $R^2_{bicycles}$ = .37, R^2_{bags} = .35.

Table 10: Assessment of the Second-Order Construct in PLS

	Cars			Bicycles			Books			Handbags		
	L	***P***	***W***	***L***	***P***	***W***	***L***	***P***	***W***	***L***	***P***	***W***
Monetary Perceptions		-.30**			-.21**			.02			-.14**	
Total costs	.89**	.73**		.93**	.82**		-.70**	-.51*		.95**	.87**	
Predictability of costs	-.73**	-.49**		-.62**	-.39**		.87**	.74**		-.55**	-.31**	
Functional Perceptions		-.22**			-.28**			-.37**			-.42**	
Transaction effort	.56**	.18*		.59**	.18		.51**	.21*		.70**	.13	
Pre- and post-usage effort	.64**	.12		.88**	.54**		.77**	.45**		.80**	.43**	
Maintenance effort	.58**	.43**		.40**	.13		.52**	.00		.66**	.05	
Storage effort	.65**	.17*		.58**	.04		.72**	.57**		.71**	.36**	
Use limitations	.52**	.26**		.70**	.28**		.42**	.14		.42**	.14	
Inflexibility	.59**	.32**		.56**	.25**		.38**	.14		.49**	.32**	
Risk of failure	.60**	.25**		.38**	-.11		.37**	.09		.53**	.08	
Risk of non-availability	.45**	-.04		.55**	.09		.36**	-.02		.42**	.03	
Experiential Perceptions		.24**			.10			.23**			.15**	
Absence of costs	.38**	.28**		.58**	.35**		.52**	.27*		.51**	.25*	
Environmental friendliness	.63**	.51**		.26	.08		.53**	.43**		.77**	.53**	
Need for careful handling	-.36**	-.23**		-.56**	-.38**		-.30**	-.27*		-.26**	-.23*	
Fun while using	.78**	.62**		.82**	.68**		.80**	.69**		.77**	.53**	
Symbolic Perceptions		.10**			.02			.13**			.03	
Being part of a community	.64**	.43**		.54**	.35		.19	.16		.52**	.32*	
Signaling one's personality	.65**	.31*		.41*	-.04		.52**	.23		.84**	.54**	
Personal attachment	.69**	.44**		.83**	.69**		.93**	.78**		.80**	.48**	
Impressing others	.72**	.31*		.68**	.38		.58**	.21		.49**	.00	
R^2		.44			.24			.34			.37	
Q^2		.38			.20			.26			.32	
n		633			627			410			428	

Note: * $p \leq .05$; ** $p \leq .01$; *L*: Loading; *P*: Path coefficient; *W:* Weight.

3.6.3 Comparison of indicator importance across product categories

After analyzing the product categories in isolation, the question arises whether the identified differences in weights and path coefficients between the investigated product categories are statistically significant or not. Therefore, a two-step approach is taken: First, an omnibus test of group differences – similar to an ANOVA – is conducted. Second, the groups are tested pairwise for differences – similar to pairwise t-tests.

When analyzing group effects in structural models, *measurement invariance* is usually a prerequisite (Sarstedt, Henseler, & Ringle, 2011). However the question that was raised previously specifically addresses potential differences in the measurement model. Thus the focus of this analysis is on product category-related differences in the perceptions' weights and the first-order path coefficients as the measurement items have been held constant across product categories (Huber, 2007).

Omnibus test of group differences

To test for differences among the four groups, the *omnibus test of group differences* (OTG) was chosen because it prevents boosting the family-wise error rate when all possible group comparisons are conducted. Additionally it does not rely on any distributional assumptions (Sarstedt et al., 2011). The omnibus test relies on bootstrapping, permutation and random selection, but can be applied to standard PLS output.[21] The OTG analysis (set to 5,000 Monte Carlo runs as recommended) reveals group differences across all product categories for all indicators and first-order constructs. The null hypothesis of equal weights can be rejected at $p \leq .001$ due to F_R values ranging from 546.92 (*transaction effort*) to 129,961.40 (*total costs*).

Multi-group comparisons

Current methodological papers criticize the common *parametric approach* for multi-group comparisons by Keil et al. (2000), which is a modification of an independent samples *t*-test, because it requires the data to be normally distributed, the groups need to have similar sample size and its results are comparatively liberal (Dibbern & Chin, 2005; Henseler, Ringle, & Sinkovics, 2009; Sarstedt et al., 2011).[22] An approach that

[21] I would like to thank Jörg Henseler for providing me the corresponding computation code file for R.
[22] Additionally, the original formula by Keil et al. (2000) contains an error. A corrected formula can be found e.g. in Sarstedt et al. (2011).

is well-suited to handle the non-normally distributed data at hand is *Henseler's PLS multigroup analysis* (Henseler, Martens, & Naes, 2007; Henseler et al., 2009). In contrast to other methods it is quite conservative and easily applicable as the author provides a spreadsheet to perform the necessary calculations. This method uses bootstrap estimates for each comparison group in order to evaluate the robustness of the group-specific estimates (Sarstedt et al., 2011). It can only be used to test the one-sided hypothesis that the estimate for one group is larger than the other – however this is unproblematic as the primary interest is in testing for differences that are assumed based on the sign of the delta between the two estimates.

In comparison to the results from the omnibus group test, the results of the more conservative multi group tests reveal less significant differences. Beginning with the pairwise comparisons of the PLS weights, it can be shown that for nine perceptions no significant differences are found. This is the case for: *transaction effort*, *use limitations*, *inflexibility*, *risk of non-availability, absence of costs*, *need for careful handling*, *fun while using*, *being part of a community*, and *impressing others* (see Table 11). For those beliefs the relative importance in determining the respective first-order construct does not significantly (on a 5%-level) differ across the four investigated product categories.

However, within each perception sub-dimension also significant differences in PLS weights are found (see Table 11). In case of *monetary perceptions*, the significant differences in *total costs* (all $p \leq .001$) and in *predictability of costs* (all $p \leq .001$) within the book category represent a special case: they are mainly due to the positive sign of the path coefficient of *monetary perceptions*, which leads to the reversed sign for the weights of both perceptions.

For the beliefs determining the *functional perceptions*, notable differences between cars and the other product categories are found. The *pre- and post-usage effort perception* is comparatively less important (at least $p \leq .01$), while the perceived *maintenance effort* is more important (at least $p \leq .01$) for cars than elsewhere. The perceived *risk of failure* is significantly more important ($p \leq .001$) for cars than for bicycles. Furthermore the perceived *storage effort* is significantly less important (at least $p \leq .01$) for bicycles than for cars, books or handbags.

Also for the beliefs determining the *experiential perceptions*, bicycles play a special role: *environmental friendliness* is significantly less important (at least $p \leq .03$) for bicycles as compared to other categories. Investigating the group-wise comparisons for those beliefs determining the *symbolic perceptions*, two significant differences are found: the importance of the perception to *signal one's personality* is significantly higher for handbags than for bicycles ($p = .02$) and the importance of personal attachment is significantly higher ($p = .04$) for books than for cars.

The reporting of the results concludes with the finding that for the *path coefficients* of all four first-order constructs, significant differences have been found. *Monetary perceptions* are significantly less important (at least $p \leq .01$) for books than for any other product category. Additionally, *monetary perceptions* are more important ($p = .01$) for cars than for handbags. *Functional perceptions* are significantly more important for handbags than cars ($p \leq .001$) or bikes ($p = .01$) and more important for books than cars ($p \leq .001$). In the case of *experiential perceptions*, the importance is less for bicycles than for cars ($p = .02$) or books ($p \leq .05$). Lastly the importance of symbolic perceptions is less important for bikes than for books ($p \leq .05$).

Table 11: Henesler's PLS Multigroup Analysis across Product Categories

	PLS Weights				***p*-values of differences**					
	Cars	Bikes	Books	Bags	a	b	c	d	e	f
Monetary perceptions										
Total costs	.73	.82	-.51	.87	–	≤.00	–	≤.00	–	≤.00
Predictability of costs	-.49	-.39	.74	-.31	–	≤.00	–	≤.00	–	≤.00
Functional perceptions										
Transaction effort	.18	.18	.21	.13	–	–	–	–	–	–
Pre- and post-usage effort	.12	.54	.45	.43	≤.00	.01	.01	–	–	–
Maintenance effort	.43	.13	.00	.05	.01	≤.00	≤.00	–	–	–
Storage effort	.17	.04	.57	.36	–	≤.00	–	≤.00	.01	–
Use limitations	.26	.28	.14	.14	–	–	–	–	–	–
Inflexibility	.32	.25	.14	.32	–	–	–	–	–	–
Risk of failure	.25	-.11	.09	.08	≤.00	–	–	–	–	–
Risk of non-availability	-.04	.09	-.02	.03	–	–	–	–	–	–
Experiential perceptions										
Absence of costs	.28	.35	.27	.25	–	–	–	–	–	–
Environmental friendliness	.51	.08	.43	.53	≤.00	–	–	.03	.01	–
Need for careful handling	-.23	-.38	-.27	-.23	–	–	–	–	–	–
Fun while using	.62	.68	.69	.53	–	–	–	–	–	–
Symbolic perceptions										
Being part of a community	.43	.35	.16	.32	–	–	–	–	–	–
Signaling one's personality	.31	-.04	.23	.54	–	–	–	–	.02	–
Personal attachment	.44	.69	.78	.48	–	.04	–	–	–	–
Impressing others	.31	.38	.21	.00	–	–	–	–	–	–

	Path Coefficients				***p*-values of differences**					
	Cars	Bikes	Books	Bags	a	b	c	d	e	f
Monetary perceptions	-.30	-.21	.02	-.14	–	≤.00	.01	≤.00	–	.01
Functional perceptions	-.22	-.28	-.37	-.42	–	≤.00	≤.00	–	.01	–
Experiential perceptions	.24	.10	.23	.15	.02	–	–	.05	–	–
Symbolic perceptions	.10	.02	.13	.03	–	–	–	.05	–	–

Note. a: cars vs. bikes; b: cars vs. books; c: cars vs. bags; d: bikes vs. books; e: bikes vs. bags; f: books vs. bags.

3.6.4 Contrasting perceptions from prospective users and experienced users

The results reported so far are based on samples with little experience of access offerings, as it is still commonplace on the market. However, it is interesting to see whether perceptions change when consumers have more access experience and to additionally validate the measurement model with experienced access uses. These results allow a forecast of the perceptions that will prevail within society when access becomes more common in our every day lives. For that purpose customers of a carsharing provider have been additionally surveyed with a similar survey to the one previously described. To ensure comparability, the collaborating carsharing provider's offering was identical to the carsharing scenario that was described to the panel respondents in my previous study.

Differences in perceptions between the sample of carsharing users and the sample of inexperienced consumers can theoretically stem from three sources: (a) fundamental differences in terms of attitudes towards access or ownership, (b) different personal circumstances and (c) from the difference in usage experience. In order to eliminate the potentially alternative explanations (a) and (b), the sample from both groups has been matched on variables measuring attitudes and socio-demographics. The result are two comparable groups with the same basic attitudes towards owning a car and carsharing respectively, which only differ in their access usage behavior.

Matching procedure

The matching of the two samples was conducted by propensity score matching.[23] According to preliminary considerations, a 1:1-matching without replacement has been conducted on a set of variables measuring attitudes and socio-demographics (see Table 12). After the matching process the balance of all matching variables and their interactions was investigated. All remaining standardized differences are smaller than the proposed threshold of $d = .25$. Also the overall X^2 balance test reveals no imbalances ($X^2(9) = 2.99$, $p = .97$) and the L_1 measure decreased from .996 to .992. Both are indicators of improved overall balance (Thoemmes, 2011).

[23] Propensity score matching has been conducted in SPSS with the custom dialog "PS Matching" provided by Thoemmes (2011). The estimation was done with the logistic regression algorithm. As recommended, matching was performed by the nearest neighbor algorithm, while units outside the area of common support have been discarded and the caliper was set equal to .10 (Thoemmes, 2011).

Before matching, the two samples (sample sizes n = 518 and n = 260 respectively) differed on 10 out of 11 matching variables on an α-level of .05 (see Table 12).[24] After the matching, the samples (n = 121 each) differ no longer significantly on any of the matching variables. The fact that the *access knowledge* is significantly different between non-access users and access users (before and) after matching indicates that the matched groups differ in terms of their access experience – given the assumption that increased experience leads to greater knowledge.

Table 12: Group Means on Matching and Control Variables Before and After Matching

Before matching				After matching		
Non-access users	**Access users**	***p***	**Matching variable**	**Non-access users**	**Access users**	***p***
43.98	34.31	≤.01	Age	35.45	36.69	.42
1.88	1.77	.08	Adults living in household	1.87	1.87	1.00
0.40	0.20	≤.01	Children living in household	0.32	0.30	.78
2.87	3.23	≤.01	Net household income per month	3.04	3.10	.77
4.25	5.06	≤.01	Level of education	4.91	5.02	.51
4.28	6.04	≤.01	Access attitude variable 1	5.52	5.55	.81
4.05	5.88	≤.01	Access attitude variable 2	5.31	5.31	1.00
6.04	4.83	≤.01	Ownership attitude variable 1	5.43	5.16	.17
6.01	4.90	≤.01	Ownership attitude variable 2	5.50	5.22	.17
-1.76	1.21	≤.01	Differential[1] attitude variable 1	0.10	0.40	.20
-1.96	0.98	≤.01	Differential[1] attitude variable 2	-0.18	0.09	.26
			Control variable			
2.72	5.67	≤.01	Access knowledge	3.35	5.59	≤.01
518	260		*n*	121	121	

Note. [1] Differential does not denote a new variable, but the difference score between access and the ownership.

Comparison of non-access users with access users

Comparing the absolute perceptions of access as well as the differential perceptions (contrasting access and ownership) reveals several significant differences of group means on an α-level of .05 (see Table 13). If not otherwise stated, the following differences have been found for both analysis perspectives.

While the perceived *total costs* of access are not significantly different ($\Delta = 0.12$, $p > .10$), experienced access users perceive a higher *predictability of costs* compared to non-access users ($\Delta = 0.43$, $p = .03$). All effort perceptions of access – except *storage effort*, which remains indifferent ($\Delta = 0.40$, $p > .05$) – are lower when respondents have more usage experience. Also the risk perceptions of access offerings decrease

[24] The smaller sample size compared to the previously reported numbers is due to the fact that those few respondents in the panel group that already had used a carsharing offering (compare Table 8) were excluded for this analysis.

with more usage experience. The experiential perceptions are not found to differ significantly across both groups. Only those who have more usage experience perceive the *fun while using* an access offering as significantly higher than when using an own car ($\Delta = 0.59$, $p \leq .01$). However, they also seem to have another benchmark because the comparison based on the difference scores does not reveal a significant difference ($\Delta = 0.29$, $p > .10$). More experience with carsharing also leads to a significantly lower *perception of being part of a community* in the access offering ($\Delta = 0.62$, $p \leq .01$). Also the perception of *being personally attached* to the good in case of access decreases significantly ($\Delta = 0.41$, $p = .02$). However, the differential perception of *personal attachment* is not found to be significant on a 5%-significance level ($\Delta = 0.49$, $p > .05$). The perception of *impressing others* shows a contrary pattern: The absolute perceptions of the access offering do not differ significantly, whereas the differential point of view reveals that users with access experience believe to impress others significantly more when using an access offering instead of an ownership offer ($\Delta = 0.78$, $p \leq .01$).

Table 13: Mean Comparison of Non-Access and Access Users on their Absolute Access and Differential Perceptions

	Absolute Access Perceptions			Differential Perceptions		
Perceptions	**Non-Access users**	**Access users**	***p***	**Non-Access users**	**Access users**	***p***
Monetary perceptions						
Total costs	3.69	3.81	.50	-1.09	-1.60	.07
Predictability of costs	4.79	5.22	.03*	0.30	1.28	≤.01*
Functional perceptions						
Transaction effort	2.60	2.22	.02*	-2.01	-2.95	≤.01*
Pre- and post-usage effort	3.52	2.87	≤.01*	1.51	1.08	.05
Maintenance effort	1.79	1.17	≤.01*	-2.73	-3.28	.01*
Storage effort	3.53	3.93	.07	0.91	0.70	.49
Use limitations	4.60	4.45	.44	2.79	2.90	.66
Inflexibility	4.28	3.95	.07	2.64	2.18	.09
Risk of failure	3.53	2.34	≤.01*	0.92	-0.31	≤.01*
Risk of non-availability	4.93	3.71	≤.01*	3.36	2.13	≤.01*
Experiential perceptions						
Absence of costs	2.67	2.80	.53	-0.97	-1.29	.29
Environmental friendliness	4.43	4.17	.26	1.50	1.73	.30
Need for careful handling	5.31	5.16	.41	1.60	1.76	.56
Fun while using	4.33	4.92	≤.01*	-0.69	-0.40	.16
Symbolic perceptions						
Being part of a community	3.69	3.07	≤.01*	0.45	0.91	.05
Signaling one's personality	3.43	3.31	.60	-0.29	-0.30	.97
Personal attachment	2.47	2.06	.02*	-2.62	-3.11	.07
Impressing others	3.81	3.81	1.00	-0.42	0.36	≤.01*

Note. * $p \leq .05$; Columns not labeled with *p* display means.

Assessment of the formative measurement model for non-access users as opposed to access users

Additionally the PLS model has been calculated for the matched groups. The variance explained for both models is good, $R^2 = .41$ for non-access users and $R^2 = .53$ for access users (see Table 14). In both cases one of the four path coefficients does not turn out to be significant: in case of non-access users this is the case for *functional perceptions* ($P = -.13$, $t = 1.45$, $p > .05$) and in case of access users for *symbolic perceptions* ($P = .10$, $t = 1.42$, $p > .05$). For *functional perceptions* Henseler's multigroup comparison approach also returns a significant difference ($p \leq .05$) between the path coefficients in both models – thus functional perceptions are more important for experienced access users in the cars product category.

Investigating the weights in both groups reveals that some perceptions gain importance for experienced access users, while others lose importance. Henseler's PLS multigroup comparison additionally reveals whether these differences turn out to be significant or not (see Table 14). For experienced access users, the weights of the differential perceptions of*, pre- and post usage effort* ($p \leq .05$), *total costs* ($p \leq .10$) and *environmental friendliness* ($p \leq .10$) increase as compared to inexperienced consumers. On the contrary, the importance for the perception of *absence of costs* decreases ($p \leq .01$). Interestingly, the signs of *signaling one's personality* and of *impressing others* have a negative effect on the overall attitude towards consumption modes for access users. Thus those two perceptions have a negative effect on the overall attitude towards consumption modes for this group of consumers.

Table 14: Assessment of the Formative Measurement Model for Non-Access Users as Opposed to Access Users

	Non-Access users		Access users		Group test for differences
	Loadings	Weights	Loadings	Weights	
	Coefficient (*t*-value)	Coefficient (*t*-value)	Coefficient (*t*-value)	Coefficient (*t*-value)	*p*-value
Monetary Perceptions	-.32 (3.83)**		-.37 (5.79)**		–
Total costs	.84 (8.42)**	.62 (4.28)**	.95 (19.19)**	.87 (8.44)**	.08
Predictability of costs	-.82 (8.10)**	-.58 (3.68)**	-.53 (2.89)**	-.32 (2.17)*	–
Functional Perceptions	-.13 (1.45)		-.33 (4.38)**		.05
Transaction effort	.30 (1.78)	.07 (.53)	.24 (2.03)*	-.13 (1.20)	–
Pre- and post-usage effort	.36 (1.96)*	-.02 (.15)	.79 (8.80)**	.38 (2.64)*	.01
Maintenance effort	.47 (3.07)**	.30 (1.67)	.58 (4.75)**	.37 (2.23)*	–
Storage effort	.79 (5.36)**	.55 (2.83)**	.54 (4.24)**	.31 (2.24)*	–
Use limitations	.40 (2.20)*	.17 (.96)	.55 (4.56)**	.32 (2.26)*	–
Inflexibility	.11 (.85)	.00 (.02)	.51 (4.81)**	.16 (1.38)	–
Risk of failure	.68 (4.27)**	.43 (2.33)*	.48 (3.08)**	.21 (1.48)	–
Risk of non-availability	.45 (2.43)*	.10 (.64)	.31 (2.38)*	-.05 (.61)	–
Experiential Perceptions	.20 (2.23)*		.17 (2.12)*		–
Absence of costs	.54 (3.91)**	.42 (2.91)**	.14 (1.05)	-.02 (.13)	≤.01
Environmental friendliness	.48 (2.71)**	.37 (2.42)*	.85 (7.16)**	.72 (4.73)**	.06
Need for careful handling	-.48 (2.94)**	-.31 (1.90)	-.21 (1.41)	-.12 (.97)	–
Fun while using	.70 (5.75)**	.63 (4.47)**	.71 (5.12)**	.51 (2.72)**	–
Symbolic Perceptions	.19 (2.17)*		.10 (1.42)		–
Being part of a community	.39 (2.01)*	.13 (.94)	.38 (2.49)*	.24 (1.61)	–
Signaling one's personality	.78 (4.98)**	.44 (2.12)*	.15 (1.13)	-.33 (1.74)	≤.001
Personal attachment	.69 (4.64)**	.34 (1.85)	.66 (5.39)**	.47 (3.13)**	–
Impressing others	.80 (7.21)**	.47 (2.60)**	-.84 (9.21)**	-.76 (6.22)**	≤.001
R^2	.41		.53		
Q^2	.31		.37		
n	121		121		

Note. The results written in line of the superordinate constructs are the path coefficients and their corresponding *t*-values. The values in brackets are the corresponding *t*-values. * p ≤ .05; ** p ≤ .01. The column *group test for differences* displays the results of Henseler's multigroup test for significant differences in path coefficients and weights. A dash (–) denotes a *p*-value larger than *p* = .10.

3.7 Discussion

In summary this research project provides five principal findings: First, a set of 18 relevant perceptions for determining a consumer's attitude towards a consumption mode has been identified by qualitative research. These perceptions can be clustered into the four superordinate domains monetary, functional, experiential, and symbolic perceptions. Second, a formative measurement model of the differential attitude towards access and ownership that is based on the qualitative findings has been developed and successfully empirically validated. Third, the ranking of the general importance of different consumption mode perceptions is as follows: Functional and monetary perceptions are most important, followed by experiential perceptions and finally symbolic perceptions. Fourth, no two forms of access are alike: Access offerings in different product categories are perceived quite differently – especially on the level of perceptions. Fifth, perceptions change as consumers gain experience with access offerings.

The implications of these principal findings for scholars and managers are discussed subsequently: First, theoretical and therein integrated managerial implications of the empirical findings are discussed. Then, the general managerial relevance of the newly developed measurement model is illustrated by describing various applications in the industry. Finally, this work closes with limitations and avenues for further research.

3.7.1 Discussion of the attitude and perceptions towards access and ownership

In order to empirically prove Lovelock and Gummesson's proposition that "marketing transactions that do not involve a transfer of ownership are distinctively different from those that do" (2004, p. 34) as well as Chen's (2009) qualitative findings that the perceived value of access and ownership is different, this study contrasts the relevant perceptions of consumption modes in four different product categories. All in all, a lot of significantly different perceptions have been found. Thus these propositions could be empirically confirmed.

The perception of the *total amount of costs* that accrue is not consistently in favor of one or the other consumption mode across product categories. This might be due to

the different pricing tariffs. In case of carsharing, bikesharing and handbag rental a pay-per-use schema was offered. In contrast to that, the book rental service had the typical flat-rate pricing tariff, which lead to the perception that in case of books, access is cheaper than ownership. Further, this perception also depends on the suitability of the access business case in the respective product category. This influence is inherent in the data, as the prices of the exemplary access offerings have been based on current market prices.

Contrary to expectations, the newly identified perception *predictability of costs* is perceived to be larger for ownership than for access in all product categories. Based on the findings from the interviews, a different outcome had been expected. A likely explanation is the current lack of experience with pay-per-use models. This explanation is supported by the comparison of experienced vs. inexperienced access users. This comparison has shown that experienced access users believe they can predict the costs of an access offering better than those with no real-world experience in the access consumption mode.

As expected, the initial *transaction effort* is perceived to be less or equal for ownership in all product categories where purchasing is no big deal and purchasing prices are comparatively low (bicycles, books and handbags). In case of cars, where the purchase is associated with high involvement and a very high purchase price, signing up for a carsharing provider is perceived to be a comparatively smaller effort.

The finding that the *pre- and post-usage effort* is perceived to be greater for access in all cases also comes with little surprise due to the access inherent characteristic of frequent interactions with the access provider, which complicate the core usage experience. Feeling relieved from the burden of *maintenance* in case of access is only the case for cars and bicycles where repairs and maintenance are comparatively frequently required. The result that the burden of *storage* is perceived to be even higher for access than ownership in case of cars, bicycles and handbags has been highly unexpected. A possible reason is that consumers feel even more effort when they have to find a suitable storage space for a quite large good from time to time rather than permanently. However, the findings that consumers perceive more *use limitations* as well as higher *risks of failure* and *non-availability* in case of access come as expected.

There is yet another finding that has come as a surprise and requires an explanation: the respondents perceive to be more *inflexible* when they use access. There is no doubt that access has the potential to add flexibility to life, but the predominant opinion of consumers seems to be that something that is not permanently available results in less flexibility than having the chance to live a leaner life with less possessions and the chance to always get the most suitable product for their needs. As flexibility has been quite broadly defined in this research, going into more detail on this aspect is definitely a promising avenue for further research.

Consumers perceive the *accruing costs* to be less present in case of the quasi flat-rate ownership – except when access is offered in a real flat-rate model, as it was the case for books. This aspect has not been discussed in the literature on consumption modes before, but the empirical outcome comes as expected.

Another interesting finding that deserves further research is the perceived *environmental friendliness* of access and ownership respectively. Access is perceived to be significantly friendlier to the environment solely in case of cars and books. Bicycles might be perceived to be environmentally friendly in any case because consumers assume that people would use bikesharing rather as a complement than a substitute – thus the overall number of bicycles would not be reduced. The perception that owning handbags is more environmentally friendly than renting handbags might be explained by the logic that shipping handbags back and forth causes additional (unnecessary) emissions. Another explanation would be that consumers assume that due to their overall negative attitude towards this particular access service, providers would not be able to reach a capacity utilization that is comparable to the utilization of a handbag that is personally owned and thus frequently used.

Contradicting the tragedy of the commons and prior argumentation in the literature on access (Durgee & O'Connor, 1995), but confirming the finding from the interviews, the majority of consumers feels a greater *need for carefully handling* the product in case of access as compared to ownership. This is in line with statements from access providers who were surprised at how little the rented objects got damaged (M. Hoene, personal communication, 10.04.2012). However, this result might also be biased by a (in this study not controlled for) social desirability bias.

Consumers do not believe that they belong more *towards a community* if they use access as compared to ownership. The only exception are books, which might be explained by the fact that people feel more bound to each other due to the membership-like business model. The remaining three symbolic perceptions, *signaling personality*, *personal attachment* and *impressing others*, are all absolutely stronger in case of ownership – confirming expectations. However, the measured differences are rather small – except in case of *personal attachment*. This leads to the conclusion that people believe that signaling to others can also happen when using something that is not theirs. The empirical data show that access offerings can contain a similar type of symbolic meaning but at a slightly lower level. However, this empirical investigation also shows that consumers nevertheless believe that they cannot form a personal connection to a rented object, which confirms the qualitative findings by Bardhi and Eckhardt (2012) as well as Chen (2009).

3.7.2 Discussion of the developed formative measurement model

This study is one of the first that develops and validates a formative-formative second-order construct. The construct *attitude towards consumption modes* is a differential measure and is caused by four super-ordinate constructs that are themselves caused by a total of 18 perceptions. Due to its specification, it can be applied to various product categories.

In total, the quality criteria of the formative measurement models are satisfactory and render it ready to be used in further settings. Indicator collinearity has not been a problem and indicator validity has almost invariably been given. Construct validity has been partly constricted by insignificant weights. But those are regarded as normal by the current literature in case of a large amount of indicators (Cenfetelli & Bassellier, 2009). Additionally, the importance of the perceptions (and thus the significance of the weights) could be shown to depend strongly on the product category. Thus, some perceptions are important in one product category, while others are only important in another product category. The model fit, which is another indicator of construct validity, has reached the minimum R^2 value of .30 in all product categories except for bicycles. However, in four of five remaining models, this value has been clearly exceeded. Even though the evaluation of the measurement

model has had some restrictions in some product categories, it has turned out to be well suitable for diverse settings overall.

The importance of the four superordinate constructs confirms and details previous findings. Taking all four investigated product categories together, *functional perceptions* are the most (in case of bicycles, books and handbags) or second-most (in case of cars) important determinants of relative consumption mode attitude. This confirms existing findings by Bardhi and Eckhardt (2012) who found that rented goods are especially valued for their functional value and the results by Lamberton and Rose (2012) who showed that functional elements are the main predictor for a consumer's likelihood of using access offerings. *Monetary perceptions* are found to be in general second-most important. However, in the most expensive product category – cars – this perception was even most important for determining the overall attitude. Again this result mirrors the access-specific findings of Lamberton and Rose (2012) and Durgee and O'Connor (1995). In the four investigated product categories *experiential perceptions* were almost equally important as monetary perceptions. Generally least important was the category of *symbolic perceptions*. Nonetheless, this study shows that using a service can transfer a symbolic meaning, too.

At the indicator level, a total of six perceptions has significant weights in all product categories: *total costs*, *predictability of costs*, *absence of costs*, *need for careful handling, fun while using*, and *personal attachment*. Surprisingly none of the beliefs in this list stems from the influential first-order construct functional perceptions. This leads to the conclusion that the product category strongly determines which kind of functional perceptions are most important. Thus managers are well advised to focus on the aforementioned six perceptions plus the relevant functional perceptions when designing a business model or planning an advertising campaign.

The only perception that has not been found to reach a significant weight in any product category was the *risk of non-availability*. As it has significant loadings though, it seems to have been suppressed by other more influential aspects (Cenfetelli & Bassellier, 2009). This might also be the explanation why this finding contradicts Lamberton and Rose (2012) who identified the risk of non-availability as one of the key indicators of sharing propensity. Some functional aspects included in this study – but not part of Lamberton and Rose's (2012) study – seem to explain the same variance as the risk of non-availability does. Based on the perceptions'

definitions this is most likely true for *effort before- and post-usage* or *perceived inflexibility*. Especially the latter's definition has been rather broad and could be specified in more detail in future investigation.

3.7.3 Discussion of indicator importance across product categories

The investigated product categories have inherently different characteristics, which made it necessary to explicitly investigate differences among those categories. Cars, for example, are very expensive and their usage is observable to others. On the other hand, books are much cheaper, more frequently bought and often consumed in a private setting. However, handbags are more expensive, typically used as status symbols and run out of fashion pretty quickly. Thus it would have been rather surprising if no differences had existed. But this is clearly not the case. The results clearly show that it is important to conduct research in more than one product category if one aims for generalizable results on consumers' consumption mode behavior.

In case of *monetary perceptions* it is found that the importance of this first-order construct increases with an increase of the typical purchase price. That means in case of cars it is most important, in case of bicycles second most, and so on. The topic of cost savings seems to become more relevant, the more expensive a purchase would be.

Functional perceptions were already described as being highly important in general, but also greatly varying in terms of the importance of sub-aspects. *Pre- and post-usage effort* is found to be significantly less important for cars as compared to other product categories. This might be due to the rather straightforward process in how to access and return cars in carsharing offerings and the small difference between getting to your own car versus getting to a carsharing car. On the contrary, the perceived *maintenance effort* is significantly more important for cars than for any other product category. This is probably due to the fact that maintenance is most frequently required for cars and thus facilitation in case of access has the biggest impact. Further, the perceived *storage effort* is relatively unimportant for bicycles. This might be explained by the always-available option to park a bicycle on the sidewalk and no need to provide some personal space for the rented good.

Experiential as well as *symbolic perceptions* are found to be less important for bicycles than for other categories. The small path coefficients of these first-order constructs let assume that bikes are regarded as a purely functional offering. Thus the majority of respondents seem not to use bikes for fun or to signal their social status. This might similarly explain why *personal attachment* is significantly more important for books than for cars. Cars are seen as a mode of transportation, while books are felt to be more personal.

3.7.4 Discussion of different perceptions from prospective users versus experienced users

Contrasting the perceptions of registered customers of a carsharing provider with those of consumers without any carsharing experience reveals important insights into what direction perceptions throughout society could develop when access becomes more common. After the two samples were matched by their consumption mode attitudes and socio-demographics one finds that – assuming that matching corrected all relevant ex-ante group differences – experienced access users perceive access offerings more positively in various dimensions due to learning effects.

Experienced access users perceive lower *risks of non-availability* and *failure* – confirming the expectation by Lamberton and Rose (2012) – perceive less *required effort* and feel *to impress others* even stronger when they are using access. Additionally, they also learned to *predict the accruing costs* for access better in advance. These modifications in beliefs are plausible and signal that consumers need to get to know access better in order to value its benefits more strongly. On the other hand, carsharing users feel less *bound to the community* of carsharing members and even less *personally attached* to the cars as compared to inexperienced consumers. These modifications are also plausible and show that some effects get even more pronounced with actual usage experience.

Besides, the formative measurement model has also been successfully re-evaluated with the additional sample of carsharing users. Comparing the thereby calculated importance with the importance of the matched sample without experience also shows some displacements. Experienced carsharing users attach more importance on functional aspects and less importance on symbolic aspects when evaluating access and ownership. Thus, it is important to communicate differently to existing and yet-

to-become customers. The latter appreciate positive symbolic meaning that is associated with using a certain consumption mode more than existing users do. Learning effects seem to cause the perceived absence of costs to become less important in determining the differential overall attitude. Thus, it is important to communicate this issue primarily to yet-to-become customers – for example by promoting flat-rate pricing models. On the other hand, perceived pre- and post-usage effort and environmental friendliness become more important for users with access experience. Access providers should try to stress those issues when communicating to their customers or trying to actively modify their business models concerning these aspects. For example, they could make the rental process even more convenient or replace their fleet by environmentally friendly electric vehicles.

3.7.5 Applications of the measurement model

The newly developed formative measurement model of *consumers' attitudes towards consumption modes* is a valid instrument that companies and public institutions can use to evaluate the perceptions and the overall attitude towards access and ownership. Consequently, it helps companies to decide which consumption mode to offer and to learn which offering characteristics are most important to consumers. For example, manufacturers deciding to move towards offering access as an additional consumption mode (consider, e.g., Daimler's car2go or BMW's DriveNow) may evaluate market potential and consumer preferences in different markets using this instrument. But it also helps public institutions to monitor consumers' perceptions and attitudes towards consumption modes in order to promote economic development programs or to support initiatives that strive to establish more sustainable ways of consumption. The results of the measurement tool can also be used by consumer policy organizations that aim to trigger political initiatives that ease access-based business models by changing regulations or giving special permissions (e.g. for parking carsharing vehicles).

The measurement model has been designed to be applicable across a broad variety of product categories. The measurement items can easily be adapted to different product categories, as its successful application in four different categories within the work at hand has shown. Thus it can be easily applied in various different contexts.

The instrument can further be used to determine the relative importance of different perceptual dimensions and perceptions from a consumers' point of view. If a PLS model is applied, the path coefficients and weights are easy to interpret measures of attribute importance. This helps companies to better understand what causes consumers to develop their overall attitudes towards consumption modes. Highly important aspects that are inherent in the current market offering should be particularly stressed in communication activities. If one particular perception is found to be important but the offering is not able to fulfill expectations, the management should try to take additional measures in order to improve relevant perceptions.

Another application of the measurement model is to use the importance of the perceptions to cluster customers or markets into homogeneous segments. The resulting segments then differ in their particular perception of consumption modes. The segments can serve as the foundation for targeted marketing campaigns or to develop custom-fit offerings that have specific features or are supported by additional services that make up for perceived shortcomings. In follow-up analyses, these segments can be compared according to their socio-demographics or behavioral data in order to directly derive managerial marketing strategies that can easily be implemented.

One further application is to periodically measure the perceptions of both consumption modes in order to monitor potential changes in consumers' beliefs and preferences. A company that is not yet offering access can track how an additional consumption mode next to ownership is evaluated and why it is valued or refused. When time has come, this company knows exactly which aspects of an access offering will be decisive and can act accordingly.

Finally, the measurement model can help companies in developing new access offerings. A company can benchmark an ownership offering against several variants of an access offering by including additional item sets for the alternative access offerings. The measurement of the ownership offering does not have to be repeated for each access offering because the same values can be used. The measurement model provides a standardized format to measure the particular perceptions of the access concepts as well as to benchmark it with existing ownership offerings.

3.7.6 Study limitations & avenues for further research

As this is the very first empirical study investigating perceptions and attitudes of both consumption modes – access and ownership – at the same time, the study's limitations offer valuable avenues for further research. A potential limitation stems from the fact that the rental goods have not been specified in terms of brands or product type. This was done in order to increase comparability to the completely unspecified ownership condition, but might have lead to different notions. Furthermore, the measurement of the (symbolic) perceptions might have been biased by social desirability, which has not been controlled for. Future studies could either include controls for the social desirability bias or try applying the third party technique. In terms of study design, the use of a matched sample in order to compare experienced to inexperienced access users might be criticized. If possible, it would be interesting to conduct a longitudinal randomized field experiment to overcome a potentially insufficient matching procedure. Replications using different product categories or collecting data in other countries would add to the generalizability of this study's findings. Bicycles are, for example, used mainly for utility reasons in Northern Europe, whereas in North America riding a bicycle is seen as a recreational activity (E. Rosenthal, 2011). It would be interesting to see how this difference will affect the results.

The recent rise of access led to the notion that ownership is not the exclusive consumption mode anymore. Even though consumers are increasingly facing the choice between access and ownership, the marketing literature has only had a very limited understanding about consumers' consumption mode perceptions and attitudes. The measurement model puts forward aids to close current gaps in the marketing literature on consumption modes as well as practitioners to perform market segmentations or to evaluate the consumption modes they offer or plan to offer. Thus this study contributes to the marketing literature by providing an item battery that is highly useful for the marketing discipline and to the managerial practice in industries in which access is on the rise.

4 Project II: How Consumers Respond to Consumption Mode Extensions

4.1 Introduction

Brand extensions are a common strategy to support the introduction of product or service innovations (D. A. Aaker & Keller, 1990; Völckner & Sattler, 2006). A well-known brand adds credibility, visibility, supports communication, and – in case of success – helps to build brand equity for the parent brand. However, the overall success of a brand extension depends on the extension's inherent features, the reactions of existing customers and whether the parent brand ultimately benefits or suffers.

A brand that introduces an access offering in addition to its ownership offerings can be regarded as extending its brand in order to conduct a *business model innovation*. Thus, managers face similar challenges when they introduce access as a new consumption mode, which the under-researched field of access-based consumption cannot answer yet (Chen, 2009; Lovelock & Gummesson, 2004): (1) Which aspects of an access offering are most important for market success – the product brand or the service convenience level? (2) How do current customers who already own branded goods of a given brand react to the introduction of an access offering by *their* brand? And finally (3), taking owners and non-owners of a brand into account, does the introduction of access ultimately harm or benefit the existing parent brand?

In the past, companies in consumer good markets have mainly relied on business models that transfer the ownership of the products at sale from the company to the consumer. The phenomenon that goods manufacturing companies start offering an additional access consumption mode by offering their own branded goods to consumers as a service in form of short-term rentals is relatively new. In 2009 Daimler launched car2go, the first carsharing service that has been launched by a car

manufacturer. Car2go has reached more than 500,000 customers within just four years (Daimler, 2013b). After registering, customers can easily rent and return Smart cars anywhere in one of more than 20 cities worldwide where car2go's service is available in the meantime (Daimler, 2013a). Soon after, various competitors such as BMW (DriveNow), CITROËN (Multicity), Ford (Ford2go), and Volkswagen (quicar) followed.

Existing research on consumer behavior is not transferable to this new mode of consumption due to the fact that access-based consumption takes place without the consumer acquiring ownership (Chen, 2009; Lovelock & Gummesson, 2004). Thus many important research avenues are currently under-researched. The aim of this research project is to advance theory and managerial knowledge on (1) how different designs of access offerings affect consumers' evaluations of those, (2) how ownership status affects the evaluation of access offerings, and (3) whether the parent brand is affected by the introduction of access as an additional consumption mode. Research questions (1) and (2) focus on consumers' evaluations of access offerings. This perspective is highly relevant for both start-ups and incumbents providing access-based offerings. The third research question (3) takes a broader perspective as it regards reciprocal effects between the introduction of access and the parent brand. Therefore this question is especially important for incumbent companies, which already provide an ownership consumption mode.

Especially with regard to the first research question (1), one should note that there is not *the one and only* access offering that is *the* alternative to an ownership offering – similar to brand extensions, which can also differ on many features. An access offering for a given branded good can vary on multiple aspects such as the provided service convenience (e.g. availability, ease of pick-up and return), the service quality or the pricing model. Lovelock and Gummesson (2004) addressed this important aspect and proposed that consumers who evaluate access offerings will attach less importance to the product brand as compared to the characteristics of the access provider. Bardhi and Eckhardt (2012) already found first support of this proposition in a qualitative study on the acceptance of access offerings: Access users' sign value has been found to primarily stem from the access consumption mode itself and not from the product brand. Lamberton and Rose (2012) added further emphasis on the importance of understanding consumers' evaluations of different versions of access

offerings. However – to the author's best knowledge – no empirical study has addressed this research question so far. Answers to the importance of different features of access offerings are of high importance to the management of access providers as well as goods manufacturers because they want to know which brands to include in access offerings and whether the cumbersomely created brand equity is still relevant for access offerings.

The second research question (2) covers a delicate managerial issue. How the brand's current customers are likely to react is a basic issue for the management of a product brand, which is included into a new access offering. Companies must be concerned that current brand owners either evaluate the access offering too positively or too negatively. A very favorable evaluation of the access offering might lead a large number of customers to switch to the new consumption mode, which ultimately causes cannibalization of sales. A very negative evaluation, on the other hand, might cause negative spillover effects for the parent brand, which might cause customers to switch to another brand. An additional access offer therefore ideally attracts brand non-owners – consumers who currently own a different brand or no product of the category in question. This research project is the first to raise the question whether consumers' brand ownership plays a role in determining their evaluation of access offerings.

If a brand has traditionally only been available via ownership and now becomes available via access as well, the incumbent's brand equity might be affected by this adaptation of its marketing strategy. This idea has been introduced by Lamberton and Rose (2012) and is the basis of the third research question (3). Thus, the perspective of an incumbent company asking itself whether adding an access offering will harm its well-established brand name is taken. Referring to this question Lamberton and Rose (2012) have assumed that access offerings might be beneficial for the brand image or the consumers' brand attitude – but again no empirical studies have investigated this research question yet. The question of potential spillover effects has been intensively researched in the literature on brand extensions. This thesis therefore draws upon brand extension literature in which positive and negative spillover effects from the extension to the parent brand as well as the reactions of owners in contrast to non-owners have been frequently investigated (Dall'Olmo

Riley, Pina, & Bravo, 2013; Kim, Lavack, & Smith, 2001; Kirmani, Sood, & Bridges, 1999).

In order to address the three above mentioned research questions, a series of five studies has been conducted in the course of this research project. In those consumer experiments various features of the access offering and differences in the characteristics of the consumers have been manipulated. Investigating potential spillover effects on the parent brands made it necessary to additionally collect evaluations of the parent brands when they solely offered ownership. Two of the five studies were conducted in two different product categories (cars and fashion) in order to test generalizability. To additionally increase external validity, one experiment was done with customers of a carsharing service instead of general consumer samples.

The structure of this work is as follows: The next section derives hypotheses on the evaluation of access and parent brands by integrating marketing theories, research on brand extensions as well as existing research results on access-based consumption. In the subsequent section, the methodology of all five studies is presented. The subsequent chapter presents the results of the experiments ordered by the three groups of hypotheses. A discussion of the results, their implications for theory and management and avenues for fruitful future research form the conclusion of this research project.

4.2 Hypotheses

Access offerings and brand extensions have certain similarities in common. In both, brand extensions and additions of an access offering, a company extends its offering and in doing so makes use of the same parent brand. Therefore theories and research approaches on brand extensions are well suited to be transferred to the emerging research area of access. However, there are also substantial differences between access offerings and good offerings that make it impossible to directly transfer results from the traditional brand extension literature to access offerings.

Existing research on brand extensions focuses on supporting the launch of product or service innovations, whereas the introduction of an access offering constitutes a business model innovation. Companies do not start to offer new products, but offer their existing products with a different ownership structure: In access there is no transfer of ownership – the customer only pays for consumption time. Furthermore the brand extension literature frequently differentiates step-down versus step-up brand extensions. This distinction is difficult to transfer to access offerings because it is not clear whether consumers perceive an access offering as subordinate or superior to existing ownership offers.

The hypotheses of this research project are ordered according to three research questions that have been raised in the introduction (see also Table 15). All hypotheses have their counterparts in the research on brand extensions: The first set of hypotheses is related to different characteristics of the access offering, which is similar to the question which characteristics of a brand extension lead to success (Broniarczyk & Alba, 1994; Lei, de Ruyter, & Wetzels, 2008; Milberg, Sinn, & Goodstein, 2010). The second set of hypotheses addresses the importance of the consumers' brand ownership status, which has also been covered in the research on brand extensions (Kirmani et al., 1999). Finally, the third hypothesis takes a different perspective by focusing on the potentially modified evaluation of the parent brand (and not the access offering anymore) – an approach that has also been a key topic in the research on brand extensions (Boisvert, 2012a; Dall'Olmo Riley et al., 2013; Gürhan-Canli & Maheswaran, 1998).

Table 15: Overview of Hypotheses (Project II)

Reference point	Hypotheses
Access evaluation	H_{1a}: The evaluation of access offerings is independent of the prestige level of the product brands the access offering is based on. H_{1b}: The evaluation of access offerings becomes more favorable with an increasing level of convenience that is offered by the access provider. H_{2a}: Compared to non-owners, owners of a distinct low prestige brand exhibit more favorable evaluations of an access offering that is based on this low prestige brand. H_{2b}: Compared to non-owners, owners of a distinct high prestige brand exhibit less favorable evaluations of an access offering that is based on this high prestige brand.
Parent brand evaluation	H_3: The introduction of access as an additional consumption mode does not affect the parent brand's evaluation.

4.2.1 Hypotheses on the importance of product brands and service convenience

The product brand used to play a major role in all ownership-based business models. But how important will the product brand still be in access offerings? Will other aspects become even more important?

The basic idea behind brand extensions is to leverage an existing and well-known brand by using the same brand name for other, new products. Thus the brand name is supposed to function as a quality surrogate in the uncertain situation of the market launch of a new product (D. A. Aaker & Keller, 1990; Völckner & Sattler, 2006). Even though brands are of high importance for goods and services, the locus of importance is different. In packaged goods "the *product* [emphasis added] is the primary brand" (Berry, 2000, p. 128) and serves consumers internally as a surrogate for the overall value of the good and externally as a signal towards others (Dawar & Parker, 1994; Dodds, Monroe, & Grewal, 1991). This supports the underlying rationale of brand extensions. Contrarily, in case of services "the *company* [emphasis added] is the primary brand" (Berry, 2000, p. 128). This difference is important in order to predict the importance of product brands in access offerings: Accordingly, the product brand will only be one of many relevant features that constitute the service brand. Other important factors are service features that enable easy access,

recovery of control and low prices (Berry & Parasuraman, 1991; Lovelock & Gummesson, 2004).

This proposition is also supported by the theory about *person-object relationships.* It is well known that we identify with our possessions in such a way that we regard those as a more or less central part of ourselves. Possessions are said to become part of our *extended self-concept* (Belk, 1988). However, research results have shown that those person-object relationships generally become weaker when goods are accessed rather than owned. For example, Durgee and O'Connor (1995) found that consumers show less personal attachment towards rented goods as compared to purchased goods. Also Bardhi and Eckhardt (2012) found very little identification or personal attachment between users and their rented objects. On the other hand, it is theoretically also possible that extensive access users start to consider the access experience and the rented goods as part of their selves. This possibility is explicitly not excluded by Belk (1988, 2013a), but it is deemed to be less effective as compared to material possessions due to three reasons: shared goods can never be unique, shared goods can be exchanged by the provider without the user's involvement and they do not gather patina from personal usage.

Several important research articles have claimed that product brands are comparatively unimportant in access offerings. Lovelock and Gummesson (2004) expect product brands to be of little importance in case of access while characteristics of the service offering are believed to become the decisive factor. Lawson (2011) builds on this assumption and speculates that need fulfillment and convenience will be more important as compared to the brand of the rented product for consumers who compare different access offers. Furthermore, qualitative research by Bardhi and Eckhardt (2012) has shown that carsharing users primarily value the utilitarian benefits whereas identity enhancement, which might be supported by the use of specific brands or identifying with a brand community, only plays a minor role. However, so far there has not been any empirical research that has tested theses claims in the context of access offerings.

In contrast, there is only one slightly related empirical study by Ainscough et al. (2011) that investigated the effects of the car model, the rental agency image and the price on the consumers' willingness to rent a car during their vacation. They found the car model to be important for consumers' decision making. However, this comes

at no surprise because in their study the two car options differed in their size. Naturally the larger car model was preferred in the setting of a multi-day vacation trip with luggage. Further they found a low importance of the car rental agency, but this is probably due to the fact that they only differentiated between a low budget and a normal car rental firm that both offered exactly the same service level. Thus, the study by Ainscough et al. (2011) is not relevant for answering the general research question of this study and a thorough empirical investigation is still necessary.

Brands are differentiated in various ways. Typical classifications of brands that were investigated in research on brand extensions are functional vs. prestige brands (Kim et al., 2001), prestige vs. luxury brands (Dall'Olmo Riley et al., 2013) or non-prestige vs. prestige brands (Kirmani et al., 1999). In this thesis, the focus is on *low vs. high prestige brands* because this is a one-dimensional distinctive feature that has been successfully applied before (Kirmani et al., 1999) and is not potentially connected to functionality (Broniarczyk & Alba, 1994).[25] High prestige brands are defined as brands which are bought for status, prestige and exclusivity reasons, whereas low prestige brands are bought primarily for their value for money (Park, Milberg, & Lawson, 1991).

Consumers are well aware that an access offering gives them only limited property rights for a short period of time (Lovelock & Gummesson, 2004). One can argue that due to the weaker relationships consumers form with accessed goods, they probably also care less about the characteristics of these goods – among them the product brand. Thus, consumers are expected to be indifferent among access offers based upon a low vs. a high prestige product brand. The set-up hypothesis is a hypothesis of equivalence (Wellek, 2010):

H_{1a}: The evaluation of access offerings is independent of the prestige level of the product brands the access offering is based on.

According to its definition, *service convenience* comprises the "consumers' time and effort perceptions related to buying or using a service" (Berry et al., 2002, p. 1) and is modeled to directly affect the service evaluation in terms of satisfaction, service quality and fairness. Berry et al. (2002) differentiate five types of service

[25] Classifying functional vs. prestige brands would make room for the possibility that the functional brand provides more or better functionality, whereas the prestige brand mainly represents a high level of social prestige, while it provides less functionality as compared to the functional brand.

convenience, out of which three relate well to access offerings: access convenience, transaction convenience, and benefit convenience. Access convenience refers to the time and effort required to initiate service delivery, transaction convenience covers all expenditures of time and effort to initiate a transaction, whereas benefit convenience describes the experienced convenience during the core service process. For access offerings this translates, for example, into the ease of getting to the renting stations for pickup and drop-off, the availability of rental goods, the possibility to make reservations, the temporal flexibility concerning the beginning and the end of rentals, and the ease of interacting with the provider.

In line with Lovelock and Gummesson (2004) and Lawson (2011) the product brand's decline in importance is hypothesized to go along with an increase of the importance of the access offering's level of service convenience. As the product brand is expected to be unimportant, the degree of service convenience is predicted to have a positive effect as it directly affects the usage experience:

H_{1b}: The evaluation of access offerings becomes more favorable with an increasing level of convenience that is offered by the access provider.

4.2.2 Hypothesized effects on current owners

If a product brand additionally becomes available via access, there are usually a lot of consumers who are already customers of this brand by having purchased a product from this brand. The big challenge for those brands is then: not to scare their existing customers, to simultaneously attract new customers and not to cannibalize their overall sales.

A study on vertical brand extensions found that a relevant characteristic for the success of brand extensions is the *ownership status* of the consumers – that is: Are they already owners of a product of the parent brand that now introduces the brand extension – or not?[26] Kirmani et al. (1999) compared the reactions of owners and non-owners to different kinds of vertical brand extensions and expected to find a so-called *ownership effect*, which implies that owners as compared to non-owners react

[26] Research on brand extensions typically differentiates *horizontal* and *vertical* brand extensions. Vertical extensions can either be positioned below or above the current position (step-down or step-up extensions). Both kinds of vertical brand extensions are very common in the industry. For example, in the automobile industry one brand typically introduces various models that differ regarding to price, size and quality (e.g. BMW 1 series, 3 series and 5 series).

more favorably to brand extensions due to their generally more favorable attitude towards the parent brand.

The logic of the ownership effect, which indicates that owners are likely to react more favorably to any actions of their brand because they have greater familiarity, knowledge, involvement and liking towards this brand can be motivated by various theories. According to the *mere exposure effect*, people already tend to prefer things, simply because they are familiar with them (Zajonc, 1968). In a similar fashion, the *mere ownership effect* predicts that physical possession leads to greater involvement, which in turn leads to a greater liking for the brand. We associate owned objects with ourselves and like them because we strive to maintain a positive self-image (Barone, Shimp, & Sprott, 1997; Beggan & Allison, 1997; Beggan, 1992). Various empirical studies also found direct experience as well as ownership to cause higher involvement and more favorable brand attitudes (Alba & Hutchinson, 1987; Celsi & Olson, 1988; Hoch & Deighton, 1989; Kirmani et al., 1999). Furthermore, owners have voluntarily decided to purchase the brand in the past "because they expect it to provide valuable benefits" (Kirmani et al., 1999, p. 89).

Surprisingly, Kirmani et al. (1999) found a deviation from the ownership effect in a study on brand extensions. They found that in case of low prestige brands the ownership effect does hold for any kind of brand extension (step-up or step-down). But, for high prestige brands the ownership effect was found to *only* hold for upward extensions. Against previous expectations, owners of high prestige brands evaluate a downward extension of *their* brand less favorably as compared to non-owners (see Figure 9).

	non-prestige parent brand		prestige parent brand	
step-up brand extension	$Attitude_{Owner} > Attitude_{Non\text{-}Owner}$	✓	$Attitude_{Owner} > Attitude_{Non\text{-}Owner}$	✓
step-down brand extension	$Attitude_{Owner} > Attitude_{Non\text{-}Owner}$	✓	$Attitude_{Owner} > Attitude_{Non\text{-}Owner}$	⊗

Note: ✓= hypothesis supported; ⊗= hypothesis not supported.

Figure 9: Hyhpotheses and Empirical Results of the Ownership Effect according to Kirmani et al. (1999).

Kirmani et al. (1999) explain this phenomenon with the high prestige brand owners' fear to lose exclusivity, while non-owners welcome the simplified availability due to

the lower prices. Also owners of high prestige brands like their brands more than others (Kirmani et al., 1999). However, they have purchased a good from a high prestige brand mainly due to its exclusivity that causes its associated social prestige (Chernev et al., 2011; Eastman et al., 1999; Park, Jaworski, & Maclnnis, 1986; Wilcox et al., 2009). Thus, owners of a high prestige brand dislike a downward brand extension because it dilutes their ownership by decreasing the brand's exclusivity.

The question of how owners evaluate the introduction of access is definitely an important question for goods manufacturing companies which neither want to scare away their customers nor cannibalize their sales. Following the propositions by Shocker et al. (2004), an access offering as well as a brand extension are substitutes to the original products. As access offerings typically allow usage at a lower price as compared to ownership and are easily available for much more people, it is likely that consumers regard access similar to a step-down brand extension. Considering access as a substitute to ownership and similar to a downwards extension, one would expect owners of high prestige brands to react similarly unfavorably to the introduction of access as Kirmani et al. (1999) found in their study on brand extensions. Thus the following hypotheses are formulated for low and high prestige brands:

H_{2a}: Compared to non-owners, owners of a distinct low prestige brand exhibit more favorable evaluations of an access offering that is based on this low prestige brand.

H_{2b}: Compared to non-owners, owners of a distinct high prestige brand exhibit less favorable evaluations of an access offering that is based on this high prestige brand.

4.2.3 Hypothesized effects on parent brand evaluations

Research on brand extensions typically not only investigates the effects of the parent brand on its extension, but also in turn how the extension can affect the equity of the parent brand. In the literature, those effects on the beliefs or attitude towards the parent brand are commonly called *parent brand dilution* or *reciprocity effects* (Boisvert, 2012a, 2012b; Gürhan-Canli & Maheswaran, 1998; Loken & John, 1993). Transferring this approach to the introduction of access as an additional consumption

mode, the question is whether and, if so, how the parent brand will be affected by the introduction of access.

The research on brand extensions typically builds upon *categorization theory* (Sujan & Bettman, 1989; Weber & Crocker, 1983) in order to explain how incongruent information is processed. The information that a parent brand introduces a brand extension is typically considered as being incongruent with the consumers' existing schema of the brand. An extension usually has a significantly different price and quality, which is not consistent with the consumers' previous associations (Kim et al., 2001). Depending on how this inconsistent information is processed, the parent brand might become more or less diluted. Categorization theory proposes two processing models that are directly relevant for brand extensions.

One processing model that categorization theory proposes is the so-called *bookkeeping* model. The idea is that "each instance of stereotype-relevant information is used to modify the stereotype gradually" (Weber & Crocker, 1983, p. 961) (see Figure 10). So, any piece of inconsistent information weakens the corresponding belief of the parent brand and leads to a slightly less favorable evaluation of the parent brand (Fishbein & Ajzen, 1975; Kim et al., 2001). Empirical studies on brand extensions confirm this theory. Especially vertical step-down extensions were found to face a high risk of parent brand image dilution (D. A. Aaker, 1997; Kim et al., 2001; Lei et al., 2008)

Another processing model that is suggested by categorization theory is the so-called *subtyping* model. If the inconsistent information is more radical and only partially applies to the previous stereotype, people develop new stereotypic structures with a separate set of beliefs associated with each subtype rather than modifying the superordinate stereotype (Gürhan-Canli & Maheswaran, 1998; Weber & Crocker, 1983) (see Figure 10). The subtyping model is used to explain the successful shielding effect of distancing techniques: If a brand extension is positioned further away from the parent brand (e.g. by linguistic or graphical means), the parent brand was found to be less negatively affected (Kim et al., 2001; Kirmani et al., 1999).

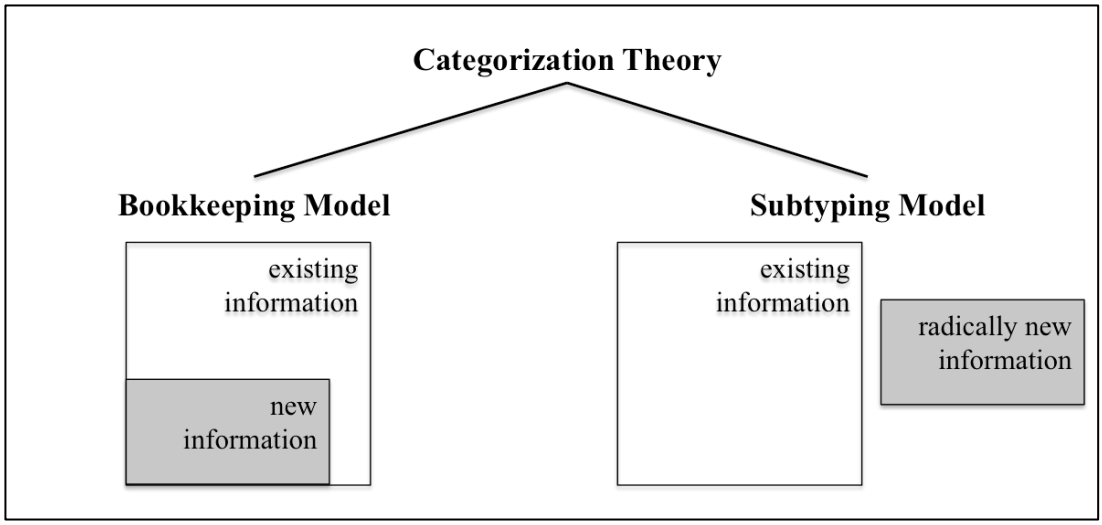

Figure 10: Processing of New Information according to the Bookkeeping and the Subtyping Model.

The subtyping model can also be used to explain the results from Dall'Olmo Riley et al. (2013) on the feedback effects of vertical downscale brand extensions on the parent brand: They found that *very up-scale luxury brands* (e.g. Porsche or Prada) do not suffer from dilution effects, whereas *prestige brands* (e.g. Audi or Diesel) suffer from such effects. Consistent with categorization theory, a more atypical extension, (the brand extension of the luxury parent brand is more atypical, because the distance between the original brand and its mass market extension is larger as compared to a prestige brand) has less impact on the parent brand because the subtyping (and not the bookkeeping) model applies (Dall'Olmo Riley et al., 2013).

Current research on access, however, offers little guidance. Only Lamberton and Rose (2012) encourage further research that "adopt[s] a broader view of sharing systems" (p. 123) by investigating the consequences for the parent brand of starting to offer access offerings. They expect positive effects on brand attitude, loyalty and corporate image due to the improved resource utilization that is inherent in access offerings due to intensified and prolonged usage (Belz, 1998; Berry & Maricle, 1973; Lovelock & Gummesson, 2004; Scholl, 2008). On the other hand, these positive effects on the environment might be offset by increased logistics and maintenance efforts. Furthermore, Lamberton and Rose (2012) did not discuss a potentially negative effect on the parent brand's image due to potentially inconsistent associations, which is an important topic in research on brand extensions (John, Loken, & Joiner, 1998; Milberg, Whan Park, & McCarthy, 1997).

When applying categorization theory to the introduction of access offerings, the question is which processing model will apply. It has been argued before that consumers perceive access offers quite differently as compared to ownership: Goods are no longer purchased but rented on a short-term basis; no transfer of ownership takes place; the personal relation to the object becomes much weaker. Thus, consumers are expected not to fine-tune their established stereotype of the parent brand, but to develop a new subtype when confronted with the incongruent information that a company is adding an access consumption mode. For the parent brand's evaluation this means that the original stereotype will still be perceived as accurate and will not be changed. Hence it is expected that the introduction of an additional access offer will not affect the parent brand's evaluation. Furthermore, the introduction of access as an additional consumption mode is neither clearly similar to a step-down nor a step-up brand extension. Depending on the pricing tariff and the provided service quality, consumers might perceive access as superior or worse than ownership. Thus, it is expected that the parent brand's evaluation will not be affected for both types of parent brands – low *and* high prestige parent brands:

H_3: The introduction of access as an additional consumption mode does not affect the parent brand's evaluation.

4.3 Methodology

In order to address the proposed hypotheses, a series of five experimental studies has been conducted. Studies 1 and 2 have been conducted in two different product categories each – cars and fashion – because previous research has shown (see chapter 3) that drawing general conclusions about access offerings is difficult. Thus, seven experiments have been conducted in total.

Both product categories, cars and fashion, are suitable for business-to-consumer access offerings and comprise a large range of different brands with different positioning strategies that allows picking distinct low and high prestige brands.[27] Furthermore, authors of relevant studies in the brand extension literature used similar product categories which enables better comparability: Kirmani et al. (1999) as well as Dall'Ollmo Riley et al. (2013) both investigated the car and the fashion industry, while Kim et al. (2001) researched cars and wristwatches.

It is also important to note that access offerings for cars and fashion differ in certain ways. A carsharing car always needs to be clearly marked, so that it can be found, whereas rented clothes do not need a publicly visible mark. The usage duration for carsharing is usually between a few minutes to a few hours, whereas fashion is typically rented for several days and is also used for a longer period of time. Finally, the price paid for fashion is a lot less compared to cars, while the purchase frequency is a lot higher for the former. Due to those differences it is important to investigate different product categories in order to test external validity across categories. At the same time it is difficult to derive causal effects from the just mentioned category characteristics by comparing the results from two product categories, as two different categories never differ solely in one particular aspect.

4.3.1 Study designs

The study designs of all experiments share a lot of commonalities (see also Table 16 for an overview). Their differences as well as commonalities are presented subsequently.

[27] The product categories, cars and fashion, are both suitable because those products typically have a high idling capacity and are not too cheap (Botsman & Rogers, 2010).

Table 16: Overview of Experiments and Specifications of the Experimental Factors

	Study 1		Study 2		Study 3	Study 4	Study 5
	Cars	Fashion	Cars	Fashion	Cars	Cars	Cars
Brand Prestige	Hyundai / Audi	H&M / BOSS	Ford / BMW	H&M / BOSS	Opel / Audi	Opel / Audi	Hyundai / Audi
Ownership Status			owner / non-owner	owner / non-owner	owner / non-owner	owner / non-owner	
Price Level			low / high	low / high	low / high		
Convenience Level					low / medium / high		
Branding Strategy						close / distant	
Consumption Modes	Ownership / Access	Ownership / Access	Ownership / Access	Ownership / Access		Ownership / Access	

Note. Filled in cells denote factors and their dimensions that have been manipulated in the respective study.

Design of Study 1

Study 1 manipulated the type of consumption modes offered and the product brand the access offering is based on. Thus the study is a 2 (consumption modes offered: only ownership / introduction of an additional access offering)[28] × 2 (brand prestige: low prestige brand / high prestige brand) between-subjects design that was separately conducted in a car and a fashion context. The assignment to one of the experimental conditions was completely randomized. The low prestige car brand was Hyundai, the high prestige car brand Audi. The low prestige fashion brand was H&M, while the high prestige equivalent was BOSS.

The treatment was designed as a fictitious consumer reports article that reported about the plans of the low or high prestige brand (depending on the second experimental factor) to introduce an access offering soon. The control group was not exposed to such an article. The article contained written and tabular information about the availability, the sign-up process, the usage process, the service quality, the pricing tariff as well as the price level (see Figure 17 – Figure 20 in appendix B.1). The displayed prices were based on current market prices (Goodman & Irmak, 2013). The prices of the carsharing access offers were composed of the price while

[28] This factor can also be interpreted as the distinction between a control and a treatment group. In that sense, the *only ownership* level is the control group whereas the *introduction of an additional access offering* is the treatment group.

driving and the price while parking: 0.22€/minute and 0.09€/minute for Hyundai and 0.25€/minute and 0.10€/minute for Audi respectively. The prices for the fashion rental offers were illustrated by providing price information for renting a pair of jeans, a gown and a suit plus shirt for a period of five days. The pricing was 12€, 11€, and 33€ for H&M and 20€, 52€, and 81€ for BOSS.

A priori G*Power 3 calculations showed that a sample size of n = 128 in each product category would have been required to find medium-sized effects of f = .25 (calculated with α = .05, (1-β) = .80 numerator df = 1, number of groups = 4) (Faul, Erdfelder, & Lang, 2009). The size of the collected sample for both product categories was N = 302. Due to the resulting small cell sizes, analyses of covariance were necessary for study 1 in order to control for potential effects due to unequal group assignments.

Design of Study 2

Study 2 additionally investigates the impact of ownership status (i.e. being owner of the product brand the access offering is based upon or not) and the price level of the access offering. Compared to study 1 this enables testing hypotheses H_{2a} and H_{2b} additionally and to rule out the possibility that the results from study 1 have been influenced by the unequal (but market-oriented) prices of the two access offerings.

The study was designed as a 2 (consumption modes offered: only ownership / introduction of an additional access offering) × 2 (product brand: low prestige brand / high prestige brand) × 2 (ownership status: non-owner / owner) × 2 (price level: low prices / high prices) between-subjects design that was separately conducted in a car and a fashion context. The assignment to all factor levels was random, except for the factor ownership status, which was accomplished based upon self-declaration.

The low prestige car brand used in this experiment was Ford, while the high prestige car brand was BMW. The low prestige fashion brand was H&M, while the high prestige equivalent was BOSS – similar to study 1. In this study, there were two different price levels for each access offering: The low price level was equivalent to the prices of the low prestige access offerings from study 1, while the high price level was equivalent to those prices that were used for the high prestige access offering in the former study. Thus each access offering was priced with the same two price levels – irrespective of the product brand it was based upon. As in study 1, the

treatments were designed as notional consumer report articles that were only presented to respondents in the access condition (see Figure 21 and Figure 22 in appendix B.1).

The appropriate sample size was calculated a priori with G*Power 3 (effect size f = .10, α = .05, (1-β) = .80, numerator df = 1, number of groups =12) and added up to a required sample size of 787 respondents for each product category.[29] The total sample size collected was N = 1807.

Design of Study 3

The focus of study 3 is the more detailed examination of consumers' evaluation of access offerings with different characteristics. In this study the set of manipulated factors that shape the access offering is further extended to enable testing of hypothesis 1b, too: In addition to the prestige level of the product brand, the price and the ownership status, the *service convenience* of the offerings is manipulated in this study. The design of the study is a 2 (product brand prestige: low prestige / high prestige) × 2 (price level: low price level / high price level) × 2 (ownership status: non-owner / owner) × 3 (service convenience level: low convenience level / medium convenience level / high convenience level) between subjects experimental design. The treatment came again in the form of a notional consumer reports article that described the respective access offering. Respondents were randomly assigned to all factors, except for ownership status. As before, this was a self-declared attribute.

The service convenience level was varied in three steps, which had been successfully pretested before the experiment (see chapter 4.4.1). The three convenience levels differed in terms of availability, ease of renting and returning, quality of provider interaction, service quality provided and insurance terms (see Figure 23 – Figure 25 in appendix B.1). As different brands as well as different convenience levels cause different costs for the provider, the notional access offerings had to be priced accordingly – the higher the access offering's convenience level and the brand prestige of the good it is based upon, the higher the price. The factor price level had two values in order to test for price level related effects. The prices were either 10% below (low price level) or 10% above (high price level) current market prices in

[29] The factor price level was nested in the access condition. Thus a total of 12 groups for each product category were formed.

Germany (see Figure 23 – Figure 25 in appendix B.1). The context of this study was the automobile industry. The brand Opel served as the low prestige car brand and Audi as the high prestige product brand.

The appropriate sample size was calculated a priori with G*Power 3 (f = .10, α = .05, (1-β) = .80, numerator df = 2, number of groups = 24). The calculation results in a minimum sample size of 967 respondents. The total sample size collected was N = 1,088.

Design of Study 4

The main purpose of study 4 is to explicitly test whether the parent brand might have remained unaffected by the introduction of access solely due to the respondents' implicit presumption that the access offering would be branded highly distant from the parent brand. This might have happened because the treatments in studies 1 and 2 did not contain explicit information on how the access offering is positioned. In this study, the new access offering is therefore either branded to be close to the parent brand or to be rather distant.

The experimental design of study 4 was a 2 (product brand prestige: low prestige / high prestige) × 2 (access offer branding strategy: close to parent brand / distant from parent brand) × 2 (ownership status: non-owner / owner) × 2 (consumption modes offered: only ownership / introduction of an additional access offering) between subjects design. Those in one of the treatment groups were again exposed to a notional consumer reports article that described the respective access offering. Those in the control condition were not given any information on an access offering and were solely questioned about their parent brand evaluation. Respondents were randomly assigned to all factors, except for ownership status, which was self-declared. The experiment was conducted only in the cars industry. The brands used were identical to those from study 3 (Audi and Opel).

By placing the parent brand name directly next to the term *carsharing* (e.g. *AudiCarsharing*) the *close* branding distance condition was operationalized. In the *far* branding distance condition, the parent brand was not part of the actual access brand (*CarNow)*, the relation between the access brand and the parent brand was only mentioned in the article (Kim et al., 2001) (see Figure 26 and Figure 27 in appendix B.1).

The appropriate minimum sample size is n = 787 according to a priori calculation with G*Power 3 (f = .10, α = .05, (1-β) = .80, numerator df = 1, number of groups = 12). The total sample size collected was N = 871.

Design of Study 5

Study 5 is different to the previously described studies because it has been a scenario experiment with signed-up carsharing customers. The study's objective was to find out how customers would react to a switch from the current high prestige product brand to a low prestige car brand.

The respondents were randomly assigned to one of two conditions. In the treatment condition they read a scenario that told them to imagine that the carsharing firm would change the car brand of its carsharing fleet from a high prestige brand (Audi) to a low prestige brand (Hyundai).[30] As respondents were not given any information on a change of price, they had to assume that the price per minute stayed unchanged – however this can only be assumed because the cooperating carsharing provider did not wish to provide any information on this issue to the respondents.

For the purpose of this experiment an online survey was sent to all customers of a cooperating carsharing firm. Participants were incentivized by the option to take part in a lottery.[31] In total 350 customers completed the survey in January 2013. The random assignment resulted in n = 171 respondents in the treatment group and n = 179 in the control group.

After reading the scenario, the respondents were asked to answer questions related to the high prestige car brand, the low prestige car brand and the brand and offering of the carsharing provider. In the control condition the respondents did not receive information about any potential change in car brands, but a short note that they would be asked some questions about the carsharing provider's brand and offering, the current car brand (the high prestige brand), and one further car brand that would be randomly determined. However, the additional car brand was not randomly determined, but was always the low prestige brand that was also used in the treatment condition (Hyundai) in order to have a baseline with which the results of

[30] As this was an experiment in a real setting, it was not possible to design a stronger manipulation (e.g. a scenario that the company is about to switch brands) in order to not scare the carsharing company's customers.
[31] Participants could win free minutes with the carsharing provider as well as backpacks.

the treatment condition could be compared to. The order of the brands to be evaluated was similar across conditions: high prestige car brand first, low prestige car brand second, and access offering as well as access provider third.

4.3.2 Sampling

Except for the fifth study, a third-party research panel provider (GMI) was contracted to conduct sampling among the German Internet population for each study.[32] The participation was anonymous and compensated (approximately 1€ for completing a survey). All respondents had to be at least 18 years old. In order to apply for the cars condition respondents had to live in cities with more than 100,000 inhabitants, because smaller towns are deemed not being suitable for profitable operations of a carsharing service (personal communication with M. Ohr, 10.04.2012).[33] The samples' characteristics are reported in appendix B.2.

All questionnaires in studies 1 – 4 contained an instructional manipulation check for those participants in the treatment condition in order to make sure that the treatment was read (Goodman & Irmak, 2013; Oppenheimer, Meyvis, & Davidenko, 2009). Everyone who failed to correctly answer a question about the content of the consumer report article (which was used as treatment) was excluded from further participation in the study.[34]

4.3.3 Measures

Content and structure of all questionnaires have been highly similar. Adaptations of the questionnaire items that have been made in the course of the research project are explicitly noted.

If not otherwise stated, all perceptions have been measured on seven-point semantic differentials, where higher numbers represent more positive scores.[35] In the

[32] Data collection for study 1 took place in January 2013. Study 2 was conducted in March 2013. Finally, studies 3 and 4 were conducted in parallel in June 2013.
[33] This requirement had to be eased in the fourth study because the sample provider could not contact any more persons who haven't had completed one of the previous questionnaires.
[34] On the page after the treatment, respondents were asked to select one out of four answers that described the content of the just read consumer reports article best. Only one answer was correct. Approximately 20% of respondents did not choose the correct answer and were thus excluded from further participation.
[35] In all studies, both, single-item and multiple-item measures were used. Both possibilities have certain advantages and disadvantages. Single item measures save time and do not cause inappropriate

following, the English versions of the items are reported even though the questionnaires were administered in German. For a comprehensive table with all constructs in German and English, please see Table 39 in appendix B.3.

The structure and content of the questionnaires was as follows: First respondents were welcomed to the study. Next, they had to answer screening questions about their age, size of city, car ownership and fashion brands ownership. The answers to those questions were used to determine a respondents' ownership status. For car ownership, respondents had to state the brands of their most and (if applicable) second most driven car. For fashion brands, respondents had to indicate the amount of clothes they own from different fashion brands on a labeled 5-point scale (1: *none*; 2: *very few*; 3: *relatively few*; 4: *relatively many*; 5: *lots of*). Respondents who indicated ownership of the car brands in question or owned more than *relatively few* pieces of a fashion brand were considered as owners.

After that, respondents in the treatment condition were presented the consumer reports article or the notional scenario description in study 5, followed by the instructional manipulation check question and questions concerning the evaluation of the access offering. *Attitude towards the access offering* was an average of three items that asked how the respondents thought about this new offering (*not favorable at all* / *very favorable*, *very negative* / *very positive*, *worthless* / *valuable*). The *intention to use* was measured by asking for the probability of using the access offering by the help of a five-point probability scale (*0-19%* / *20-39%* / *40-59%* / *60-79%* / *80-100%*). Only in study 5 an additional measure of the *perceived price fairness of the access offering* was part of the questionnaire. Its measurement took place with a single item on a 7-point semantic differential (*the prices for this sharing offering are too cheap* / *are too expensive*).

From there on the questionnaires for both – control and treatment group – were equal again. The next part of the questionnaire dealt with the evaluation of the product

respondent behavior (Drolet & Morrison, 2001). They are suitable for concretely, unambiguous constructs, such as attitude, beliefs or intentions (Bergkvist & Rossiter, 2007; Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012; Rossiter, 2002). On the other hand they are not suitable for complex constructs such as personality traits (Bergkvist & Rossiter, 2007). Multi-item measures also provide a less discriminating response scale as compared to multi-item measures (Bergkvist & Rossiter, 2007). Furthermore, a study found that the predictive validity performance of single-items can be relatively variable across product categories and stimuli (Diamantopoulos et al., 2012). Being aware of arguments pro and contra, both methods are used. This comes with the advantage, that common method bias is reduced (Bergkvist & Rossiter, 2007).

brand. Subjects were asked about their *brand attitude*, *brand purchase intention*, *willingness to pay a price premium* and the *willingness to recommend the brand to others*. Brand attitude was an average of two items that asked how people thought about the brand (*not favorable at all* / *very favorable*, *dislike very much* / *like very much*). The remaining three aspects of brand evaluation were measured by single-items each (*purchasing something from this brand is highly unlikely* / *likely*, *I am not* / *am willing to pay more for this brand than for a comparable brand, I would not* / *would definitely recommend this brand to others*). Furthermore, the respondents were also asked about their subjective brand image in terms of *innovativeness* (*very predictable* / *very innovative*) and *eco-friendliness* (*acts not environmentally friendly* / *acts very environmentally friendly*) to gain insights into the kind of potential image changes. As from study 2 the measurement of brand image was extended by a measure of *brand exclusivity*, which was also measured on a 7-point semantic differential (*this brand is available to everyone / this brand is only available to an exclusive group*). Finally, respondents had to answer a series of control questions.

4.4 Results

The presentation of the results proceeds along the lines of the proposed hypotheses in order to facilitate a clear presentation. Additional comprehensive results tables can be found in appendices B.4 – B.10.

4.4.1 Pretests

In order to support the selection of suitable stimuli for the experiments, pretests on brand prestige and different service convenience levels have been conducted before they have been applied in the experiments.

Pretests on Brand Prestige

In a pretest of brand prestige, respondents were asked to evaluate various automobile and fashion brands concerning their *brand familiarity*, *brand attitude* and perceived *brand prestige* in order to select appropriate low and high prestige brands (Dall'Olmo Riley et al., 2013; Kim et al., 2001; Milberg et al., 2010). The presentation order of the brands was random. The evaluations were all measured on seven-point semantic differentials. In this pretest 125 respondents took part and evaluated both sets of brands. As all investigated brands were well known ($M > 4.90$) and at least neutrally evaluated ($M > 3.09$), the brands for the studies could be selected based on their associated prestige level. Means (with standard deviations in parentheses) for the low prestige car brands were 3.35 (1.27) for Ford and 3.11 (1.16) for Opel; means for the high prestige car brands were 6.12 (0.89) for Audi and 6.54 (.62) for BMW.[36] The low prestige fashion brands' prestige was evaluated at 3.38 (1.32) for H&M, whereas high prestige fashion brands were evaluated at 6.42 (0.75) for BOSS.

Pretests on Service Convenience Level

Different levels of service convenience were pretested for carsharing offerings in a second pretest. Each participant was asked to read one table that described an access offering and to rate the access offering in terms of the convenience it offers to a

[36] Due to a technical failure the sample that evaluated Ford only comprised 23 respondents. That is why a second pretest was conducted at the end of the questionnaire of study 1 with all respondents from the no-treatment group in the car product category ($n = 222$). In this pretest Ford's brand prestige was evaluated at 4.16 (1.39). The higher prestige evaluation is in line with the evaluation of other low prestige brands in this pretest (e.g. Škoda with 3.62 (1.36)).

customer on a seven-point semantic differential: (1) *not at all convenient* … (7) *very convenient*. In total there were three different versions of access offerings described, but the respondents only read one of them, as it was a between-subjects set-up. In contrast to the experimental stimuli, no specific brand was mentioned.

The convenience level pretest for cars was conducted at the end of all surveys in study 1, which were in the cars and no-treatment condition (n = 150). The three types of carsharing offerings were rated as follows: 3.92 (1.32) for the low convenience, 4.85 (1.53) for the medium convenience, and 5.47 (1.25) for the high convenience access offering. Games-Howell post-hoc tests showed that low and medium convenience levels were significantly different, $p \leq .01$. However, the difference between medium and high convenience narrowly missed the 5%-significance level with $p = .10$.

4.4.2 Manipulation checks

The manipulation check to control the intended manipulation of brand prestige by investigating two different brands has been successful in all five studies (see appendix B.4). The perceived brand prestige has always been significantly larger for the high prestige brand as compared to the low prestige brand. Except for study 3, the analysis of each manipulation check has been performed solely with those respondents in the respective control conditions.[37]

Further it could be shown that despite the manipulation of brand prestige, the corresponding brand quality judgments have been comparable across both product categories. This has been tested additionally for studies 1 and 2 in order to rule out alternative explanations (see appendix B.4).

Also the additional manipulation check in study 3 to control the intended differences among the three service convenience levels has been successful. The manipulation check in study 4 for the perceived branding distance has been successful, too (see Table 41 and Table 42 in appendix B.4).

[37] Study 3 was designed without a *control* condition. Thus, the brand prestige manipulation check in this study has been based upon respondents, who *were* exposed to one of the access offerings. However, they had to be non-owners in order to eliminate ownership effects.

4.4.3 Results of hypothesis 1a

Hypothesis 1a suggests that the evaluation of the access offering is independent of the product brand's prestige level. This hypothesis could be tested for all seven experiments. To assess this hypothesis, in each case a MAN(C)OVA and follow-up AN(C)OVAs were calculated for the two dependent variables *access attitude* and *access usage intention*, which measure the access evaluation. Because this hypothesis is testing equivalence and a non-significant test is no sufficient proof of equivalence, specific tests of equivalence have been performed additionally (Wellek, 2010).[38]

Results of study 1 – cars

In study 1, the MANCOVA contained those control variables that do not harm the assumptions as covariates:[39] *access involvement*, *access fit* and *age*. The main effect of brand prestige, $V = .00$, $F(2, 64) = .01$, $p > .10$, is found to be non-significant in the multivariate and the univariate analysis of variance, $F_{attitude}(1, 65) = .02$, $p > .10$, $F_{intention}(1, 65) = .02$, $p > .10$ (see Table 44 in appendix B.6).

In order to specifically test the hypothesis of equivalence, the equivalence range was set to the *strict* tolerance level $\varepsilon = \pm .36$ (Wellek, 2010, p. 16). An alpha-level = .05 results in a very low test power of $(1-\beta) = .15$ due to the small sample size. Thus the more *liberal* tolerance level $\varepsilon = \pm .74$ was applied in this case. The *t*-values based on the adjusted means for access attitude ($t_{attitude} = 0.85$) and usage intention ($t_{intention} = 0.37$) are within the critical interval [-1.38, 1.38]. Thus, equivalence at a *liberal* level is given and hypothesis 1a is supported.

[38] A test of equivalence does not strictly test for equivalence, but assumes a tolerable zone around the mean differences of two groups (in the case of equivalence tests for two unrelated samples). Wellek (2010) also describes equivalence as "equality except for practically irrelevant deviations" (p. 1). The null and alternative hypotheses to be tested in a two-group design are:
H_0: $\Theta \leq -\varepsilon_1$ or $\Theta \geq \varepsilon_2$; H_1: $-\varepsilon_1 < \Theta < \varepsilon_2$
Where Θ is the parameter of the degree of dissimilarity (commonly defined as $(\mu_1 - \mu_2)/\sigma$) and ε_1 and ε_2 define the equivalence interval (the smaller the latter two values, the stricter the test). Wellek (2010) recommends to set $\varepsilon = .74$ for liberal equivalence and $\varepsilon = .36$ for strict equivalence. Wellek (2010) provides R and SAS codes for computing critical intervals and test power for *t*-values from independent samples *t*-tests on the accompanying website of his book. If the observed *t*-value falls inside the critical interval, the null hypothesis can be rejected and equivalence within a tolerable zone is assumed (Wellek, 2010).

[39] All covariates had to have significant correlations with one or both of the dependent variables. Further the point-biserial correlations between the covariates and the treatment effect had to be low to medium in order to limit confounding between covariate and treatment. Furthermore, all potential covariates were controlled for treatment-by-covariate interactions (homogeneity of regression) by calculating type III models with all potential interactions (Warner, 2012). To be included in the final type I model the control variables had to have significant effects (Hair, 1998).

Results of study 1 – fashion

In the MANCOVA, with *access involvement* and *access fit* as covariates, the level of brand prestige is found to be significant, $V = .10$, $F(2, 62) = 3.51$, $p \leq .05$, after having taken into account the covariates. The picture for the dependent variable *access attitude* is similar ($F(1, 63) = 7.09$, $p \leq .05$), while in case of *access usage intention* the main effect of brand prestige, $F(1, 63) = 0.50$, $p > .10$, is not significant (see Table 45 in appendix B.6).

Despite showing no significant effect, the *t*-value of the adjusted mean for *access usage intentions* lies neither within the *strict* [-0.19, 0.19] nor the *liberal* [-1.37, 1.37] critical interval ($t_{\text{access usage intention}} = -1.68$). Consequently H_{1a} is not supported in case of fashion.

Results of study 2 – cars

In the cars category in study 2, a MANOVA on access evaluation revealed a significant main effect of brand, $V = .02$, $F(2, 572) = 5.32$, $p \leq .01$, and a significant two-way interaction of price × brand, $V = .01$, $F(2, 572) = 3.16$, $p \leq .05$. Further, the two-way interaction owner × brand narrowly misses the significance level, $V = .01$, $F(2, 572) = 2.85$, $p \leq .10$ (see Table 46 in appendix B.6).

The univariate analysis for *access attitude* shows that the main effect of the brand's prestige level is not significant, $F(1, 573) = 0.49$, $p > .10$. Setting the equivalence range at the *strict* tolerance level $\varepsilon = \pm 0.36$ (Wellek, 2010, p. 16), the critical interval for *t* [-2.69, 2.69] covers the estimated *t*-value ($t = 0.68$) at a test power ($1-\beta$) = .99. Thus at a strict level, equivalence is given and hypothesis 1a is supported.

The ANOVA for the dependent variable *intention to use the access offering* reveals a significant main effect of brand, $F(1, 573) = 6.35$, $p \leq .05$. The usage intention is found to be higher for high prestige car brands ($M = 2.08$) in comparison to low prestige car brands ($M = 1.84$), $F(1, 573) = 6.35$, $p \leq .05$.[40] Thus H_{1a} is contradicted if the usage intention is used as a proxy for the evaluation of an access offering.

Furthermore, the results show that the different price levels in study 1 have not influenced the results. Even though the main effect of price is significant for *access*

[40] This result is not contradicted by the significant ownership status × brand and price level × brand interactions because they are both hybrid in nature and leave the brand prestige factor interpretable (see Figure 30 - Figure 33 in the appendix).

attitude, it is rendered not interpretable by an interesting interaction effect between brand prestige and price level.[41] Interaction tables reveal that an access offering based upon a low prestige product and priced at the lower level leads to more favorable evaluations as compared to the higher price level (interaction effect = .14 for *attitude*; interaction effect = .08 for *usage intention*). More interestingly, it can also be learned that access offerings with high prestige brands are more favorably evaluated if they are priced at the *higher* price level as compared to a lower price.

Results of study 2 – fashion

In the fashion product category, the MANOVA on access evaluation reveals a significant main effect of brand (V = .03, $F(2, 605) = 7.90$, $p \leq .001$) as well as a significant two-way interaction between ownership status and brand (V = .02, $F(2, 605) = 5.91$, $p \leq .01$) (see Table 47 in appendix B.6).

Contradicting H_{1a}, the ANOVA results for *access attitude* reveal a significant main effect of the prestige level of the fashion brand, $F(1, 606) = 11.31$, $p \leq .01$. Access offerings based on high prestige brands are more favorably evaluated (M = 4.07) as compared to low prestige brands (M = 3.62).

The ANOVA with *access usage intention* as dependent variable also reveals a significant main effect for brand ($F(1, 606) = 13.83$, $p \leq .001$).[42] The significant effect of brand contradicts hypothesis 1a. Analyzing the group means shows that if a fashion access offering is based on a high prestige brand it is more likely to be used as if it was based on a low prestige brand ($M_{\text{high prestige}} = 1.80 > M_{\text{low prestige}} = 1.50$).

Results of study 3 – cars

A MANOVA reveals a non-significant main effect of brand prestige. However, the interactions ownership status × brand prestige (V = .01, $F(2, 1063) = 3.12$, $p \leq .05$) and price × brand prestige (V = .01, $F(2, 1063) = 3.12$, $p \leq .01$) are found to be significant (see Table 48 in appendix B.6).

The hypothesis is supported for *access attitude* as the main effect of brand prestige is found to be not significant ($F(1, 1064) = 0.13$, $p \geq .10$) and the test of equivalence

[41] See Figure 28 and Figure 29 in the appendix.
[42] The interaction graphs of the significant ownership status × brand interaction reveal equal ranks. Thus this interaction effect can be classified as ordinal and both significant main effects can be interpreted at a global level.

(Wellek, 2010) is positive: The *t*-value of the independent *t*-test between the low and the high brand prestige groups, $t = -0.34$, falls well within the critical interval for *strict* equivalence. An even stricter tolerable zone that only accepts 5%-deviations as compared to 10%-deviations also covers the calculated *t*-value in the critical interval [-1.32, 1.32] for $\varepsilon = 0.18$.[43]

Also in the case of *access usage intention*, hypothesis 1a is fully supported. The main effect of brand prestige is found to be not significant ($F(1, 1064) = 0.58$, $p \geq .10$) and the test of equivalence based upon a *t*-test ($t = 0.76$) yields positive results for strict equivalence and the even stricter equivalence – similar to the previously reported results.

Also in this study the main effect of price is either not interpretable due to disordinal interactions or not significant.[44] Furthermore the interaction pattern between price level and brand prestige, which has already been identified in study 2 on cars, is confirmed (interaction effect = .11 each).

Results of study 4 – cars

In study 4, the MANOVA only reveals one significant effect – namely the main effect of brand prestige ($V = .01$, $F(2, 571) = 3.39$, $p \leq .05$). Two interaction effects narrowly miss the 5%-significance level: the brand prestige × ownership status interaction ($V = .01$, $F(2, 571) = 2.80$, $p \leq .10$) as well as the brand prestige × branding strategy interaction ($V = .01$, $F(2, 571) = 2.64$, $p \leq .10$) (see Table 49 in appendix B.6).

For the dependent variable *access attitude*, hypothesis 1a can be confirmed. The main effect is found to be not significant ($F(1, 572) = 0.15$, $p \geq .10$) and based on the independent samples *t*-test ($t = 0.39$), the test of equivalence reveals equivalence at the strictest level [-0.55, 0.55] for $\varepsilon = 0.18$. But, the ANOVA for the dependent variables *access usage intention* reveals a significant main effect by brand prestige

[43] Wellek (2010) based his initial suggestion to use the tolerance level $\varepsilon = 0.36$ for testing *strict* tolerance based upon the basic assumption that people generally rate probabilities of medium size that differ by no more than $\varepsilon_{basic} = 10\%$ as rather similar. If ε_{basic} is further reduced, even stricter tolerance levels can be calculated. Wellek derives the appropriate tolerance level ε for a two-sample *t*-test by the following equation (ϕ^{-1} denotes the quantile function for the standard normal distribution): $\varepsilon = 2^{.5} \times \phi^{-1}(.5 + \varepsilon_{basic})$.

[44] For the corresponding interaction graphs of brand prestige × price level, see Figure 38 and Figure 39 in appendix B.8.

($F(1, 572) = 6.24$, $p \leq .05$).[45] Thus the equivalence hypothesis 1a cannot be supported by this data.

A short note to the already mentioned brand prestige × branding strategy interaction: this interaction turns out to be significant for *access usage intention*, $F(1, 572) = 5.28$, $p \leq .05$).[46] It reveals an interesting pattern, as a close branding strategy between parent brand and access offerings turns out to be especially positive for high prestige product brands (interaction effect = .12), whereas low prestige product brands suffer from such a strategy (simple main effects: $F(1, 576) = 11.50$, $p \leq .01$). Low prestige product brands should rather be included in an access offering branded with a larger distance to the parent brand.

Results summary for hypothesis 1a

To summarize the results for cars, equivalence between the two different product brands has been found in two out of four experiments. In the remaining two experiments the access attitude has been found to be equivalent, while the behavioral intention to use the access offering has been significantly higher for the high prestige product brand. In case of the two experiments in the fashion industry the results have consistently shown a more favorable access evaluation for the high prestige product brand (see Table 17).

However, it needs to be taken into account that each study had a different experimental design in terms of the type of the included experimental factors. Thus it was accounted for a different part of the overall variance in each study (e.g. study 3 contained the most variants of access offerings and reveals equivalence across product brands) (Warner, 2012). Furthermore, the heightened importance of the brand in the second study might be explained by an unintended priming effect that has not been present in the first study: In study 2, brand related control variables have been collected directly before the treatment, whereas in study 1 those variables were measured after the treatment and the measurement of the dependent variables. Just having answered questions on how one relates to a brand, which shortly after is claimed to be in the process of introducing access, might have caused an increased

[45] The interaction between ownership status and brand prestige is hybrid in nature, as the cell mean ranks only switch for ownership status. Thus the main effect of brand prestige stays unaffected and interpretable (see Figure 40 and Figure 41 in the appendix).
[46] The interaction is hybrid in nature: the main effect of brand prestige stays interpretable (see Figure 42 and Figure 43 in the appendix).

and – under normal circumstances – unrealistic mental presence of the brand when the respondents read the actual treatment.

Table 17: Results Summary for Testing Hypothesis 1a

		Access Attitude		Access Usage Intention	
	MANOVA	Univariate Analyses	Equivalence Tests	Univariate Analyses	Equivalence Tests
Study 1 – Cars	0.01 (.99)	0.02 (.89)	liberal equivalence	0.02 (.89)	liberal equivalence
Study 1 – Fashion	3.51 (.04)	7.09 (.01)	no equivalence	0.50 (.48)	no equivalence
Study 2 – Cars	5.32 (.01)	0.49 (.49)	strict equivalence	6.35 (.01)	no equivalence
Study 2 – Fashion	7.90 (≤.001)	11.31 (≤.01)	no equivalence	13.83 (≤.001)	no equivalence
Study 3 – Cars	0.63 (.53)	0.13 (.72)	strictest equivalence	0.58 (.45)	strictest equivalence
Study 4 – Cars	3.39 (.03)	0.15 (.70)	strictest equivalence	6.24 (.01)	no equivalence

Note. The results of the analyses of variance only display the results for the main effects of brand prestige. *F*-values are displayed above the corresponding *p*-values in parentheses.

4.4.4 Results of hypothesis 1b

Hypothesis 1b predicts that an increased level of service convenience will positively influence the access evaluation. Taken together with hypothesis 1a the proposition that service convenience is more important than the product brand can be tested additionally by a *relative importance analysis*. Only the design of study 3 is suitable to test hypothesis 1b and to perform a relative importance analysis.

A relative importance analysis enables to partition the explained variance among the experimental factors (Johnson, 2000; LeBreton, Tonidandel, & Krasikova, 2013; Tonidandel & LeBreton, 2011).[47] If the model of interest contains interactive effects, it requires a special analysis of relative importance – the so-called *residualized relative importance analysis* (LeBreton et al., 2013). This method is able to cope with the hierarchical nature of higher order regression models whereas general

[47] Common estimates of importance such as visually inspecting the standardized regression coefficients, comparing simple bivariate correlations, or the change in R^2 are problematic: They either "do not appropriately partition variance when predictors are correlated", "fail to take into account the relationships between the predictors", or they credit "any shared explanatory variance […] to the variable that was entered first in the regression equation" (all quotes from Tonidandel & LeBreton, 2011, p. 2).

relative importance analysis requires unrestricted regression models without inherent ordering of the variables (LeBreton et al., 2013). After all assumptions are met, the cross-products have to be residualized for the respective relevant lower order effects, before a traditional relative weight analysis with all lower order effects and the calculated residuals can be performed.[48]

Results of study 3 – cars

A MANOVA results in a significant main effect for the factor convenience level (V = .02, $F(4, 2128) = 5.19$, $p \leq .001$) (see Table 48 in appendix B.6). The univariate follow-up analyses show mixed results.

For the dependent variable *access attitude*, hypothesis 1b is supported as the main effect of service convenience is found to be significant ($F(2, 1064) = 9.02$, $p \leq .001$) and the cell means rank as expected ($M_{\text{low convenience}} = 4.69 < M_{\text{medium convenience}} = 5.03 < M_{\text{high convenience}} = 5.10$). However, planned repeated contrasts show that only the low convenience level differs significantly from the medium as well as the high convenience level ($p \leq .01$). Medium and high convenience level are found to differ not significantly ($p = .88$).

The results of the residualized relative importance analysis for the dependent variable *access attitude* show that service convenience is more important than the product brand (see Table 48): First, the relative importance of the main effect of brand (0.25%) is significantly lower (95% CI [.004, .033]) as compared to the importance of the main effect of the convenience level (29.77%). Second, even though two interaction effects, in which brand prestige is part of, are quite large (brand prestige × price: 13.01% and brand prestige × ownership status: 5.22%), the sum of the relative importance of all brand prestige-related effects (24.40%) is about half as large as all convenience level-related effects (41.45%).[49]

For the dependent variable *access usage intention*, the main effect of service convenience narrowly misses the 5%-significance level ($F(2, 1064) = 2.62$, $p \geq .05$).

[48] It is required that "all variables have been standardized and (…) any cross-products (…) have been appropriately computed as the cross-products of the standardized variables" (LeBreton, Tonidandel, & Krasikova, 2013, p. 454). The residuals r are calculated by saving the residual of the following regression equation, where U and V denote main effects and $U \times V$ the interaction effect: $U \times V = \beta_1 \times U + \beta_2 \times U + r$.

[49] Even though Le Breton et al. (2013) do not recommend adding up the percentage of variance explained in some special cases, it does make sense in this case, as it is possible to interpret the result if higher-order effects are counted for *all* factors to which they relate.

Even though the ranking of the three convenience levels turns out as expected ($M_{\text{low convenience}} = 2.11 < M_{\text{medium convenience}} = 2.15 < M_{\text{high convenience}} = 2.31$), the differences are too marginal in order to become significant. Thus hypothesis 1b cannot be supported.

In order to assess whether service convenience or brand prestige is more important, a residualized relative importance analysis was performed, too. Even though the main effect of convenience level accounts for more of the total variance explained (9.77% vs. 1.14%) – this time, the bootstrapping analysis does not reveal a significant difference. Further, brand prestige is part of the two strongest interactions: brand prestige × price (15.35%) and brand prestige × ownership status (11.92%). Also the sum of the relative importance of all brand prestige-related effects (30.56%) is larger than all convenience-level effects (17.75%). Thus the proposition that service convenience is more important is not supported.

Results summary for hypothesis 1b

The proposition that service convenience plays an important role and is thus more important than the product brand can only be partially supported. In case of the dependent variable *access attitude*, the hypothesis is fully supported by investigating the main effects and the residualized relative importance analysis; whereas in case of the *behavioral intention* the main effect of the service convenience level is found to be narrowly not significant and the relative importance analysis can not determine a superiority. It is interesting to see how the convenience level loses importance when it comes to behavioral in contrast to attitudinal measures.

4.4.5 Results of hypotheses 2a and 2b

Hypotheses 2a and 2b propose an interaction effect between ownership status and product brand: They predict that owners evaluate access offerings more positively than non-owners – owners of high prestige brands being the exception with a reverse effect expected. These hypotheses could be tested in four experiments.

Beforehand, the validity of the general ownership effect is confirmed by anticipating some side results of the subsequent analyses of parent brand evaluation for hypothesis 3: Consistently across studies 2 and 3, the main effects of brand prestige, ownership status and the corresponding interaction turn out to have significant effects in the MANOVAs (see Table 52 – Table 54 in appendix B.7). These results

confirm the assumption of the ownership effect: owners are more favorable towards their brands as compared to non-owners. Interestingly, simple main effects of the interactions further reveal that owners of high prestige brands express a particularly favorable evaluation of their brand (see Table 43 in B.7).[50]

Results of study 2 – cars

In study 2, the two-way interaction ownership status × brand narrowly misses the significance level, $V = .01$, $F(2, 572) = 2.85$, $p \leq .10$, in the MANOVA, but both univariate analyses reveal significant interaction effects.

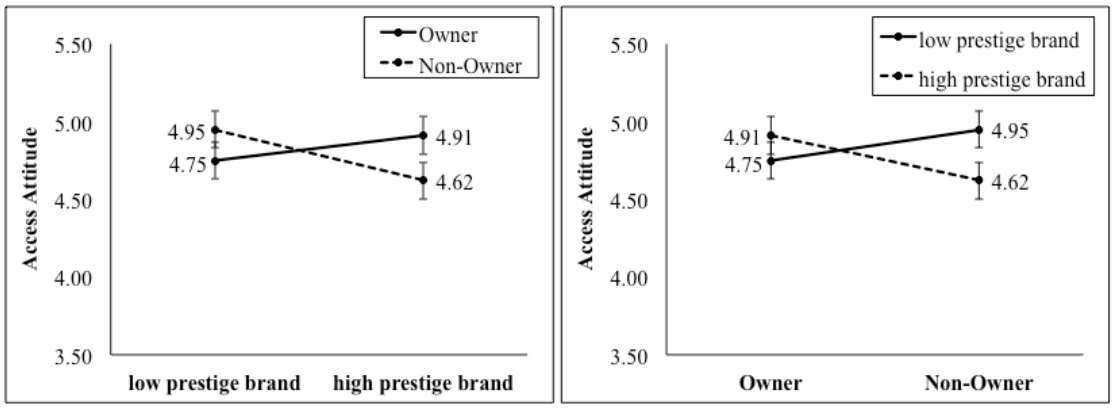

Figure 11: Interaction Graph of Access Attitude between Brand Prestige and Ownership Status as well as Ownership Status and Brand Prestige in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

The univariate analysis for *access attitude* reveals a significant interaction effect of ownership status × brand prestige, $F(1, 573) = 4.45$, $p \leq .05$ (see Figure 11). However, the analysis of the interaction effect table reveals a pattern contrary expectation:[51] Owners of the high prestige brand have more favorable access attitudes towards an access offering based on this high prestige brands as compared to non-owners (interaction effect = .12), whereas owners of the low prestige brand have less favorable access evaluations of an access offering of this low prestige brand in contrast to non-owners of this brand (interaction effect = -.12). Simple main effects analysis reveals neither a significant difference between owners and non-owners in case of the low prestige brand, $F(1, 577) = 2.85$, $p > .10$, nor in the case of

[50] All interaction graphs reveal ordinal interaction – thus, the main effects are interpretable, too.
[51] The cell means do not allow differentiating among main and interaction effects. Thus they might be misleading. That's why it is recommended to calculate the interaction effects by subtracting the cell and row means from each cell value and finally adding the grand mean (R. Rosenthal & Rosnow, 1991; Umesh, Peterson, McCann-Nelson, & Vaidyanathan, 1996; Warner, 2012).

the high prestige brand, $F(1, 577) = 3.06$, $p > .05$. Overall hypothesis 2a and 2b are contradicted, because the effect turns out unlike expected.

In case of the dependent variable *access usage intention*, the ownership status × brand interaction effect is also found to be significant, $F(1, 573) = 3.85$, $p \leq .05$. Follow-up cell means analyses show that the behavioral intention to use access offers based on the low prestige brand differs only marginally between owners and non-owners ($M_{\text{low prestige, owner}} = 1.82 \leq M_{\text{low prestige, non-owner}} = 1.85$), whereas the intention to use access offerings based on the high prestige brand are significantly higher ($F(1, 577) = 6.51$, $p \leq .05$; interaction effect = .09) for owners of this brand in contrast to non-owners ($M_{\text{high prestige, owner}} = 2.25 > M_{\text{high prestige, non-owner}} = 1.91$). The effect is similar to the one found for the dependent variable access attitude, but both findings contradict the original hypotheses H_{2a} and H_{2b}.

Results of study 2 – fashion

In the fashion product category, the MANOVA on *access evaluation* reveals significant main effects of ownership status ($V = .06$, $F(2, 605) = 20.31$, $p \leq .001$) and brand ($V = .03$, $F(2, 605) = 7.90$, $p \leq .001$) as well as a significant two-way interaction between ownership status and brand ($V = .02$, $F(2, 605) = 5.91$, $p \leq .01$).

The univariate analysis for *access attitude* shows that the predicted interaction effect between ownership status and brand is not significant, $F(1, 606) = 1.95$, $p > .10$ (see Table 47 in appendix B.6). Thus hypotheses 2a and 2b are contradicted.

The univariate analysis for *access usage intention* reveals a different picture: a significant main effect for brand and ownership as well as a marginally non-significant ownership status × brand interaction ($F(1, 606) = 2.82$, $p \leq .10$) (see Table 47 and Figure 12). Follow-up investigations by the help of interaction tables were most insightful because the main effects mask the nature of interactions quite strongly: Simple effect analysis based on the cell means finds significant differences between owners and non-owners in case of the low prestige brand ($F(1, 610) = 8.41$, $p \leq .01$) as well as the high prestige brand ($F(1, 610) = 28.54$, $p \leq .001$). In both cases the probability to use the access offering seem to be larger for owners (see Figure 12).

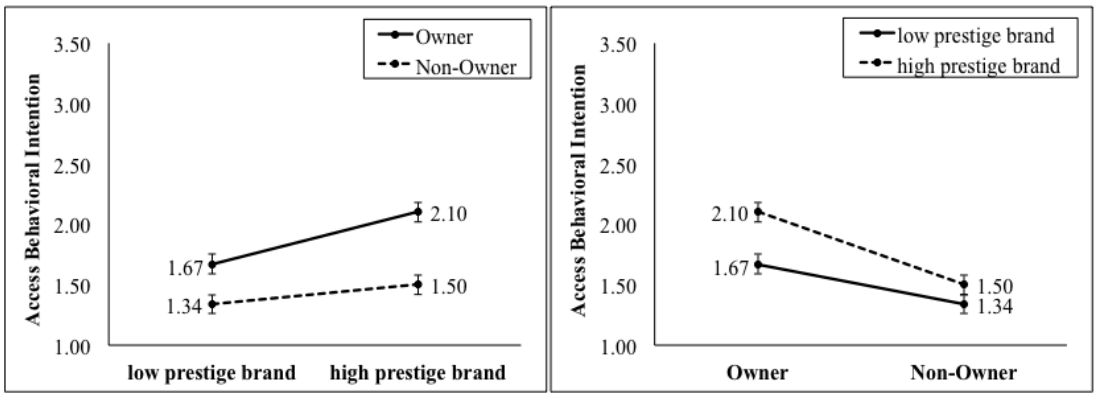

Figure 12: Interaction Graphs of Access Behavioral Intention between Brand Prestige and Ownership Status as well as between Ownership Status and Brand Prestige in Study 2 for Fashion. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

The interaction table finally reveals that the interaction effect causes a positive effect for owners of high prestige brands (interaction effect = .07) as opposed to non-owners of high prestige brands (interaction effect = -.07). For low prestige brands the pattern is the other way round: non-owners are more likely to use it (interaction effect = .07) as compared to owners (interaction effect = -.07). Thus both hypotheses on the ownership effect are contradicted, because the effect turned out different than predicted.

Results of study 3 – cars

In study 3, the MANOVA results in significant main effects for the factors ownership status and convenience level. Further, the interaction ownership status × brand prestige (V = .01, $F(2, 1063) = 3.12$, $p \leq .05$) is found to be significant (see Table 48 in appendix B.6).

For the dependent variable *access attitude*, the interaction effect was found to be narrowly not significant at the 5%-level, $F(1, 1064) = 2.88$, $p \leq .10$. However, simple main effect analysis reveals that in case of the high prestige brand, owners have significantly more positive attitudes than non-owners ($F(1, 1084) = 16.11$, $p \leq .001$). In case of the low prestige brand, simple main effect analysis only finds a narrowly not significant result ($F(1, 1084) = 2.86$, $p \leq .10$). The interaction table reveals that despite the cell means (which have been influenced by the big positive impact of being owner) in case of low prestige product brands, the interaction effect is actually negative for owners (interaction effect = -.07). Altogether, the hypotheses cannot be supported as the follow-up analysis reveals pattern contrary expectations (but in line with the results of study 2).

The interaction effect between ownership status and brand prestige is found to be significant for *access usage intention* ($F(1, 1064) = 5.88$, $p \leq .05$). The interaction effect table reveals a pattern contrary the hypotheses: Owners of a car by Audi (the high prestige brand) have more favorable behavioral usage intentions as compared to non-owners (interaction effect = .09), whereas owners of a car by Opel (the low prestige brand) react comparatively negative towards an introduction of an access offering based upon their brand (interaction effect = -.09). Simple main effects analysis also reveals a significant more positive behavioral intention for owners as compared to non-owners in case of the high prestige brand ($F(1, 1084) = 26.21$, $p \leq .001$). In case of the low prestige brand the effect is narrowly not significant at a 5%-significance level ($F(1, 1084) = 3.04$, $p \leq .10$) and also misleading as it is influenced by the main effects. Altogether, hypotheses 2a and 2b cannot be supported but reveal a consistent pattern similar to the results of study 2.

Results of study 4 – cars

In the MANOVA in study 4, the brand prestige × ownership status interaction ($V = .01$, $F(2, 571) = 2.80$, $p \leq .10$) narrowly misses the 5%-significance level (see Table 49 in appendix B.6). In the ANOVA for *access attitude*, the interaction between brand prestige and ownership status turns out to be significant, $F(1, 572) = 3.94$, $p \leq .05$. The interaction table shows that the original hypotheses are not supported, nonetheless the results are consistent with those of the previous studies: Owners of the high prestige brand express more positive attitudes as compared to non-owners (interaction effect = .12), while owners of the low prestige brand are less favorable as compared to non-owners (interaction effect = -.12).

In the ANOVA for *access usage intention*, one finds the brand prestige × ownership status interaction effect to be significant, too ($F(1, 572) = 4.04$, $p \leq .05$). The interaction table reveals the same pattern as for the dependent variable access attitude (interaction effect = .10). Thus the initial hypotheses 2a and 2b have to be rejected, but the pattern found in the previous studies is confirmed once more.

Results summary for hypotheses 2a and 2b

Even though relevant interaction effects between ownership status and brand prestige have been found in all cases except one, the interactions have not turned out as hypothesized. Instead, it is found that owners react more favorable than non-owners

in case of high prestige brands, whereas owners react less favorable in case of low prestige brands. The finding for high prestige brands is against the findings by Kirmani et al. (1999), but in line with the initial idea of the ownership effect. The result for low prestige brands is different from both, the original concept of the ownership effect and different from the findings by Kirmani et al. (1999) in the domain of brand extensions. However, these effects are consistently found in both product categories.

Table 18: Results Summary for Testing Hypothesis 2a and 2b

		Access Attitude		Access Usage Intention	
	MANOVA	Univariate Analyses	Interaction Effect	Univariate Analyses	Interaction Effect
Study 2 – Cars	2.85 (.06)	4.45 (.04)	low prestige brand: -.12 high prestige brand: .12	3.85 (.05)	low prestige brand: -.09 high prestige brand: .09
Study 2 – Fashion	5.91 (≤.01)	1.95 (.16)	n.a.	2.82 (.09)	low prestige brand: -.07 high prestige brand: .07
Study 3 – Cars	3.12 (.04)	2.88 (.09)	low prestige brand: -.07 high prestige brand: .07	5.88 (.02)	low prestige brand: -.09 high prestige brand: .09
Study 4 – Cars	2.80 (.06)	3.94 (.05)	low prestige brand: -.12 high prestige brand: .12	4.04 (.05)	low prestige brand: -.10 high prestige brand: .10

Note. The results of the analyses of variance only display the results for the interaction effects between ownership status and brand prestige. *F*-values are displayed above the corresponding *p*-values in parentheses. The signs of the interaction effects are from an owner's perspective: a positive sign indicates that owners are more favorable, whereas a negative sign indicates that owners are less favorable – in each case compared to non-owners.

4.4.6 Results of hypothesis 3

Hypothesis 3 takes a broader perspective and suggests that consumers will not change their evaluation of the *parent brand*, if it introduces an additional access offering based on its product brand. The evaluation of the parent brand has been

operationalized by the following four dependent variables each: *brand attitude*, *brand purchase intention*, *brand WOM*, *willingness to pay a price premium*.

As equivalence is hypothesized, tests of equivalence according to Wellek (2010) are performed. For these tests it is necessary to rely on *t*-values, as tests based on *F*-values are not available. Thus, explanatory power is lost because no second factor can reduce the variability within cells (Warner, 2012).

The hypothesis could be tested in five different experiments. Additionally, analyses of further dependent *brand image* variables have been conducted in order to also gain insights on how the brand image is potentially modified through the addition of the access consumption mode.

Results of study 1 – cars

After taking into account all suitable and significant covariates in the MANCOVA (see Table 50 in appendix B.7) a significant effect of brand prestige is identified, whereas no significant effect of introducing the access offering is found ($V = .05$, $F(4, 143) = 1.74$, $p > .10$). Also the interaction term is found to be not significant, $V = .03$, $F(4, 143) = 0.95$, $p > .10$.

After controlling for relevant covariates (as listed in Table 50), *brand attitude* differs significantly among the brands and – relevant for hypothesis testing – among the number of consumption modes offered, $F(1, 148) = 4.41$, $p \leq .05$. The adjusted means show that the brand attitude suffers if access is introduced ($M_{\text{Access}} = 4.74 < M_{\text{Ownership}} = 5.13$). For the dependent variables *brand purchase intention* and *brand word-of-mouth* the effects of additionally introducing access are not significant. Comparing the *t*-values ($t_{\text{brand purchase intention}} = 0.18$; $t_{\text{brand wom}} = 0.46$) of the adjusted group means with the critical interval for *strict* equivalence [-0.61, 0.61] supports the notion of equivalence for these two dependent variables. Furthermore the main effect of introducing access for the dependent variable *willingness to pay a price premium* for the product brand is narrowly not significant at a 5%-level, $F(1, 148) = 3.20$, $p \leq .10$, but at the same time no *strict* equivalence can be confirmed ($t_{\text{brand wtp price premium}} = -2.53$). Overall, hypothesis 3 is only partly supported in the automobile product category.

A modification of the parent brand image is only found for the *brand's innovativeness*, but not for its *ecological friendliness*. For the *brand's innovativeness*,

the brand × treatment effect is found to be significant, $F(1, 146) = 4.55$, $p \leq .05$. Investigating the adjusted cell means leads to the conclusion that low prestige brands benefit in terms of innovativeness ($M_{Access} = 5.06 > M_{Ownership} = 4.48$, $t(72) = 2.30$, $p \leq .05$), while there is little change for high prestige brands ($M_{Access} = 4.92 < M_{Ownership} = 5.04$, $t(80) = -0.55$, $p > .10$).

Results of study 1 – fashion

In the fashion product category, the MANCOVA reveals that only the main effect of brand prestige has a significant impact on the product brand evaluation, while the introduction of access does not significantly affect the parent brand's evaluation (see Table 51 in appendix B.7). Also the ANCOVAs reveal no significant main or interaction effects by the introduction of access.

Comparing the *t*-values based upon adjusted means with the critical intervals for *strict* equivalence [-0.55, 0.55] supports the notion of equivalence for *brand attitude* ($t_{brand\ attitude} = -0.48$), *brand purchase intention* ($t_{brand\ purchase\ intention} = -0.20$) and *brand WOM* ($t_{brand\ WOM} = -0.55$). *Liberate* equivalence (critical interval [-2.79, 2.79]) is found for the *willingness to pay a price premium* ($t_{brand\ WTP\ price\ premium} = -2.02$). This largely supports the hypothesis that the introduction of access as an additional consumption mode does not affect the parent brand's evaluation.

Concerning parent brand image modifications, it is found that only the main effect of access becomes almost significant, $F(1, 133) = 3.78$, $p \leq .10$. In case of the low prestige brand the innovativeness perception increases from $M_{Ownership} = 4.26$ to $M_{Access} = 4.61$ and in case of the high prestige brand from $M_{Ownership} = 4.69$ to $M_{Access} = 5.08$.

Results of study 2 – cars

For this analysis it was necessary to create a nested factor, called *treatment*, because the experimental factor *price level* solely refers to the access offering. The nested factor *treatment* has three levels: ownership only, introducing access at a low price, introducing access at a high price.

Even though the multivariate analysis shows a significant effect of brand prestige, ownership status, and the brand prestige by ownership status interaction, all

treatment related effects have been found to be not significant – thus basically supporting the hypothesis (see Table 52 in appendix B.7).

As proposed all ANOVAs reveal no signifncant effects, but the main effect of treatment for the dependent variable *word-of-mouth* only narrowly misses significance, $F(1, 880) = 2.30$, $p \leq .10$. The tests of equivalence, which required to pool the different price levels into one group, all revealed equivalence. All *t*-values fall well into the critical interval [-3.47, 3.47] for *strict* equivalence tests according to Wellek (2010): $t_{\text{brand attitude}} = 1.49$; $t_{\text{brand purchase intention}} = 0.57$; $t_{\text{brand WOM}} = 1.95$; $t_{\text{brand WTP price premium}} = 0.69$. Thus hypothesis 3 is supported.

The modification of the parent brand image has been investigated for the perceived parent brand's *innovativeness*, *exclusiveness* and *environmental friendliness*. Except for the latter, some treatment related effects have been found.

In case of *brand innovativeness* the main effect of the treatment factor ($F(2, 880) = 2.49$, $p \leq .10$) and the interaction of ownership status × treatment ($F(2, 880) = 2.80$, $p \leq .10$) narrowly miss the 5%-significance level. The latter interaction is disordinal in nature (see Figure 34 and Figure 35 in appendix B.8), thus rendering the main treatment effect unsuitable for further interpretation. Investigating the interaction itself, only the introduction of access at a low price level causes non-owners to significantly increase their innovativeness beliefs ($t(305) = 2.90$, $p \leq .01$).

For the brand's *exclusiveness* the main effect of the treatment narrowly misses the significance level of 5% ($F(2, 880) = 2.42$, $p \leq .10$) as well as the ownership status × treatment interaction ($F(2, 880) = 2.84$, $p \leq .10$). As the interaction's nature is hybrid due to a change in order for the treatment factor, only the interaction itself is suitable for further interpretation (see Figure 36 and Figure 37 in appendix B.8). Follow-up contrasts show that non-owners beliefs are very little modified, whereas owners perceive less exclusivity when an access brand is introduced. However this loss is only significant for the access offering priced at the higher price level ($t(295) = 2.85$, $p \leq .01$).

Results of study 2 – fashion

Similar to the previous section, a nested factor has been created for the following analyses in the fashion category. The MANOVA results show that none of the treatment related factors are significant (see Table 53 in appendix B.7).

For all four dependent variables, the main effect of treatment is found to be not significant at a 5%-level – as expected. The critical interval for *strict* equivalence [-3.47, 3.47] contains all *t*-values from the independent samples *t*-test between the ownership and the pooled access conditions: $t_{\text{brand attitude}} = -0.67$; $t_{\text{brand purchase intention}} = -0.18$; $t_{\text{brand WOM}} = -0.83$; $t_{\text{brand WTP price premium}} = -1.83$. Thus hypothesis 3 is supported.

Also for the fashion product category three dimensions of potential brand image modifications have been investigated. However for neither *innovativeness*, nor *eco-friendliness*, nor *exclusivity* any treatment related significant effects are found.

Results of study 4 – cars

Also in study 4 it has been necessary to create a nested factor, but with different levels. In this study it integrates the *type of consumption modes* offered with the *branding strategy* of the access offering. Thus, the *treatment* factor has three levels: ownership only, an additional access offering with a close branding strategy and an additional access offering with a distant branding strategy.

The multivariate analysis yields significant results for the main effects brand prestige and ownership status, but not for the treatment factor, $V = .01$, $F(8, 1714) = .62$, $p \geq .10$. Further, two of the four interactions are found to be significant: the brand prestige × ownership status interaction ($V = .03$, $F(4, 856) = 7.33$, $p \leq .001$) and the treatment × ownership status interaction ($V = .03$, $F(8, 1714) = 2.72$, $p \leq .01$) (see Table 54 in appendix B.7).

Similar to the MANOVA and confirming the expectations, for neither of the dependent variables the main effect of treatment is significant. For the purpose of the equivalence test, the two branding strategies were pooled into one joined group as no differences between the original three groups have been found by the ANOVAs. The *t*-values of the independent samples *t*-tests range between $t = 0.16$ and $t = 1.18$ and fall between the critical interval for strict equivalence [-3.36; 3.36]. Thus hypothesis 3 is supported.

Moreover, the treatment by ownership status interaction shall be further analyzed as it yields a significant result in the MANOVA and in two cases an only narrowly not significant result in the ANOVAs. One of those cases is the ANOVA with the dependent variable *brand purchase intention*, $F(2, 858) = 2.68$, $p \leq .10$. Simple main effects analysis reveals a significant difference for the treatment factor among

owners, $F(2, 865) = 3.80$; $p \leq .05$. Pairwise comparisons find only one significant difference: that is, owners develop a significantly higher brand purchase intention as compared to the condition in which only ownership is available if the brand introduces a distantly branded additional access offering (mean difference = 0.53; $p \leq .01$). The other case is the ANOVA with the *willingness to pay a price premium* for the brand, $F(2, 858) = 2.81$, $p \leq .10$. In this case the simple main effect analysis neither reveals significant differences for owners, nor for non-owners.

As in previous studies, it was further analyzed whether the parent brand image is modified by the introduction of access. For the dependent variable parent *brand innovativeness*, only the main effects turn out to be significant – among them the main effect *treatment*, $F(2, 858) = 9.45$, $p \leq .001$. A REGWQ post-hoc test shows that all sub-groups differ significantly: The parent brand innovativeness perception increases significantly if an additional closely branded access offering ($M = 4.99$) is introduced as compared to the control condition ($M = 4.75$). It further increases significantly if you compare a distantly branded access offering ($M = 5.22$) to a closely branded access offering ($M = 4.99$). The parent brand's *ecological friendliness* ($F(2, 858) = 1.28$, $p \geq .10$) as well as the parent brand's *exclusivity* ($F(2, 858) = 0.61$, $p \geq .10$) are not significantly affected by the introduction of an access offering.

Results summary for hypothesis 3

In summary the hypothesis that the introduction of an access offering does not impact the evaluation of the parent brand is confirmed. Only for two dependent variables in study 1 no equivalence could be proven (see Table 19). However, this study suffers under a comparatively small sample size and the associated need to rely on ANCOVAs.

Study 4 helps to rule out an alternative explanation, as the type of sub-branding of the access offering in relation to its parent brand was explicitly manipulated to be either close or distant. But none of these two strategies changes the results from the previous studies. Thus the results show that the type of branding strategy only plays a minor role.

Nonetheless some modifications of the parent's brand image have been found. Overall, brands seem to gain a more innovative image – except their original rating is

already very high as it is the case for some high prestige car brands or owners. While the parent brand's green image is not affected by the introduction of access, the perceived brand exclusivity has been found to decrease for owners in one study. However, this seems to neither significantly harm the overall brand evaluation of owners – as could be expected due to the findings from Kirmani et al. (1999) – nor their evaluation of the access offering itself.

Table 19: Results Summary for Testing Hypothesis 3

		Univariate Analyses			
	MANOVA	Brand Attitude	Brand Purchase Intention	Brand WOM	Brand WTP price premium
Study 1 – Cars	1.74 (.15)	4.41 (.04) no equivalence	0.20 (.66) strict equivalence	0.73 (.40) strict equivalence	3.20 (.08) no equivalence
Study 1 – Fashion	0.23 (.92)	0.12 (.73) strict equivalence	0.07 (.80) strict equivalence	0.16 (.70) strict equivalence	0.12 (.73) liberate equivalence
Study 2 – Cars	1.45 (.17)	2.16 (.12) strict equivalence	0.71 (.49) strict equivalence	2.30 (.10) strict equivalence	0.31 (.73) strict equivalence
Study 2 – Fashion	0.86 (.55)	0.63 (.53) strict equivalence	0.21 (.81) strict equivalence	0.64 (.53) strict equivalence	2.49 (.08) strict equivalence
Study 4 – Cars	0.62 (.77)	1.10 (.33) strict equivalence	1.76 (.17) strict equivalence	0.91 (.40) strict equivalence	0.32 (.73) strict equivalence

Note. F-values are displayed above the corresponding *p*-values in parentheses. Underneath the results from the equivalence test according to Wellek (2010) are displayed in text form.

4.4.7 Results of the scenario experiment with real customers

Impact on high prestige product brand

To assess the overall impact on the high prestige brand, a MANOVA with *brand attitude*, *brand purchase intention* and *brand word-of-mouth* was conducted (see Table 61 in appendix B.6). It is found that the treatment – replacing the high prestige car brand by a low prestige car brand – has a significant effect on the evaluation of

the high prestige car brand, $V = .02$, $F(3, 346) = 2.87$, $p \leq .05$. Follow-up analysis show that the cell means in the treatment group are significantly more positive for *brand attitude* ($F(1, 348) = 3.42$, $p \leq .10$) and for the *willingness to recommend* the brand to others ($F(1, 348) = 4.81$, $p \leq .05$). Only the *purchase intention* is not found to be significantly affected ($F(1, 348) = 0.27$, $p > .10$).

Investigations of the brand image show that the high prestige brand is perceived to have even higher prestige ($F(1, 348) = 4.99$, $p \leq .05$) and higher quality ($F(1, 348) = 3.41$, $p \leq .10$) if it is not part of the access offering anymore. The brand innovativeness, however, is not significantly affected by a brand switch ($F(1, 348) = 3.09$, $p > .10$).

Impact on low prestige product brand

The overall impact for the low prestige car brand of being included in the access offering is not significant ($V = .00$, $F(3, 346) = 0.21$, $p > .10$). Also the univariate analysis for *brand attitude* ($F(1, 348) = 0.39$, $p > .10$), *purchase intention* ($F(1, 348) = 0.16$, $p > .10$) and *willingness to recommend to others* ($F(1, 348) = 0.59$, $p > .10$) all yield no significant results.

Also the low prestige brand's image remains largely unaffected. Only the brand *innovativeness* increases with the inclusion into the access offering ($F(1, 348) = 2.97$, $p \leq .10$).

Impact on the access offering and the access provider brand

If the access provider switches the type of brand that it offers, the attitude towards its access offering is not statistically significantly affected ($F(1, 348) = 1.44$, $p > .10$). A test of equivalence (Wellek, 2010) reveals equivalence at the strict tolerance level $\varepsilon = \pm 0.36$ ($t(348) = -0.71$, critical interval for t [-1.72, 1.72], $\alpha = .05$, $(1-\beta) = .91$). However, the probability that customers continue their usage in the future decreases significantly ($F(1, 348) = 3.97$, $p \leq .05$). The perceived price fairness of both offers is not significantly different $F(1, 348) = 0.86$, $p > .10$).

The customers' attitude towards the access provider brand was also not significantly affected ($F(1, 348) = 0.51$, $p > .10$). Again the test of equivalence revealed a positive result at the strict level ($t(348) = -1.00$, critical interval for t [-1.72, 1.72], $\alpha = .05$, $(1-\beta) = .91$). The users' willingness to recommend the brand to others in case of the

switch was also found to be not significantly different ($F(1, 348) = 0.11$, $p > .75$). Regarding the access provider's brand image, neither the brand prestige ($F(1, 348) = 2.63$, $p > .10$) nor the quality ($F(1, 348) = 0.15$, $p > .10$) are significantly affected.

Results summary for the scenario experiment with real customers in study 5

In summary, it is found that the customers' (hypothetical) reaction to a switch from a high prestige car brand (Audi) to a low prestige car brand (Hyundai) in a real carsharing offering is rather marginal. Thus also for *real* customers of an access offering, the type of brand an access offering is based upon seems to be rather unimportant. This adds further validity to the previously reported results, which have been based upon experiments with general consumers only.

The consumers' attitude towards the carsharing offer as well as the carsharing brand stays equal given the scenario of a car brand switch. Only the intended future usage probability is significantly reduced. It remains unclear whether this is the direct result of the brand switch or only due to the generally increased uncertainty that was induced by the experimental scenario. Nonetheless this should be seen as a warning that there might be potential negative effects for the access provider as well. Furthermore, cautious is required because it cannot be precluded that customers in the brand-switch scenario hoped for a price decrease in the long run as no information on the pricing was given due to the carsharing provider's request.

Interestingly the high prestige brand's evaluation and image becomes more favorably after it has been replaced by a low prestige brand. That means that consumers with brand experience who are currently able to use this high prestige car brand at a low price (as compared to a purchase) appreciate such a brand even more if it is no longer available via access. On the other hand the low prestige car brand seems to be neither harmed nor to really benefit by being included in an access offering.

It shall be noted that the order of the measures of the dependent variables was always equal and not randomized. This might have led to order effects such as that the treatment was most present in respondents' minds when they were questioned about the high prestige brand (that was always measured first). This might potentially explain why the high prestige brand was affected the most.

Table 20: Results Summary of all Studies and Hypotheses (Project II)

		Study 1		Study 2		Study 3	Study 4	Study 5
		Cars	**Fashion**	**Cars**	**Fashion**	**Cars**	**Cars**	**Cars**
Access Evaluation	H_{1a}: The evaluation of access offerings is *independent of the prestige level* of the product brands the access offering is based on.	☑ equivalent evaluation	☒ high prestige brand better evaluated	☑☒ *attitude:* equivalent evaluation *intention:* high prestige brand better evaluated	☒ high prestige brand better evaluated	☑ equivalent evaluation	☑☒ *attitude:* equivalent evaluation *intention:* high prestige brand better evaluated	☑☒ *attitude:* equivalent evaluation *intention:* high prestige brand better evaluated
	H_{1b}: The evaluation of access offerings becomes *more favorable with an increasing level of convenience* that is offered by the access provider.					☑☒ *attitude:* positive effect *intention:* no effect		
	H_{2a}: Compared to non-owners, owners of a distinct *low prestige brand* exhibit *more favorable evaluations* of an access offering that is based on this low prestige brand.			☒ owners evaluate it worse	☒ *attitude:* interaction n.s. *intention:* owners evaluate it worse	☒ owners evaluate it worse	☒ owners evaluate it worse	
	H_{2b}: Compared to non-owners, owners of a distinct *high prestige brand* exhibit *less favorable evaluations* of an access offering that is based on this high prestige brand.			☒ owners evaluate it better	☒ *attitude:* interaction n.s. *intention:* owners evaluate it worse	☒ owners evaluate it better	☒ owners evaluate it better	
Parent Brand Evaluation	H_3: The introduction of access as an additional consumption mode *does not affect the parent brand's evaluation*.	☐ results not clear	☑ no spillover	☑ no spillover	☑ no spillover		☑ no spillover	

Note. ☑ hypothesis supported; ☒ hypothesis not supported; ☐ no clear result.

4.5 Discussion

Overall, the results of the conducted studies are of great importance because this research project is the first to address consumer behavior in situations where consumers face the introduction of different types of access offerings, which is becoming an increasingly significant consumption mode next to ownership. In particular, this research is the first to shed light on consumers' evaluations in case of different characteristics of the access offerings, on different reactions from owners and non-owners, and on the consequences for the involved parent brands.

The discussion will draw upon the results of all studies, which are summarized in Table 20. The findings will be compared to existing theoretical knowledge and used to derive meaningful managerial implications. This section will end with study limitations and an outlook on promising future research avenues in this emerging field.

4.5.1 Discussion of the importance of product brands and service convenience

While there has never been any doubt that with the rise of access brands in general might lose importance, a decreasing importance of product brands in access offers that goes hand-in-hand with an increasing importance of service convenience has been postulated by different scholars (Lawson, 2011; Lovelock & Gummesson, 2004). This dissertation is the first to test this postulate in two different product categories.

In the automobile industry the results consistently show that the consumers' *attitude* towards the announced access offering is not affected by the fact whether a high or a low prestige car serves as the basis of the access offering. However, if one regards the stated *behavioral intention* instead of the attitude the usage intention is significantly higher for high prestige car brands in three out of five studies. In the fashion industry, the consumers' access evaluation is also not independent from the prestige level of the brand: a fashion rental that lends out apparel from a high prestige brand causes more positive evaluations than one based on a low prestige fashion brand (see Table 20).

Some of these results give proof to the current theory, while others deliver objections. Thus it is required to advance and refine the theory in order to be able to explain what it depends on whether or not the product brand is important in access offerings. So, how can the results of the studies at hand be explained? In the following four possible explanations for the differences between the categories are proposed. Subsequently, the different results for the two outcomes, attitude and behavioral intention, are discussed.

First, product brands might be more important for the evaluation of access offers if the gap in product quality between the investigated brands is large. Given the novelty of access offerings, product brands might serve consumers as cues, which function as surrogate indicators of the overall quality of the access offering (Olson & Jacoby, 1972). Transferred to the studies at hand, the different results in the cars and the fashion context might be caused by a larger perceived *quality* gap between low and high prestige brands in case of fashion as compared to cars – even though the studies at hand did not intend to manipulate this factor. However, additional analyses in studies one and two showed that quality perceptions in both product categories were comparable (see appendix B.4). Thus it remains to be seen in future studies whether the distance in product quality (and thus the convenience during the consumption process) will impact the importance of the brand in access offerings. However, this approach does not yet help to explain the differing results of the study at hand.

Second, the importance of the product brand might depend on the general price level of a product category and the ratios between purchasing and rental price for the different brands within a product category. In a very expensive product category, such as cars, consumers probably do not even compare the rental prices in cents with the purchase prices of thousands of Euros (Nagle & Hogan, 2006). However, in case of fashion, it is more likely that consumers compare purchase and rental prices because they are less apart. If the purchase price then lies under a certain threshold, consumers might go straight away for the purchase because access is – in absolute terms – not that much less. This effect in combination with an over-proportional impact of handling fees for access offerings that build upon low prestige (and thus

also low priced) product brands could explain the different results for fashion and cars.[52]

Third, external symbolic meanings might explain the differences between the two investigated product categories. Carsharing cars have to be clearly marked as such.[53] Thus third parties will require little effort to recognize that the driver of this car is not its true owner. This might explain the low importance of the car brand, because others will easily recognize that the driver of a high prestige carsharing car is *only* a carsharing user anyway. For fashion, the case is different. Rented fashion does not need to be marked as such. Thus outsiders will have no possibility to find out whether someone rented or purchased a given piece of fashion. This makes it more beneficial for some consumers to choose the high prestige brand, as they benefit from the social prestige associated with wearing expensive clothes while only paying the rental fee (Eastman et al., 1999).

Fourth, the typical rental duration might influence the importance of the product brand. The typical usage duration for carsharing is usually between a few minutes to a few hours, whereas rented fashion is typically rented for several days and is also worn for a longer period of time. The shorter the usage duration, the less important the characteristics of the product (among them, its brand) will be and the more important the core need fulfillment and the ease of beginning and ending a rental will become.

Prices might also help to explain the different results for access attitude and behavioral intention in the automobile industry. As mentioned before, for cars, the rental price is very small compared to the typical purchase price. Thus consumers might not care about the car brand and express the same attitude towards carsharing offerings based upon different brands, but when it comes to whether they would use it (at least once), they can more easily imagine to try out driving the high prestige car if a price-per-minute allows an affordable testing of such a car.

Drawing upon the Theory of Planned Behavior one could further argue that consumers feel internally indifferent towards a low and a high prestige car brand, but

[52] It has been assumed that an access provider wants to earn the same ratio of the initial purchase price for low and high prestige product brands. Adding the fix costs for cleaning, delivering, returning, and overhead, an access offering based on a low prestige product brand is over-proportionally charged with these routine costs.

[53] A carsharing car needs to be clearly marked, so that others can locate the car.

they fear disapproval by their peers if they use a low prestige car in a carsharing offer (Ajzen, 1991). On the other hand, it might be the case that consumers expect their peers to react favorably if they use a carsharing offering based upon a high prestige brand and that using such a service might be something consumers consider worth telling their friends which would increase their social reputation. Both lines of argument would explain the increased behavioral intention to use carsharing offerings.

The inclusion of the service convenience factor in the automobile industry has further shown that a higher service convenience is important in determining the attitude towards the access attitude, whereas the behavioral intention is found not to be affected by this factor. This finding needs an explanation: Possibly consumers perceive the impact of an increased service convenience as being too weak to cause additional behavioral intentions as opposed to *only* more favorable attitudes. In contrast to attitude, behavioral intentions might be hampered by personal circumstances that render carsharing simply unsuitable.

4.5.2 Discussion of ownership status effects

The results of four experiments show that ownership status plays an important role in the evaluation of additionally introduced access offerings. However, the nature of the interaction effect has been unexpected: Non-owners evaluate newly introduced access offerings based on *low prestige* brands more positively than owners, whereas access offers based on *high prestige* brands are evaluated more favorably by owners than non-owners (see Table 20). This effect has been consistent across both product categories and different brands.

Interestingly, this finding is neither in line with the initial definition of the ownership effect nor with the empirical results Kirmani et al. (1999) found in their research on the evaluation of brand extensions. The initial definition of the ownership effect says that owners react more positively to actions of the brand they own because they have more favorable attitudes towards it. In contrast, the study by Kirmani et al. (1999) showed that this effect only holds for brand extensions by *non-prestige* parent brands – for *prestige* parent brands they found that owners react less favorably than non-owners in case of a downward brand stretch.

As for the low prestige brands, the result found in the experiments at hand contradicts the initial idea of the ownership effect. So, how can this result be explained? It is possible that owners of the low prestige brand perceive a particular low degree of fit between the brand and the added access offering, as they are those consumers who know the brand best because they already own it. Maybe they think that *their* low prestige brand is not suitable for being included in an access offering due to the specific brand image they have in mind. In the literature on brand extensions, fit has been found to be an important determinant for the evaluation of brand extensions (Carter & Curry, 2011; Loken & John, 1993; Völckner & Sattler, 2006).

Besides, the owners' evaluation might be caused by reactance due to frustration because everyone is now able to get access to *their* brand without making any significant investment. This effect is likely to occur especially for low prestige brands because those brands are usually bought primarily for their value-for-money (Park et al., 1991). The owners had already made their purchase decision at a point in time when they did not know about an alternative access offering based upon their preferred brand. Thus they might feel to have wasted money, which causes their reaction to be less favorable compared to non-owners.

As for high prestige brands the results are in line with the initial definition of the ownership effect, but in contrast to the results by Kirmani et al. (1999). How can this deviation in case of access offerings be explained? Owners generally feel a stronger attachment to *their* brands (Beggan, 1992; Belk, 1988; Kirmani et al., 1999). This study finds that this effect is even stronger for owners of high prestige brands as compared to owners of low prestige brands (see chapter 4.4.5). Given that the brand evaluation from owners of high prestige brands is so positive, owners seem to perceive an additional access offer not as a devaluation of their ownership (as they do in case of step-down brand extensions (Kirmani et al., 1999)) but rather as an *extension* of options. Owners of high prestige brands seem to appreciate that they can use *their* brand in even more situations in life and experience different product variants through the help of an additional access offer. These findings also challenge the proposition by Shocker et al. (2004) that access offerings are perceived as substitutes to owned goods. These results rather suggest that consumers perceive access offers as complements and not as substitutes.

Finally, there is the question whether the results will be stable over time. As both investigated access offerings are rather new to the market, consumers have not become used to the availability of a second consumption mode. Thus one could argue that owners have not yet truly realized that not only they, but also anybody else can drive or wear *their* brand.

4.5.3 Discussion of the parent brand evaluation

This is the first study that empirically approaches the question whether parent brands suffer from or gain from halo effects by introducing an additional consumption mode. Consistently across three studies and two product categories it has been found that the parent brand evaluation is not changed by the introduction of an additional access offer. This applies equally for owners as well as non-owners and for both, low and high prestige parent brands. In study 4 the branding distance between parent brand and its access offering was manipulated additionally, but not even that has had an impact on the results.

All experiments found *equivalent* parent brand evaluations – with and without the introduction of access. Thus the theoretical implications of this finding need to be discussed. These results challenge the only proposition on the effects of introducing access on the parent brand, which was put forward by Lamberton and Rose (2012). Against their proposition in none of the five experiments a positive effect on brand evaluation has been found. They based their assumption on the idea that consumers would recognize the positive environmental effects of access offerings and thereupon develop a more positive picture of the parent brand. Based upon the research at hand, this idea cannot be supported either. Additional analyses of parent brand image dimensions have shown that in none of the experiments a modification of the environmental friendliness perception has taken place. However, in most of the cases the parent brand's innovativeness perception increased if the brand introduced access as an additional consumption mode.

Furthermore, the fact that no modifications of the parent brand evaluation have been found leads to two competing conclusions based upon categorization theory: Either, the information of introducing an access offer is perceived to be only incremental and very much congruent with the existing perception of the parent brand, or, the information is so inconsistent and radical that the subtyping model applies. Based on

this research, no final decision can be made. However, the former conclusion is rather unlikely because research on brand extensions, which are common practice as compared to the introduction of an additional access consumption mode, has frequently shown that the parent brand image is modified by such extensions (J. L. Aaker, 1997; Kim et al., 2001; Lei et al., 2008). Thus the latter conclusion seems to be more likely.

Interestingly, not even the branding distance plays a role in answering the question whether the parent brand evaluation becomes modified or not. In contrast to the research on brand extensions, a distant branding strategy is apparently not even necessary to shield the parent brand from negative spillover effects due to the introduction of access offers. This result is in contrast to the current practice of car manufacturers, which have launched their carsharing offers with a lot of distance to the parent brand, e.g. car2go, which is the carsharing brand by Daimler. However there are also other reasons for a distant branding strategy. Those companies might not only aim to shield their parent brands, but also aim to introduce more than one of their car brands in the same carsharing service (e.g. Mini and BMW, which both belong to the BMW Group and are part of the carsharing offering DriveNow) and to intentionally build a new brand that stands for mobility services and not only vehicles (J. Kolling, personal communication, 20.06.2013).

4.5.4 Managerial implications

For managers a series of important questions can be answered based upon the empirical results of this study. First, which brand should offer an access offering or which product brand should an access offering be based upon? As for fashion it is recommendable to base an access offering on a high prestige product brand. For cars, the product brand only plays a minor role. The fifth study even shows that managers of (product brand independent) access companies could save costs by not relying on high prestige brands. This might then give them the chance to focus on important aspects such as service quality or building a stronger service brand.

Second, which aspects of an access offering are most important for market success? It is definitely the mix of service convenience, pricing and the products that are lent out. Generally ranking those elements is difficult as it is likely to be very much industry dependent.

Third, is having a strong product brand an asset when it comes to access offerings? At least for cars, consumers do not care about the product brand. However, it has been interesting to see that access offerings based on high prestige brands are evaluated better if they are more expensive. This gives providers the chance to charge higher prices as consumers seem to perceive prices as quality signals. Study 4 also shows that access offerings that are branded highly distant to the parent brand are not evaluated worse. On the one hand, this is good news for new entrants because they can simply use any strong product brand as a basis for their proprietary access offering. On the other hand, incumbents could also try out access quite easily as they do not need to fear too much negative spillover effects. Thus, especially high prestige fashion brands should consider introducing access offerings – at the moment the market only consists of new entrants that offer access offerings for fashion.

Fourth, does a distant branding strategy – as it can be frequently observed in the carsharing market – make sense for access offerings that are introduced as additional consumption modes? As already mentioned, a distant branding strategy in contrast to a close branding strategy seems to be unnecessary as in neither case the parent brand evaluation is affected. On the other hand, it was found that a close branding strategy is favorable for high prestige product brands, whereas for low prestige product brands it is definitely better to include them in a distantly branded access offering in order to increase usage intentions.

Fifth, in which cases do access offerings harm existing customer relationships or cannibalize sales? The answer to this question depends on the product brand's prestige. In case of high prestige brands, owners are found to be even stronger supporters of the access consumption modes as compared to non-owners. In case of low prestige brands, this pattern changes. Thus, such offerings should primarily be targeted at non-owners and cautiousness is required regarding the development of the existing customer relationships. With regard to sales, access is an add-on business in the short run. Long-term effects, on the contrary, have not been investigated yet. However, it is possible that sales cannibalization does indeed happen when current owners decide to switch to access and not to repurchase a newer model. Furthermore the allure of high prestige brands might diminish over time when rarity is not given anymore.

4.5.5 Study limitations & avenues for further research

This study provides the first substantial empirical assessment of consumers' response to the introduction of access, but it is also subject to some limitations and a natural limitation in scope. These limitations might serve as starting points for further research.

First, all five studies reported here have been conducted in a hypothetical setting. Thus one might argue that the treatments in this series of experiments have been too weak in order to cause realistic reactions because the treatments did not contain any personal real life experience or anecdotes by family and friends. The fifth study has been conducted with actual customers of a carsharing provider, though. But the treatment, a change of car brands, has been hypothetical only. Even though it is difficult to conduct, further field research on actual access offerings is desirable.

Second, in all five studies cross-sectional designs have been employed. Thus the external validity could be enhanced by a longitudinal design that makes it possible to detect the temporal stability of the findings at hand. Positive or negative effects might simply need some time to evolve – depending on market acceptance of the access offering and the way consumers end up perceiving access. Thus it would be useful if further research addressed those issues in longitudinal field studies, which would overcome the limitations of cross-sectional designs.

Third, generalizing the results of the experiments in this study to other than the investigated product categories (cars and fashion) should be made with great caution. Already the investigation of only two product categories uncovered different effects. In summary, it was important to investigate two different product categories in order to show that caution is required when generalizations about access are made. However, as different product categories usually differ on more than one characteristic (price level, rebuy frequency, usage duration, ease of ownership perception) at the same time, it is not easy to isolate one of them. However, this can also be seen as a fruitful starting point for further research. Extending this research to further product categories is thus highly encouraged.

Fourth, this research has only been conducted with German respondents. Thus, further research should investigate the reported results for cultural differences in other countries and cultures.

Fifth, even though different brands were used in the various experiments, specific brands might have caused specific effects. Testing further brands that differ to an even greater degree in their brand prestige (e.g. low cost brands vs. upscale luxury brands) or that differ in other features than brand prestige might also be interesting (e.g. brand quality as mentioned above). Furthermore, the assortment size of an access offering might also be an influential variable of an access offering. A large assortment can stem from providing different models or even different brands in order to provide customers with more choice.

5 General Discussion and Conclusion

This dissertation pursues the overarching goal of studying consumers' reactions to the two alternative consumption modes, access and ownership. By relying on a mixed-methods approach, which combines consumer interviews, surveys with prospective users as well as actual users and a series of scenario-experiments, two different perspectives are taken in order to advance this so far under-researched topic: On the one hand, the consumers' perspective is studied by investigating how consumers perceive and evaluate two different consumption modes. On the other hand, a company's perspective is taken by researching how a company should ideally market a new access offering. Neither of both research perspectives has been studied before in this breadth and depth. Existing research on consumption mode evaluation has solely relied on qualitative techniques (Chen, 2009; Durgee & O'Connor, 1995); and there is only one publication yet that deals with one facet of the ideal design of access offerings (Lamberton & Rose, 2012).

From a theoretical perspective, this thesis supports the development of a theory on consumption mode choice and the development of a theoretical basis for the marketing of access offerings. From a managerial point of view, the results of this thesis help to develop a better understanding why consumers prefer one or the other consumption mode and to guide the strategic design of access offerings and the corresponding market entry strategy. In addition to that, the findings are also important for policy makers interested in promoting access given the scarcity of resources and a growing world population.

This chapter presents a general discussion of the key results of this dissertation and proceeds as follows: First, the key findings that have been presented in detail in the previous chapters are briefly summarized. Subsequently their general implications for theory, research and management are discussed. Finally the dissertation is closed with concluding remarks and directions for future studies.

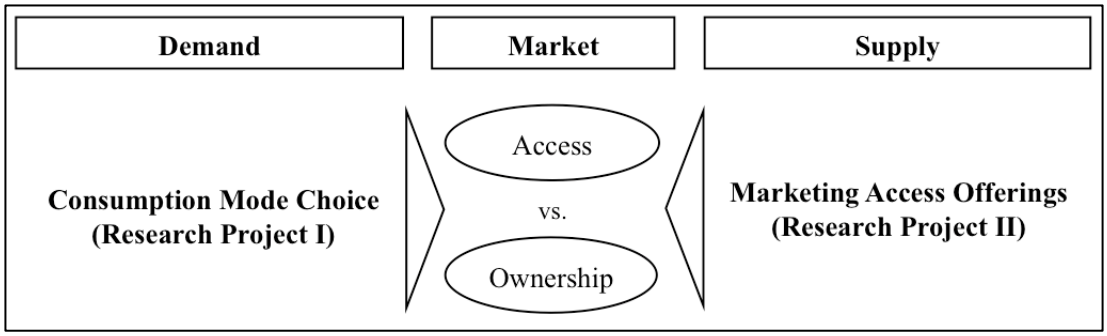

Figure 13: Perspectives of the Research Projects.

5.1 Summary of Key Findings

Key findings of project I

The outcome of the qualitative research is a set of 18 perceptions that are relevant when consumers consider different consumption modes. These perceptions are clustered into four dimensions – monetary, functional, experiential, and symbolic perceptions. All the perceptions have served as foundation for the development of a second-order formative measurement model whose empirical validation allows answering all research questions.

The results indicate that consumers perceive access and ownership significantly different on a variety of perceptions. Thereof the following findings are of particular importance: Overall, consumers do not perceive the total amount of costs to be higher or lower in either of the consumption modes across product categories: in case of cars no significant differences are found, bikesharing and handbag rentals are perceived to be more expensive than ownership, whereas book rentals are believed to be cheaper than purchasing books. Against expectations, consumers perceive the predictability of costs to be larger for ownership than for access. Furthermore, consumers perceive access to render them surprisingly less flexible as compared to ownership. In terms of perceived environmental friendliness, the results depend on the product category: Access is only perceived to be significantly friendlier to the environment than ownership in case of cars and books – but not consistently across all investigated categories. Against prior literature, consumers feel a greater need for carefully handling the product if they access it rather than own it. Finally, consumers perceive a significantly lower personal attachment to a rented good as compared to an owned product. However, the remaining symbolic perceptions differ on a rather

small extent showing that signaling symbolic meanings to others cannot only happen in case of ownership.

The empirical validation of the formative measurement model shows that all of the qualitatively identified perceptions are well suited to determine the attitude towards a consumption mode. On a superordinate level, functional and monetary perceptions are found to be most important for determining the differential consumption modes attitude. The experiential perceptions dimension follows next, whereas the set of symbolic perceptions is generally least important. On an individual perception level six perceptions have significant weights in all investigated product categories: total costs, predictability of costs, absence of costs, need for careful handling, fun while using, and personal attachment. Only one perception is not found to have a significant weight in any product category – the risk of non-availability.

The empirical results also validate the existence of significant differences in access offerings from different product categories. In particular, monetary perceptions become the more important, the more expensive the product category is. The importance of individual functional perceptions, on the other hand, strongly depends on the product category. For example, perceived maintenance effort is significantly more important for cars than for any other product category. For bicycles, experiential and symbolic perceptions are found to be significantly less important than for any other product category.

Finally, the contrast of experienced access users with inexperienced access users shows that experience affects perceptions of consumption modes. Experienced access users perceive the access consumption mode to contain a smaller risk of non-availability and a smaller risk of failure. Furthermore their effort perceptions are not as strong and they believe even stronger in impressing others by their consumption mode choice. On the other side, experienced access users feel even less bound to a community and less personal attachment to rented goods as compared to users without actual experience. Moreover, for consumers with carsharing experience functional perceptions become more important yet, whereas symbolic perceptions become less important for determining their consumption modes evaluation.

Key findings of project II

In a series of five experiments it is found that, for cars, the consumers' attitude towards the announced access offering is not affected by the prestige level of the product brand, which serves as basis for the offering. However, it is found that the service convenience level of the access offering plays a significant and relatively more important role for consumers' attitude towards an access offering. The consumers' behavioral intention though, is found to be higher for a high prestige product brand in three out of five experiments. In the case of behavioral intentions the service convenience level is not found to affect the consumers' evaluations of the access offering. Two of those experiments have also been conducted in a second product category, the fashion industry. There it is found that consumers' evaluations of an announced access offering, measured by either attitude or behavioral intention, significantly increase for rental offerings based on high prestige brands as compared to low prestige brands.

Moreover, the results of four experiments demonstrate that the ownership status of a consumer – that is being already owner of a product from the brand that introduces an access offering, or not – influences his or her evaluation of an access offering. In case of access offerings that are based on low prestige brands, non-owners express a more positive evaluation as compared to owners. In case of access offerings that are based on high prestige brands, owners' evaluations are better as compared to non-owners. This effect can be consistently shown across different brands and both product categories.

Furthermore, it is found that the introduction of an additional consumption mode does not negatively affect the parent brand. The consumers' evaluation of the parent brand is not influenced by the announcement of introducing access across three studies in two different product categories. The results show that it does not matter whether the parent brand is a low or a high prestige brand or whether consumers have already been customers of that firm or not. Also the branding distance between the parent brand and the new access offering has not been found to affect the result.

5.2 General Discussion

5.2.1 Implications for theory and research

This dissertation contributes several important implications for the currently rather unexplored research area of consumption modes. These implications can be grouped into three categories – general implications that originate from both research projects as well as implications that originate from either of the two conducted research projects.

Implications across both research projects

Most importantly, this dissertation is the first to show on an empirical basis that access market offerings are fundamentally different from ownership market offerings. This can be shown for both perspectives which have been taken in this dissertation: the consumer's point of view in research project I, as well as the managerial point of view in research project II. In the first project, it is shown that consumers perceive access and ownership differently on a set of 18 perceptions. In the second project, it is found that product brands play a smaller role in access offerings than in ownership offerings. Furthermore it is shown that the direction of an interaction effect based on the consumers' ownership status and the product brand is reversed in case of access offerings. These fundamental differences prove the proposition by Lovelock and Gummesson (2004) that access and ownership marketing transactions are prominently different. Furthermore these differences confirm that existing marketing theories cannot be directly transferred to access offerings because the vast majority of marketing theories has been developed under the implicit assumption that consumption can only take place in the ownership consumption mode (Bardhi & Eckhardt, 2012; Chen, 2009). Thus, given the rise of access, it is necessary to reassess the marketing literature regarding consumer-object, consumer-provider and consumer-consumer relationships on their transferability to consumption that takes place in the access consumption mode.

Moreover, this dissertation is the first research project in the context of access that has empirically investigated and compared several product categories: cars, bicycles, books, handbags and clothing. In summary, various important differences between different product categories have been found. This leads to the conclusion that

studies on access that only cover one product category can reveal interesting insights, but are not sufficient in order to make generalizations that hold for access in general. Product categories differ in at least four features that have important implications for the corresponding access offerings: price level, visibility of consumption, durability of goods, and main consumption goal (see chapter 2.3.2 for more details). On top, it is important to note that also the design of access offerings within a product category can differ decisively. The typology, proposed in this dissertation, contains six important dimensions on which access offerings within a given product category can differ: level of convenience, positioning, tangibility, transaction length, price model, and contracting partners. Thereof the first two have been investigated in-depth in the second research project, but the remaining dimensions have been excluded due to complexity reasons. This potential variety for an access offering – even within a product category – should be taken into account in future studies on access offerings, too.

Moreover, the results of both research projects show that there is a gap between consumers' expressed attitude and behavioral intention to use either of the consumption modes. In research project II, the consumers' attitude towards a carsharing access offering is found to be not affected by the product brand, whereas the behavioral intention is affected. On top, a high level of service convenience is found to be crucial for consumers' attitude, whereas not for consumers' behavioral usage intention. Also in project I, a decrease in the variance explained is found when using behavioral intention as the dependent variable instead of the attitude. However, this difference can be explained by drawing upon the Theory of Planned Behavior: Additional analysis shows that the amount of variance explained, in case of using the behavioral intention as the explained variable, substantially increases by including the remaining two constructs of the TPB: social norm and perceived behavioral control (Ajzen, 1991). This leads to the conclusion that in case of consumption mode choice the behavioral intention is constrained by perceived social norms and perceived behavioral control. Constraints by perceived social norms might be due to a historical bias against renting (Ronald, 2008) and the still low usage level of access offerings among general consumers, which render access special. Consumers might as well perceive a lack of behavioral control if they used access due to the following reasons: the restricted availability of access offerings, the intention to use a good

over a long period of time, as this is generally believed to not match access very well (Moore & Taylor, 2009), as well as other personal circumstances such as already owning a good in the respective category or living in a large household in which many people can economically share owned goods.

Implications by project I

Project I contributes to the marketing literature by providing empirically grounded information about the perception of consumption modes and by advancing theory development on consumption mode choice. It takes a broader perspective than previous research as it does not solely focus on the adoption of access (Lamberton & Rose, 2012; Moeller & Wittkowski, 2010; Schrader, 2001) or solely applies qualitative methods (Chen, 2009; Durgee & O'Connor, 1995). Furthermore, it contributes a standardized way to measure and understand the nature of the factors that drive consumption mode choice – over time, over different product categories and over different access designs. Besides, it could help to explain other important marketing outcomes such as usage intensity, satisfaction or customer retention.

With regard to how consumers perceive access and ownership respectively, project I provides new insights – partly confirming and partly contradicting previous propositions and research. Overall, it is found that even though access has gained popularity, ownership is still the preferred consumption mode by the general consumer. With regard to the perceived total costs it is found that consumers perceive carsharing similarly expensive as ownership, bicycle and handbag rental as more expensive, whereas book rentals as more economical compared to ownership. This is in contrast to Bardhi and Eckhardt (2012) who found that carsharing users value the economical advantage of access. However, it needs to be taken into account that these users had already chosen access – probably at least partly because the cost structure matches their usage needs, which does not seem to be the case in general. In contrast to Bardhi and Eckhardt (2012), this research project further finds that the perceived flexibility is generally higher in ownership. This contradiction might also be explained by a sample bias: Carsharing users value a different kind of flexibility as compared to the general consumer. The former are happy to be free by not being bound to a particular product, whereas the latter value the flexibility that arises from permanently owning a good which is thus always available. Furthermore, this study

finds that access is not always perceived as being more environmentally friendly than ownership – this perception depends on the product category at question. Only in case of cars and books, consumers perceive using access to be more eco-friendly. This means that consumers do not share the predominant opinion in the literature that access is generally more environmentally friendly than ownership (Bardhi & Eckhardt, 2012; Lovelock & Gummesson, 2004; Schrader, 1999). Interestingly, this research project also finds the perception of being required to handle the product carefully to be greater in case of access. This is contradictory to the tragedy of the commons (Hardin, 1968) as well as prior literature (Durgee & O'Connor, 1995). The interviews reveal that being afraid of punishments by the access providers is most likely the key driver of this perception. Thus, consumers seem to believe that the control mechanisms by other users and by the access providers work well to prohibit selfish behavior. Furthermore, prior postulates and qualitative findings that the consumer-object relationship is weaker in case of access are empirically confirmed for the first time (Bardhi & Eckhardt, 2012; Durgee & O'Connor, 1995).

The empirical validation of the formative measurement model in four different product categories shows that the amount of important factors for determining consumers' attitude towards consumption modes is large and that the individual importance is varying across industries. The latter finding empirically confirms a presumption by Lamberton and Rose (2012). Generally, the dimensions of functional and monetary perceptions are most important. This is in line with the speculations on the general importance of various factors for predicting the adoption of access offerings by Lamberton and Rose (2012) as well as Bardhi and Eckhardt (2012). However, the results of this research project do not only empirically confirm their speculations on the drivers of the adoption of access – beyond that it is found that functional and monetary perceptions are also most important for the evaluation of consumption modes in general, followed by experiential and symbolic perceptions. Furthermore, the dimension of monetary perceptions is the more important for determining consumers' attitude towards consumption modes, the more expensive the product category is. Overall, these findings show that the types of value that are discussed in the literature on customer value creation are suitable to be used for consumption mode choice, too (Boksberger & Melsen, 2011; Smith & Colgate, 2007).

On an individual perception level, it is found that the relative importance is strongly dependent on the product category. This is particularly the case for functional perceptions. As those are closely linked to the theoretical construct service convenience, one could draw upon this literature stream for further research (Berry et al., 2002; Colwell, Aung, Kanetkar, & Holden, 2008; Seiders, Voss, Godfrey, & Grewal, 2007). Surprisingly, the perceived risk of non-availability is not found to be important in any product category despite the importance Lamberton and Rose (2012) attach to this perception. On top, it has not been found either to have a significant weight in the formative model for experienced access users. The fact that this study accounts for more perceptions than the study by Lamberton and Rose probably causes its minor importance, but at the same time challenges the study by Lamberton and Rose who have focused on this particular perception.

The perceptions of the access consumption mode are not static but change with increasing access usage experience due to learning effects. For example, risk perceptions decrease, the predictability of costs increases, but the personal attachment decreases even further. Thus, project I also confirms the expectation by Lamberton and Rose (2012) that the importance of different factors varies between familiar and unfamiliar customers: the functional dimension becomes more important, whereas the symbolic dimension loses importance. Thus, it is important to consider the respondents' usage experience when comparing different findings.

Implications by project II

Project II contributes to the marketing literature by improving the understanding of how access offerings should be marketed. It is the first study that empirically investigates the importance of the product brand, the service convenience level and the ownership status of the consumers. Furthermore, to the author's best knowledge there has not been any study that has empirically investigated potential spillover effects due to the introduction of an additional access offering onto the parent brand before.

The results of this study show that the findings in the brand extension literature cannot be simply transferred, even though the conceptualization of this study makes successfully use of the theoretical basis of brand extensions. For example, the interaction effect between ownership status and product brand turns out exactly

opposite as compared to findings from the brand extension literature by Kirmani et al. (1999). This seems to be due to the fact that in case of brand extensions a new product is introduced as an additional ownership offering under the same parent brand, whereas in case of the introduction of an additional access offering an existing product is offered as a service.

Lovelock and Gummesson's (2004) proposition that in access offerings the importance of the product brand will decrease, while the importance of the provider's characteristics will increase cannot be supported without restrictions based on the results at hand. The results indicate that it depends on the product category as well as on the outcome variable whether this proposition applies or not. In the fashion industry the product brand plays a role for consumers – probably because the price difference between purchasing and renting is lower as compared to cars, a third party cannot distinguish owned vs. rented apparel, and the rental period is typically longer as compared to carsharing. However, this study only allows the conclusion that the product brand does play a role in fashion rental offerings because this study did not investigate whether the provider's characteristics are more important or not. In the case of cars more extensive experiments have been conducted. These results lead to the conclusion that for the consumers' attitude towards carsharing offerings the product brand does not matter at all and that the provided service convenience level is more important than the product brand – confirming Lovelock and Gummesson's (2004) proposition. For the consumers' behavioral intention, on the other hand, the product brand is found to be important in three out of five experiments and also found to be more relevant than the service convenience level. These differences can be explained by the small price per minute that allows test-driving high prestige cars for a very low price and the perception of social norms, which seem to be in favor of the high prestige brand.

Similar to the literature on brand extensions, the additional consideration of the consumers' ownership status has helped to explain additional variance and to derive important insights on potentially negative effects on existing customers of a brand. Also in case of access offerings an interaction effect of ownership status and product brand prestige is found – however its outcome is different from Kirmani and colleagues' (1999) study on brand extensions: Non-owners evaluate newly introduced access offerings based on *low prestige* brands more positively than

owners, whereas access offers based on *high prestige* brands are evaluated more favorably by owners than non-owners. This leads to the presumption that low prestige brand owners perceive a particularly low degree of fit between the brand and the added access offering. Alternatively, their evaluation might be caused by reactance due to frustration that there is now a more economical way to use the same product, which they had bought primarily due to its value for money. High prestige brand owners, on the other hand, seem to perceive an additional access offering by their brand not as devaluation of their ownership, but rather as an extension of options.

Lamberton and Rose's (2012) proposition that adding access as an additional consumption mode might positively influence the brand evaluation is disproved by the results of this research project: In none of the studies the parent brand evaluation gets modified by the introduction of an additional access offering. The only perception that is found to be affected in almost all studies is the parent brand's innovativeness rating. From a theoretical point of view, this result can best be explained by categorization theory (Sujan & Bettman, 1989; Weber & Crocker, 1983): The information that a brand introduces an additional access offering is so inconsistent and radical compared to the existing belief structures about this brand, that consumers do not modify their existing brand beliefs but create a new sub-type for the access offering.

5.2.2 Implications for managers

First of all managers are facing the big question whether the rise of access will continue or not. On the one hand, one could argue that the *sharing economy* and *collaborative consumption* are currently only being hyped in the media because it is a new topic that fits the current zeitgeist. Access can also be regarded as having been a trend that has been primarily caused by the financial crisis and which will soon end after the crisis has been completely overcome and consumers have enough money to purchase everything they need (Belk, 2013b). Finally, one could argue that it is challenging to create a profitable access-based business model.

It is difficult to refute all remaining skepticism regarding the future development of access. However, there are number of reasons why access has not been a one-off trend, but will permanently remain an important topic: First, there are a number of

access companies, which already operate profitable – take Netflix (BBC, 2013) or car2go as examples, the latter having claimed to have profitable operations in some of the cities where the service is offered (Daimler, 2013b; Handelsblatt, 2013). The fact that many companies, which operate on access-based business models, are not profitable (yet) is due to the fact that these companies are new ventures, which typically need some time to reach the break-even (Kakati, 2003). Second, a number of professional venture capitalists are investing in access-based start-ups because they expect them to grow significantly and generate a lot of profits – otherwise they would not invest their funds into those start-ups (Collaborative Fund, 2013; Rooney, 2012). Third, further technological advances will make access offerings even more relevant than today. Imagine what micro-drones or autonomous cars can make possible if they are used for transporting rented goods back and forth or for transporting passengers. Fourth, governments are likely to increasingly incentivize the usage of access offerings in order to promote an economical use of scarce resources in light of a growing world population, while simultaneously being able to fulfill customer needs (Belk, 2013b). The first Chinese cities are, for example, already enforcing bikesharing offerings in order to fight pollution and congestion (Waldmeir, 2013). Similar to Belk who writes "it would be folly to ignore sharing and collaborative consumption as alternative ways of consuming and as new business paradigms" (Belk, 2013b, p. 5), incumbent companies are suggested to drive the trend towards access or at least prepare for that trend, whereas new ventures should exploit their opportunities if they manage to identify promising new markets.

Interestingly, industries differ a lot in their maturity of access offerings. The probably most advanced industry is the car industry. Many different players – car manufacturers (e.g. Daimler, BMW, or Citroën) as well as new entrants (e.g. Zipcar or Deutsche Bahn) – are currently offering different kind of carsharing offers. In all other industries, such as fashion, handbags, bicycles, movies, or tools, access offerings are exclusively offered by new entrants (e.g. Rent-the-Runway, Netflix or all municipal bikesharing providers). Thus, it remains interesting to see how incumbents will react. They can either ignore those new offerings, introduce access offerings by themselves or purchase successful access providers (as Avis did with Zipcar) in order to exploit the opportunities of enlarged markets and to establish closer customer relationships (Belk, 2013b). In the following section, general

managerial advice based on the outcomes of this thesis is given to those who consider introducing access offerings or have already done so.

The first recommendation is to make use of the measurement tool, which has been developed and validated in research project I. It is beneficial for a number of typical challenges: First, it helps to develop a better understanding of what perceptions drive consumption mode choice. Second, it can be used to cluster customers into relevant market segments. Third, its periodical application allows monitoring changes that develop over time. Fourth, it can be used to develop and benchmark new access or ownership offerings. As the measurement model has been developed to be adaptable to any product category, it can be applied in many different industries.

In general, the following perceptions are most influential in determining a consumers' attitude towards consumption modes: total costs, predictability of costs, absence of costs, need for careful handling, fun while using, and personal attachment. Moreover, the functional perceptions are very important. However, their individual importance is strongly industry-dependent so that no general advice can be given on which ones to focus. Managers should focus on these perceptions when they design new market offerings or plan an advertising campaign to effectively activate consumers. Furthermore, managers should watch out for last mile innovations (e.g. same-day delivery, automated parcel pick-up locations or parcel delivery by drones) as these make online shopping as well as receiving and returning rented goods more convenient and cheaper – thus addressing the two most important dimensions of perceptions, functional and monetary perceptions. It is also important to use different communication strategies for consumers with access experience vs. those without: Experienced access users attach even more importance to functional perceptions, while the importance of symbolic perceptions further declines.

Besides, managers are keen to know how an access offering should be ideally designed and whether its introduction might have negative consequences for the parent brand. In the fashion industry, an access offering should offer fashion by high prestige brands in order to attract customers. In case of cars the difference between cars by a high and a low prestige brand is smaller. Thus, offering a carsharing service with low prestige cars is an interesting option, which allows saving costs or investing those savings into service features that render the carsharing offering more convenient. Interestingly, owners of a high prestige brand that introduces access react

more favorable than all non-owners, whereas owners of a low prestige brand react less positive as compared to all other consumers. Thus, low prestige brands should try to target different market segments compared to their current target segment, whereas high prestige brands can benefit by directly targeting their existing customers who appreciate this extension of their consumption options. New entrants and established companies are both well suited to provide access offerings, as the proximity to an established brand is not found to affect consumers' evaluations and no negative spillover effects are found. Thus, new entrants can pick any product brand and start providing their access offer, whereas established companies do not need to fear negative consequences.

5.3 Directions for Future Studies

Overall, this thesis is among the first publications that focus on the increasingly relevant topic of consumption mode choice. Existing research has almost exclusively assumed that consumption takes place in the ownership consumption mode, which causes the need to reassess a lot of marketing knowledge in the context of access. As a consequence there remain a lot of promising research questions, which should be addressed in future studies.

Generally, future studies on consumption mode choice or those that are solely focused on access should investigate more than only one product category. Both research projects in this dissertation clearly reveal that access offerings across different product categories are not similar. Thus, identifying and explaining these differences remains an important research area.

To the author's best knowledge, all existent empirical research – as well as this dissertation – has exclusively researched B2C access offerings. However, the market for peer-to-peer (P2P) sharing is also growing significantly (The Economist, 2013). In these cases the company only provides the digital marketplace where private lenders and borrowers of goods such as cars, rooms, parking space, books or tools are brought together. On the one hand, it would be interesting to investigate the lenders' motivation. On the other hand, the measurement model put forward in research project I could be applied (and potentially refined) for borrowers in a P2P context in order to find differences in contrast to b2c access offerings.

A related area for future research is the so-called grey zone between access and ownership (see chapter 2.1). Future research could reassess the validity of the formative measurement model as well as the results from research project II in cases when the consumption takes place via leasing or fractional ownership in order to shed light on this grey zone.

The application of the measurement model for determining consumers' attitude towards consumption modes has revealed the importance of cost perceptions. As access offerings can be provided with many different tariff types it will be interesting to see how the tariff type will influence perceptions and preferences of consumers. Especially access offerings with flat-rate pricing are interesting as this form of tariff is most similar to ownership. However, the economic feasibility of flat-rate access offerings should also not be forgotten.

Even though the hypothetical access offerings in all studies of this dissertation have been described as only offering one kind of brand, there are access offerings, which offer their customers a multitude of brands. In those cases it will be interesting to see whether brand preferences as well as brand picking behavior will change as the brand decision does not only happen once but before every usage.

All studies in this dissertation are based on cross-sectional designs. However, longitudinal research designs would be beneficial in order to find whether the findings stay constant over time and to answer the question whether access only cannibalizes product sales or enlarges the market. In order to reveal some of the former effects, samples of users without access experience have been contrasted to samples with actual access experience. Nonetheless, it remains open how the general perception of access will develop among non-access users.

The question remains whether it is ultimately more beneficial for a company in the long run to offer both consumption modes or to offer solely one of them. The results of this dissertation provide first insights that access can be an add-on business on the short run, but future research is necessary to investigate long-term effects.

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Appendix

A. Appendix for Project I

A.1. PCM Item Battery

Table 21: Original German Items for Measuring the Attitude Towards Consumption Modes

Perception	Item (German Version)	Answer Scale
Total costs	Meiner Einschätzung nach sind die Gesamtkosten für mich...	a
Predictability of costs	Ich finde, dass man die anfallenden Kosten gut abschätzen kann.	b
Absence of costs	Bei der Nutzung hat man das Gefühl, dass einem keine Kosten entstehen.	b
Transaction effort	Ich finde den einmaligen Aufwand beim Kauf bzw. der Registrierung...	a
Pre-usage effort	Ich finde den erforderlichen Aufwand vor jeder Verwendung...	a
Post-usage effort	Ich finde den erforderlichen Aufwand nach jeder Verwendung...	a
Maintenance effort	Ich empfinde den Aufwand zur Instandhaltung / Pflege als...	a
Storage effort	Ich empfinde den Aufwand einen geeigneten Abstellort / Aufbewahrungsort zu finden als...	a
Risk of non-availability	Das Risiko, dass ___ nicht verfügbar ist, wenn ich es nutzen möchte ist...	a
Risk of failure	Das Risiko eines Defekts / einer Beschädigung wenn man ___ nutzt ist...	a
Use limitations	Ich bin bei der Verwendung hinsichtlich Art, Dauer und dem Ort der Verwendung stark eingeschränkt.	b
Need for careful handling	Bei der Verwendung hat man das Gefühl, dass man sehr vorsichtig sein muss.	b
Inflexibility*	Die Flexibilität in verschiedenen Lebenssituationen ist...	a
Fun while using	Die Verwendung bereitet viel Vergnügen.	b
Being part of a community	Ich fühle mich anderen ___ Eigentümern / Nutzern verbunden.	b
Environmental friendliness	Die Nutzung empfinde ich als umweltfreundlich.	b

Perception	Item (German Version)	Answer Scale
Signaling one's personality	Ein ___ zu besitzen / zu nutzen drückt stark die eigene Persönlichkeit aus.	b
Personal attachment	Ich finde man hat eine starke persönliche Bindung zum/zur ___.	b
Impressing others	Es macht einen guten Eindruck auf Andere ___ zu besitzen / zu nutzen.	b

	Answer Scales
a	sehr gering (1) … sehr hoch (7)
b	überhaupt nicht (1) … voll und ganz (7)

* reverse coded item

A.2. Description of Access Offerings

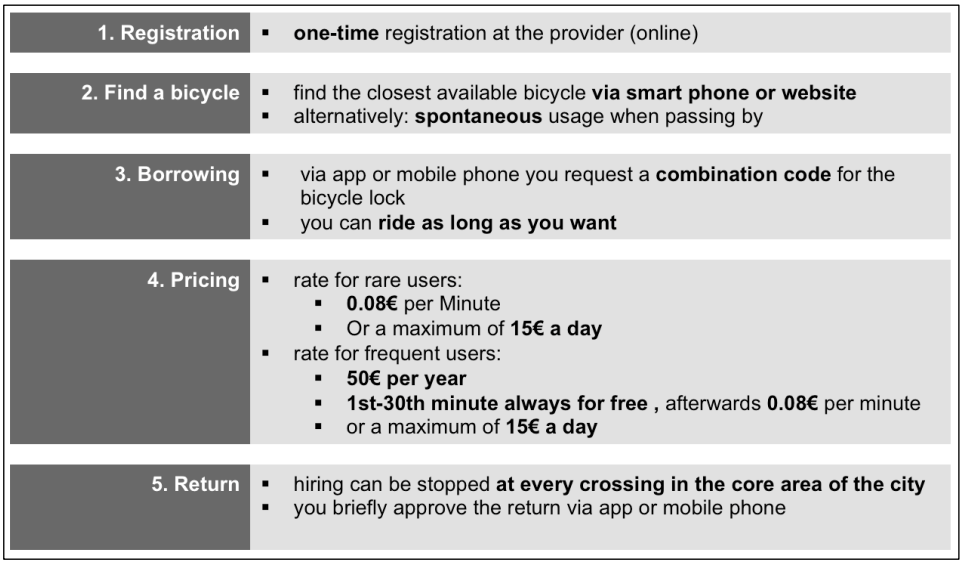


Figure 14: Description of the Bikesharing Access Offering Used in the Survey (Project I).

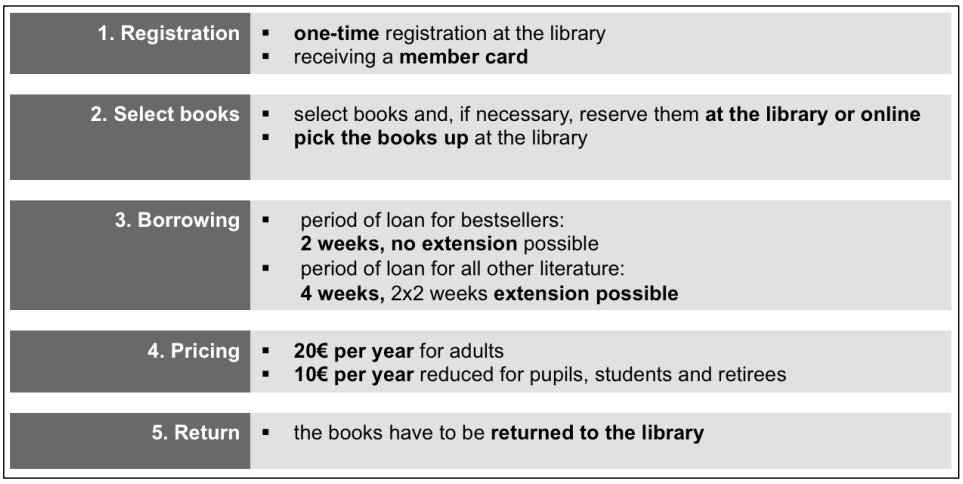


Figure 15: Description of the Book Rental Access Offering Used in the Survey (Project I).

Figure 16: Description of the Handbag Rental Access Offering Used in the Survey (Project I).

A.3. Correlation Matrices

Table 22: Correaltion Matrix for the Product Categories Cars and Bicycles (Project I)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	M	SD
1	Total costs	—	-.29*	-.27*	.36*	.41*	.38*	.18*	.23*	-.12*	-.03	.00	-.11*	-.16*	-.10*	.33*	.25*	.11*	.28*	.25*	-.37*	-.33*	2.16	2.45
2	Predictability of costs	-.34*	—	.42*	-.30*	-.31*	-.33*	-.26*	-.25*	.28*	.23*	.12*	.26*	.30*	.27*	-.24*	-.20*	-.16*	-.21*	-.23*	.27*	.20*	-1.52	2.61
3	Absence of costs	-.20*	.17*	—	-.09*	-.31*	-.26*	.04	-.18*	.20*	.11*	.07	.16*	.33*	.12*	-.24*	-.26*	-.10*	-.20*	-.21*	.18*	.16*	-2.70	2.83
4	Transaction effort	.28*	-.32*	-.02	—	.42*	.52*	.40*	.26*	-.11*	-.13*	-.02	-.19*	-.05	-.17*	.20*	.19*	.12*	.24*	.22*	-.26*	-.22*	0.73	2.45
5	Pre-usage effort	.23*	-.27*	-.13*	.25*	—	.80*	.20*	.47*	-.20*	-.10*	.05	-.19*	-.36*	-.17*	.46*	.34*	.26*	.47*	.43*	-.35*	-.36*	2.40	2.01
6	Post-usage effort	.23*	-.29*	-.07	.31*	.76*	—	.33*	.52*	-.19*	-.14*	.01	-.19*	-.23*	-.19*	.45*	.35*	.27*	.42*	.43*	-.33*	-.34*	2.04	2.03
7	Maintenance effort	.27*	-.33*	-.05	.50*	.07	.14*	—	.34*	-.13*	-.09*	-.08*	-.15*	.00	-.17*	.11*	.14*	.07	.09*	.21*	-.20*	-.13*	-0.82	2.33
8	Storage effort	.25*	-.35*	-.11*	.26*	.44*	.49*	.23*	—	-.15*	-.06	.03	-.15*	-.16*	-.09*	.37*	.32*	.25*	.41*	.34*	-.23*	-.24*	1.49	2.15
9	Fun while using	-.22*	.29*	.08*	-.19*	-.28*	-.29*	-.12*	-.30*	—	.35*	.27*	.23*	.25*	.27*	-.18*	-.14*	-.18*	-.12*	-.17*	.26*	.22*	-0.95	1.64
10	Being part of a community	-.13*	.17*	.03	-.18*	-.09*	-.12*	-.14*	-.13*	.32*	—	.17*	.19*	.12*	.30*	-.04	-.02	-.05	.00	.00	.13*	.09*	-0.11	1.53
11	Environmental friendliness	-.33*	.27*	.03	-.29*	-.05	-.07	-.37*	-.09*	.20*	.25*	—	.12*	.01	.15*	.06	.07	-.10*	.01	.02	.08*	.07	-0.11	0.89
12	Signaling one's personality	-.10*	.26*	.13*	-.16*	-.16*	-.19*	-.12*	-.15*	.29*	.24*	.19*	—	.31*	.45*	-.13*	-.09*	-.12*	-.05	-.09*	.08*	.08*	-0.66	1.86
13	Personal attachment	-.13*	.23*	.16*	.02	-.31*	-.23*	.15*	-.21*	.36*	.11*	-.03	.28*	—	.30*	-.26*	-.26*	-.15*	-.21*	-.22*	.16*	.17*	-2.74	2.44
14	Impressing others	-.11*	.21*	.13*	-.13*	-.17*	-.19*	-.07	-.21*	.33*	.30*	.17*	.37*	.38*	—	-.14*	-.09*	-.06	-.06	-.11*	.15*	.11*	-0.51	1.63
15	Use limitations	.17*	-.18*	-.14*	-.03	.44*	.40*	-.12*	.36*	-.30*	-.01	.10*	-.15*	-.39*	-.16*	—	.47*	.37*	.43*	.31*	-.29*	-.29*	2.08	2.34
16	Need for careful handling	.19*	-.19*	-.18*	.13*	.24*	.23*	.05	.31*	-.18*	.05	.06	-.12*	-.23*	-.12*	.37*	—	.16*	.32*	.34*	-.18*	-.15*	2.25	2.32
17	Inflexibility	.10*	-.16*	-.05	.12*	.42*	.33*	.01	.30*	-.27*	-.09*	-.01	-.08*	-.22*	-.11*	.42*	.17*	—	.31*	.10*	-.22*	-.25*	1.41	2.64
18	Risk of non-availability	.14*	-.16*	-.10*	.08*	.49*	.41*	-.04	.34*	-.23*	-.07	.06	-.10*	-.32*	-.13*	.47*	.30*	.46*	—	.57*	-.23*	-.22*	3.09	2.33
19	Risk of failure	.20*	-.29*	-.10*	.20*	.39*	.40*	.11*	.40*	-.25*	-.11*	-.07	-.23*	-.27*	-.20*	.34*	.26*	.23*	.46*	—	-.15*	-.16*	2.33	2.31
20	Attitude 1	-.45*	.39*	.18*	-.30*	-.29*	-.30*	-.30*	-.33*	.41*	.26*	.35*	.26*	.26*	.30*	-.23*	-.19*	-.26*	-.21*	-.29*	—	.80*	-2.04	1.80
21	Attitude 2	-.47*	.36*	.21*	-.24*	-.28*	-.29*	-.25*	-.30*	.39*	.19*	.29*	.19*	.23*	.20*	-.26*	-.18*	-.31*	-.23*	-.28*	.79*	—	-2.01	2.00
M		0.08	-0.66	-0.86	-0.64	2.40	2.00	-1.72	1.51	-1.25	0.08	0.87	-0.57	-2.81	-0.66	3.15	1.78	3.04	3.49	1.69	-1.68	-1.91		
SD		2.33	2.51	2.14	2.56	2.01	1.97	2.33	2.26	1.86	1.70	1.86	1.87	2.37	1.85	2.21	2.11	2.13	2.20	2.18	2.20	2.22		

Note. Inter-correlations, means and standard deviations for cars (n = 633) are presented below the diagonal. Inter-correlations, means and standard deviation for bicycles (n= 627) are presented above the diagonal. * $p \leq .05$

Table 23: Correaltion Matrix for the Product Categories Books and Handbags (Project I)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	M	SD
1	Total costs	—	-.28*	-.26*	.41*	.48*	.47*	.31*	.27*	-.13*	-.03	-.32*	-.15*	-.17*	-.05	.20*	.21*	.09*	.27*	.30*	-.41*	-.37*	2.64	2.59
2	Predictability of costs	-.26*	—	.42*	-.20*	-.30*	-.28*	-.21*	-.19*	.34*	.17*	.34*	.41*	.35*	.30*	-.07	-.03	-.13*	-.16*	-.16*	.23*	.22*	-1.96	2.44
3	Absence of costs	-.31*	.47*	—	-.12*	-.34*	-.29*	-.05	.03	.20*	.14*	.24*	.27*	.34*	.18*	-.14*	-.15*	-.04	-.20*	-.15*	.19*	.22*	-3.00	3.13
4	Transaction effort	.27*	-.22*	-.27*	—	.58*	.52*	.48*	.46*	-.22*	-.15*	-.23*	-.23*	-.12*	-.08	.12*	.15*	.22*	.21*	.40*	-.41*	-.34*	2.02	2.34
5	Pre-usage effort	.03	-.12*	-.25*	.31*	—	.82*	.41*	.35*	-.22*	-.09	-.28*	-.21*	-.22*	-.04	.32*	.34*	.13*	.38*	.46*	-.45*	-.42*	3.46	2.16
6	Post-usage effort	.05	-.09	-.18*	.24*	.72*	—	.48*	.38*	-.19*	.00	-.29*	-.17*	-.21*	-.03	.30*	.33*	.10*	.45*	.46*	-.41*	-.39*	3.58	2.20
7	Maintenance effort	-.01	-.10*	-.17*	.19*	.35*	.35*	—	.69*	-.30*	-.03	-.20*	-.25*	-.13*	-.13*	.16*	.18*	.14*	.18*	.30*	-.37*	-.34*	1.75	2.71
8	Storage effort	.28*	-.24*	-.26*	.21*	.21*	.22*	.47*	—	-.26*	-.04	-.15*	-.22*	-.08	-.12*	.08	.05	.15*	.15*	.30*	-.39*	-.38*	1.02	2.83
9	Fun while using	.06	.17*	.13*	-.14*	-.30*	-.30*	-.09	-.10*	—	.39*	.36*	.41*	.37*	.42*	-.10*	-.01	-.12*	-.10*	-.20*	.32*	.30*	-1.20	2.18
10	Being part of a community	-.06	.11*	.00	.04	-.02	-.02	.07	-.06	.10*	—	.17*	.22*	.18*	.27*	.17*	.10*	-.04	.02	-.04	.14*	.12*	-0.11	2.02
11	Environmental friendliness	-.30*	.29*	.29*	-.15*	-.06	-.03	-.03	-.25*	.10*	.22*	—	.25*	.18*	.29*	-.12*	.02	-.14*	-.19*	-.17*	.31*	.30*	-0.86	2.51
12	Signaling one's personality	.01	.18*	.23*	-.05	-.15*	-.18*	-.05	-.12*	.19*	.06	.11*	—	.47*	.44*	-.06	-.01	-.14*	-.11*	-.19*	.24*	.19*	-1.16	2.30
13	Personal attachment	.14*	.05	.08	-.02	-.31*	-.34*	-.07	.01	.32*	.04	-.05	.28*	—	.35*	-.18*	-.26*	-.05	-.18*	-.19*	.21*	.19*	-3.12	2.60
14	Impressing others	.08	.11*	.15*	-.01	-.16*	-.20*	.00	-.03	.23*	-.04	.02	.30*	.39*	—	.05	.11*	.02	-.05	-.06	.14*	.11*	0-.69	1.96
15	Use limitations	-.05	.00	-.08	.09	.36*	.39*	.15*	.04	-.22*	.03	.11*	-.09	-.28*	-.22*	—	.48*	.17*	.23*	.25*	-.24*	-.22*	2.96	2.83
16	Need for careful handling	-.03	-.06	-.13*	.14*	.23*	.24*	.31*	.07	-.12*	.15*	.20*	-.10*	-.22*	-.07	.42*	—	.11*	.25*	.27*	-.13*	-.08	3.75	2.53
17	Inflexibility	-.10*	-.08	-.10*	.23*	.32*	.30*	.14*	.02	-.28*	-.08	-.01	-.14*	-.19*	-.03	.22*	.09	—	.11*	.05	-.29*	-.25*	0.46	3.30
18	Risk of non-availability	-.06	-.13*	-.11*	.23*	.27*	.32*	.22*	.14*	-.13*	-.04	-.02	-.17*	-.17*	-.10*	.25*	.18*	.33*	—	.50*	-.23*	-.23*	3.53	2.47
19	Risk of failure	-.09	.02	-.04	.14*	.32*	.35*	.16*	.05	-.20*	-.01	.10*	-.07	-.32*	-.16*	.35*	.30*	.11*	.35*	—	-.29*	-.28*	3.23	2.27
20	Attitude 1	-.15*	.19*	.24*	-.28*	-.34*	-.38*	-.28*	-.37*	.35*	.07	.23*	.18*	.27*	.18*	-.20*	-.16*	-.21*	-.20*	-.18*	—	.84*	-3.51	2.04
21	Attitude 2	-.13*	.16*	.20*	-.22*	-.34*	-.34*	-.23*	-.34*	.33*	.05	.21*	.12*	.28*	.16*	-.21*	-.10*	-.17*	-.15*	-.18*	.79*	—	-3.22	2.35
M		-2.06	0.44	0.85	0.13	1.86	2.47	0.51	-0.63	-0.57	0.39	1.86	-0.37	-2.27	-0.78	2.84	2.30	1.16	2.14	2.75	-1.09	-0.89		
SD		2.39	2.23	2.97	2.14	2.19	2.17	2.22	2.54	1.49	1.69	2.05	1.31	2.24	1.53	2.46	2.28	2.92	2.97	1.96	1.77	2.01		

Note. Inter-correlations, means and standard deviations for books (n = 410) are presented below the diagonal. Inter-correlations, means and standard deviation for handbags (n= 428) are presented above the diagonal. * $p \leq .05$

A.4. Detailed PLS Results

Table 24: Detailed PLS Results on Paths, Loadings and Weights for Cars

	Paths		Loadings		Weights		
	Coefficient	***t*-value**	**Coefficient**	***t*-value**	**Coefficient**	***t*-value**	***SE***
Monetary Perceptions	-.30**	8.05					
Total costs			.89**	26.54	.73**	12.72	.06
Predictability of costs			-.73**	13.63	-.49**	7.16	.07
Functional Perceptions	-.22**	5.71					
Transaction effort			.56**	8.37	.18*	2.17	.08
Pre- and post-usage effort			.64**	1.79	.12	1.39	.09
Maintenance effort			.58**	8.41	.43**	5.73	.08
Storage effort			.65**	11.16	.17*	2.09	.08
Use limitations			.52**	7.28	.26**	2.72	.10
Inflexibility			.59**	8.61	.32**	3.79	.08
Risk of failure			.60**	9.22	.25**	3.11	.08
Risk of non-availability			.45**	6.50	-.04	0.50	.09
Experiential Perceptions	.24**	5.92					
Absence of costs			.38**	5.38	.28**	4.19	.07
Environmental friendliness			.63**	1.26	.51**	8.48	.06
Need for careful handling			-.36**	4.72	-.23**	3.24	.07
Fun while using			.78**	17.73	.62**	11.31	.05
Symbolic Perceptions	.10**	2.93					
Being part of a community			.64**	6.66	.43**	3.93	.11
Signaling one's personality			.65**	6.64	.31*	2.24	.14
Personal attachment			.69**	8.45	.44**	3.97	.11
Impressing others			.72**	9.16	.31*	2.53	.12
R^2			.44				
Q^2			.38				
n			633				

Note. ** $p \leq 01$; * $p \leq .05$.

Table 25: Detailed PLS Results on Paths, Loadings and Weights for Bicycles

	Paths		Loadings		Weights		
	Coefficient	***t*-value**	**Coefficient**	***t*-value**	**Coefficient**	***t*-value**	***SE***
Monetary Perceptions	-.21**	4.87					
Total costs			.93**	26.34	.82**	13.16	.06
Predictability of costs			-.62**	7.99	-.39**	4.33	.09
Functional Perceptions	-.28**	6.26					
Transaction effort			.59**	8.78	.18	1.85	.09
Pre- and post-usage effort			.88**	21.00	.54**	4.69	.11
Maintenance effort			.40**	4.51	.13	1.27	.10
Storage effort			.58**	8.07	.04	0.39	.10
Use limitations			.70**	1.63	.28**	2.88	.10
Inflexibility			.56**	7.25	.25**	2.86	.09
Risk of failure			.38**	4.33	-.11	1.00	.10
Risk of non-availability			.55**	7.37	.09	0.83	.11
Experiential Perceptions	.10	1.79					
Absence of costs			.58**	5.39	.35**	2.74	.13
Environmental friendliness			.26	1.65	.08	0.44	.17
Need for careful handling			-.56**	4.72	-.38**	2.78	.14
Fun while using			.82**	9.30	.68**	5.84	.12
Symbolic Perceptions	.02	.46					
Being part of a community			.54**	3.14	.35	1.83	.19
Signaling one's personality			.41*	2.13	-.04	0.17	.23
Personal attachment			.83**	7.19	.69**	4.11	.17
Impressing others			.68**	4.27	.38	1.70	.22
R^2				.24			
Q^2				.20			
n				627			

Note. ** $p \leq 01$; * $p \leq .05$.

Table 26: Detailed PLS Results on Paths, Loadings and Weights for Books

	Paths		Loadings		Weights		
	Coefficient	***t*-value**	**Coefficient**	***t*-value**	**Coefficient**	***t*-value**	***SE***
Monetary Perceptions	.02	.39					
Total costs			-.70**	3.72	-.51*	2.16	.24
Predictability of costs			.87**	6.28	.74**	3.80	.19
Functional Perceptions	-.37**	8.76					
Transaction effort			.51**	5.37	.21*	2.12	.10
Pre- and post-usage effort			.77**	12.71	.45**	4.54	.10
Maintenance effort			.52**	6.68	.00	0.03	.10
Storage effort			.72**	1.86	.57**	6.51	.09
Use limitations			.42**	4.47	.14	1.40	.10
Inflexibility			.38**	4.19	.14	1.48	.09
Risk of failure			.37**	4.35	.09	0.92	.10
Risk of non-availability			.36**	4.11	-.02	0.21	.10
Experiential Perceptions	.23**	4.12					
Absence of costs			.52**	5.51	.27*	2.54	.11
Environmental friendliness			.53**	5.07	.43**	3.95	.11
Need for careful handling			-.30**	2.75	-.27*	2.57	.11
Fun while using			.80**	12.18	.69**	8.52	.08
Symbolic Perceptions	.13**	2.83					
Being part of a community			.19	1.10	.16	0.95	.16
Signaling one's personality			.52**	4.05	.23	1.61	.15
Personal attachment			.93**	13.26	.78**	5.53	.14
Impressing others			.58**	3.93	.21	1.14	.19
R^2			.34				
Q^2			.26				
n			410				

Note. ** $p \leq 01$; * $p \leq .05$.

Table 27: Detailed PLS Results on Paths, Loadings and Weights for Handbags

	Paths		Loadings		Weights		
	Coefficient	***t*-value**	**Coefficient**	***t*-value**	**Coefficient**	***t*-value**	***SE***
Monetary Perceptions	-.14**	2.96					
Total costs			.95**	28.32	.87**	13.93	.06
Predictability of costs			-.55**	5.94	-.31**	2.93	.11
Functional Perceptions	-.42**	9.39					
Transaction effort			.70**	12.73	.13	1.42	.09
Pre- and post-usage effort			.80**	16.16	.43**	4.22	.10
Maintenance effort			.66**	1.06	.05	0.49	.10
Storage effort			.71**	12.99	.36**	3.72	.10
Use limitations			.42**	4.94	.14	1.80	.08
Inflexibility			.49**	6.40	.32**	4.17	.08
Risk of failure			.53**	7.73	.08	0.98	.09
Risk of non-availability			.42**	5.56	.03	0.42	.08
Experiential Perceptions	.15**	2.92					
Absence of costs			.51**	5.40	.25*	2.24	.11
Environmental friendliness			.77**	1.58	.53**	5.10	.10
Need for careful handling			-.26*	2.04	-.23*	2.14	.11
Fun while using			.77**	1.18	.53**	5.15	.10
Symbolic Perceptions	.03	.78					
Being part of a community			.52**	3.46	.32*	2.06	.15
Signaling one's personality			.84**	8.60	.54**	2.92	.19
Personal attachment			.80**	7.63	.48**	2.76	.18
Impressing others			.49**	3.05	.00	0.02	.20
R^2				.37			
Q^2				.32			
n				428			

Note. ** $p \leq 01$; * $p \leq .05$.

A.5. Assessment of the Nomological Validity

Table 28: Assessment of the Nomological Validity for the Overall Construct Usage Intention

	Cars			Bicycles			Books			Handbags		
	L	***P***	***W***	***L***	***P***	***W***	***L***	***P***	***W***	***L***	***P***	***W***
Monetary Perceptions	-.17**			-.22**			-.11**			-.11*		
Total costs	.87**	.70**		.96**	.88**		.89**	.76**		.91**	.79**	
Predictability of costs	-.76**	-.52**		-.53**	-.28*		-.68**	-.48*		-.65**	-.43**	
Functional Perceptions	-.38**			-.17**			-.47**			-.30**		
Transaction effort	.38**	.03		.50**	.09		.57**	.28**		.71**	.23	
Pre- and post-usage effort	.66**	.08		.91**	.61**		.88**	.59**		.81**	.35*	
Maintenance effort	.38**	.30**		.24*	-.03		.41**	-.05		.58**	.01	
Storage effort	.69**	.23**		.52**	-.05		.46**	.28**		.60**	.22	
Use limitations	.58**	.18*		.68**	.21		.53**	.22**		.54**	.27**	
Inflexibility	.70**	.38**		.50**	.19		.50**	.19*		.46**	.27**	
Risk of failure	.67**	.30**		.57**	.10		.39**	.03		.63**	.20	
Risk of non-availability	.64**	.14		.69**	.20		.40**	-.01		.47**	.04	
Experiential Perceptions	.06			.10*			.13**			.07		
Absence of costs	.30*	.19		.80**	.62**		.56**	.33**		.39**	.12	
Environmental friendliness	.55**	.40**		.16	.00		.40**	.33**		.52**	.32*	
Need for careful handling	-.34**	-.19		-.54**	-.31*		-.48**	-.43**		-.67**	-.66**	
Fun while using	.88**	.75**		.67**	.50**		.75**	.63**		.66**	.52**	
Symbolic Perceptions	.04			.08*			.14**			.12*		
Being part of a community	.81**	.67**		.38**	.24		.25	.22		.30*	.12	
Signaling one's personality	.47**	.10		.34*	-.04		.51**	.22		.78**	.51**	
Personal attachment	.61**	.41*		.96**	.91**		.92**	.76**		.90**	.71**	
Impressing others	.65**	.25		.45**	.12		.59**	.23		.30	-.20	
R^2	.28			.18			.41			.22		
Q^2	.25			.16			.34			.18		
n	633			627			410			428		

Note. ** $p \leq 01$; * $p \leq .05$; *L:* Loadings; *P*: Path Coefficients; *W*: Weights.

A.6. Absolute Consumption Mode Perceptions

Table 29: Differences Between Access and Ownership Perceptions and Attitudes

	Cars		Bicycles		Books		Handbags	
	Δ	***p***	**Δ**	***p***	**Δ**	***p***	**Δ**	***p***
Monetary Perceptions								
Total costs	0.08	.40	2.16	≤ .001	-2.06	≤ .001	2.64	≤ .001
Predictability of costs	-0.66	≤ .001	-1.52	≤ .001	0.44	≤ .001	-1.96	≤ .001
Functional Perceptions								
Transaction effort	-0.64	≤ .001	0.73	≤ .001	0.13	.214	2.02	≤ .001
Pre-usage effort	2.40	≤ .001	2.40	≤ .001	1.86	≤ .001	3.46	≤ .001
Post-usage effort	2.00	≤ .001	2.04	≤ .001	2.47	≤ .001	3.58	≤ .001
Maintenance effort	-1.72	≤ .001	-0.83	≤ .001	0.51	≤ .001	1.75	≤ .001
Storage effort	1.51	≤ .001	1.49	≤ .001	-0.63	≤ .001	1.02	≤ .001
Use limitations	3.16	≤ .001	2.09	≤ .001	2.84	≤ .001	2.96	≤ .001
Inflexibility	3.04	≤ .001	1.41	≤ .001	1.16	≤ .001	0.46	.004
Risk of failure	1.69	≤ .001	2.33	≤ .001	2.75	≤ .001	3.23	≤ .001
Risk of non-availability	3.49	≤ .001	3.09	≤ .001	2.14	≤ .001	3.53	≤ .001
Experiential Perceptions								
Absence of costs	-0.86	≤ .001	-2.70	≤ .001	0.85	≤ .001	-3.00	≤ .001
Environmental friendliness	0.87	≤ .001	-0.11	.002	1.86	≤ .001	-0.86	≤ .001
Need for careful handling	1.78	≤ .001	2.25	≤ .001	2.30	≤ .001	3.75	≤ .001
Fun while using	-1.25	≤ .001	-0.95	≤ .001	-0.57	≤ .001	-1.20	≤ .001
Symbolic Perceptions								
Being part of a community	0.08	.23	-0.12	.061	0.39	≤ .001	-0.11	.242
Signaling one's personality	-0.57	≤ .001	-0.66	≤ .001	-0.37	≤ .001	-1.16	≤ .001
Personal attachment	-2.81	≤ .001	-2.74	≤ .001	-2.27	≤ .001	-3.12	≤ .001
Impressing others	-0.66	≤ .001	-0.51	≤ .001	-0.78	≤ .001	-0.69	≤ .001
Attitude								
Attitude 1 (good/bad)	-1.68	≤ .001	-2.04	≤ .001	-1.09	≤ .001	-3.51	≤ .001
Attitude 2 (advantageous / disadvantageous)	-1.92	≤ .001	-2.01	≤ .001	-0.88	≤ .001	-3.22	≤ .001

Note. Δ: Mean access perception – mean ownership perception; *p*: *p*-value of paired sample *t*-Test between access and ownership perceptions.

Table 30: Contrast of the Absolute Consumption Mode Perceptions for Cars

	Access		Ownership				
Variable	***M***	***SD***	***M***	***SD***	**Δ**	***t*(632)**	***p***
Total costs	4.41	1.63	4.33	1.45	0.08	0.84	.40
Predictability of costs	4.28	1.72	4.93	1.53	-0.66	-6.56	≤ .001
Presence of costs	2.71	1.60	3.57	1.80	-0.86	-1.14	≤ .001
Transaction effort	3.24	1.50	3.88	1.90	-0.64	-6.30	≤ .001
Pre-usage effort	4.17	1.53	1.77	1.29	2.40	3.07	≤ .001
Post-usage effort	3.81	1.59	1.81	1.28	2.00	25.48	≤ .001
Maintenance effort	2.27	1.54	4.00	1.47	-1.74	-18.61	≤ .001
Storage effort	3.85	1.66	2.35	1.59	1.51	16.82	≤ .001
Risk of non-availability	5.16	1.48	1.67	1.38	3.49	39.95	≤ .001
Risk of failure	4.13	1.55	2.43	1.46	1.69	19.59	≤ .001
Use limitations	4.93	1.53	1.78	1.38	3.15	35.94	≤ .001
Need for careful handling	5.27	1.63	3.49	1.72	1.78	21.16	≤ .001
Flexibility	4.66	1.54	1.62	1.24	3.04	35.95	≤ .001
Fun while using	4.00	1.57	5.24	1.74	-1.25	-16.89	≤ .001
Being part of a community	3.08	1.81	3.00	1.90	0.08	1.21	.23
Environmental friendliness	4.21	1.67	3.35	1.56	0.87	11.75	≤ .001
Signaling one's personality	3.15	1.78	3.72	2.02	-0.57	-7.69	≤ .001
Personal attachment	2.40	1.49	5.21	1.83	-2.81	-29.79	≤ .001
Impressing others	3.36	1.63	4.02	1.90	-0.66	-8.98	≤ .001
Attitude 1 (good/bad)	4.31	1.56	5.99	1.30	-1.68	-19.14	≤ .001
Attitude 2 (advantageous / disadvantageous)	4.07	1.57	5.98	1.39	-1.92	-21.68	≤ .001

Note. The results of the *t*-test are based upon a paired sample *t*-Test. The number in parentheses in the label of the second column from the right denotes the degrees of freedom.

Table 31: Contrast of the Absolute Consumption Mode Perceptions for Bicycles

	Access		Ownership				
	M	***SD***	***M***	***SD***	**Δ**	***t*(627)**	***p***
Total costs	4.41	1.75	2.24	1.51	2.16	22.09	≤ .001
Predictability of costs	4.03	1.85	5.55	1.68	-1.52	-14.59	≤ .001
Presence of costs	2.80	1.71	5.50	1.91	-2.70	-23.86	≤ .001
Transaction effort	3.32	1.63	2.59	1.75	0.73	7.44	≤ .001
Pre-usage effort	4.06	1.57	1.66	1.22	2.40	29.98	≤ .001
Post-usage effort	3.75	1.66	1.71	1.23	2.04	25.24	≤ .001
Maintenance effort	2.30	1.66	3.12	1.47	-0.82	-8.86	≤ .001
Storage effort	3.39	1.79	1.90	1.32	1.49	17.37	≤ .001
Risk of non-availability	4.72	1.66	1.63	1.36	3.09	33.16	≤ .001
Risk of failure	4.46	1.66	2.13	1.40	2.33	25.26	≤ .001
Use limitations	4.33	1.70	2.24	1.73	2.08	22.30	≤ .001
Need for careful handling	5.05	1.79	2.80	1.82	2.25	24.24	≤ .001
Flexibility	4.00	1.74	2.59	1.84	1.41	13.32	≤ .001
Fun while using	4.62	1.65	5.57	1.67	-0.95	-14.40	≤ .001
Being part of a community	3.48	1.95	3.59	2.07	-0.11	-1.88	.06
Environmental friendliness	6.36	1.30	6.47	1.19	-0.11	-3.04	.002
Signaling one's personality	3.25	1.76	3.91	2.00	-0.66	-8.91	≤ .001
Personal attachment	2.41	1.55	5.15	1.98	-2.74	-28.10	≤ .001
Impressing others	3.20	1.72	3.71	1.92	-0.51	-7.85	≤ .001
Attitude 1 (good/bad)	4.40	1.59	6.44	1.03	-2.04	-28.41	≤ .001
Attitude 2 (advantageous / disadvantageous)	4.27	1.62	6.29	1.32	-2.01	-25.19	≤ .001

Note. The results of the *t*-test are based upon a paired sample *t*-Test. The number in parentheses in the label of the second column from the right denotes the degrees of freedom.

Table 32: Contrast of the Absolute Consumption Mode Perceptions for Books

	Access		Ownership				
	M	***SD***	***M***	***SD***	**Δ**	***t*(410)**	***p***
Total costs	2.43	1.50	4.49	1.61	-2.06	-17.41	≤ .001
Predictability of costs	5.62	1.64	5.18	1.83	0.44	4.04	≤ .001
Presence of costs	4.54	1.85	3.69	2.13	0.85	5.81	≤ .001
Transaction effort	2.88	1.56	2.75	1.77	0.13	1.24	.21
Pre-usage effort	3.91	1.63	2.05	1.38	1.86	17.18	≤ .001
Post-usage effort	4.23	1.65	1.76	1.23	2.47	23.08	≤ .001
Maintenance effort	2.92	1.76	2.42	1.56	0.51	4.62	≤ .001
Storage effort	2.32	1.63	2.95	1.82	-0.63	-5.02	≤ .001
Risk of non-availability	4.61	1.75	2.47	1.86	2.14	14.59	≤ .001
Risk of failure	4.43	1.55	1.68	1.21	2.75	28.41	≤ .001
Use limitations	4.80	1.79	1.96	1.48	2.84	23.44	≤ .001
Need for careful handling	5.43	1.58	3.13	1.82	2.30	2.43	≤ .001
Flexibility	4.22	1.74	3.06	1.72	1.16	8.08	≤ .001
Fun while using	5.20	1.56	5.77	1.49	-0.57	-7.78	≤ .001
Being part of a community	3.65	1.94	3.26	1.90	0.39	4.67	≤ .001
Environmental friendliness	5.76	1.43	3.90	1.69	1.86	18.39	≤ .001
Signaling one's personality	4.16	1.70	4.52	1.79	-0.37	-5.68	≤ .001
Personal attachment	3.04	1.59	5.31	1.70	-2.27	-2.51	≤ .001
Impressing others	3.66	1.60	4.44	1.78	-0.78	-1.32	≤ .001
Attitude 1 (good/bad)	5.24	1.55	6.33	1.00	-1.09	-12.44	≤ .001
Attitude 2 (advantageous / disadvantageous)	5.11	1.61	6.00	1.33	-0.88	-8.94	≤ .001

Note. The results of the *t*-test are based upon a paired sample *t*-Test. The number in parentheses in the label of the second column from the right denotes the degrees of freedom.

Table 33: Contrast of the Absolute Consumption Mode Perceptions for Handbags

	Access		Ownership				
	M	***SD***	***M***	***SD***	**Δ**	***t*(428)**	***p***
Total costs	5.63	1.64	2.99	1.62	2.64	21.10	≤ .001
Predictability of costs	4.11	1.92	6.07	1.58	-1.96	-16.59	≤ .001
Presence of costs	2.53	1.76	5.54	2.05	-3.00	-19.87	≤ .001
Transaction effort	4.21	1.89	2.19	1.55	2.02	17.83	≤ .001
Pre-usage effort	5.24	1.58	1.78	1.37	3.46	33.14	≤ .001
Post-usage effort	5.32	1.58	1.74	1.44	3.58	33.70	≤ .001
Maintenance effort	4.15	2.10	2.40	1.53	1.75	13.34	≤ .001
Storage effort	3.46	2.12	2.44	1.73	1.02	7.46	≤ .001
Risk of non-availability	5.33	1.60	1.81	1.57	3.53	29.51	≤ .001
Risk of failure	5.03	1.65	1.80	1.44	3.23	29.45	≤ .001
Use limitations	5.01	1.92	2.04	1.67	2.96	21.71	≤ .001
Need for careful handling	6.24	1.38	2.49	1.72	3.75	3.72	≤ .001
Flexibility	3.66	2.11	3.21	1.93	0.46	2.86	≤ .001
Fun while using	4.09	1.92	5.29	1.88	-1.20	-11.40	≤.001
Being part of a community	2.71	2.00	2.82	2.09	-0.11	-1.17	.24
Environmental friendliness	4.30	2.04	5.16	1.83	-0.86	-7.12	≤ .001
Signaling one's personality	3.75	1.99	4.91	2.03	-1.16	-1.47	≤ .001
Personal attachment	2.46	1.66	5.57	1.85	-3.12	-24.79	≤ .001
Impressing others	3.53	1.92	4.22	2.02	-0.69	-7.32	≤ .001
Attitude 1 (good/bad)	3.02	1.72	6.53	0.95	-3.51	-35.51	≤ .001
Attitude 2 (advantageous / disadvantageous)	3.09	1.78	6.31	1.32	-3.22	-28.40	≤ .001

Note. The results of the *t*-test are based upon a paired sample *t*-Test. The number in parentheses in the label of the second column from the right denotes the degrees of freedom.

A.7. Cross Tabs of the Consumption Mode Attitudes

Table 34: Cross Tabs of Consumption Mode Attitudes for Cars

Sum of attitudes towards access	Sum of attitudes towards ownership													
	2	3	4	5	6	7	8	9	10	11	12	13	14	Sum
2	1	0	0	0	0	0	2	0	0	5	1	0	30	39
3	0	0	1	0	0	0	0	1	0	1	0	1	3	7
4	0	0	0	0	0	1	4	0	2	1	4	0	19	31
5	0	0	0	0	0	0	1	0	1	0	5	0	6	13
6	0	0	1	0	1	0	1	0	3	4	12	4	28	54
7	0	0	0	0	0	0	0	0	2	1	8	9	21	41
8	2	1	0	0	0	1	31	5	8	10	32	12	72	174
9	0	0	0	0	0	0	3	3	3	6	8	7	18	48
10	1	0	0	2	2	0	3	8	10	10	24	6	29	95
11	0	0	0	0	0	0	4	2	3	4	7	3	7	30
12	2	0	0	0	1	0	3	4	5	3	10	3	19	50
13	0	0	1	0	0	1	1	0	2	1	0	1	5	12
14	0	0	1	3	2	0	2	4	1	2	4	2	18	39
Sum	6	1	4	5	6	3	55	27	40	48	115	48	275	633

Color	Absolute	Relative
white	381	60%
light grey	210	33%
dark grey	42	7%

Table 35: Cross Tabs of Consumption Mode Attitudes for Bicycles

Sum of attitudes towards access	Sum of attitudes towards ownership													
	2	3	4	5	6	7	8	9	10	11	12	13	14	Sum
2	4	0	1	0	0	1	2	0	3	0	2	0	37	50
3	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4	0	0	0	0	0	0	0	0	1	0	3	2	18	24
5	0	0	0	0	0	0	2	0	1	0	3	0	9	15
6	0	0	0	0	0	0	2	2	0	0	4	0	15	23
7	0	0	0	0	0	1	1	0	2	2	2	4	12	24
8	0	0	0	1	2	3	25	4	4	4	30	6	126	205
9	0	0	0	0	0	0	3	1	2	4	4	4	22	40
10	0	0	0	0	0	0	2	1	6	1	13	5	46	74
11	0	0	0	0	0	0	0	1	0	4	8	4	23	40
12	0	0	0	0	0	1	3	2	0	3	16	4	41	70
13	0	0	0	0	0	0	1	0	0	0	3	0	11	15
14	0	0	0	0	0	0	3	1	1	0	3	2	36	46
Sum	4	0	1	1	2	6	44	12	20	18	92	31	396	627

Color	Absolute	Relative
white	398	63%
light grey	216	34%
dark grey	13	2%

Table 36: Cross Tabs of Consumption Mode Attitudes for Books

Sum of attitudes towards access	Sum of attitudes towards ownership													
	2	3	4	5	6	7	8	9	10	11	12	13	14	Sum
2	0	0	0	0	0	0	0	0	2	0	0	0	6	8
3	0	0	0	0	0	0	0	0	1	0	0	0	0	1
4	0	0	0	0	0	0	3	0	0	0	0	0	3	6
5	0	0	0	0	0	0	1	0	0	0	0	0	7	8
6	0	0	0	0	0	0	1	1	0	1	5	2	9	19
7	0	0	1	0	0	0	1	1	0	1	2	3	5	14
8	0	0	0	0	0	1	13	4	4	7	11	4	45	89
9	0	0	0	0	0	0	1	0	3	0	0	1	6	11
10	0	0	0	1	0	0	3	2	6	4	15	3	15	49
11	0	0	0	0	0	0	1	0	1	3	4	4	6	19
12	0	0	0	0	0	0	3	4	3	5	16	7	40	78
13	0	0	0	0	0	0	1	0	0	1	0	2	5	9
14	0	0	0	0	0	0	10	3	6	6	15	6	53	99
Sum	0	0	1	1	0	1	38	15	26	28	68	32	200	410

Color	Absolute	Relative
white	150	37%
light grey	224	55%
dark grey	36	9%

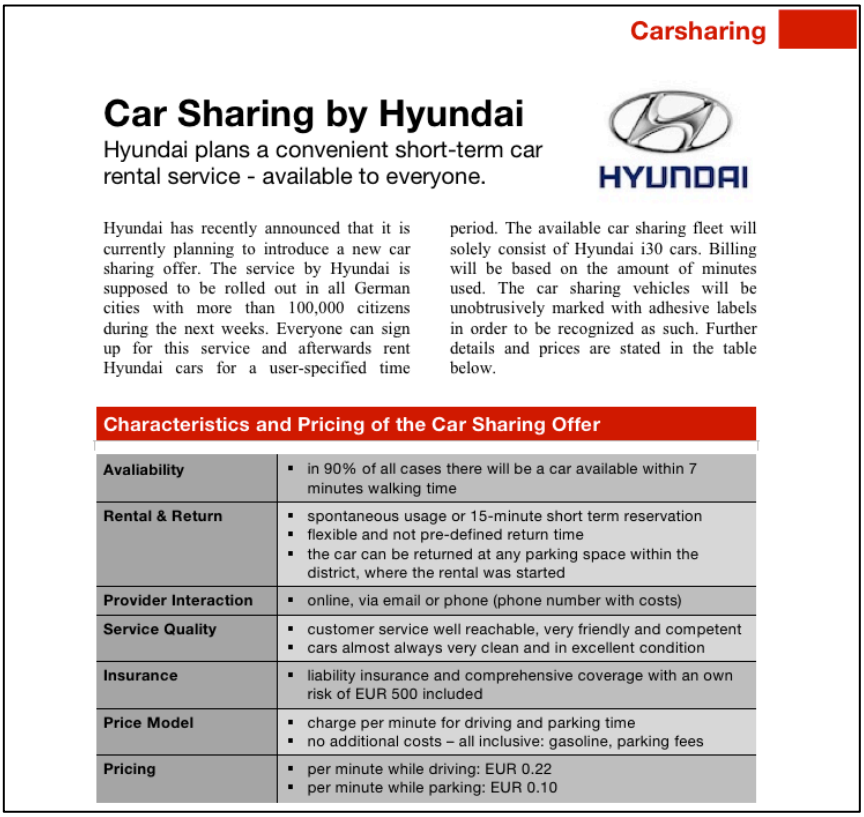
Table 37: Cross Tabs of Consumption Mode Attitudes for Handbags

Sum of attitudes towards access	Sum of attitudes towards ownership													
	2	3	4	5	6	7	8	9	10	11	12	13	14	Sum
2	1	0	0	1	0	0	7	0	2	1	6	4	98	120
3	0	0	0	0	1	0	0	0	1	0	3	0	3	8
4	0	0	0	0	0	0	3	0	0	2	2	3	33	43
5	0	0	0	0	0	0	0	0	0	2	1	4	8	15
6	0	0	0	0	0	0	2	2	2	5	6	2	22	41
7	0	0	0	0	0	0	2	0	2	0	1	1	10	16
8	2	0	1	0	0	0	10	1	5	3	17	1	56	96
9	0	0	0	0	0	0	1	0	1	1	4	1	12	20
10	0	0	0	0	0	0	0	0	2	0	1	1	19	23
11	0	0	0	0	0	0	1	0	1	2	2	0	2	8
12	0	0	0	0	0	0	0	1	2	0	8	0	14	25
13	0	0	0	0	0	0	0	0	0	1	0	0	2	3
14	0	0	0	0	0	0	0	1	2	0	2	0	5	10
Sum	3	0	1	1	1	0	26	5	20	17	53	17	284	428

Color	Absolute	Relative
white	354	83%
light grey	66	15%
dark grey	8	2%

B. Appendix for Project II

B.1. Experimental Treatments



Carsharing

Car Sharing by Hyundai

Hyundai plans a convenient short-term car rental service - available to everyone.

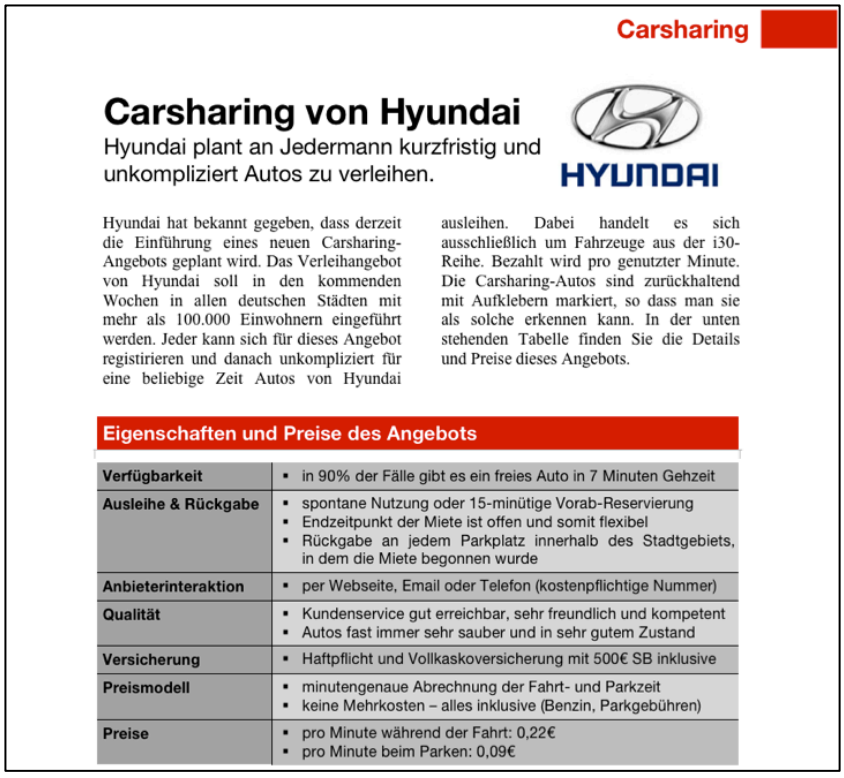
HYUNDAI

Hyundai has recently announced that it is currently planning to introduce a new car sharing offer. The service by Hyundai is supposed to be rolled out in all German cities with more than 100,000 citizens during the next weeks. Everyone can sign up for this service and afterwards rent Hyundai cars for a user-specified time period. The available car sharing fleet will solely consist of Hyundai i30 cars. Billing will be based on the amount of minutes used. The car sharing vehicles will be unobtrusively marked with adhesive labels in order to be recognized as such. Further details and prices are stated in the table below.

Characteristics and Pricing of the Car Sharing Offer

Avaliability	▪ in 90% of all cases there will be a car available within 7 minutes walking time
Rental & Return	▪ spontaneous usage or 15-minute short term reservation ▪ flexible and not pre-defined return time ▪ the car can be returned at any parking space within the district, where the rental was started
Provider Interaction	▪ online, via email or phone (phone number with costs)
Service Quality	▪ customer service well reachable, very friendly and competent ▪ cars almost always very clean and in excellent condition
Insurance	▪ liability insurance and comprehensive coverage with an own risk of EUR 500 included
Price Model	▪ charge per minute for driving and parking time ▪ no additional costs – all inclusive: gasoline, parking fees
Pricing	▪ per minute while driving: EUR 0.22 ▪ per minute while parking: EUR 0.10

Figure 17: Notional Consumer Reports Article on the Low Prestige Car Brand from Study 1 (English).



Carsharing

Carsharing von Hyundai

Hyundai plant an Jedermann kurzfristig und unkompliziert Autos zu verleihen.

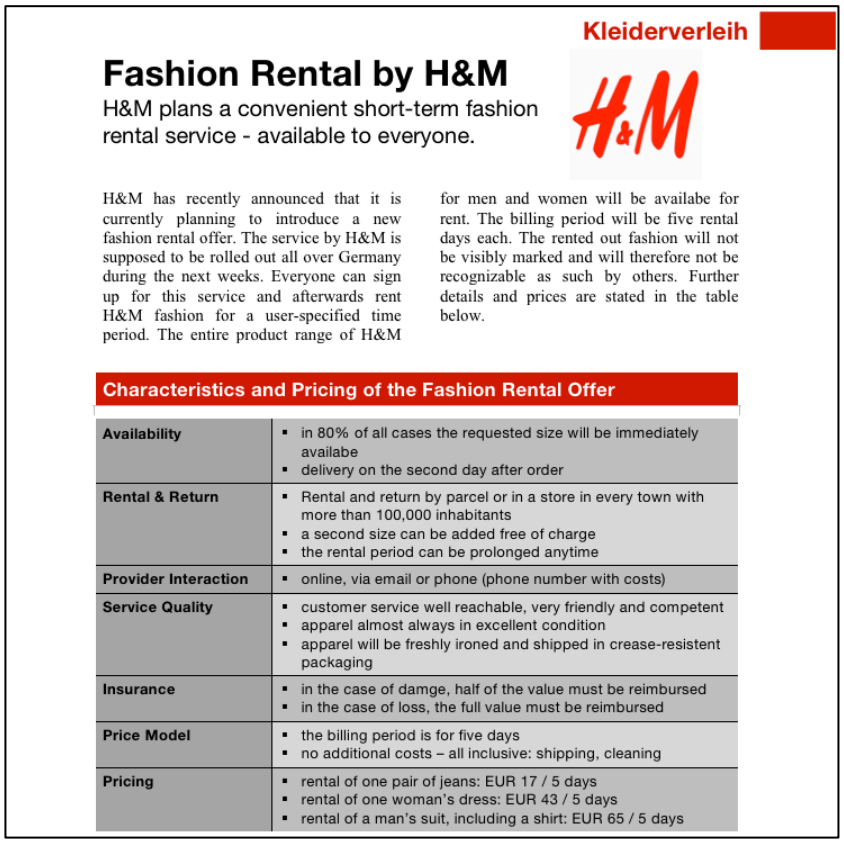
HYUNDAI

Hyundai hat bekannt gegeben, dass derzeit die Einführung eines neuen Carsharing-Angebots geplant wird. Das Verleihangebot von Hyundai soll in den kommenden Wochen in allen deutschen Städten mit mehr als 100.000 Einwohnern eingeführt werden. Jeder kann sich für dieses Angebot registrieren und danach unkompliziert für eine beliebige Zeit Autos von Hyundai ausleihen. Dabei handelt es sich ausschließlich um Fahrzeuge aus der i30-Reihe. Bezahlt wird pro genutzter Minute. Die Carsharing-Autos sind zurückhaltend mit Aufklebern markiert, so dass man sie als solche erkennen kann. In der unten stehenden Tabelle finden Sie die Details und Preise dieses Angebots.

Eigenschaften und Preise des Angebots

Verfügbarkeit	▪ in 90% der Fälle gibt es ein freies Auto in 7 Minuten Gehzeit
Ausleihe & Rückgabe	▪ spontane Nutzung oder 15-minütige Vorab-Reservierung ▪ Endzeitpunkt der Miete ist offen und somit flexibel ▪ Rückgabe an jedem Parkplatz innerhalb des Stadtgebiets, in dem die Miete begonnen wurde
Anbieterinteraktion	▪ per Webseite, Email oder Telefon (kostenpflichtige Nummer)
Qualität	▪ Kundenservice gut erreichbar, sehr freundlich und kompetent ▪ Autos fast immer sehr sauber und in sehr gutem Zustand
Versicherung	▪ Haftpflicht und Vollkaskoversicherung mit 500€ SB inklusive
Preismodell	▪ minutengenaue Abrechnung der Fahrt- und Parkzeit ▪ keine Mehrkosten – alles inklusive (Benzin, Parkgebühren)
Preise	▪ pro Minute während der Fahrt: 0,22€ ▪ pro Minute beim Parken: 0,09€

Figure 18: Notional Consumer Reports Article on the Low Prestige Car Brand from Study 1 (German).



Kleiderverleih

Fashion Rental by H&M

H&M plans a convenient short-term fashion rental service - available to everyone.

H&M has recently announced that it is currently planning to introduce a new fashion rental offer. The service by H&M is supposed to be rolled out all over Germany during the next weeks. Everyone can sign up for this service and afterwards rent H&M fashion for a user-specified time period. The entire product range of H&M for men and women will be availabe for rent. The billing period will be five rental days each. The rented out fashion will not be visibly marked and will therefore not be recognizable as such by others. Further details and prices are stated in the table below.

Characteristics and Pricing of the Fashion Rental Offer

Availability	▪ in 80% of all cases the requested size will be immediately availabe ▪ delivery on the second day after order
Rental & Return	▪ Rental and return by parcel or in a store in every town with more than 100,000 inhabitants ▪ a second size can be added free of charge ▪ the rental period can be prolonged anytime
Provider Interaction	▪ online, via email or phone (phone number with costs)
Service Quality	▪ customer service well reachable, very friendly and competent ▪ apparel almost always in excellent condition ▪ apparel will be freshly ironed and shipped in crease-resistent packaging
Insurance	▪ in the case of damge, half of the value must be reimbursed ▪ in the case of loss, the full value must be reimbursed
Price Model	▪ the billing period is for five days ▪ no additional costs – all inclusive: shipping, cleaning
Pricing	▪ rental of one pair of jeans: EUR 17 / 5 days ▪ rental of one woman's dress: EUR 43 / 5 days ▪ rental of a man's suit, including a shirt: EUR 65 / 5 days

Figure 19: Notional Consumer Reports Article on the Low Prestige Fashion Brand from Study 1 (English).

Kleiderverleih

Kleiderverleih von H&M

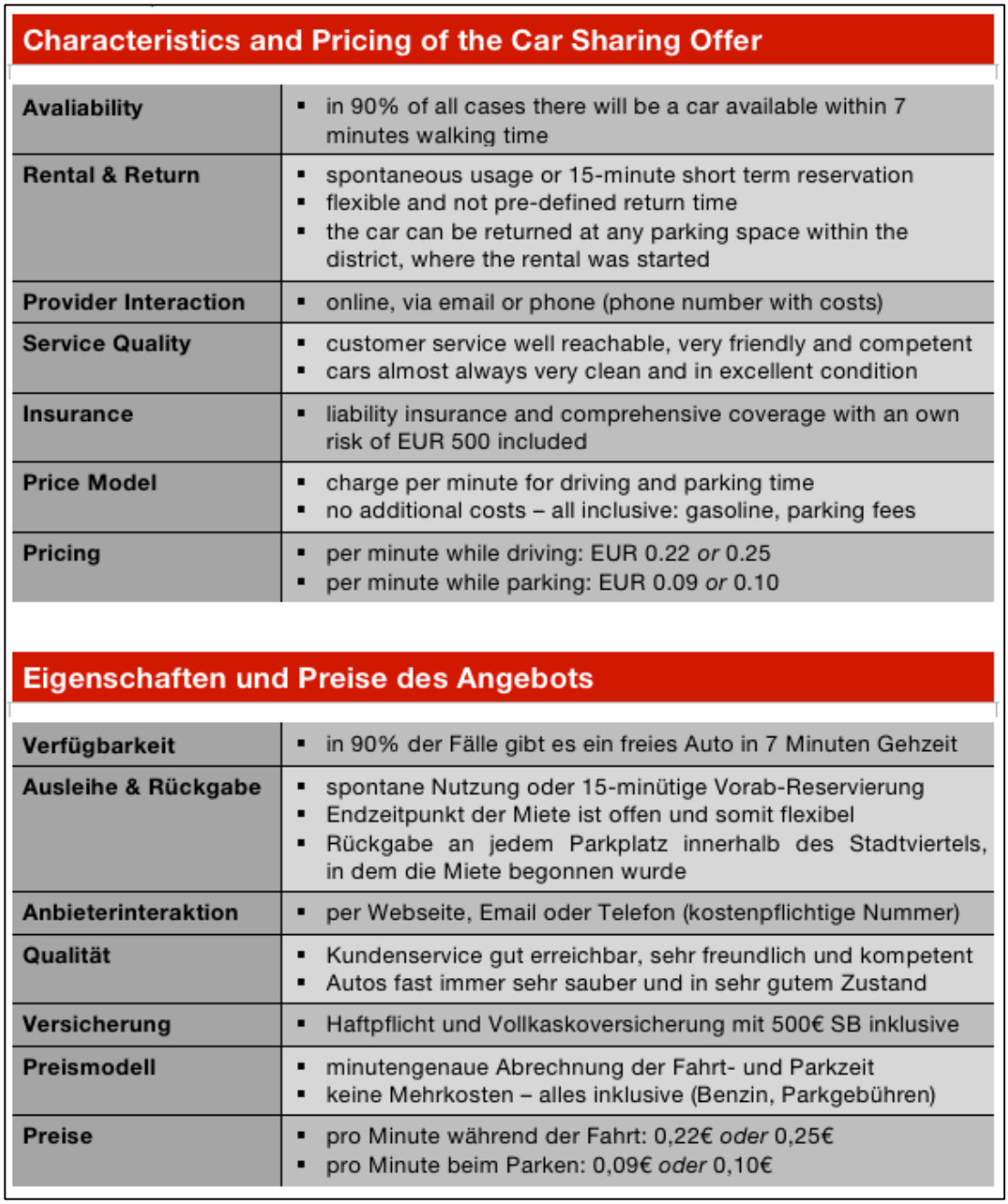
H&M plant an Jedermann kurzfristig und unkompliziert Kleidung zu verleihen.

H&M hat bekannt gegeben, dass derzeit die Einführung eines neuen Kleiderverleih-Angebots geplant wird. Das Verleihangebot von H&M soll in den kommenden Wochen deutschlandweit eingeführt werden. Jeder kann sich für dieses Angebot registrieren und danach unkompliziert für eine beliebige Zeit Kleidung von H&M ausleihen. Dabei handelt es sich um das komplette Sortiment für Männer und Frauen. Bezahlt wird für jeweils fünf Miettage. Die verliehene Kleidung ist nicht sichtbar markiert, so dass man sie als Außenstehender nicht erkennen kann. In der unten stehenden Tabelle finden Sie die Details und Preise dieses Angebots.

Eigenschaften und Preise des Angebots

Verfügbarkeit	• in 90% der Fälle ist die gewünschte Größe vorrätig • Lieferung am zweiten Tag nach Bestellung
Ausleihe & Rückgabe	• Ausleihe und Rückgabe per Post oder in einem Shop in Orten mit mehr als 100.000 Einwohnern • eine zweite Größe kann kostenfrei mitbestellt werden • Mietdauer kann jederzeit verlängert werden
Anbieterinteraktion	• per Webseite, Email oder Telefon (kostenpflichtige Nummer)
Qualität	• Kundenservice gut erreichbar, sehr freundlich und kompetent • Kleidung fast immer in sehr gutem Zustand
Versicherung	• bei Beschädigung muss die Hälfte des Werts ersetzt werden • bei Verlust muss der volle Wert ersetzt werden
Preismodell	• Preise gelten für jeweils 5 Miettage • keine Mehrkosten – alles inklusive (Porto, Reinigung)
Preise	• Mietkosten für eine Jeans: 12€ / 5 Tage • Mietkosten für ein Damenkleid: 11€ / 5 Tage • Mietkosten für einen Herrenanzug inkl. Hemd: 33€ / 5 Tage

Figure 20: Notional Consumer Reports Article on the Low Prestige Fashion Brand from Study 1 (German).



Characteristics and Pricing of the Car Sharing Offer

Avaliability	▪ in 90% of all cases there will be a car available within 7 minutes walking time
Rental & Return	▪ spontaneous usage or 15-minute short term reservation ▪ flexible and not pre-defined return time ▪ the car can be returned at any parking space within the district, where the rental was started
Provider Interaction	▪ online, via email or phone (phone number with costs)
Service Quality	▪ customer service well reachable, very friendly and competent ▪ cars almost always very clean and in excellent condition
Insurance	▪ liability insurance and comprehensive coverage with an own risk of EUR 500 included
Price Model	▪ charge per minute for driving and parking time ▪ no additional costs – all inclusive: gasoline, parking fees
Pricing	▪ per minute while driving: EUR 0.22 *or* 0.25 ▪ per minute while parking: EUR 0.09 *or* 0.10

Eigenschaften und Preise des Angebots

Verfügbarkeit	▪ in 90% der Fälle gibt es ein freies Auto in 7 Minuten Gehzeit
Ausleihe & Rückgabe	▪ spontane Nutzung oder 15-minütige Vorab-Reservierung ▪ Endzeitpunkt der Miete ist offen und somit flexibel ▪ Rückgabe an jedem Parkplatz innerhalb des Stadtviertels, in dem die Miete begonnen wurde
Anbieterinteraktion	▪ per Webseite, Email oder Telefon (kostenpflichtige Nummer)
Qualität	▪ Kundenservice gut erreichbar, sehr freundlich und kompetent ▪ Autos fast immer sehr sauber und in sehr gutem Zustand
Versicherung	▪ Haftpflicht und Vollkaskoversicherung mit 500€ SB inklusive
Preismodell	▪ minutengenaue Abrechnung der Fahrt- und Parkzeit ▪ keine Mehrkosten – alles inklusive (Benzin, Parkgebühren)
Preise	▪ pro Minute während der Fahrt: 0,22€ *oder* 0,25€ ▪ pro Minute beim Parken: 0,09€ *oder* 0,10€

Figure 21: Details Table of the Notional Consumer Reports Articles for Cars in Study 2 (English and German). *Note:* Words in italics were not part of the original design. The tabels include the prices for both price levels. However, the original tables only contained either or.

Characteristics and Pricing of the Fashion Rental Offer

Availability	▪ in 80% of all cases the requested size will be immediately availabe ▪ delivery on the second day after order
Rental & Return	▪ Rental and return by parcel or in a store in every town with more than 100,000 inhabitants ▪ a second size can be added free of charge ▪ the rental period can be prolonged anytime
Provider Interaction	▪ online, via email or phone (phone number with costs)
Service Quality	▪ customer service well reachable, very friendly and competent ▪ apparel almost always in excellent condition ▪ apparel will be freshly ironed and shipped in crease-resistent packaging
Insurance	▪ in the case of damge, half of the value must be reimbursed ▪ in the case of loss, the full value must be reimbursed
Price Model	▪ the billing period is for five days ▪ no additional costs – all inclusive: shipping, cleaning
Pricing	▪ rental of one pair of jeans: EUR 13 *or* 17 / 5 days ▪ rental of one woman's dress: EUR 13 *or* 42 / 5 days ▪ rental of a man's suit, including a shirt: EUR 40 *or* 67 / 5 days

Eigenschaften und Preise des Angebots

Verfügbarkeit	▪ in 80% der Fälle ist die gewünschte Größe vorrätig ▪ Zustellung am zweiten Tag nach Bestellung
Ausleihe & Rückgabe	▪ Ausleihe und Rückgabe per Post oder in einem Shop in Orten mit mehr als 100.000 Einwohnern ▪ eine zweite Größe kann kostenfrei mitbestellt werden ▪ Mietdauer kann jederzeit verlängert werden
Anbieterinteraktion	▪ per Webseite, Email oder Telefon (kostenpflichtige Nummer)
Qualität	▪ Kundenservice gut erreichbar, sehr freundlich und kompetent ▪ Kleidung fast immer in sehr gutem Zustand ▪ Kleidung frisch gebügelt und in knitterfreier Verpackung
Versicherung	▪ bei Beschädigung muss die Hälfte des Werts ersetzt werden ▪ bei Verlust muss der volle Wert ersetzt werden
Preismodell	▪ Preise gelten für jeweils 5 Miettage ▪ keine Mehrkosten – alles inklusive (Porto, Reinigung)
Preise	▪ Mietkosten für eine Jeans: 13 € *oder* 17€ / 5 Tage ▪ Mietkosten für ein Damenkleid: 13€ *oder* 43€ / 5 Tage ▪ Mietkosten für einen Herrenanzug inkl. Hemd: 40€ *oder* 67€ / 5 Tage

Figure 22: Details Table of the Notional Consumer Reports Articles for Fashion in Study 2 (English and German). *Note:* Words in italics were not part of the original design. The tabels include the prices for both price levels. However, the original tables only contained either or.

Characteristics and Pricing of the Car Sharing Offer

Avaliability	▪ in 80% of all cases there will be a car available within 10 minutes walking time
Rental & Return	▪ start time of rental has to be scheduled in advance ▪ return time has to be scheduled in advance ▪ the car must be returned at the station, where the rental was started
Provider Interaction	▪ online or via email
Service Quality	▪ customer service mediocre reachable, friendly and relatively competent ▪ cars usually clean and in good condition
Insurance	▪ liability insurance and comprehensive coverage included
Price Model	▪ charge per minute for driving and parking time ▪ no additional costs – all inclusive: gasoline, parking fees
Pricing	▪ per minute while driving: EUR 0.18 *or* 0.22 *for Audi;* EUR 0.16 *or* 0.19 *for Opel* ▪ per minute while parking: EUR 0.06 *or* 0.08 *for Audi*; EUR 0.05 *or* 0.06 *for Opel*

Eigenschaften und Preise des Angebots

Verfügbarkeit	▪ in 80% der Fälle gibt es ein freies Auto in 10 Minuten Gehzeit
Ausleihe & Rückgabe	▪ Startzeitpunkt muss vorab vereinbart werden ▪ Endzeitpunkt der Miete muss vorab festgelegt werden ▪ Rückgabe an der Station, an der die Miete begonnen wurde
Anbieterinteraktion	▪ per Webseite oder Email
Qualität	▪ Kundenservice mittelmäßig erreichbar, freundlich und relativ kompetent ▪ Autos meistens sauber und in gutem Zustand
Versicherung	▪ Haftpflicht und Vollkaskoversicherung inklusive
Preismodell	▪ minutengenaue Abrechnung der Fahrt- und Parkzeit ▪ keine Mehrkosten – alles inklusive (Benzin, Parkgebühren)
Preise	▪ pro Minute während der Fahrt: 0,18€ *oder* 0,22€ *für Audi;* 0,16€ *oder* 0,19€ *für Opel* ▪ pro Minute beim Parken: 0,06€ *oder* 0,08€ *für Audi*; 0,05€ *oder* 0,06€ *für Opel*

Figure 23: Details Table of the Notional Consumer Reports Article for the Low Convenience Condition in Study 3 (English and German). *Note:* Words in italics were not part of the original design. The tabels include the prices for both price levels. However, the original tables only contained either or.

Characteristics and Pricing of the Car Sharing Offer

Avaliability	▪ in 90% of all cases there will be a car available within 7 minutes walking time
Rental & Return	▪ spontaneous usage or 15-minutes reservation in advance ▪ flexible and not pre-defined return time ▪ the car can be returned at any parking space within the district, where the rental was started
Provider Interaction	▪ online, via email or phone ▪ smartphone app
Service Quality	▪ customer service well reachable, very friendly and competent ▪ cars always very clean and in excellent condition
Insurance	▪ liability insurance and comprehensive coverage included
Price Model	▪ charge per minute for driving and parking time ▪ no additional costs – all inclusive: gasoline, parking fees
Pricing	▪ per minute while driving: EUR 0.23 *or* 0.28 *for Audi;* EUR 0.20 *or* 0.25 *for Opel* ▪ per minute while parking: EUR 0.09 *or* 0.11 *for Audi*; EUR 0.08 *or* 0.09 *for Opel*

Eigenschaften und Preise des Angebots

Verfügbarkeit	▪ in 90% der Fälle gibt es ein freies Auto in 7 Minuten Gehzeit
Ausleihe & Rückgabe	▪ spontane Nutzung oder 15-minütige Vorab-Reservierung ▪ Endzeitpunkt der Miete ist offen und somit flexibel ▪ Rückgabe an jedem Parkplatz innerhalb des Stadtviertels, in dem die Miete begonnen wurde
Anbieterinteraktion	▪ per Webseite, Email oder Telefon ▪ per Smartphine-App
Qualität	▪ Kundenservice gut erreichbar, sehr freundlich und kompetent ▪ Autos fast immer sehr sauber und in sehr gutem Zustand
Versicherung	▪ Haftpflicht und Vollkaskoversicherung inklusive
Preismodell	▪ minutengenaue Abrechnung der Fahrt- und Parkzeit ▪ keine Mehrkosten – alles inklusive (Benzin, Parkgebühren)
Preise	▪ pro Minute während der Fahrt: 0,23€ *oder* 0,28€ *für Audi;* 0,20€ *oder* 0,25€ *für Opel* ▪ pro Minute beim Parken: 0,09€ *oder* 0,11€ *für Audi*; 0,08€ *oder* 0,09€ *für Opel*

Figure 24: Details Table of the Notional Consumer Reports Article for the Medium Convenience Condition in Study 3 (English and German). *Note:* Words in italics were not part of the original design. The tabels include the prices for both price levels. However, the original tables only contained either or.

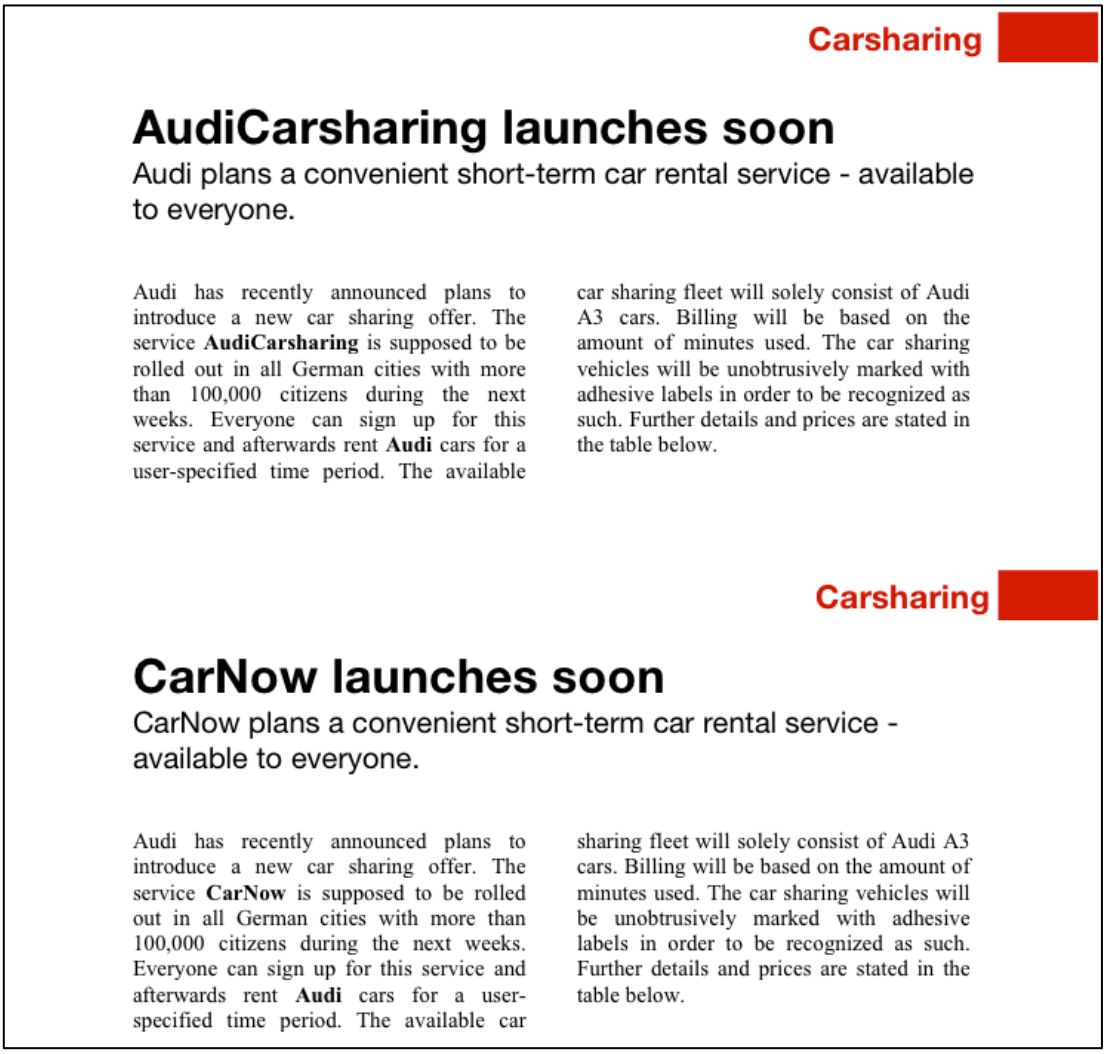
Characteristics and Pricing of the Car Sharing Offer

Avaliability	▪ in 95% of all cases there will be a car available within 5 minutes walking time
Rental & Return	▪ spontaneous usage or 12-hour reservation in advance ▪ flexible and not pre-defined return time ▪ the car can be returned at any parking space within the whole city (one-way trips are allowed)
Provider Interaction	▪ online, via email or phone ▪ smartphone app
Service Quality	▪ customer service very well reachable, very friendly and competent ▪ cars always very clean and in excellent condition
Insurance	▪ liability insurance and comprehensive coverage included
Price Model	▪ charge per minute for driving and parking time ▪ no additional costs – all inclusive: gasoline, parking fees
Pricing	▪ per minute while driving: EUR 0.27 *or* 0.33 *for Audi;* EUR 0.25 *or* 0.30 *for Opel* ▪ per minute while parking: EUR 0.12 *or* 0.14 *for Audi*; EUR 0.10 *or* 0.13 *for Opel*

Eigenschaften und Preise des Angebots

Verfügbarkeit	▪ in 95% der Fälle gibt es ein freies Auto in 5 Minuten Gehzeit
Ausleihe & Rückgabe	▪ spontane Nutzung oder 12-stündige Vorab-Reservierung ▪ Endzeitpunkt der Miete ist offen und somit flexibel ▪ Rückgabe an jedem Parkplatz innerhalb der Stadt (Einwegfahrten sind erlaubt)
Anbieterinteraktion	▪ per Webseite, Email oder Telefon ▪ per Smartphone-App
Qualität	▪ Kundenservice sehr gut erreichbar, sehr freundlich und kompetent ▪ Autos immer sehr sauber und in sehr gutem Zustand
Versicherung	▪ Haftpflicht und Vollkaskoversicherung inklusive
Preismodell	▪ minutengenaue Abrechnung der Fahrt- und Parkzeit ▪ keine Mehrkosten – alles inklusive (Benzin, Parkgebühren)
Preise	▪ pro Minute während der Fahrt: 0,27€ *or* 0,33€ *für Audi;* 0,25€ *oder* 0,30€ *für Opel* ▪ pro Minute beim Parken: 0,12€ *oder* 0,14€ *für Audi*; 0,10€ *oder* 0,13€ *für Opel*

Figure 25: Details Table of the Notional Consumer Reports Article for the High Convenience Condition in Study 3 (English and German). *Note:* Words in italics were not part of the original design. The tabels include the prices for both price levels. However, the original tables only contained either or.



Carsharing

AudiCarsharing launches soon

Audi plans a convenient short-term car rental service - available to everyone.

Audi has recently announced plans to introduce a new car sharing offer. The service **AudiCarsharing** is supposed to be rolled out in all German cities with more than 100,000 citizens during the next weeks. Everyone can sign up for this service and afterwards rent **Audi** cars for a user-specified time period. The available car sharing fleet will solely consist of Audi A3 cars. Billing will be based on the amount of minutes used. The car sharing vehicles will be unobtrusively marked with adhesive labels in order to be recognized as such. Further details and prices are stated in the table below.

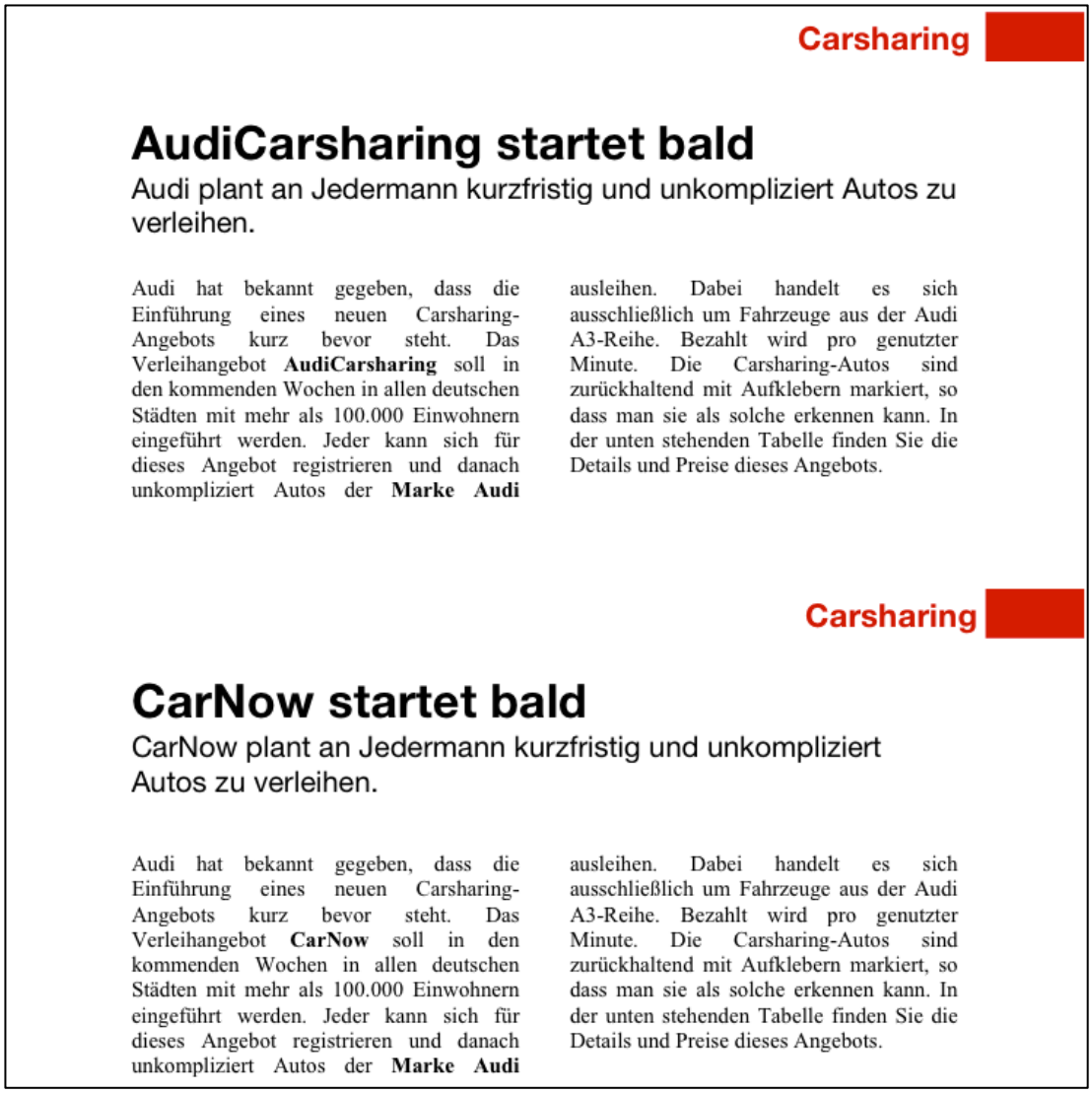
Carsharing

CarNow launches soon

CarNow plans a convenient short-term car rental service - available to everyone.

Audi has recently announced plans to introduce a new car sharing offer. The service **CarNow** is supposed to be rolled out in all German cities with more than 100,000 citizens during the next weeks. Everyone can sign up for this service and afterwards rent **Audi** cars for a user-specified time period. The available car sharing fleet will solely consist of Audi A3 cars. Billing will be based on the amount of minutes used. The car sharing vehicles will be unobtrusively marked with adhesive labels in order to be recognized as such. Further details and prices are stated in the table below.

Figure 26: Text of the Notional Consumer Reports Article for the Low Distance (top) and High Distance (bottom) Branding Strategy in Study 4 (English). *Note:* The original treatment also contained detail tables, similar to those from study 1. The alternative version for the low prestige brand is not displayed here. The only difference is that the term "Audi" was replaced by "Opel".



Carsharing

AudiCarsharing startet bald

Audi plant an Jedermann kurzfristig und unkompliziert Autos zu verleihen.

Audi hat bekannt gegeben, dass die Einführung eines neuen Carsharing-Angebots kurz bevor steht. Das Verleihangebot **AudiCarsharing** soll in den kommenden Wochen in allen deutschen Städten mit mehr als 100.000 Einwohnern eingeführt werden. Jeder kann sich für dieses Angebot registrieren und danach unkompliziert Autos der **Marke Audi** ausleihen. Dabei handelt es sich ausschließlich um Fahrzeuge aus der Audi A3-Reihe. Bezahlt wird pro genutzter Minute. Die Carsharing-Autos sind zurückhaltend mit Aufklebern markiert, so dass man sie als solche erkennen kann. In der unten stehenden Tabelle finden Sie die Details und Preise dieses Angebots.

Carsharing

CarNow startet bald

CarNow plant an Jedermann kurzfristig und unkompliziert Autos zu verleihen.

Audi hat bekannt gegeben, dass die Einführung eines neuen Carsharing-Angebots kurz bevor steht. Das Verleihangebot **CarNow** soll in den kommenden Wochen in allen deutschen Städten mit mehr als 100.000 Einwohnern eingeführt werden. Jeder kann sich für dieses Angebot registrieren und danach unkompliziert Autos der **Marke Audi** ausleihen. Dabei handelt es sich ausschließlich um Fahrzeuge aus der Audi A3-Reihe. Bezahlt wird pro genutzter Minute. Die Carsharing-Autos sind zurückhaltend mit Aufklebern markiert, so dass man sie als solche erkennen kann. In der unten stehenden Tabelle finden Sie die Details und Preise dieses Angebots.

Figure 27: Text of the Notional Consumer Reports Article for the Low Distance (top) and High Distance (bottom) Branding Strategy in Study 4 (German). *Note:* The original treatment also contained detail tables, similar to those from study 1. The alternative version for the low prestige brand is not displayed here. The only difference is that the term "Audi" was replaced by "Opel".

B.2. Sample Characteristics

Table 38: Sociodemographics for Studies 1 – 5 (Project II)

Criterion	Study 1 (*n* =302)	Study 2 (*n* = 1807)	Study 3 (*n* =1088)	Study 4 (*n* =871)	Study 5 (*n* =350)
Gender (%)					
Male	52.32%	49.53%	49.72%	49.14%	70.86%
Female	47.68%	50.47%	50.28%	50.86%	29.14%
Age Groups (%)					
18-29	20.20%	19.59%	27.21%	40.30%	41.71%
30-39	22.52%	21.69%	25.64%	22.96%	32.86%
40-49	33.11%	28.00%	16.45%	16.30%	17.71%
50-59	24.17%	23.52%	16.54%	11.25%	5.71%
60+	0.00%	7.19%	14.15%	9.18%	2.00%
Highest Level of Education (%)					
Basic secondary school or none	9.27%	11.79%	10.29%	5.51%	-
Middle secondary school	36.42%	33.04%	30.42%	30.20%	-
Higher secondary school	28.15%	26.40%	29.41%	34.79%	-
University degree or doctoral degree	26.16%	28.78%	29.87%	29.51%	-
Number of Adults in Household (%)					
1 person	35.43%	30.60%	31.43%	31.69%	-
2 persons	48.68%	54.51%	55.06%	55.11%	-
3 persons	11.92%	10.35%	8.36%	8.96%	-
4 or more persons	3.97%	4.54%	5.15%	4.24%	-
Number of Kids in Household (%)					
0 children	70.20%	73.55%	74.08%	75.09%	-
1 child	17.88%	15.61%	15.07%	15.27%	-
2 children	11.26%	8.47%	8.9%	7.92%	-
3 or more children	.66%	.50%	1.92%	1.72%	-
Monthly Household Net Income (%)					
≤ 1,000€	14.24%	12.45%	14.71%	19.63%	-
1,001€ – 2,000€	28.81%	29.66%	30.88%	28.82%	-
2,001€ – 3,000€	26.49%	25.62%	27.67%	23.54%	-
3,001€ – 4,000€	8.28%	17.27%	13.88%	15.84%	-
4,001€ – 5,000€	8.94%	8.36%	8.18%	6.54%	-
> 5,000€	5.30%	6.64%	4.69%	5.63%	-
Not answered	7.95%	-	-	-	-

Criterion	Study 1 (n =302)	Study 2 (n = 1807)	Study 3 (n =1088)	Study 4 (n =871)	Study 5 (n =350)
City Size (%)					
less than 100,000 inhabitants	23.51%	26.78%	.00%	4.71%	-
100,001 – 500,000 inhabitants	30.79%	33.37%	47.89%	48.11%	-
500,001 – 1,000,000 inhabitants	19.21%	17.49%	24.36%	18.94%	-
more than 1,000,000 inhabitants	26.49%	22.36%	27.76%	28.24%	-

Note. A dash (-) denotes that this answer category has not been part of the respective survey.

B.3. Measures

Table 39: Comprehensive Display of all Measurement Constructs and Items in German and English (Project II)

Construct	Items (German)	Items (English)	Source
Access attitude (α = .93)	*Wie beurteilen Sie das neue Verleihangebot von ____ insgesamt?*[2] finde ich sehr schlecht / finde ich sehr gut sehe ich sehr negativ / sehe ich sehr positiv finde ich sehr unbrauchbar / finde ich sehr nützlich	*How do you evaluate the new access offering by ____?*[2] not favorable at all / very favorable; very negative / very positive; worthless / valuable	adapted from (Esch, Langner, Schmitt, & Geus, 2006; Kim et al., 2001; Spiggle, Nguyen, & Caravella, 2012)
Access usage intention	*Wie wahrscheinlich würden Sie ein solches Angebot nutzen?* sehr unwahrscheinlich / sehr wahrscheinlich	*How likely are you to use such an offering?* very unlikely / very likely	adapted from (Kim et al., 2001)
Access price fairness[5]	*Wie beurteilen Sie das Carsharing-Angebot?* die Preise sind zu günstig / die Preise sind zu teuer	*How do you evaluate the carsharing offering?* the prices are too cheap / the prices are too expensive	none
Brand attitude (α = .96)	*Wie ist Ihre generelle Einstellung gegenüber ____?*[2] finde ich sehr schlecht / finde ich sehr gut; mag ich überhaupt nicht / mag ich sehr gerne	*How is your general attitude towards ____?*[2] not favorable at all / very favorable; dislike very much / like very much	adapted from (Boisvert, 2012b; Kim et al., 2001)
Brand purchase intention	*Wie werden Sie sich gegenüber ____ verhalten?*[2] mir ____ von dieser Marke zu kaufen ist sehr unwahrscheinlich / mir ____ von dieser Marke zu kaufen ist sehr wahrscheinlich;	*How will you behave towards ____ in the future?*[2] purchasing _____ from this brand is highly unlikely / purchasing _____ from this brand is highly likely	adapted from (Kim et al., 2001)

Construct	Items (German)	Items (English)	Source
Brand word-of-mouth intentions	*Wie werden Sie sich gegenüber ____ verhalten?*[2] ich würde diese Marke Anderen nicht weiterempfehlen / ich würde Anderen diese Marke auf jeden Fall weiterempfehlen	*How will you behave towards ____ in the future?*[2] I would not recommend this brand to others / I would definitely recommend this brand to others	adapted from (Brady, Davies, & Gann, 2005; Spiggle et al., 2012)
Brand willingness to pay a price premium	*Wie werden Sie sich gegenüber ____ verhalten?*[2] ich bin nicht bereit für diese Marke mehr als für vergleichbare Marken zu bezahlen / ich bin bereit für diese Marke mehr als für vergleichbare Marken zu bezahlen	*How will you behave towards ____ in the future?*[2] I am not willing to pay more for this brand than for a comparable brand / I am willing to pay more for this brand than for a comparable brand	adapted from (Netemeyer et al., 2004)
Access involvement	*Wie beurteilen Sie das neue Verleihangebot von ____ insgesamt?*[2] ist mir gänzlich unwichtig / ist mir sehr wichtig	*How do you evaluate the new access offering by ____?*[2] not important to me / very important to me	adapted from (Boisvert, 2012b)
Access fit (α = .86)	*Wie gut passt das Verleihangebot zu ____?*[2] das Verleihangebot passt gar nicht zu ____ / das Verleihangebot passt sehr gut zu ____; das Verleihangebot macht sehr wenig Sinn für ____/ das Verleihangebot macht sehr viel Sinn für ____	*How do you evaluate the fit between the access offering and ____?*[2] very low fit with ____ / very high fit with ____; makes little sense for ____ / makes a lot of sense for ____	adapted from (Milberg et al., 2010)
Access knowledge	Ich kenne mich sehr gut mit Sharing- und Vermietangeboten (z.B. Carsharing, Bikesharing, Handtaschenverleih, etc.) aus.	I am well versed in sharing and rental offerings (e.g. carsharing, bikesharing, handbag rentals, etc.).	none
Brand innovativeness	*Wie beurteilen Sie das Image von ____?*[2] überhaupt nicht innovativ / sehr innovativ	*How do you evaluate the brand image of ____?*[2] very predictable / very innovative	adapted from (Boisvert, 2012b)

Construct	Items (German)	Items (English)	Source
Brand eco-friendliness	*Wie beurteilen Sie das Image von ____?*[2] verhält sich nicht umweltfreundlich / verhält sich sehr umweltfreundlich	*How do you evaluate the brand image of ____?*[2] acts not environmentally friendly / acts very environmentally friendly	none
Brand exclusivity[1]	*Wie beurteilen Sie das Image von ____?*[2] ist der breiten Masse zugänglich / ist nur einer exklusiven Gruppe zugänglich	*How do you evaluate the brand image of ____?*[2] this brand is available to everyone / this brand is only available to an exclusive group	none
Brand quality[5]	*Wie beurteilen Sie das Image von ____?*[2] bietet sehr geringe Qualität / bietet sehr hohe Qualität	*How do you evaluate the brand image of ____?*[2] offers very low quality / offers very high quality	adapted from (Kim et al., 2001)
Brand familiarity	Ich kenne die Marke ____ sehr gut.[2]	I am very familiar with the brand ____.[2]	adapted from (Kim et al., 2001; Milberg et al., 2010)
Self-brand connection (α = .92)	Ich empfinde eine persönliche Verbindung zu ____.[2] Ich kann mich mit ____ sehr gut identifizieren.[2]	I feel a personal connection to ____.[2] I can identify very well with ____.[2]	adapted from (Spiggle et al., 2012)
Category hedonism	Mir bereitet es Freude mich mit ____ zu beschäftigen.[3] Für mich sollten ____Spaß machen.[3]	For me it is exciting to be engaged with ____.[3] From my point of view ____ should be fun.[3]	adapted from (Voss et al., 2003)
Category utilitarianism	Für mich sind / ist ____ Mittel zum Zweck.[3] Für mich sollte(n) ____ funktional sein.[3]	For me, ____ are practical.[3] For me, ____ should be functional.[3]	adapted from (Voss et al., 2003)
Ease of ownership perception	Außenstehende können sehr leicht erkennen, dass einem ein ____ nicht selbst gehört.[4]	Outside can easily recognize that one is not the true owner of _____.[4]	none
Brand visibility	Viele Personen um mich herum nehmen wahr, welche Marke mein(e) ____ hat.[3]	A lot of persons around me notice the brand of my _____.[3]	none
Age	*Bitte geben Sie Ihr Alter an.*	*Please indicate your age.*	none.

Construct	Items (German)	Items (English)	Source
Gender	*Bitte geben Sie Ihr Geschlecht an.*	*Please indicate your gender.*	none
City size	*Wie viele Einwohner hat Ihr derzeitiger Wohnort?*	*How many inhabitants live in your current place of residence?*	none
Car ownership	*Wie viele Autos gibt es in Ihrem Haushalt?* *Bitte geben Sie die Marke, die Fahrzeugklasse und das Alter jedes Ihrer Autos an.*	*How many cars do you have in your household?* *Please indicate the brand, vehicle category and age of each of your cars.*	none
Fashion ownership	*Wie viele Kleidungsstücke der folgenden Kleidermarken besitzen Sie?*	*How many pieces of clothing by the following brands do you own?*	none
Car availability	*Wie häufig steht Ihnen ein privater PKW zum fahren zur Verfügung?*	*How frequently is a private car available to you?*	none
Status consciousness (α = .85)	Ich würde ein Produkt alleine aus Prestigegründen kaufen. Ich bin an neuen Produkten interessiert, die als Statussymbol gelten. Ich würde durchaus mehr Geld für ein Prestigeobjekt ausgeben, als für ein vergleichbares Produkt mit weniger Prestige. Bei der Kaufentscheidung ist es mir egal, ob ein Produkt Prestigecharakter hat.	I would buy a product just because it has status. I am interested in new products with status. I would pay more for a product if it had status. A product is more valuable to me if it has some snob appeal.	adapted from (Eastman et al., 1999)
Variety seeking (α = .73)	Ich schaue mir Werbung oft aus reiner Neugier an. Mir wird langweilig wenn ich immer die gleichen Marken kaufe - selbst wenn sie gut sind. Ich kaufe gerne mal etwas anderes, um mehr Vielfalt zu erleben.	I often read advertisements just out of curiosity. I get bored with buying the same brands even if they are good. I enjoy taking chances in buying something unfamiliar, just to get some variety in my purchases.	adapted from (Cotte & Wood, 2004)

Construct	Items (German)	Items (English)	Source
Innovativeness (α = .94)	Mir macht es Spaß immer das Neuste zu kaufen.	Overall, I enjoy buying the latest products.	adapted from (Völckner & Sattler, 2006)
	Ich kaufe gerne neue Produkte bevor es Andere tun.	I like to purchase new products before others do.	
	Ich finde es spannend die neusten Produkte zu kaufen.	Overall, it is exciting to buy the latest products.	
Avoidance of similarity[1] (α = .89)	Ich genieße es Dinge die zu besitzen, die andere nicht besitzen.	I enjoy having things that others do not.	adapted from (Lynn & Harris, 1997; Tian, Bearden, & Hunter, 2001)
	Ich versuche Produkte oder Marken zu vermeiden, die üblicherweise vom durchschnittlichen Konsumenten gekauft werden.	I avoid products or brands that have been accepted and purchased by the average consumer.	
	Je gewöhnlicher ein Produkt oder eine Marke in der Allgemeinbevölkerung ist, desto weniger bin ich daran interessiert.	The more commonplace a product or brand is among the general population, the less interested I am in buying it.	
	Produkte, die regelmäßig von der breiten Masse gekauft werden, sind nicht viel Wert.	Products don't seem to hold much value when everyone purchases them regularly.	

Note. Text in *italics* denotes a question, whereas standard text denotes the items. The reported Cronbach's α are from study 1, if not otherwise indicated.
[1] These constructs are only relevant for studies 2-4. [2] The blanks in these items need to be filled with the respective brand name. [3] The blanks in these items need to be filled with the term of the corresponding product category. [4] The blanks in these items need to be filled with the general term for access offerings in the corresponding product category. [5] These constructs are only relevant for studies 1, 2 and 5.

B.4. Manipulation Checks

Table 40: Manipulation Checks for Brand Prestige and Brand Quality

	low prestige brand *M (SD)*	**high prestige brand** *M (SD)*	**independent samples *t*-test** *t* (*p*)
Brand Prestige			
Study 1, Cars: Hyundai vs. Audi	3.76 (1.34)	5.30 (1.34)	-5.31 (≤ .001)
Study 1, Fashion: H&M vs. BOSS	4.10 (1.35)	5.12 (1.42)	-3.12 (≤ .01)
Study 2, Cars: Ford vs. BMW	3.94 (1.33)	5.51 (1.61)	-9.44 (≤ .001)
Study 2, Fashion: H&M vs. BOSS	4.01 (1.38)	5.05 (1.43)	-6.41 (≤ .001)
Study 3, Cars: Opel vs. Audi	3.92 (1.46)	5.45 (1.48)	-12.31 (≤ .001)
Study 4, Cars: Opel vs. Audi	3.63 (1.33)	5.19 (1.41)	-6.90 (≤ .001)
Study 5, Cars: Hyundai vs. Audi	2.76 (1.20)	5.63 (1.21)	-23.60 (≤ .001)
Brand Quality			
Study 1, Cars: Hyundai vs. Audi	4.15 (1.33)	5.45 (1.22)	-4.72 (≤ .001)
Study 1, Fashion: H&M vs. BOSS	3.83 (1.39)	5.02 (1.24)	-3.95 (≤ .001)
Study 2, Cars: Ford vs. BMW	4.52 (1.37)	5.51 (1.67)	-5.75 (≤ .001)
Study 2, Fashion: H&M vs. BOSS	3.96 (1.32)	5.09 (1.46)	-7.07 (≤ .001)

Note. The bold variable denotes the respective depending variable. The first mentioned brand name is the low prestige brand. Except study 3 all reported measurements were collected from the control groups. Study 3 was designed without a control condition. Thus, the brand prestige manipulation check in this study is based upon respondents who were exposed to one of the access offerings. However, only non-owners' responses were used for the manipulation check in order to get an objective result.

Table 41: Manipulation Checks for Service Convenience

	low convenience level *M (SD)*	**medium convenience level** *M (SD)*	**high convenience level** *M (SD)*	**ANOVA** ***F* (*p*)**
Study 3, Cars	4.67 (1.38)	5.15 (1.34)	5.42 (1.36)	28.44 (≤ .001)

Note. On the questionnaire page after the consumer reports article, respondents were asked the following questions as a manipulation check of the convenience level: "How do you judge the convenience of this carsharing offering?" Answers were collected on a 7-item semantic differential labeled *very inconvenient* on the left and *very convenient* on the right. Post-hoc tests reveal significant differences for all pairwise comparisons.

Table 42: Manipulation Checks for Branding Strategy

	close branding strategy *M (SD)*	**distant branding strategy** *M (SD)*	**independent samples *t*-test** ***t* (*p*)**
Study 4, Cars	2.76 (1.85)	3.35 (2.04)	-3.62 (≤ .001)

Note. Subsequently to the consumer reports article, respondents were asked the following questions as a manipulation check of the branding strategy: "How similar is the product brand to the brand of the access provider?" Answers were collected on a 7-item semantic differential, anchored by *product brand and provider brand are identical* and *product brand and provider brand are completely different*.

B.5. Additional Analyses

Table 43: Simple Main Effect Analysis for the Ownership Status × Brand Prestige Interaction of the Parent Brand Evaluation

		Cell Means		
	Interaction Effect from ANOVA	**low prestige brand owners**	**high prestige brand owners**	**Simple Main Effect Analysis**
Study 2, Cars				
Brand attitude	0.48 (.49)	5.52 (1.26)	6.17 (1.10)	30.38 (<.001)
Brand purchase intention	6.51 (.01)	5.37 (1.55)	5.89 (1.41)	11.78 (<.01)
Brand WOM	3.36 (.07)	5.19 (1.54)	6.03 (1.27)	34.84 (<.001)
Brand WTP	26.88 (<.001)	3.86 (1.62)	5.34 (1.54)	92.63 (<.001)
Study 2, Fashion				
Brand attitude	0.09 (.76)	5.12 (1.30)	5.55 (1.19)	14.85 (<.001)
Brand purchase intention	0.37 (.54)	5.33 (1.40)	5.32 (1.31)	0.01 (.93)
Brand WOM	0.31 (.58)	4.86 (1.49)	5.11 (1.66)	5.09 (.02)
Brand WTP	14.39 (<.001)	3.54 (1.53)	4.65 (1.52)	59.58 (<.001)
Study 4, Cars				
Brand attitude	10.04 (<.01)	5.71 (1.25)	6.37 (.99)	28.85 (<.001)
Brand purchase intention	0.09 (.76)	5.41 (1.54)	5.96 (1.33)	12.68 (<.001)
Brand WOM	0.19 (.66)	5.23 (1.63)	5.94 (1.55)	12.75 (<.001)
Brand WTP	7.30 (.01)	3.87 (1.63)	5.28 (1.63)	79.94 (<.001)

Note. F-values are displayed above the corresponding *p*-values in parentheses in the columns labeled *interaction effect from ANOVA* and *simple main effect analysis*. In the columns that display the *cell means* the means are displayed above the standard deviation in parentheses.

B.6. MANOVAs for Access Evaluation

Table 44: Analysis of Covariance for Brand Prestige in Study 1 in the Cars Category

		Univariate Analyses	
	MANOVA ***F*(2, 64)**	**Access Attitude** ***F*(1, 65)**	**Access Usage Intention** ***F*(1, 65)**
Access involvement	42.56 (≤.001)	59.34 (≤.001)	53.87 (≤.001)
Access fit	13.00 (≤.001)	18.56 (≤.001)	26.06 (≤.001)
Age	3.08 (.05)	0.30 (.59)	4.64 (.04)
Brand prestige	0.01 (.99)	0.02 (.89)	0.02 (.89)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 45: Analysis of Covariance for Brand Prestige in Study 1 in the Fashion Category

		Univariate Analyses	
	MANOVA ***F*(2, 62)**	**Access Attitude** ***F*(1, 63)**	**Access Usage Intention** ***F*(1, 63)**
Access involvement	42.28 (≤.001)	70.24 (≤.001)	29.44 (≤.001)
Access fit	25.04 (≤.001)	49.02 (≤.001)	0.00 (.95)
Brand prestige	3.51 (.04)	7.09 (.01)	0.50 (.48)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 46: Analysis of Variance for Ownership Status, Price Level and Brand Prestige in Study 2 in the Cars Category

		Univariate Analyses	
	MANOVA ***F*(2, 572)**	**Access Attitude** ***F*(1, 573)**	**Access Usage Intention** ***F*(1, 573)**
Owner	1.45 (.23)	0.15 (.70)	2.74 (.10)
Price	2.61 (.07)	4.86 (.03)	2.39 (.12)
Brand	5.32 (.01)	0.49 (.49)	6.35 (.01)
Owner × Price	1.65 (.19)	3.24 (.07)	1.11 (.29)
Owner × Brand	2.85 (.06)	4.45 (.04)	3.85 (.05)
Price × Brand	3.16 (.04)	5.81 (.02)	3.05 (.08)
Owner × Price × Brand	0.50 (.61)	0.49 (.49)	0.10 (.75)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 47: Analysis of Variance for Ownership Status, Price Level and Brand Prestige in Study 2 in the Fashion Category

		Univariate Analyses	
	MANOVA ***F*(2, 605)**	**Access Attitude** ***F*(1, 606)**	**Access Usage Intention** ***F*(1, 606)**
Owner	20.31 (≤.001)	2.13 (.15)	34.12 (≤.001)
Price	0.58 (.56)	0.01 (.93)	0.66 (.42)
Brand	7.90 (≤.001)	11.31 (≤.01)	13.83 (≤.001)
Owner × Price	0.92 (.40)	0.02 (.88)	0.98 (.32)
Owner × Brand	5.91 (≤.01)	1.95 (.16)	2.82 (.09)
Price × Brand	0.61 (.54)	0.27 (.61)	0.23 (.64)
Owner × Price × Brand	1.23 (.29)	0.21 (.65)	2.18 (.14)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 48: Analysis of Variance for Ownership Status, Price Level, Brand Prestige and Convenience Level in Study 3

		Univariate Analyses		Relative Weights Analysis	
	MANOVA ***F*(2, 1063)**	**Access Attitude** ***F*(1, 1064)**	**Access Usage Intention** ***F*(1, 1064)**	**Access Attitude**	**Access Usage Intention**
Owner	14.07 (≤.001)	17.33 (≤.001)	23.89 (≤.001)	31.09%	49.25%
Price	2.05 (.13)	4.06 (.04)	0.64 (.42)	7.39%	1.28%
Brand	0.63 (.53)	0.13 (.72)	0.58 (.45)	0.25%	1.14%
Convenience	5.19 (≤.001)	9.02 (≤.001)	2.62 (.07)	29.77%	9.77%
Owner × Price	0.81 (.45)	0.71 (.40)	1.55 (.21)	1.38%	3.23%
Owner × Brand	3.12 (.04)	2.88 (.09)	5.88 (.02)	5.22%	11.92%
Owner × Convenience	1.35 (.25)	1.72 (.18)	0.66 (.52)	0.66%	1.86%
Price × Brand	4.94 (.01)	6.94 (.01)	7.69 (.01)	13.01%	15.35%
Price × Convenience	0.94 (.44)	0.14 (.87)	0.96 (.39)	0.47%	3.83%
Brand × Convenience	1.04 (.38)	1.96 (.14)	0.48 (.62)	3.63%	0.19%
Owner × Price × Brand	0.04 (.96)	0.08 (.78)	0.03 (.85)	0.21%	0.07%
Owner × Price × Convenience	0.77 (.54)	1.37 (.26)	0.19 (.82)	4.83%	0.21%
Owner × Brand × Convenience	0.25 (.91)	0.14 (.87)	0.46 (.63)	0.52%	1.33%
Price × Brand × Convenience	0.31 (.87)	0.56 (.57)	0.14 (.87)	1.14%	0.03%
Owner × Price × Brand × Convenience	0.67 (.61)	0.83 (.44)	0.13 (.88)	0.43%	0.53%

Note. F-values are displayed above the corresponding *p*-values in parentheses. The results of the relative weight analysis are displayed in form of the *rescaled importance weights*, which are calculated by dividing the raw weights by the model R^2 and then multiplying these values by 100%. The resulting percentages indicate the proportion of variance explained attributable to each effect.

Table 49: Analysis of Variance for Brand Prestige, Ownership Status and Branding Strategy in Study 4

		Univariate Analyses	
	MANOVA ***F*(2, 571)**	**Access Attitude** ***F*(1, 572)**	**Access Usage Intention** ***F*(1, 572)**
Brand	3.39 (.03)	0.15 (.70)	6.24 (.01)
Owner	1.11 (.33)	1.81 (.18)	1.33 (.25)
Branding	0.51 (.60)	1.01 (.32)	0.10 (.76)
Brand × Owner	2.80 (.06)	3.94 (.05)	4.04 (.05)
Brand × Branding	2.64 (.07)	1.21 (.27)	5.28 (.02)
Owner × Branding	1.71 (.18)	3.16 (.08)	1.49 (.22)
Brand × Owner × Branding	1.90 (.15)	3.66 (.06)	1.37 (.24)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

B.7. MANOVAs for Parent Brand Evaluation

Table 50: Brand × Access ANCOVA in Study 1 in the Cars Category

		Univariate Analyses			
	MANOVA ***F*(4, 143)**	**Brand Attitude** ***F*(1, 148)**	**Brand Purchase Intention** ***F*(1, 150)**	**Brand WOM** ***F*(1, 151)**	**Brand WTP price premium** ***F*(1, 148)**
Brand familiarity	---	120.30 (≤.001)	112.57 (≤.001)	100.87 (≤.001)	---
Variety Seeking	13.66 (≤.001)	---	---	---	5.18 (.02)
Innovativeness	---	8.45 (≤.001)	13.02 (≤.001)	---	---
Access Knowledge	2.59 (.04)	---	---	---	30.64 (≤.001)
Car availability	3.54 (.01)	2.38 (.13)	---	---	---
Hedonism	2.79 (.03)	---	---	---	3.41 (.07)
Utilitarianism	3.01 (.02)	1.29 (.26)	---	---	---
Visibility	7.04 (≤.001)	---	---	---	19.93 (≤.001)
Brand	7.90 (≤.001)	5.15 (.03)	1.43 (.23)	2.62 (.11)	12.57 (≤.001)
Access	1.74 (.15)	4.41 (.04)	0.20 (.66)	0.73 (.40)	3.20 (.08)
Brand × Access	0.95 (.44)	2.63 (.11)	2.24 (.14)	0.16 (.69)	0.01 (.92)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 51: Brand × Access ANCOVA in Study 1 in the Fashion Category

		Univariate Analyses			
	MANOVA ***F*(4, 134)**	**Brand Attitude** ***F*(1, 136)**	**Brand Purchase Intention** ***F*(1, 138)**	**Brand WOM** ***F*(1, 138)**	**Brand WTP price premium** ***F*(1, 140)**
Personal brand connection	42.33 (≤.001)	73.28 (≤.001)	158.15 (≤.001)	69.11 (≤.001)	72.73 (≤.001)
Brand familiarity	---	10.80 (≤.001)	29.95 (≤.001)	17.52 (≤.001)	---
Status consciousness	5.09 (≤.001)	4.52 (.04)	3.34 (.07)	---	---
Utilitarianism	3.47 (.01)	14.44 (≤.001)	---	4.49 (.04)	---
Ownership perceptibility	2.96 (.02)	5.40 (.02)	---	---	---
Brand visibility	---	---	---	---	9.09 (≤.001)
High prestige brand ownership	5.92 (≤.001)	3.10 (.08)	12.56 (≤.001)	---	---
Low prestige brand ownership	---	---	---	8.04 (.01)	---
Brand	11.23 (≤.001)	5.22 (.02)	10.68 (≤.001)	5.44 (.02)	0.87 (.35)
Access	0.23 (.92)	0.12 (.73)	0.07 (.80)	0.16 (.70)	0.12 (.73)
Brand × Access	0.70 (.59)	1.14 (.29)	0.42 (.52)	0.00 (.99)	0.00 (.99)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 52: Analysis of Variance for Brand, Ownership Status, and Treatment in Study 2 in the Cars Category

		Univariate Analyses			
	MANOVA ***F*(4, 877)**	**Brand Attitude** ***F*(1, 880)**	**Brand Purchase Intention** ***F*(1, 880)**	**Brand WOM** ***F*(1, 880)**	**Brand WTP price premium** ***F*(1, 880)**
Brand	30.90 (≤.001)	51.96 (≤.001)	5.36 (.02)	43.07 (≤.001)	71.94 (≤.001)
Owner	113.63 (≤.001)	262.45 (≤.001)	516.89 (≤.001)	285.48 (≤.001)	199.55 (≤.001)
Treatment	1.45 (.17)	2.16 (.12)	0.71 (.49)	2.30 (.10)	0.31 (.73)
Brand × Owner	7.41 (≤.001)	0.48 (.49)	6.51 (.01)	3.36 (.07)	26.88 (≤.001)
Brand × Treatment	1.23 (.28)	0.93 (.40)	0.27 (.76)	0.45 (.64)	0.19 (.83)
Owner × Treatment	0.88 (.53)	2.75 (.06)	1.85 (.16)	1.68 (.19)	0.95 (.39)
Brand × Owner × Treatment	1.11 (.36)	0.83 (.44)	0.68 (.51)	1.78 (.17)	0.65 (.52)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 53: Analysis of Variance for Brand, Ownership Status, and Treatment in Study 2 in the Fashion Category

		Univariate Analyses			
	MANOVA ***F*(4, 900)**	**Brand Attitude** ***F*(1, 903)**	**Brand Purchase Intention** ***F*(1, 903)**	**Brand WOM** ***F*(1, 903)**	**Brand WTP price premium** ***F*(1, 903)**
Brand	29.70 (≤.001)	33.11 (≤.001)	0.50 (.48)	14.23 (≤.001)	49.80 (≤.001)
Owner	135.58 (≤.001)	267.05 (≤.001)	523.97 (≤.001)	169.89 (≤.001)	152.22 (≤.001)
Treatment	0.86 (.55)	0.63 (.53)	0.21 (.81)	0.64 (.53)	2.49 (.08)
Brand × Owner	6.06 (≤.001)	0.09 (.76)	0.37 (.54)	0.31 (.58)	14.39 (≤.001)
Brand × Treatment	0.03 (.97)	0.44 (.64)	0.34 (.71)	0.60 (.55)	0.05 (.95)
Owner × Treatment	0.82 (.59)	1.10 (.33)	1.11 (.33)	0.06 (.95)	1.11 (.33)
Brand × Owner × Treatment	0.34 (.95)	0.57 (.57)	0.07 (.93)	0.92 (.40)	0.09 (.91)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

Table 54: Analysis of Variance for Brand, Ownership Status, and Treatment in Study 4

		Univariate Analyses			
	MANOVA ***F*(4, 856)**	**Brand Attitude** ***F*(1, 859)**	**Brand Purchase Intention** ***F*(1, 859)**	**Brand WOM** ***F*(1, 859)**	**Brand WTP price premium** ***F*(1, 859)**
Brand	46.17 (≤.001)	115.73 (≤.001)	22.39 (≤.001)	49.49 (≤.001)	99.29 (≤.001)
Owner	114.59 (≤.001)	244.87 (≤.001)	446.93 (≤.001)	182.28 (≤.001)	152.05 (≤.001)
Treatment	0.62 (.77)	1.10 (.33)	1.76 (.17)	0.91 (.40)	0.32 (.73)
Brand × Owner	7.33 (≤.001)	10.04 (≤.01)	0.09 (.76)	0.19 (.66)	7.30 (.01)
Brand × Treatment	0.41 (.92)	0.53 (.59)	0.27 (.76)	0.05 (.95)	0.70 (.50)
Owner × Treatment	2.72 (.01)	0.36 (.70)	2.68 (.07)	1.01 (.36)	2.81 (.06)
Brand × Owner × Treatment	0.82 (.58)	0.91 (.40)	0.28 (.76)	1.62 (.20)	0.27 (.76)

Note. F-values are displayed above the corresponding *p*-values in parentheses.

B.8. Interaction Graphs

Interaction Graphs – Study 2

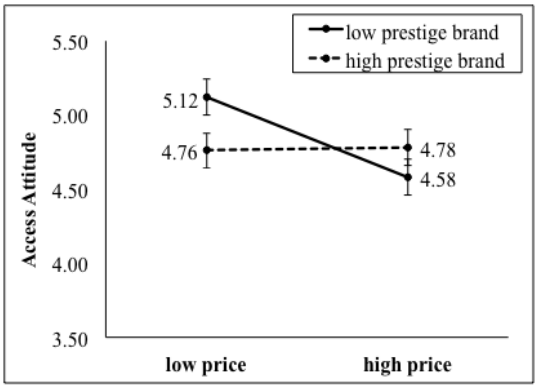


Figure 28: Interaction Graph of Access Attitude between Price Level and Brand in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

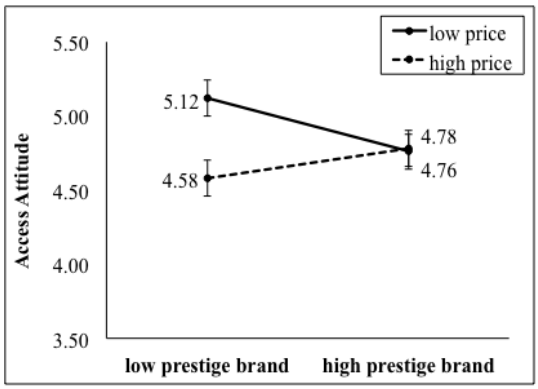


Figure 29: Interaction Graph of Access Attitude between Brand and Price Level in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

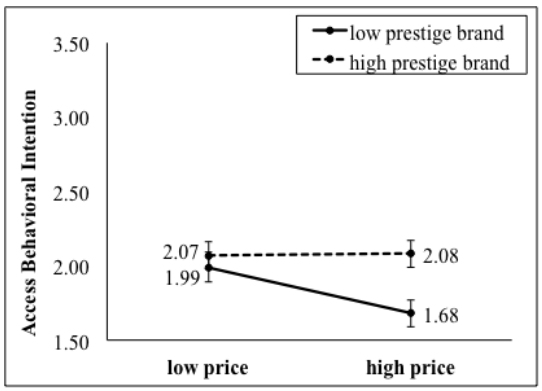


Figure 30: Interaction Graph of Access Behavioral Intention between Brand and Price Level in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

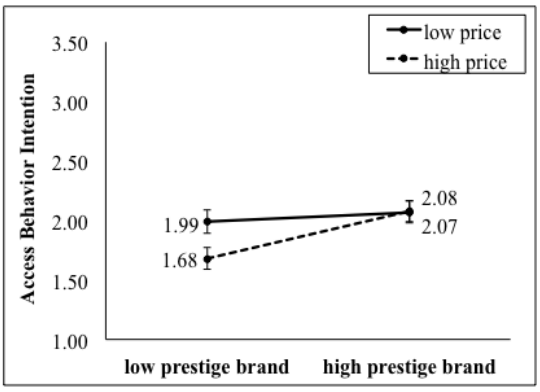


Figure 31: Interaction Graph of Access Behavioral Intention between Brand and Price Level in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

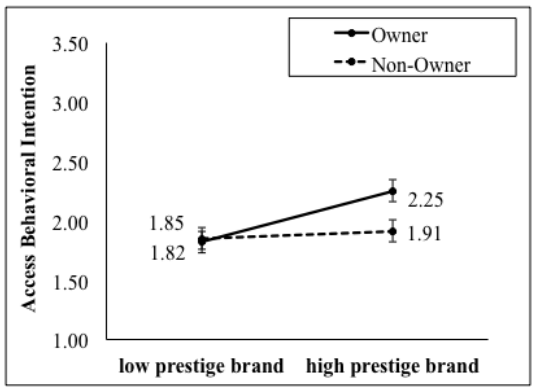


Figure 32: Interaction Graph of Access Behavioral Intention between Brand and Ownership Status in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

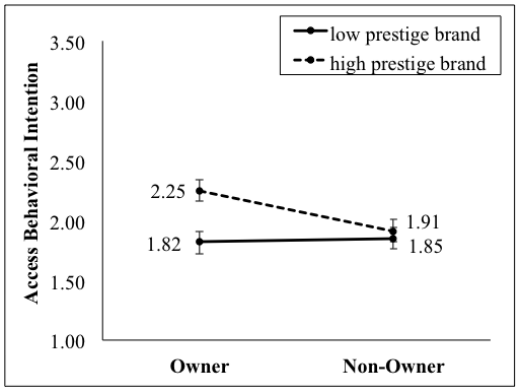


Figure 33: Interaction Graph of Access Behavioral Intention between Ownership Status and Brand in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

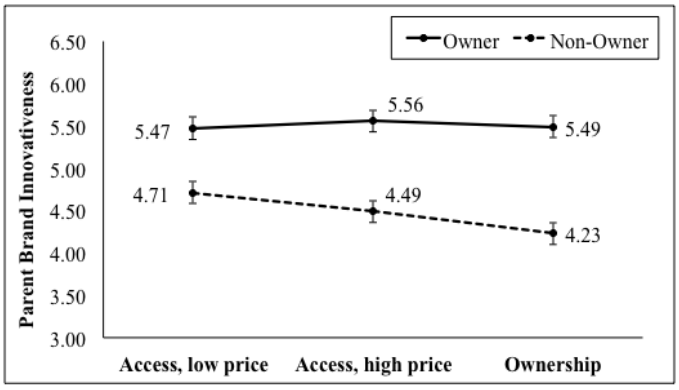


Figure 34: Interaction Graph of Parent Brand Innovativeness between Treatment and Ownership Status in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

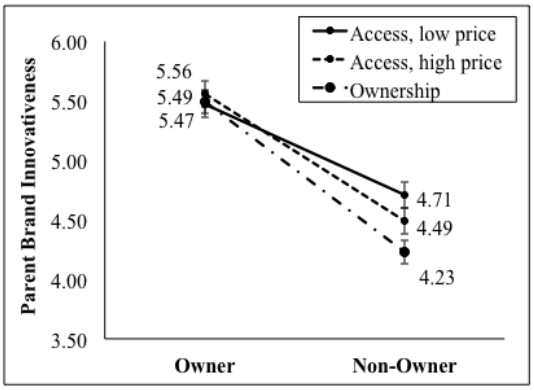


Figure 35: Interaction Graph of Parent Brand Innovativeness between Ownership Status and Treatment in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

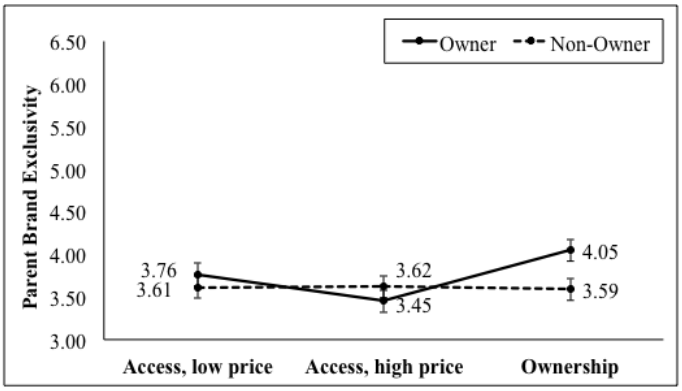


Figure 36: Interaction Graph of Parent Brand Exclusivity between Treatment and Ownership Status in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

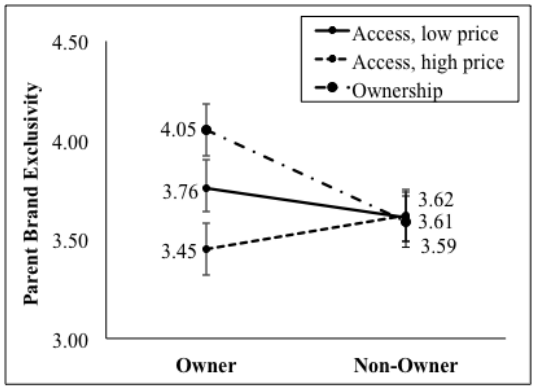


Figure 37: Interaction Graph of Parent Brand Exclusivity between Ownership Status and Treatment in Study 2 for Cars. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

Interaction Graphs – Study 3

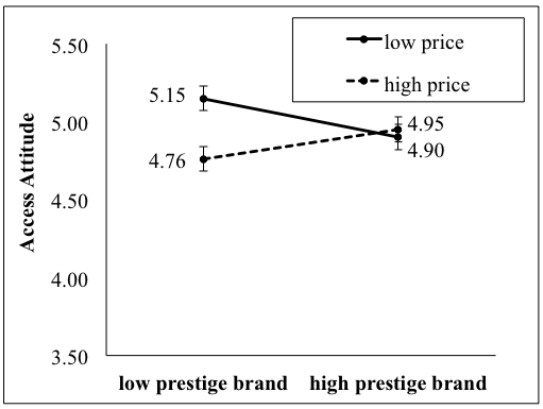


Figure 38: Interaction Graph of Access Attitude between Brand Prestige and Price Level in Study 3. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

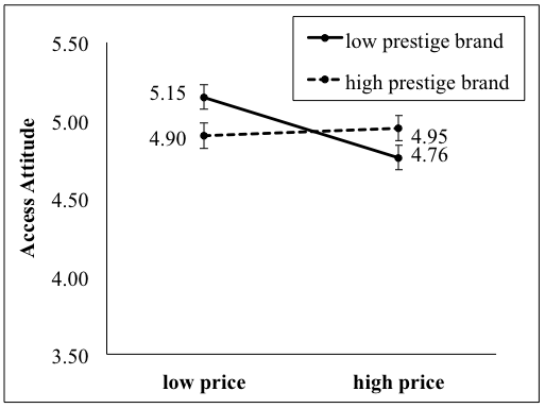


Figure 39: Interaction Graph of Access Attitude between Price Level and Brand Prestige in Study 3. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

Interaction Graphs – Study 4

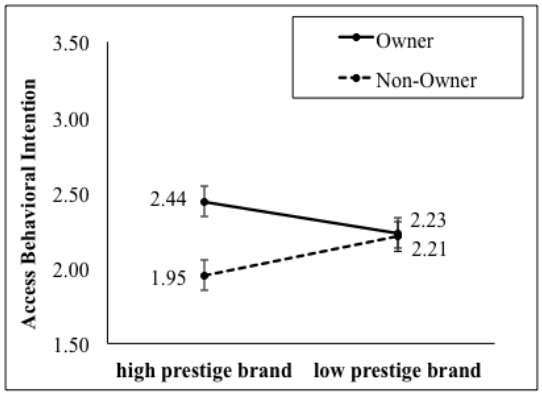


Figure 40: Interaction Graph of Access Usage Intention between Brand Prestige and Ownership Status in Study 4. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

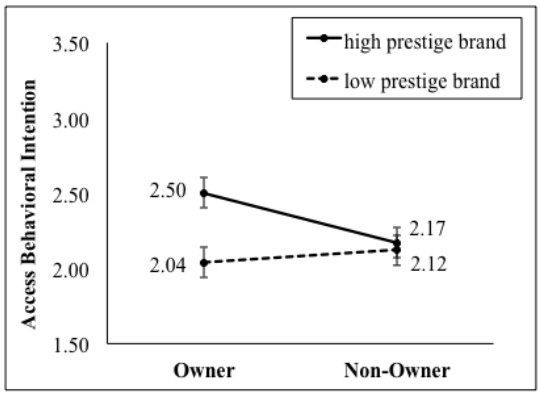


Figure 41: Interaction Graph of Access Usage Intention between Ownership Status and Brand Prestige in Study 4. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

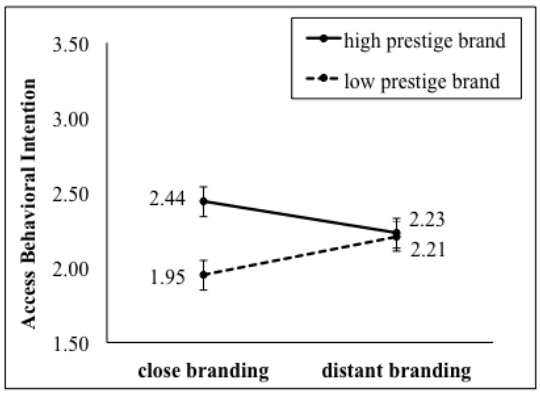


Figure 42: Interaction Graph of Access Usage Intention between Branding Strategy and Brand Prestige in Study 4. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

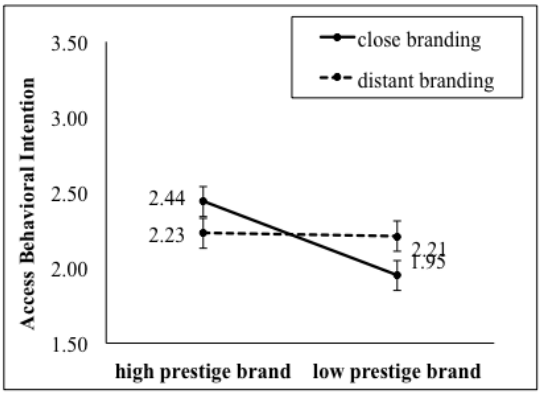


Figure 43: Interaction Graph of Access Usage Intention between Brand Prestige and Branding Strategy in Study 4. *Note:* error bars represent standard error of means; 3.5 = neutral scale mean.

B.9. Cell Means

Table 55: Cell Means in Study 1 in the Cars Category

	Low Prestige Brand		High Prestige Brand	
	Access	**Ownership**	**Access**	**Ownership**
Access Offering Perceptions				
Access attitude	5.37 (1.17)	---	5.17 (1.31)	---
Access usage intentions	1.93 (0.98)	---	1.86 (1.24)	---
Product Brand Perceptions				
Brand attitude	4.27 (1.52)	4.36 (1.26)	5.27 (1.68)	5.76 (1.20)
Brand purchase intention	3.57 (1.81)	3.41 (1.73)	4.10 (2.13)	4.35 (1.85)
Brand WOM	3.82 (1.42)	3.96 (1.38)	5.02 (1.69)	5.05 (1.69)
Brand WTP price premium	2.46 (1.37)	3.22 (1.55)	3.90 (1.83)	4.33 (1.66)
Brand innovativeness	4.64 (1.03)	4.15 (1.45)	5.31 (1.20)	5.30 (1.22)
Brand ecological friendliness	4.43 (1.14)	4.41 (1.24)	4.81 (1.40)	4.80 (1.14)
Cell size *n*	28	46	42	40

Note. Standard deviations in parentheses.

Table 56: Cell Means in Study 1 in the Fashion Category

	Low Prestige Brand		High Prestige Brand	
	Access	**Ownership**	**Access**	**Ownership**
Access Offering Perceptions				
Access attitude	3.65 (1.75)	---	4.29 (1.55)	---
Access usage intentions	1.49 (1.01)	---	1.72 (1.02)	---
Product Brand Perceptions				
Brand attitude	4.57 (1.53)	4.79 (1.38)	4.86 (1.56)	4.78 (1.20)
Brand purchase intention	4.74 (1.77)	4.76 (1.92)	3.38 (2.06)	3.78 (1.58)
Brand WOM	4.37 (1.63)	4.41 (1.57)	4.47 (1.55)	4.56 (1.26)
Brand WTP price premium	3.14 (1.35)	3.41 (1.78)	3.13 (1.72)	3.50 (1.74)
Brand innovativeness	4.74 (1.29)	4.41 (1.38)	4.91 (1.25)	4.62 (1.11)
Brand ecological friendliness	3.46 (1.29)	3.55 (1.33)	4.66 (1.10)	4.36 (0.94)
Cell size *n*	35	29	32	50

Note. Standard deviations in parentheses.

Table 57: Cell Means in Study 2 in the Cars Category

	Low prestige brand						High prestige brand					
	Owner			Non-owner			Owner			Non-owner		
	Access, low price	Access, high price	Owner-ship	Access, low price	Access, high price	Owner-ship	Access, low price	Access, high price	Owner-ship	Access, low price	Access, high price	Owner-ship
Access Offering Perceptions												
Access attitude	4.87	4.63	---	5.37	4.54	---	4.84	4.99	---	4.68	4.57	---
Access usage intentions	1.94	1.70	---	2.04	1.66	---	2.17	2.32	---	1.96	1.85	---
Product Brand Perceptions												
Brand attitude	5.34	5.65	5.55	4.38	4.18	4.13	6.04	6.30	6.16	4.83	5.01	4.46
Brand purchase intention	5.20	5.55	5.35	3.21	3.32	3.16	5.67	5.93	6.04	3.40	3.23	2.99
Brand WOM	5.24	5.32	5.01	3.75	3.80	3.52	5.99	5.94	6.16	4.48	4.22	3.79
Brand WPP	3.80	3.97	3.80	3.04	2.84	2.79	5.21	5.33	5.47	3.28	3.40	3.06
Brand innovativeness	4.86	4.96	4.87	4.24	3.99	3.89	6.09	6.15	6.12	5.17	4.99	4.58
Brand ecological friendliness	4.82	4.68	4.56	4.08	4.11	4.05	5.19	5.37	5.42	4.41	4.33	3.96
Brand exclusivity	2.96	2.55	3.32	2.93	2.82	3.01	4.56	4.35	4.78	4.28	4.41	4.17
Cell size *n*	71	74	75	72	74	80	70	72	76	75	73	80

Table 58: Cell Means in Study 2 in the Fashion Category

	Low prestige brand						High prestige brand					
	Owner			Non-owner			Owner			Non-owner		
	Access, low price	Access, high price	Owner-ship	Access, low price	Access, high price	Owner-ship	Access, low price	Access, high price	Owner-ship	Access, low price	Access, high price	Owner-ship
Access Offering Perceptions												
Access attitude	3.73	3.89	---	3.43	3.43	---	4.12	4.02	---	4.07	4.05	---
Access usage intentions	1.70	1.64	---	1.41	1.27	---	2.21	1.99	---	1.42	1.59	---
Product Brand Perceptions												
Brand attitude	5.19	5.12	5.04	3.71	3.70	3.93	5.54	5.51	5.62	4.07	4.36	4.37
Brand purchase intention	5.47	5.27	5.25	3.17	3.13	3.31	5.37	5.28	5.32	2.91	3.11	3.21
Brand WOM	4.90	4.91	4.76	3.55	3.38	3.63	5.11	5.04	5.38	3.84	3.95	4.04
Brand WPP	3.48	3.58	3.56	2.54	2.51	2.96	4.54	4.67	4.73	2.84	2.93	3.23
Brand innovativeness	4.97	5.07	4.85	4.07	3.83	3.81	5.30	5.15	5.16	4.05	4.38	4.28
Brand ecological friendliness	4.08	4.24	4.10	3.59	3.39	3.43	4.34	4.46	4.74	3.79	4.04	3.83
Brand exclusivity	2.91	3.04	2.93	2.89	2.89	3.03	4.57	4.38	4.61	3.96	4.35	4.09
Cell size *n*	77	80	71	71	71	75	76	80	77	77	82	78

Table 59: Cell Means in Study 3

	Low prestige brand											
	Owner						Nonowner					
	Low price			High price			Low price			High price		
	Low convenience	Medium convenience	High convenience	Low convenience	Medium convenience	High convenience	Low convenience	Medium convenience	High convenience	Low convenience	Medium convenience	High convenience
Access Offering Perceptions												
Access attitude	5.07 (1.30)	5.35 (1.34)	5.41 (1.15)	4.55 (1.39)	4.92 (1.17)	5.07 (1.52)	4.45 (1.35)	5.38 (1.05)	5.24 (1.49)	4.33 (1.53)	4.87 (1.45)	4.86 (1.56)
Access usage intentions	2.25 (1.14)	2.50 (1.37)	2.55 (1.31)	2.02 (1.32)	2.02 (1.09)	2.20 (1.29)	1.94 (1.23)	2.20 (1.43)	2.36 (1.31)	1.98 (1.18)	1.98 (1.28)	1.98 (1.17)
Cell size *n*	44	44	44	44	44	44	48	50	44	45	47	44

	High prestige brand											
	Owner						Nonowner					
	Low price			High price			Low price			High price		
	Low convenience	Medium convenience	High convenience	Low convenience	Medium convenience	High convenience	Low convenience	Medium convenience	High convenience	Low convenience	Medium convenience	High convenience
Access Offering Perceptions												
Access attitude	5.26 (1.45)	5.14 (1.27)	5.18 (1.60)	4.92 (1.38)	4.99 (1.32)	5.53 (1.19)	4.45 (1.37)	4.58 (1.35)	4.80 (1.34)	4.54 (1.38)	5.00 (1.35)	4.73 (1.39)
Access usage intentions	2.31 (1.35)	2.34 (1.26)	2.78 (1.43)	2.50 (1.34)	2.35 (1.30)	2.70 (1.30)	1.80 (.93)	1.75 (.97)	1.91 (1.09)	1.94 (1.23)	2.20 (1.43)	2.36 (1.31)
Cell size *n*	45	44	45	44	46	44	44	44	46	46	53	45

Table 60: Cell Means in Study 4

	Low prestige brand						High prestige brand					
	Owner			Nonowner			Owner			Nonowner		
	Access, close branding	Access, distant branding	Ownership	Access, close branding	Access, distant branding	Ownership	Access, close branding	Access, distant branding	Ownership	Access, close branding	Access, distant branding	Ownership
Access Offering Perceptions												
Access attitude	4.81 (1.40)	5.06 (1.25)	---	4.90 (1.34)	5.12 (1.54)	---	5.43 (1.44)	4.99 (1.40)	---	4.62 (1.37)	5.03 (1.39)	---
Access usage intention	1.90 (1.02)	2.17 (1.07)	---	1.99 (1.32)	2.26 (1.33)	---	2.73 (1.39)	2.27 (1.24)	---	2.15 (1.15)	2.19 (1.35)	---
Parent Brand Perceptions												
Brand attitude	5.67 (1.46)	5.83 (1.08)	5.65 (1.18)	4.12 (1.60)	4.04 (1.52)	4.12 (1.33)	6.51 (.79)	6.42 (.88)	6.17 (1.22)	5.22 (1.32)	5.46 (1.24)	5.20 (1.36)
Brand purchase intention	5.44 (1.48)	5.65 (1.38)	5.13 (1.72)	2.97 (1.80)	3.07 (1.84)	3.30 (1.67)	6.00 (1.27)	6.21 (1.12)	5.68 (1.54)	3.51 (1.88)	3.72 (1.65)	3.57 (1.93)
Brand WOM	5.17 (1.75)	5.32 (1.53)	5.21 (1.61)	3.77 (1.50)	3.85 (1.66)	3.59 (1.52)	6.19 (1.09)	5.82 (1.85)	5.81 (1.59)	4.35 (1.65)	4.79 (1.44)	4.47 (1.70)
Brand WPP	3.83 (1.73)	3.79 (1.62)	3.99 (1.57)	2.59 (1.56)	2.97 (1.57)	2.84 (1.59)	5.47 (1.51)	5.11 (1.81)	5.26 (1.57)	3.47 (1.72)	3.92 (1.58)	3.43 (1.83)
Brand innovativeness	4.81 (1.40)	5.10 (1.19)	4.86 (1.32)	3.84 (1.31)	4.34 (1.44)	3.64 (1.26)	6.18 (.87)	6.05 (1.17)	5.57 (1.54)	5.15 (1.35)	5.39 (1.08)	4.95 (1.42)
Brand ecological friendliness	4.85 (1.19)	4.88 (1.13)	5.00 (1.35)	4.03 (1.22)	4.42 (1.19)	4.04 (1.17)	5.44 (1.39)	5.08 (1.29)	5.13 (1.54)	4.50 (1.30)	4.43 (1.33)	4.05 (1.32)
Brand exclusivity	3.15 (2.00)	3.06 (1.81)	3.44 (2.05)	3.11 (1.75)	2.88 (1.69)	3.16 (1.75)	4.68 (1.54)	4.48 (1.57)	4.47 (1.57)	4.40 (1.61)	4.32 (1.52)	4.03 (1.45)
Cell size *n*	72	72	72	73	73	73	73	73	72	72	72	74

Table 61: Cell Means and Analyses of Variance in Study 5

	Treatment: ***M (SD)***	**Control:** ***M (SD)***	**MANOVA:** ***F*-value (*p*-value)**	**Univariate Analysis:** ***F*-value (*p*-value)**
High prestige car brand				
Brand attitude	6.01 (1.22)	5.76 (1.30)		3.42 (.07)
Brand purchase intention	3.93 (2.05)	4.04 (1.91)	2.87 (.04)	0.27 (.61)
Brand WOM	5.44 (1.56)	5.07 (1.61)		4.81 (.03)
Brand prestige	5.93 (1.09)	5.65 (1.21)	---	4.99 (.03)
Brand quality	5.99 (1.08)	5.77 (1.23)	---	3.41 (.07)
Brand innovativeness	5.58 (1.24)	5.39 (1.28)	---	1.95 (.16)
Low prestige car brand				
Brand attitude	3.50 (1.17)	3.42 (1.25)		0.39 (.53)
Brand purchase intention	2.20 (1.40)	2.14 (1.35)	0.21 (.89)	0.16 (.69)
Brand WOM	2.92 (1.35)	2.81 (1.42)		0.59 (.44)
Brand prestige	2.76 (1.15)	2.76 (1.20)	---	0.00 (1.00)
Brand quality	3.57 (1.10)	3.40 (1.20)	---	1.81 (.18)
Brand innovativeness	3.47 (1.21)	3.23 (1.37)	---	2.97 (.09)
Access provider brand				
Access attitude	5.50 (1.23)	5.63 (1.16)	---	1.01 (.32)
Access usage intentions	5.52 (1.78)	5.88 (1.62)	---	3.97 (.05)
Access price fairness	4.87 (1.13)	4.98 (1.13)	---	0.86 (.35)
Brand attitude	5.91 (1.14)	5.99 (1.03)	---	0.51 (.48)
Brand WOM	6.08 (1.20)	6.12 (1.18)	---	0.11 (75)
Brand prestige	5.14 (1.20)	4.94 (1.13)	---	2.63 (.11)
Brand quality	5.74 (1.13)	5.69 (1.03)	---	0.15 (.70)
Brand innovativeness	5.58 (1.24)	5.59 (1.13)	---	0.01 (.92)
Cell size *n*	171	179		

B.10. Correlation Tables

Table 62: Cars and Fashion Correlation Table in Study 1 (Project II)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	M	SD
1	Access attitude	—	.59*	.63*	.68*	.30*	.22	.31*	.11	.09	.29*	.21	.34*	.45*	.27*	.40*	.11	.28*	.16	.04	n.a.	n.a.	.03	5.25	1.25
2	Access usage intention	.44*	—	.66*	.42*	.28*	.50*	.31*	.39*	.19	.33*	.35*	.26*	.43*	.39*	.35*	-.03	.23	.18	.10	n.a.	n.a.	.19	1.89	1.14
3	Access involvement	.61*	.56*	—	.52*	.23	.37*	.23	.30*	.15	.32*	.55*	.41*	.49*	.46*	.44*	-.11*	.39*	.33*	.09*	n.a.	n.a.	-.03	3.66	1.81
4	Access fit	.75*	.28*	.51*	—	.41*	.32*	.38*	.06	.23	.32*	.23	.31*	.47*	.29*	.31*	.20	.17	.13	-.07	n.a.	n.a.	.17	4.99	1.35
5	Brand attitude	.37*	.06	.33*	.33*	—	.69*	.76*	.54*	.64*	.72*	.30*	.38*	.35*	.31*	.34*	.08	.39*	.32*	.10	n.a.	n.a.	-.02	4.95	1.54
6	Brand purchase intention	.20	.16	.34*	.16	.63*	—	.64*	.62*	.64*	.75*	.36*	.42*	.44*	.36*	.43*	-.03	.35*	.33*	.25*	n.a.	n.a.	-.01	3.87	1.91
7	Brand word of mouth	.35*	.17	.42*	.28*	.77*	.67*	—	.55*	.63*	.66*	.25*	.33*	.40*	.32*	.36*	.13	.39*	.28*	.22*	n.a.	n.a.	.01	4.50	1.64
8	Brand WTP price premium	.40*	.40*	.65*	.31*	.47*	.58*	.58*	—	.56*	.60*	.45*	.36*	.39*	.37*	.23*	-.12	.42*	.21*	.13	n.a.	n.a.	-.15	3.55	1.74
9	Brand familiarity	.19	.28*	.26*	.21	.51*	.66*	.55*	.39*	—	.82*	.31*	.34*	.43*	.40*	.46*	.06	.54*	.39*	.30*	n.a.	n.a.	-.06	3.74	1.96
10	Personal brand connection	.23	.39*	.41*	.15	.54*	.67*	.53*	.57*	.66*	—	.40*	.48*	.52*	.45*	.49*	.00	.53*	.42*	.30*	n.a.	n.a.	-.07	3.18	1.84
11	Status consciousness	.14	.35*	.41*	.12	.21*	.32*	.26*	.50*	.43*	.56*	—	.58*	.54*	.54*	.41*	.25*	.47*	.18*	.07	n.a.	n.a.	-.22*	2.90	1.49
12	Innovativeness	.05	.23	.33*	.13	.23*	.33*	.31*	.35*	.40*	.47*	.54*	—	.70*	.55*	.43*	-.09	.50*	.24*	.08	n.a.	n.a.	-.17	3.74	1.69
13	Variety seeking	.14	.27*	.41*	.20	.23*	.33*	.30*	.44*	.36*	.47*	.60*	.61*	—	.50*	.46*	.02	.45*	.25*	.11	n.a.	n.a.	-.10	3.48	1.41
14	Access knowledge	.28*	.24	.37*	.25*	.24*	.32*	.24*	.32*	.31*	.40*	.34*	.29*	.37*	—	.37*	-.06	.39*	.27*	.09	n.a.	n.a.	-.08	2.79	1.57
15	Hedonism	.11	.06	.13	.05	.20*	.24*	.28*	.22*	.32*	.33*	.31*	.57*	.45*	.16	—	-.30	.63*	.33*	.48*	n.a.	n.a.	-.09	4.32	1.63
16	Utilitarianism	.08	-.07	.14	.11	.21*	.04	.08	.01	-.10	-.07	-.23*	-.35*	-.25*	.08	-.38*	—	-.02	.14	.01	n.a.	n.a.	.20*	5.18	1.44
17	Visibility	.26*	.28*	.38*	.27*	.23*	.33*	.28*	.47*	.41*	.51*	.63*	.61*	.58*	.24*	.44*	-.20	—	.42*	.39*	n.a.	n.a.	-.33*	3.78	1.89
18	Ownership perceptibility	-.14	-.04	.05	-.11	-.03	.18*	.07	.31*	.11	.33*	.42*	.30*	.46*	.37*	.20*	-.13	.37*	—	.21*	n.a.	n.a.	-.13	3.99	1.71
19	Car Availability	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	—	n.a.	n.a.	.06	4.15	2.05
20	Boss apparel owned	.27*	.14	.23	.20	.31*	.47*	.29*	.31*	.41*	.36*	.27*	.25*	.29*	.26*	.20*	-.03	.24*	.25*	n.a.	—	n.a.	n.a.	n.a.	n.a.
21	H&M apparel owned	.38*	.21	.25*	.19	.28*	.33*	.40*	.29*	.37*	.37*	.23*	.22*	.17*	.06	.31*	-.14	.25*	.00	n.a.	.13	—	n.a.	n.a.	n.a.
22	Age	-.20	-.21	-.26*	-.11	-.05	-.09	-.11	-.07	-.14	-.25*	-.23*	-.24*	-.08	-.08	-.14	.22*	-.25*	.01	n.a.	.02	-.36*	—	40.60	10.74
M		3.96	1.60	2.84	3.93	4.75	4.12	4.47	3.32	3.90	2.89	2.62	3.45	3.36	2.60	4.43	4.74	3.40	2.79	n.a.	1.55	2.77	40.64		
SD		1.67	1.02	1.71	1.74	1.39	1.88	1.47	1.65	1.78	1.59	1.43	1.58	1.31	1.53	1.45	1.30	1.73	1.55	n.a.	0.83	1.27	11.07		

Note. Inter-correlations, means and standard deviations for the product category cars are presented above the diagonal; those for the product category fashion are presented below the diagonal.
* $p < .05$; n.a. = not available because the variable is only related to one of the product categories.

Table 63: Cars and Fashion Correlation Table in Study 2 (Project II)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	M	SD
1	Access attitude	—	.46*	.29*	.15*	.25*	.17*	.24*	.22*	.03	.06	.13*	.18*	.02	.06	.07	.09*	.12*	-.02	4.81	1.42
2	Access usage intention	.60*	—	.28*	.26*	.27*	.28*	.22*	.29*	.04	.21*	.21*	.22*	.19*	.20*	.00	.17*	.14*	-.07	1.95	1.15
3	Brand attitude	.25*	.32*	—	.69*	.75*	.57*	.70*	.54*	.17*	.19*	.21*	.22*	.11*	.31*	-.01	.26*	.10*	-.03	5.15	1.44
4	Brand purchase intention	.18*	.30*	.70*	—	.73*	.68*	.56*	.49*	.12*	.24*	.20*	.17*	.18*	.30*	-.04	.31*	.12*	-.06	4.40	1.99
5	Brand word of mouth	.27*	.35*	.69*	.69*	—	.63*	.67*	.57*	.16*	.21*	.19*	.17*	.12*	.28*	-.01	.27*	.12*	-.02	4.75	1.75
6	Brand WTP price premium	.26*	.34*	.57*	.61*	.60*	—	.55*	.48*	.29*	.34*	.26*	.22*	.24*	.27*	-.13*	.28*	.10*	-.11*	3.82	1.86
7	Brand innovativeness	.29*	.33*	.63*	.59*	.61*	.46*	—	.64*	.26*	.15*	.19*	.24*	.10*	.33*	.00	.27*	.14*	.00	4.98	1.48
8	Brand eco-friendliness	.26*	.28*	.52*	.44*	.52*	.48*	.59*	—	.19*	.19*	.15*	.19*	.14*	.27*	-.02	.25*	.10*	.02	4.57	1.37
9	Brand Exclusivity	.16*	.19*	.19*	.09*	.17*	.32*	.21*	.33*	—	.24*	.17*	.13*	.19*	.12*	-.05	.14*	.08*	-.08*	3.68	1.77
10	Status consciousness	.11*	.22*	.22*	.29*	.24*	.37*	.20*	.21*	.15*	—	.53*	.37*	.58*	.32*	-.31*	.33*	.15*	-.32*	2.63	1.40
11	Innovativeness	.13*	.19*	.19*	.32*	.29*	.34*	.28*	.22*	.14*	.56*	—	.47*	.55*	.37*	-.11*	.38*	.21*	-.33*	3.50	1.69
12	Variety seeking	.17*	.29*	.29*	.28*	.24*	.30*	.30*	.28*	.18*	.40*	.52*	—	.45*	.28*	-.02	.29*	.13*	-.14*	3.38	1.34
13	Avoidance of similarity	.19*	.24*	.24*	.24*	.22*	.34*	.22*	.18*	.16*	.63*	.61*	.51*	—	.28*	-.15*	.33*	.19*	-.23*	2.78	1.45
14	Hedonism	.15*	.24*	.24*	.36*	.34*	.31*	.34*	.25*	.07*	.38*	.49*	.48*	.43*	—	-.16*	.46*	.22*	-.02	3.91	1.76
15	Utilitarianism	.07*	.02	.02	-.09*	-.03	-.11*	.02	.04	.02	-.32*	-.21*	-.09*	-.20*	-.33*	—	-.09*	-.02	.12*	5.35	1.48
16	Visibility	.16*	.31*	.31*	.36*	.30*	.38*	.30*	.23*	.14*	.53*	.50*	.39*	.51*	.36*	-.18*	—	.35*	-.15*	3.69	1.89
17	Ownership perceptibility	-.03	.03	.03	.09*	.11*	.12*	.08*	.10*	.16*	.26*	.23*	.22*	.32*	.13*	-.09*	.34*	—	-.13*	3.96	1.81
18	Age	-.12*	-.11*	-.11*	-.14*	-.07*	-.09*	-.08*	-.02	-.02	-.22*	-.26*	-.11*	-.19*	-.18*	.23*	-.13*	-.13*	—	42.12	11.98
M		3.85	1.66	4.69	4.24	4.38	3.48	4.59	4.01	3.66	2.64	3.51	3.29	2.82	4.13	4.78	3.06	2.52	41.80		
SD		1.66	1.02	1.39	1.81	1.62	1.71	1.37	1.27	1.86	1.43	1.67	1.33	1.46	1.62	1.33	1.66	1.55	11.87		

Note. Inter-correlations, means and standard deviations for the product category cars are presented above the diagonal; those for the product category fashion are presented below the diagonal.
* $p < .05$

Table 64: Correlation Table in Study 3 (Project II)

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Access attitude	-										
2	Access usage intention	.50*	-									
3	Status consciousness	.08*	.19*	-								
4	Innovativeness	.15*	.22*	.55*	-							
5	Variety seeking	.14*	.21*	.29*	.59*	-						
6	Avoidance of similarity	.11*	.20*	.65*	.49*	.33*	-					
7	Hedonism	.15*	.22*	.38*	.38*	.28*	.30*	-				
8	Utilitarianism	.05	.01	-.30*	-.16*	-.01	-.21*	-.15*	-			
9	Visibility	.18*	.21*	.40*	.36*	.24*	.30*	.51*	-.06*	-		
10	Ownership perceptibility	.08*	.09*	.12*	.17*	.08*	.15*	.22*	.08*	.31*	-	
11	Age	-.12*	-.11*	-.32*	-.32*	-.07*	-.29*	-.08*	.18*	-.19*	-.09*	-
M		4.94	2.19	2.86	3.82	3.80	2.87	4.45	5.37	3.96	4.25	41.16
SD		1.39	1.25	1.39	1.73	1.33	1.42	1.60	1.31	1.82	1.63	14.68

Note. * $p < .05$

Table 65: Correlation Table in Study 4 (Project II)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Access attitude	-																	
2	Access usage intention	.44*	-																
3	Brand attitude	.25*	.17*	-															
4	Brand purchase intention	.15*	.14*	.71*	-														
5	Brand word of mouth	.29*	.16*	.71*	.67*	-													
6	Brand WTP price premium	.20*	.21*	.53*	.63*	.59*	-												
7	Brand innovativeness	.22*	.24*	.70*	.56*	.63*	.55*	-											
8	Brand eco-friendliness	.20*	.16*	.47*	.39*	.48*	.43*	.58*	-										
9	Brand Exclusivity	-.01	.08*	.15*	.14*	.13*	.33*	.27*	.18*	-									
10	Status consciousness	.08	.08	.11*	.23*	.13*	.35*	.14*	.16*	.21*	-								
11	Innovativeness	.09*	.21*	.12*	.21*	.10*	.24*	.14*	.18*	.10*	.48*	-							
12	Variety seeking	.10*	.26*	.14*	.17*	.11*	.22*	.20*	.25*	.13*	.28*	.59*	-						
13	Avoidance of similarity	.05	.13*	.03	.15*	.07*	.25*	.08*	.10*	.22*	.60*	.45*	.29*	-					
14	Hedonism	.11*	.16*	.32*	.36*	.31*	.24*	.30*	.33*	.08*	.29*	.35*	.28*	.26*	-				
15	Utilitarianism	-.05	.01	-.03	-.13*	-.04	-.17*	.02	-.01	.00	-.38*	-.23*	-.10*	-.23*	-.26*	-			
16	Visibility	.14*	.16*	.31*	.34*	.28*	.28*	.30*	.28*	.10*	.30*	.34*	.31*	.29*	.52*	-.13*	-		
17	Ownership perceptibility	.06	.14*	.11*	.09*	.09*	.05	.12*	.06	.01	.03	.14*	.11*	.12*	.25*	.05	.30*	-	
18	Age	-.14*	-.03	-.02	-.14*	-.02	-.09*	.07*	.08*	.01	-.30*	-.26*	-.02	-.22*	-.07*	.20*	-.11*	-.07*	-
M		5.00	2.21	5.36	4.52	4.86	3.89	4.99	4.65	3.77	3.01	3.94	3.80	3.06	4.47	5.27	4.12	4.33	37.00
SD		1.40	1.26	1.51	2.01	1.78	1.87	1.49	1.36	1.81	1.44	1.71	1.36	1.48	1.66	1.38	1.86	1.74	13.65

Note. * $p < .05$

Table 66: Correlation Table in Study 5 (Project II)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	High prestige car brand																				
1	Brand attitude	—																			
2	Brand purchase intention	.49*	—																		
3	Brand WOM	.71*	.46*	—																	
4	Brand prestige	.53*	.32*	.60*	—																
5	Brand quality	.58*	.31*	.66*	.74*	—															
6	Brand innovativeness	.63*	.42*	.63*	.64*	.57*	—														
	Low prestige car brand																				
7	Brand attitude	-.18*	-.16*	-.16*	-.10	-.13*	-.13*	—													
8	Brand purchase intention	-.16*	.05	-.13*	-.06	-.18*	-.10*	.55*	—												
9	Brand WOM	-.19*	-.13*	-.03	.01	-.05	-.10	.67*	.61*	—											
10	Brand prestige	-.13*	-.14*	-.07	-.01	-.09	-.04	.60*	.45*	.57*	—										
11	Brand quality	-.10	-.09	-.02	.03	.02	-.04	.58*	.36*	.53*	.61*	—									
12	Brand innovativeness	-.11*	-.07	-.01	.03	-.03	-.03	.47*	.38*	.51*	.66*	.63*	—								
	Access provider brand																				
13	Access attitude	.20*	.07	.16*	.14*	.15*	.20*	-.03	-.11*	-.08	.05	-.07	.03	—							
14	Access usage intentions	.11*	.14*	.14*	.13*	.14*	.12*	-.02	-.07	.02	.02	-.03	-.04	.51*	—						
15	Access price fairness	.01	.03	-.03	-.01	-.01	-.01	-.03	.06	.01	-.03	-.05	.02	.00	-.07	—					
16	Brand attitude	.21*	.05	.19*	.22*	.25*	.18*	-.09	-.15*	-.08	-.02	-.07	-.03	.64*	.43*	.01	—				
17	Brand WOM	.13*	-.01	.13*	.18*	.19*	.14*	-.03	-.13*	-.03	.03	-.01	.03	.65*	.52*	-.06	.71*	—			
18	Brand prestige	.20*	.11*	.18*	.23*	.23*	.20*	-.05	-.03	-.05	.10	-.06	-.02	.42*	.25*	.00	.51*	.37*	—		
19	Brand quality	.29*	.11*	.34*	.29*	.36*	.27*	-.17*	-.19*	-.12*	-.05	-.03	-.04	.49*	.31*	-.07	.64*	.58*	.59*	—	
20	Brand innovativeness	.14*	.08*	.12*	.17*	.13*	.16*	-.13*	-.09	-.11*	.02	-.07	.00	.56*	.35*	-.02	.69*	.58*	.64*	.66*	—
M		5.88	3.99	5.25	5.79	5.88	5.48	3.46	2.17	2.87	2.76	3.48	3.35	5.57	5.71	4.93	5.95	6.10	5.04	5.71	5.59
SD		1.26	1.97	1.59	1.16	1.16	1.26	1.21	1.37	1.38	1.18	1.15	1.30	1.19	1.71	1.13	1.08	1.19	1.17	1.08	1.18

Note. * $p < .05$