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An Investigation into the Impact of Psychological Ownership and Pricing Systems on Value Creation

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AUFLISTUNG ALLER MANUSKRIPTE UND ERKLÄRUNG DER KOAUTORENSCHAFT

Die vorliegende Dissertation umfasst drei Beiträge. Folgender Beitrag wurde in Alleinautorenschaft erstellt:

Paper II:
The Dynamic Nature of Psychological Ownership and Its Impact on A Multi-actor Value Creation Process

Paper III:
Interrelations and Conflicts between Pricing Systems and Value in use Perceptions in Business Markets – A Conceptual Framework and Research Propositions

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Paper I:
The Impact of Psychological Ownership on Value in Use and Relational Outcomes

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1. GENERAL MOTIVATION OF THE DISSERTATION

Recent marketing research acknowledges that value creation is not just a responsibility of the product or service providers but also requires customers' participation since value can only be created in use (Vargo and Lusch, 2006; Plé & Cáceres 2010). Contrary to the concept of value in exchange that sees value as being 'set in stone' at the very moment of transaction (Merz et al., 2009), value in use (Vargo and Lusch, 2008) acknowledges that service providers are just offering a value proposition at the moment of exchange. Actual value however, is left to be determined by the experiences customers make in their usage processes, while various usage processes thus may result in various values-in-use perceptions (Kleinaltenkamp, 2013; Pfisterer & Roth, 2018), defined as "all customer-perceived consequences arising from a solution that facilitate or hinder achieving the customers' goals" (Macdonald et al., 2016, p. 97). According to Vargo and Lusch (2006, 2008), the core process of value creation comprises resource integration activities to which customers contribute as resource integrators. Customers thus operate on resources that are made available to them by other actors - a given provider or other market actors in order to increase their well-being (Vargo et al., 2008). The specific actors might either be individuals or multitudes of individuals such as an organization, a family, a group of acquaintances etc. (Macdonald et al., 2016) resulting in multi-actor usage processes. The participants of such processes are termed as usage center (Macdonald et al., 2016) that comprises "from the perspective of a single actor, all resource integrators that draw on a focal resource within a usage process" (Kleinaltenkamp et al. 2017, p.721). The interactions between these actors have an inherent tendency to result in value co-creation, or on the other hand, value co-destruction (Plé & Cáceres, 2010). In these processes of resource integration, individuals within a usage center each perceive multiple dimensions of both collective and individual value in use (Kleinaltenkamp et al. 2017). Collective value in use relates to the perceived

goals of the collective entity the individuals believe to be a member of, whereas individual value in use corresponds to the goals of the individuals themselves (Macdonald et al., 2016). Both individual and collective value are being perceived from the perspective of a single individual. Consequently, as individuals within one usage center usually pursue several varying goals on both individual and collective levels (Epp & Price, 2011), they may assess the same product, service or business relationships in different ways (Eggert et al. 2019). However, a shared understanding and assessment of collective value can be reached through communication between individuals based on their value experience (Eggert et al., 2019).

In a nutshell, customers' usage processes represent interactive processes that turn providers' value propositions into value in use (Grönroos, 2011), which requires service providers to integrate their offers into customers' activities. Accordingly, instead of focusing on selling their value propositions, providers need to understand how they can proactively participate in customer's usage processes in order to increase value co-creation (Grönroos, 2011). In order to deepen the understanding towards this regard, this cumulative dissertation investigates value in use incorporating theory from psychological ownership (PO) as well as pricing systems from a marketing perspective:

The impact of PO on value in use

PO is a cognitive-affective construct defined as "the state in which individuals feel as though the target of ownership or a piece of that target is 'theirs'" (Pierce et al., 2003, p. 86). By controlling the target, coming to intimately know the target and investing the self into the target, PO is finally formed (Pierce et al., 2001; 2003). Research in organizational field shows that PO positively affects employees' attitudes toward the organization (Van Dyne & Pierce, 2004), increases the desire to know more about one's firm (Rodgers & Freundlich, 1998), exerts an influence on feelings of responsibility (Pierce et al., 1991; Rodgers & Freundlich, 1998), and can affect change processes in

organizations (Dirks et al., 1996). Although it seems obvious that individuals may also develop feelings of ownership toward supplier-provided objects, only a few empirical studies have applied the concept of PO in marketing and services. As a result, the first assumption is that the degree of PO also affects the behavior of service customers using supplier resources without owning them. According to Reb and Connolly (2007), a high degree of PO positively affects an individual's endowment effect, i.e., the effect does not rely on legal ownership but is driven only by subjective feelings of ownership. Asatryan and Oh (2008) investigate the impact of PO in a restaurant setting and show the positive effects of a high degree of PO on relationship intentions such as WOM, competitive resistance, and willingness to pay. Surprisingly, the few empirical studies in marketing and services using the PO concept mainly focus either on behavioral effects of PO that are related to customers' buying behavior, which occurs before the usage of the psychologically owned object, or on relational outcomes, which occur after the usage of an object. No studies have examined the usage of specific objects themselves, though PO relates precisely to such objects. As people value objects included in their endowment more than those not included, the degree of PO they perceive with respect to a psychologically owned supplier object also likely affects the value in use they receive from that object. Following this logic, we assume that PO also affects the value in use customers perceive in the services usage process and drives relational outcomes since value in use is seen as an important driver of relational outcomes like satisfaction, commitment, and word-of-mouth (WOM) (Bruns & Jacob, 2016; Lemke et al., 2011; Macdonald et al., 2011).

In order to address the research gap that few studies has applied PO in marketing and services, not to mention that no study ever focused on the usage process of the psychologically owned object themselves, the first paper is aiming at incorporating PO

into the service field and exploring insights on the impact of PO on value in use and its relational outcomes.

Following the above logic, although research has demonstrated the motives and mechanisms of PO (e.g. Avey et al. 2009; Pierce et al. 2001, 2003), and its impact in organizational and service fields (e.g. Van Dyne & Pierce, 2004; Peck and Shu 2009, Fuchs et al., 2010), no study has yet explored whether PO itself evolves. However, since usage represents a dynamic process (Warde, 2005; Day & Crask, 2000), and customers not only have the role of active contributors of value but also the role of interpreters of their experience (Gummerus, 2013), value changes might happen as a result and be influenced by usage experiences (Richins 1994). On the other hand, PO reflects an individual's awareness, thoughts, and beliefs regarding the target of perceived ownership (Pierce et al., 2003), which draws from an individual's practice with respect to a certain target. Pierce et al.'s (2001; 2003) theory emphasizes that learned factors constitute the basis for the formation of psychological ownership. Since learned factors and the value perception derived within are changing through time, we assume that the degree of customers' perceived PO towards the psychologically owned object may not stay at the same level throughout the entire usage process either. Besides the evidence in literature addressing the context-bound nature of experience, there is also emphasis on experience that it contains both individual and sociocultural levels involving social groups and many interactions (Akaka et al., 2015; Helkkula, 2011; Ramaswamy, 2011). While both PO and usage processes have been recognized as important concepts in marketing and service research, the concept of usage center has not been incorporated into investigations on their intersection yet. However. A tremendous amount of services, such as access-bases services, depend quite largely upon the active involvement of the various customers, the evolvement of PO of each actor will adversely affect the entire usage center.

As a result, in order to address the dynamic nature of PO and its further impact, the second research project focuses on exploring how PO evolves over time and its influence on multi-actor value creation process.

The impact of pricing systems on value in use

Pricing systems, also known as pricing models, can be defined as "the manner in which a company offers its products or services and monetizes the value in the form of a price" (Simon & Fassnacht, 2019, p.522). In the last decade, lots of effort have been drawn on investigating the impact of pricing systems on usage processes in the B2C context (e.g. Lambrecht & Skiera 2006; Just & Wansink, 2011; Schmale et al., 2011; Krämer & Wiewiorra, 2012). This research has shown that pricing systems do affect consumers' usage behaviors and value perceptions. However, research on the relation between pricing systems and customer value perceptions in the B2B field remain scarce.

In contrast to the lack of academic attention on this topic, ever since new technologies such as smart cards and internet being introduced, which allow firms to track their customers' usage volume, sophisticated usage-based pricing systems became quite popular in practice (Lambrecht & Skiera 2006) as well as in B2B markets. It is crucial to understand and grasp value for both customers and suppliers in order to understand further purchasing and marketing decisions in business markets (Eggert et al., 2018). Eggert et al. (2019) describe value as contextual and further disaggregate value into expected value in use, experienced value in use and relationship value. A value proposition makes promises on expected value - companies sell promises and create expectations among customers (Vargo & Lusch 2008). For both customers and suppliers, this value is very much dependent on the price that is paid for a product or service. However, without usage there is no experienced value in use as perceived by the customer and as a result, the value proposition becomes invalid (e.g. Grönroos 2011, Vargo & Lusch 2008). In line with literature of experience being individual, dynamic, cumulative and context-bound (e.g.

Chandler & Vargo, 2011), learned factors based on past experiences from a business relationship as well as the value proposition are changing and developing over time which leads to newly formed expectations with regard to value in use (Payne et al., 2017). Therefore, experienced value in use is crucial in forming relationship value (Eggert et al., 2019).

In spite of the central role experienced value in use plays in forming relationship value between customers and suppliers that in turn impact expected value in use in the long run (Eggert et al., 2019), literature mainly concentrates on the investigation of expected value in use and relationship value. Moreover, value has been largely conceptualized on a collective level rather than individual level in literature (Ulaga & Eggert, 2006), despite the well-acknowledged crucial role of personal motivations for supplier selection (Johnston & Bonoma, 1981). A comprehensive understanding towards value on both individual and collective levels helps managers create superior value for the individuals in both the buying and usage centers of the customer organizations (Macdonald et al., 2016). To fill in the above underexplored field in business market, understanding the impact of pricing systems on customers' experienced value in use through usage process and its further impact on relationship value and expected value becomes essential since pricing has a multidimensional impact on costs, margins, revenues, and customer perceptions (Homburg and Totzek 2011). Consequently, the third paper aims at exploring the interrelations between pricing systems and value in use on both individual and collective level in business markets.

The remainder of this thesis is structured as follows: First, a brief overview as well as the outline of all three papers is provided. Second, a detailed description of the underlying theory, research question, method, and contributions of each paper are given. Lastly, findings and conclusions of the research projects and future research directions for the respective research fields are presented.

2. OVERVIEW OF THE RESEARCH PAPERS

This dissertation addresses the presented research gaps and investigates the derived research questions as follows: The first paper addresses the question how the degree of perceived PO affects the value in use customers perceive in service usage processes and the relational outcomes satisfaction, affective commitment and WOM intention. To measure the degree of PO, a published measurement scale is being used (Avey et al., 2009). A qualitative study as well as a quantitative study were conducted. The identified behaviors and impacts serve as first steps toward the investigation of PO's dynamic nature and its impact on multi-actor value creation processes.

The second paper addresses the question how the perceived degree of PO evolves over time and how PO towards a certain focal resource impacts multi-actor value creation processes, involving other resource integrators and other resources. Semi-structured interviews were conducted towards this object, which uncovered the dynamic nature of PO, how it precisely evolves with customers' usage experiences and how it impacts other resource integrators' perceptions in the same usage center from both preventative and promotive focuses.

The third paper investigates the interrelations and conflicts between pricing systems and value in use on individual and collective levels in business markets. A conceptual framework linking pricing systems with value in use is presented based on the integrative framework of value in business markets (Eggert et al., 2019). From this foundation, testable research propositions are provided which offer multiple avenues and opportunities for future research.

TABLE 1. OVERVIEW OF PAPER I

The Impact of Psychological Ownership on Value in Use and Relational Outcomes Michael Kleinaltenkamp, Franziska Storck, Patrick Gumprecht & Jingshu Li	
Keywords	Car sharing, psychological ownership, usage process, value in use, relational outcomes
Main research question	How does the degree of perceived PO affect the value in use customers perceive in service usage processes and the relational outcomes?
Empirical methods	Semi-structured interviews and online survey **Pre-study:** N=20, M_{age}= 28.6 years [22-39], 40% female, car-sharing users from various cultural backgrounds. Semi-structured interviews **Study 2:** N=152, M_{age}= 31 years [21-61], 46% female, Facebook and Xing population, convenience student and lecture population, car sharing users. Online Survey
Main results	• Identification of PO's existence in service fields where the individuals do not legally own the specific objects. • The form of PO does not require a long-lasting relationship with a PO target. • Identification of 6 cognitive and 5 affective value dimensions in car sharing. PO positively influences each of the value-in-use dimensions, especially "Self-fulfillment" and "Productivity". • People with a higher degree of PO show greater commitment to the service provider and enhanced WOM intention.
Academic outlet	Published in Journal of Service Management Research, 2 (2), 50-70

TABLE 2. OVERVIEW OF PAPER II

The Dynamic Nature of Psychological Ownership and Its Impact on A Multi-actor Value Creation Process Jingshu Li	
Keywords	Car sharing, bike sharing, psychological ownership, usage center, usage process, value in use
Main research question	How does the perceived degree of PO evolve over time and influence value creation in multi-actors usage processes?
Empirical methods	Semi-structured interviews based on qualitative content analysis (Mayring's 2002). **Study:** N=20, M_{age}= 28 years [20-36], 50% car sharing users, 50% bike sharing users, all users' usage experience $\geqslant$ 3 months.
Main results	• Identification of PO changing driven by the perceptions and weights shifting based on each root of PO over time. • A circular approach of PO evolvement is presented: forming – fulfilling and hindering – reassembling. • Identification of PO's impact on collective usage processes from preventative and promotive drives.
Academic outlet	To be submitted to the Journal of Creating Value

TABLE 3. OVERVIEW OF PAPER III

Interrelations and Conflicts between Pricing Systems and Value in use Perceptions in Business Markets – A Conceptual Framework and Research Propositions Jingshu Li	
Keywords	Pricing systems, value in use, usage process, usage center
Main research purpose	Understanding the impact of pricing systems on customers' usage process and value perceptions from individual and collective level in business markets.
Conceptual development	(1) Literature review on pricing systems and value concepts in business markets (2) A conceptual framework presented based on the integrative framework of value in business markets (Eggert et al., 2019) that: • incorporates pricing systems and value in use as critical components; • details the two spheres of suppliers and customers; • differentiates between collective and individual value, linking the value conceptualizations through pricing systems. (3) Identification of the research gap and testable research propositions being presented.
Main results	• Identification of conflicts between direct users' individual value and indirect users' collective value within a pay-per-use system. • Identification of a discrepancy arising in long term between customer and supplier's expected value in use within any single-part pricing system. • Helping to understand the necessity of introducing multi-part pricing systems which includes both usage-independent and usage-dependent elements to enforce a more stable business relationship value between suppliers and customers.
Academic outlet	

3. DETAILED DESCRIPTION AND CONTRIBUTION OF THE RESEARCH PAPERS

3.1 Paper I:

The Impact of Psychological Ownership on Value in Use and Relational Outcomes

Description

Research in psychology has sufficiently proved that feelings of ownership have important behavioral, emotional, and psychological consequences (Pierce, Kostova, & Dirks, 2001), even when a consumer is only the user of resources, not the legal owner. This so-called psychological ownership (PO) has received a great deal of attention in the organizational field (e.g. Van Dyne & Pierce, 2004; Rodgers & Freundlich, 1998; Pierce, Rubenfeld, & Morgan, 1991). On the other hand, services largely represent transactions through which customers gain the right to use tangible or intangible resources of service providers (Wittkowski, Moeller, & Wirtz, 2013). In doing so, customers attain access to resources without the need to own them legally - for example, when a rental car firm rents a car to a customer or a sports organizer gives audiences access to an arena for a sporting event. Following this logic, this paper investigates the effects of customer-perceived psychological ownership in the service field.

From a legal perspective, a non-ownership service provision (Lovelock & Gummesson, 2004) is characterized by the attenuation of property rights, at least for a certain period (Haase & Kleinaltenkamp, 2011). To analyze such effects of PO on service usage processes, we chose the field of car sharing, which is “primarily designed for shorter time and shorter distance trips as an extension of the transportation network, providing a public service designed to enhance mobility options” (Carsharing Association, 2016). During the service process, customers can use a car that is legally owned by a supplier firm or another individual; thus, car sharing represents a typical

example of an access-based service (Bardhi & Eckhardt, 2012; Belk, 2014), as in the course of usage, customers may feel that the car is “theirs”.

This paper contains two studies: a qualitative pre-study was conducted first to investigate whether PO affects the value in use customers perceive in service usage processes and to identify the respective value-in-use dimensions. Semi-structured interviews were conducted with a sample of 20 people who had used car-sharing services in a large German city. All respondents had used car-sharing service in the last months. As the initial aim of the study was to investigate the relevance of the overall concept of PO for value-in-use generation, the interviewees were first asked to fill out a questionnaire based on the PO measurement model of Avey et al. (2009) to measure the degree of PO with respect to car sharing. 6 cognitive and 5 affective value dimensions are identified during the respective usage situation of car sharing and that they affect value in use. However, the respective manifestation of these dimensions varied from person to person. This diversity was the starting point for the second study that investigated how PO affects the various value-in-use dimensions and through this drives relational outcomes. Based on the literature review and the results of the qualitative pre-study, an online questionnaire was developed. 210 persons participated in the survey and 58 questionnaires were excluded because of invalid information resulting in a data sets of 152 respondents being used for final analysis. The findings help to reveal the relevance of PO in the service filed and help to understand its impact on value in use and the relational outcomes.

Contribution

With the findings of the two studies, this paper provides additional conceptual and empirical insights into the relevance and impact of PO in the service field. Different from the studies from organizational fields in which the PO concept was developed originally,

this paper captures the effects of PO in a context with customers' payment of objects used— instead of a situation where they are connected with them through an employment contract. Furthermore, by transferring the theoretical foundation of PO to a practical service context, this study extends the service marketing literature, in that few studies in this field focus on the usage of specific objects to which PO relates. Lastly, this study reveals that in the car-sharing context the value-in-use dimensions "Convenience" and "Hedonistic benefit" have the highest impact on the relational outcomes satisfaction, affective commitment and WOM intention. As these relational outcomes have a high impact on customer loyalty and firm performance, it helps guide firms in improving service design by improving the experience of these value-in-use dimensions and adapting their service offerings to the PO motives or relate them accordingly.

3.2 Paper II:

The Dynamic Nature of Psychological Ownership and Its Impact on A Multi-actor Value Creation Process

Description

This paper follows the first research project and extends its findings with respect to a dynamically developing setting. The first paper has shown that PO exists not only in organizations (from the perspective of their employees) but also in service areas where customers do not legally own the specific resources but pay for their usage in a form of access-based consumption. Typically, in a car sharing context, different degrees of PO (as perceived by the customers) will lead to different perceptions of value in use, which in turn affect customers' usage behavior. However, since usage represents a dynamic process (Warde, 2005; Richins 1994; Day & Crask, 2000), and customers regularly change their value assessments through their usage experiences (Flint et al., 2002; Richins, 1994), we can assume that the degree of customers' perceived PO towards the sharing target may not stay at the same level. This is because, first, the value (on a monetary level) of a focal resource itself in a sharing service is changing – tangible goods like sharing cars can depreciate over time. Second, service providers, on the other hand, will try to update their products, service and technology, which will affect the way customers use a certain product or service. Third, sharing services depend quite largely upon the active involvement of the various customers. Actors usually do not use products and services in isolation, it is more common that they are connected virtually with other users through an internet platform, software system, social media or common understanding (Kleinaltenkamp et al., 2017). Consequently, with respect to PO, individuals who are more promotion-oriented may experience feelings toward the targets of ownership that are quite different from those who are prevention-oriented. Hence, people who are more prevention-oriented may not want to share car sharing cars with

others, as they seek to maintain their own continuous use of the cars. Thus, this might diminish the value perception of other customers. In contrast, those individuals with a more promotive focus may carefully take care of the car sharing cars and are willing to share information, including benefits which they "co-own" with other customers, because they are willing to make improvements within their sharing community.

Based on this notion and research in PO's impact on customers' usage process and value in use perceptions (e.g. Kleinaltenkamp et al., 2018, Fritze et al., 2020), this paper assumes that customers' perceived PO towards a certain object is changing over time which will impact not only on their own usage behaviors but also affect the behavior of other resource integrators within the same usage center. By linking PO and multi-actor usage processes, this paper chose the field of bike/car sharing to explore the phenomenon of interactive usage processes through which customers benefit in some form but might also, in some cases, become worse off.

This study consists of 20 semi-structured interviews with a sample of 10 bike sharing users and 10 car sharing users who had been using the service between at least three months to three years in Germany and in China. The primary purpose of this study was to gain insights into the dynamic nature of PO. Hence, it was crucial to identify the degree of respondents' PO in different stage. Prior to the interviews, the PO measurement model developed in the first paper based on Avey et al. (2009) was used to measure respondents' PO level in the early stage of their bike/car sharing usage. The interviews aimed to explore the interrelations between PO and value creation which involved individual and collective social contexts, with the opportunity to seek "before and after" insights. Participants were asked to tell their story in their own words about their very first, their most unforgettable, and their most recent usage of bike/car sharing services. The coding of the transcribed interviews followed the process of Mayring's (2002)

qualitative content analysis and the results help to understand how customer's perceived PO develops after it is formed and its impact on multi-actor value creation processes.

Contribution

The findings make different contributions to theory as well as practice. To begin with, in contrast with the current literature on how PO is being generated (Pierce et al., 2001; 2003), this paper identifies further ways of how PO develops in the following by proposing a circular approach of PO development: forming – fulfilling and hindering – reassembling. Second, this paper presented in detail how the weight of each root of PO changes, which is especially important because a higher degree of PO has been posited to affect important relational outcomes such as commitment, loyalty and WOM (Kleinaltenkamp et al., 2018). This weight-shifting of PO as a cognitive process shapes the view of other actors and the focal actor themselves, hence capturing how individual and collective values are formed through the interplay of their ongoing intertwined experiences (Helkkula et al., 2012). Third, this paper demonstrates that the dominance of preventative PO can lead to discord (value co-destruction) whereas the dominance of promotive PO can lead to symbiosis (value co-creation). Hence, it offers service providers practical guidance on contributing to the shaping of customers' perceived PO, seeking to change customers' existing PO from preventative to promotive in order to achieve value co-creation.

3.3 Paper III:

Interrelations and Conflicts between Pricing Systems and Value in use Perceptions in Business Markets – A Conceptual Framework and Research Propositions

Description

Research in the B2C context showed relevant impact of pricing systems on consumers' usage behavior and their pricing perceptions. DellaVigna & Malmendier (2006), for instance, claimed that on average, customers who chose a monthly flat fee could have saved $600 during their membership, if they had chosen the pricing scheme of a 10-visit card. Another example is the usage behavior of German railway travelers. Here, research shows that the German railway cards (e.g. Bahncard 25, Bahncard 50 etc.) are used far too little to actually take advantage of the possible price advantage (Schmale et al., 2011). Just and Wansink (2011) demonstrated the sunk cost fallacy in their all-you-can-eat buffet study: The higher the fixed price customers pay, the more they consume. Typically, Just and Wansink (2011) indicate that even when there is no marginal cost for additional consumption, price is still taken into the evaluation of marginal utility by customers (Just & Wansink 2011). Surprisingly, despite the highly popular usage-based pricing systems in B2B markets, research is scarce in this regard. Backhaus et al. (2011) pointed out that 70% of pricing systems choice are biased due to flat-rate system in business markets, while Buchheit and Feltovich (2008) showed that pricing behavior varied substantially and significantly with the level of the sunk cost in B2B settings. They claim that within "cost-based pricing", firms' price setting is based on average total cost rather than marginal cost. This stands in contrast to classic economic theory but is oftentimes the case in real-life situations (Buchheit & Feltovich, 2008). The major difference from B2C markets here is that suppliers in business markets are not dealing with individual customers but rather dealing with purchase departments or buying centers using sophisticated tools to assess price offers on a professional level (Homburg and Totzek 2011). However, professional decision makers are human beings, who oftentimes

still make irrational decisions, i.e. fail to ignore sunk costs (Buchheit & Feltovich, 2008) and pricing systems choice biases (Backhaus et al. 2011) in their decision making. Hence, this paper is aiming at offering insights into the interrelations between pricing systems and customers' usage process and value perceptions in B2B markets since it is crucial to understand and grasp value for both customers and suppliers in order to understand further purchasing and marketing decisions in business markets (Eggert et al., 2018).

At the very moment of transaction, a buyer agrees to pay the provider a specific price required for its product or service. From the seller's perspective, the price reflects the value that the product or service delivers for the customer. The price thus reveals a kind of an 'objective' perspective of value that is captured in the term value in exchange, which "as reflected in market prices, represents the objective conceptualization of value (i.e. the power of purchasing other goods)" (Eggert et al., 2019, P.14). On the contrary, value in use (Vargo & Lusch, 2004) acknowledges that providers of goods and services are just offering a value proposition at the moment of exchanging. The actual value is left to be determined by the customers' usage processes (Kleinaltenkamp, 2013; Pfisterer & Roth, 2018). This paper acknowledges the value conceptualizations from Eggert et al. (2019) and disaggregated value further into expected value in use, experienced value in use and relationship value. Based on the integrative framework of value in business markets (Eggert et al., 2019), a conceptual framework is developed linking pricing systems with value in use through usage process in B2B settings. The framework consists of two spheres: the supplier sphere and the customer sphere. Specifically, in the customer sphere, differences between collective and individual value are identified. This is because different members of the same company do not necessarily follow the same goals on individual and collective levels, which results in different usage processes and perceptions of the same products or services. Thus, even when individuals share the same organizational resources, their individual value experience may vary (Macdonald et al.,

2016) which in turn shapes customer's expected value in use. Following the literature review and the research gaps being addressed within the conceptual framework, testable research propositions are derived which help to articulate the precise nature of the interrelation of pricing systems and value perceptions. Moreover, this paper also helps to identify value conflicts on individual and collective level in the customer firm under a pay-per-use system, as well as conflicts in expected value-in-use between suppliers and customers within any single-part pricing system.

Contribution

This conceptual paper contributes to theory on value and pricing systems as well as practice. First, this paper is the first to present a conceptual framework that incorporates pricing systems and value in use as critical components which extends the understanding of the impact of pricing systems on customers' usage behavior and value perception from a B2C context to the B2B context. The conceptual framework distinguishes between value beneficiaries and their value perceptions (i.e. customer individual and collective value perceptions, suppliers' value perceptions) as well as the reference object of value (i.e. relationship value and transactional value) (Eggert et al. 2019). By incorporating pricing systems into the linkages of value conceptualizations, it integrates the two research streams into one coherent concept which opens vast research opportunities. Second, another major contribution of this paper is providing testable research propositions that identify the conflicting pursuit of each party's goal achievement in a given pricing system. Future research with different focuses are thus derived and possible methods are presented: (1) Testing of the propositions within the conceptual framework in parts; (2) Continue on exploring multi-part pricing systems that are optimal in avoiding potential value conflicts and sustaining supplier and customer's relationship value. Third, this paper also helps both supplier and customer firms understanding that pricing systems are not supposed to influence usage processes directly but indirectly. Moreover, it is the

actual experienced value embedded within an offer based on certain pricing systems that influences usage processes. This paper thus gives guidance to both supplier and customer firms in designing/choosing optimal pricing systems that help enforce price premiums by understanding the customers' perceptions on each level and their conflicting value pursuit.

4. CONCLUDING REMARKS AND RESEARCH OUTLOOK

In conclusion, this dissertation focuses on investigations of value creation in different aspects with respect to research questions incorporating PO and pricing systems. The first two papers investigate PO's influence on value in use and relational outcomes, as well as how the development of PO impacts multi-actor value creation processes. The third paper deals with the interrelations and conflicts between pricing systems and value in use on individual and collective levels in business markets. The different findings are summarized and avenues for future research are pointed out.

The findings of the first paper reveals that PO significantly and positively influences each of the identified value-in-use dimensions, either cognitive or affective. The more car-sharing users perceive the car as theirs, the higher the different value-in-use dimensions are perceived during the usage processes. On the other hand, In the car-sharing context the value-in-use dimensions "Convenience" and "Hedonistic benefit" have the highest impact on the relational outcomes satisfaction, affective commitment and WOM intention, followed by "Price/performance ratio", "Self-fulfillment", "Privacy", and "Freedom". As a consequence, companies should adapt their service offerings to the PO motives (self-identity, self-efficacy, having a place, accountability, and territoriality) (Pierce et al. 2001; Avey et al. 2009) or relate them accordingly. As car-sharing users differ with respect to the importance of certain PO motives, the extent of the PO motives may serve as a segmentation criterion to identify customers with different value-in-use appraisals without needing to precisely capture the difficult-to-measure value in use itself. Through such a segmentation, customers could be identified relatively easily for more targeted marketing efforts in order to increase satisfaction, affective commitment and WOM intention. For this purpose, the items adapted to measure PO based on Avey et al. (2009) in the field of car sharing provide a starting point for future research in such a segmentation approach. Moreover, in order to get a comprehensive

understanding of PO's presence and its effects, further research should be conducted in a variety of other service fields since the results of this study are based on users of a car-sharing service in Germany. Thus, they might not be generalizable to different contexts in the service field. It would be especially worthwhile to investigate whether feelings of ownership also occur for services that consist of more or less intangible components and for which consumers are not able to take something with them, such as banking and insurance. Moreover, as many consumers use car-sharing services typically several times, it will be interesting to investigate whether this has an impact on the characteristics and the degree of PO motives as well as on value-in-use perceptions. Using longitudinal data would allow gaining insights on how such changes in PO over time lead to changes in the experienced value in use.

The second paper builds as a follow-up study of the first project and focuses on the research gap that was hinted in the first project. The findings of this paper showcase how changes in PO happen over time and three procedures of customers' perceived PO evolvement are identified: forming – fulfilling and hindering – and reassembling. The circular approach of PO development presented in this paper analyzes in detail how the weight of each root of PO changes, based on the resource integrator's experiences and learned factors. Future research should be conducted beyond bike/car sharing services, to test the applicability of the circular approach of PO development (forming – fulfilling and hindering – reassembling) proposed by this study to other service fields. We assume that this approach is transferable especially to other sharing economy-oriented settings. However, it would be prudent to investigate whether PO still evolves the same way in fields where property rights boundaries are either blurred, or absent. For example, does the sense of PO evolves the same way towards resources like public goods, such as parks? Another major finding of this paper is revealing how collective usage processes contribute to the shaping and changing of customer's perceived degree of PO, which leads to

important impacts on value creation at both collective and individual levels. The findings have highlighted deeper insights regarding how the different weight of each PO root impacts a focal resource integrator's usage processes, which in turn affects other resource integrators' perceived PO in a usage center. Thus, the newly perceived levels of PO in turn influence other integrators' usage processes, and vice versa. This weight-shifting of PO as a cognitive process shapes the view of other actors and the focal actor themselves, hence capturing how individual and collective values are formed through the interplay of their ongoing intertwined experiences (Helkkula et al., 2012). It demonstrates the fact that the dominance of preventative PO can lead to discord (value co-destruction) whereas the dominance of promotive PO can lead to symbiosis (value co-creation). Consequently, the goal of service providers in general is to achieve promotive PO and symbiosis. Providers should explicitly consider, from a design perspective, how to embed customers' interests into value propositions. As a result, the design of service offerings should aspire to a commitment that will enable customers to generate a promotive focused PO which sustains the connection. Future research should thus focus on investigating approaches to enhance customer's perceived PO based on a promotive drive, and at the meantime, to decrease customer's perceived PO based on a preventative drive in different service contexts.

The third paper presents a conceptual framework linking pricing systems to value conceptions which gives a clear path for further analyzing the interrelations between pricing systems and value in use in a dynamic approach. Especially considering literature on both topics: pricing systems and value in use, are scarce but important in B2B marketing (Brennan et al., 2007; Eggert et al. 2019). Testable research propositions provided in this paper showcase the potential conflicts between direct users' individual experienced value in use and indirect users' collective experienced value in use, as well as the conflicts between supplier and customer expected value in use that may be caused

by certain pricing systems. Future research could thus focus on testing the given research propositions in parts – focus on the conflicts between individual and collective value caused from different pricing systems or focus on the discrepancy between customer and suppliers' expected value arising from different pricing systems. Quantitative methods like survey can potentially give more generalizable results. The intensity of usage can be measured by users' frequency of use, or the total amount of usage in a certain period. On the other hand, the value constructs in the proposed framework can be measured by published measurements (e.g. Ranjan & Read 2016). Moreover, the testable research propositions suggest that one-part pricing systems are not ideal for business relationship value in the long run, another major research opportunity arises which is to identify multi-part pricing systems that are optimal in avoiding potential value conflicts within the customer organization, and at the same time optimal in sustaining supplier and customer's relationship value. Case studies could follow a certain multi-part pricing system or a portfolio of multi-part pricing systems, investigating its impact on perceived value within the customer firm on both individual and collective level of direct and indirect users based on published value assessing models (e.g. Macdonald et al. 2011). Meanwhile, case studies can further articulate pricing systems' influence on the relationship value between suppliers and customers. In addition, depth interviews of purchase managers, managers involved in usage center, and sales managers from both suppliers and customers firms are essential in providing further insights into enriching the conceptual framework.

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5. THE IMPACT OF PSYCHOLOGICAL OWNERSHIP ON VALUE IN USE AND RELATIONAL OUTCOMES

ABSTRACT

Services largely represent transactions through which customers gain the right to use tangible or intangible resources of service providers. In doing so, customers attain access to resources without the need to own them legally. Feelings of ownership have important behavioral, emotional, and psychological consequences, even when a consumer is only the user of resources, not the legal owner. Research in the organizational field has especially investigated this so-called psychological ownership. Following this research, the current study investigates the effects of customer-perceived psychological ownership in the field of car-sharing services. Based on a qualitative pre-study, a quantitative study was conducted, that shows that psychological ownership has a significant positive influence on each of the identified value-in-use dimensions. Furthermore, the study reveals how the various dimensions influence customers' satisfaction, affective commitment and word-of-mouth intention.

Keywords:

Car sharing, psychological ownership, usage process, value in use, relational outcomes

1. INTRODUCTION

Services refer to transactions through which customers gain the right to use tangible or intangible resources of service providers (Wittkowski, Moeller, & Wirtz, 2013). As such, customers attain access to suppliers' resources without the need to own them. From a legal perspective, such a non-ownership service provision (Lovelock & Gummesson, 2004) is characterized by the attenuation of property rights, at least for a certain period (Haase & Kleinaltenkamp, 2011). That is, during the time of service usage, providers, as the owners of the resources, transfer certain rights to use or change the specific supplier resources to customers—for example, when a rental car firm rents a car to a customer or a sports organizer gives audiences access to an arena for a sporting event.

Research in psychology has sufficiently proved that feelings of ownership have important behavioral, emotional, and psychological consequences (Pierce, Kostova, & Dirks, 2001). However, such feelings of ownership can also occur when an individual is not the legal owner but only the user of resources. This so-called *psychological ownership* (PO) has received a great deal of attention in the organizational field. Studies show that PO positively affects employees' attitudes toward the organization, in turn increasing organizational commitment, job satisfaction, and organization-based self-esteem as well as employees' work behavior toward performance and organizational citizenship (Van Dyne & Pierce, 2004). PO also increases the desire to know more about one's own firm (Rodgers & Freundlich, 1998), exerts an influence on feelings of responsibility (Pierce, Rubenfeld, & Morgan, 1991; Rodgers & Freundlich, 1998), and can affect change processes in organizations (Dirks, Cummings, & Pierce, 1996). However, under certain conditions PO can also have dysfunctional effects that negatively affect both the organization and the respective individual (Pierce et al., 2001). In line with this research tradition, this study's first assumption is that the degree of PO also affects the behavior

of service customers using supplier resources within the process of service provisioning without owning them.

Moreover, Reb and Connolly (2007) show that a high degree of PO positively affects an individual's endowment effect, i.e., the effect does not rely on legal ownership but is driven only by subjective feelings of ownership. Hence, people judge the value of certain objects as higher merely when they develop subjective feelings of ownership toward these objects. Thus, the second assumption is that PO also affects the value in use customers perceive in the services usage process, defined as all customer-perceived consequences arising from use that facilitate or hinder the achievement of goals (Macdonald, Wilson, Martinez, & Toossi, 2011; Woodruff, 1997). Moreover, as value in use is seen as an important driver of relational outcomes like satisfaction, commitment, and word-of-mouth (WOM) (Bruns & Jacob, 2016; Lemke, Clark, & Wilson, 2011; Macdonald et al., 2011), we also assume that PO drives, mediated through value in use, such relational outcomes.

Accordingly, this article addresses the following research questions:

(1) How does the degree of perceived PO affect the value in use customers perceive in service usage processes?

(2) How does the degree of perceived PO affect the relational outcomes satisfaction, affective commitment and WOM intention?

In addressing these questions, the study contributes to the current state of knowledge in three ways. First, it provides additional conceptual and empirical insights into the relevance and impact of PO in the service field. This differs from the area of organizational behavior, in which the PO concept was developed originally, as it captures the effects of PO in a context with customers' payment of objects used—instead of a situation where they are connected with them through an employment contract. Second, by transferring the theoretical foundation of PO to a practical service context, this study

extends the service marketing literature, in that few studies in this field focus on the usage of specific objects to which PO relates. Third, this study helps guide firms in improving service design by empirically demonstrating how the degree of PO leads to increased customer-perceived value in use and thus relational outcomes.

The remainder of the article proceeds as follows: After presenting an overview on the motivations for and the mechanisms of PO, the authors conceptualize how PO can affect customers' value perceptions and behaviors in service usage. They then describe the method consisting of a qualitative pre-study and a quantitative main study and analyze how PO affects customers' value-in-use perceptions and through this relational outcomes in the context of car sharing. The article concludes with a discussion of its contributions and limitations as well as avenues for further research.

2. THEORETICAL BACKGROUND

PO is a cognitive-affective construct defined as "the state in which individuals feel as though the target of ownership or a piece of that target is 'theirs'" (Pierce, Kostova, & Dirks, 2003, p. 86). Thus, PO reflects "an individual's awareness, thoughts, and beliefs regarding the target of ownership" (Pierce et al., 2003, p. 86). Building on studies in psychology addressing the motivations underlying feelings of ownership, Pierce et al. (2001) assume that both hereditary (Burk, 1990; Porteous, 1976) and learned (Furby, 1978; Lewis & Brook, 1974; Seligman, 1975) factors form the basis for the establishment of PO. In particular, they highlight three motivational categories or "roots" that cause a person to develop perceived feelings of ownership (Pierce et al., 2001, 2003; Van Dyne & Pierce, 2004) (see Figure 1). First, *efficacy and effectance* (White, 1959) describes a person's (perceived) ability to successfully influence a distinct object to bring about a specific result (Bandura, 1977; Rosenthal, 2004). An inherent desire for power and control (Furby, 1978) leads to the aspiration of wealth and thus fosters the formation of

PO (Pierce et al., 2001). Second, self-identity (Dittmar, 1992; Mead, 1934) entails the cognitive relationship of a person with a distinct object. This relationship may imply symbolic value for the ownership or even for the use of the object (Dittmar, 1992). Various studies have demonstrated that ownership of distinct objects (e.g., vehicles) evokes symbolic value and results in the perception of the object as an extended part of one's self (Belk, 1988; Rousseau, 2003). Third, *having a place to dwell in (home)* (Heidegger, 1927/1967; Polanyi, 1962) describes a person's inherent desire for ownership of a personal domain or area (Duncan, 1981; Porteous, 1976). The acts of control and personal arrangements of an area are the main driving forces behind this motivation (Porteous, 1976).

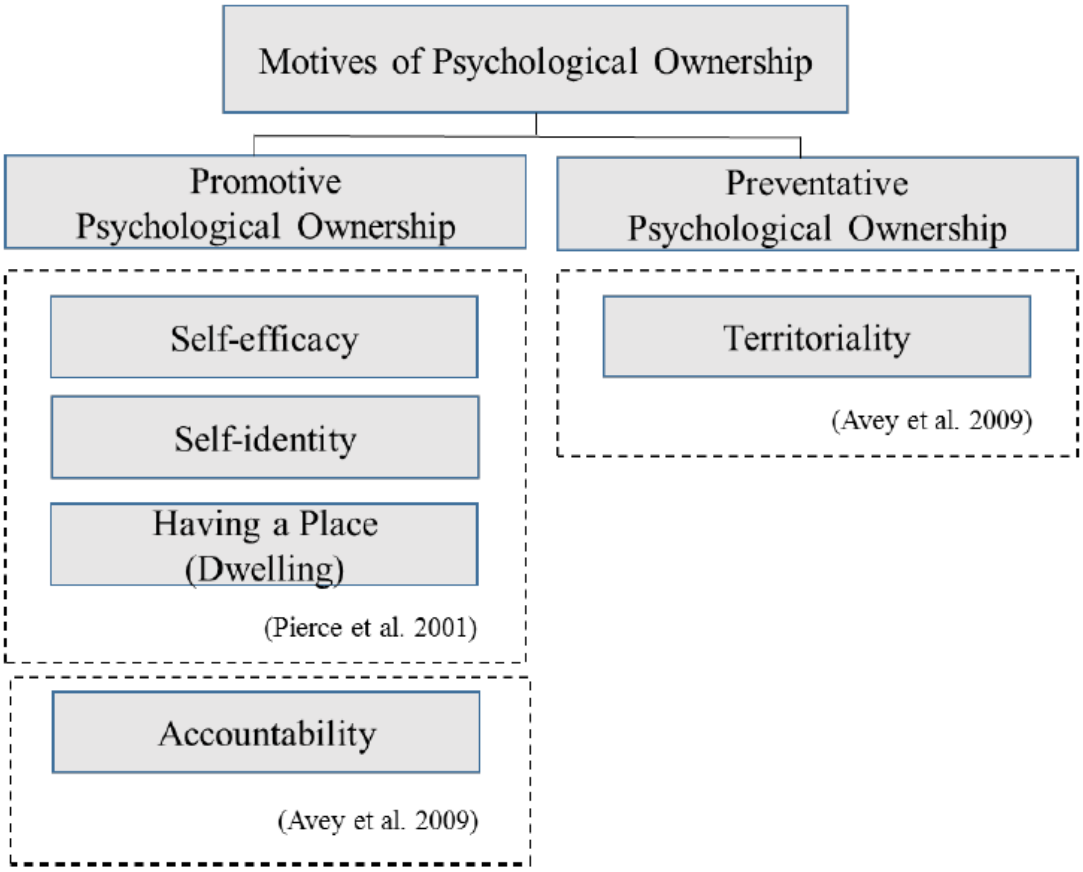

Figure 1: Motives of PO

Moreover, in line with Higgens (1997), Avey, Avolio, Crossley, and Luthans (2009) differentiate between two types of promotive and preventive PO (see Figure 1). In addition to the three motivations mentioned above, they view accountability as another

facet of promotive PO. Accountability refers to “the implicit or explicit expectation that one may be called on to justify one’s beliefs, feelings and actions to others” (Lerner & Tetlock, 1999, p. 255) and is a component of PO through two mechanisms: “(1) the expected right to hold others accountable and (2) the expectation for one’s self to be held accountable” (Avey et al., 2009, p. 177). The second category, preventive PO, encompasses the concept of territoriality, defined as a person’s reluctance to share a respective object with others (Avey et al., 2009). The rationale for this directive is that the feeling of ownership induces a person to exclude others from using that object (Brown, Lawrence, & Robinson, 2005).

In addition to these motivations, Pierce et al. (2001, 2003) highlight three mechanisms or “routes” of behavior through which PO is generated (see Figure 2). First, controlling the target describes one of the major mechanisms underlying perceived feelings of ownership (Pierce et al., 2001). Rudmin and Berry (1987) indicate that ownership generally confers control of the usage of distinct objects. Furthermore, controlling an object may result in feelings of ownership toward the object (Csikszentmihalyi & Rochberg-Halton, 1981). Second, coming to intimately know the target means that feelings of ownership toward objects are due to a common long-term relationship between an individual and the respective objects (James, 1890/1963). Furthermore, intimate knowledge of a certain object can result in the perception that this object extends one’s personality (Beaglehole, 1932). Third, investing the self in the target encompasses a person’s investment of energy, time, and effort in an object, which in turn results in the extension of personality, thus triggering feelings of ownership (Csikszentmihalyi & Rochberg-Halton, 1981).

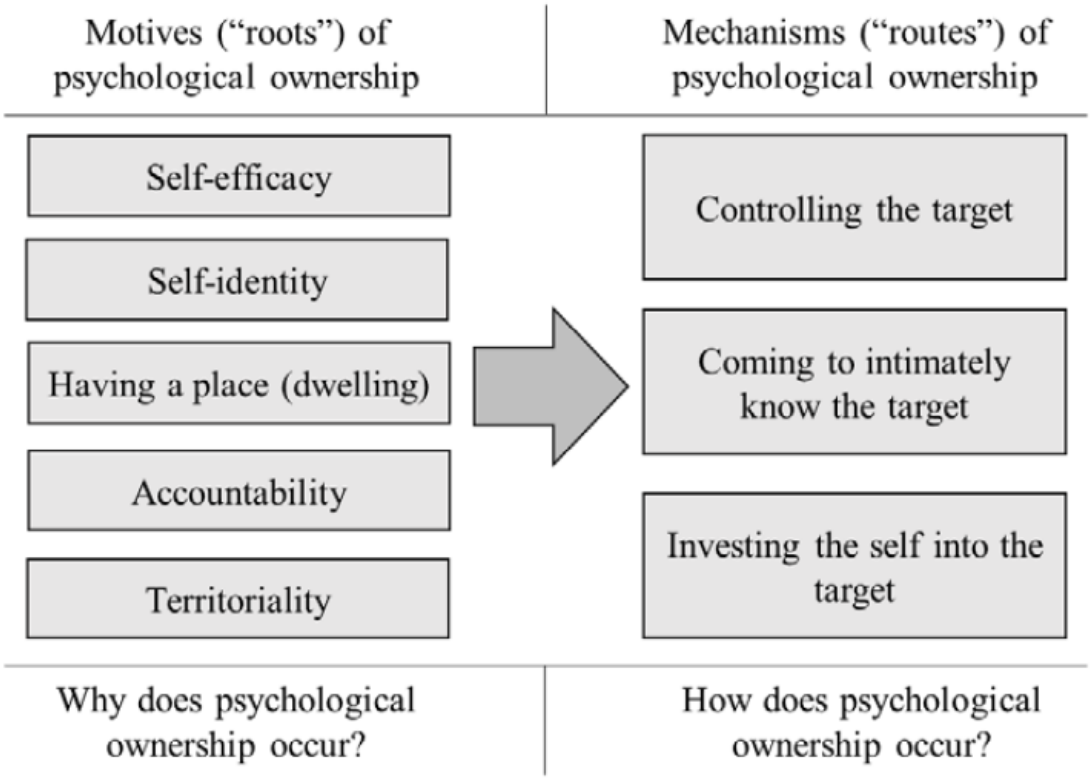

Figure.2: Relationship between the Motivations and the Mechanisms of PO

Although it seems obvious that individuals may also develop feelings of ownership toward supplier-provided objects, to date only a few empirical studies have applied the concept of PO in marketing and services (see Table 1). Only one known study has focused on the drivers of PO; Peck and Shu (2009) show that merely touching an object (i.e., a product) results in an increase in perceived ownership of that object. Other studies have focused on outcomes of PO. Asatryan and Oh (2008) investigate the impact of PO in a restaurant setting and show the positive effects of a high degree of PO on relationship intentions such as WOM, competitive resistance, and willingness to pay. In addition, in healthcare, Mifsud, Cases and N'Goala (2015) identify PO as one factor that leads to service appropriation. Similarly, Jussila, Tarkiainen, Sarstedt, and Hair (2015) argue that PO offers additional understanding and explanation of relational

outcomes such as customer satisfaction, loyalty, WOM, and willingness to pay. Last, Fuchs, Prandelli, and Schreier (2010) show the effects of PO on the buying behavior of customers who are empowered by a supplier firm to collectively select the final

products the company will later sell to the broader market, whereas Sinclair and Tinson (2017) reveal that in the context of music streaming PO leads to loyalty, empowerment and social rewards.

Authors	Context	Effect	Type of study
Antecedents of PO			
Peck & Shu (2009)	Products (mugs)	Mere touch of a product increases perceived ownership of that product	Empirical, experimental
Intentional outcomes of PO			
Asatryan & Oh (2008)	Services (restaurants)	A high degree of PO has a positive effect on relationship intentions, such as WOM, competitive resistance, and willingness to pay	Empirical, quantitative
Jussila et al. (2015)	N/A	PO may give additional understanding and explanation of relational outcomes, such as customer satisfaction, loyalty, WOM, and willingness to pay	Conceptual
Mifsud et al. (2015)	Healthcare	PO of a service leads to service appropriation	Empirical, qualitative
Behavioral outcomes of PO			
Fuchs et al. (2010)	Products (T-shirts, breakfast cereals)	PO positively affects the buying behavior of customers who are empowered to select products to be marketed by a supplier	Empirical, experimental
Sinclair & Tinson (2017)	Music streaming	PO leads to loyalty, empowerment and social rewards	Empirical, qualitative
Effects of PO on value assessment			
Reb & Connolly (2007)	Products (chocolate bars, coffee mugs)	PO affects an individual's endowment effect	Empirical, experimental

Table1: Empirical Studies Using the PO Concept in Marketing and Services

Thus, the few empirical studies in marketing and services using the PO concept mainly focus either on behavioral effects of PO that are related to customers' buying behavior, which occurs before the usage of the psychologically owned object, or on relational outcomes, which occur after the usage of an object. Surprisingly, no studies have examined the usage of specific objects themselves, though PO relates precisely to such objects. Moreover, recent research emphasizes that relational outcomes are driven

by the value in use customers perceive in usage experiences (Bruns & Jacob, 2016; Lemke et al., 2011; Macdonald, Kleinaltenkamp, & Wilson, 2016; Verleye, 2015). Therefore,

to better understand the effects of PO in access-based services, it is necessary to investigate its impact on the ways customers use supplier objects, which they own only psychologically, not legally. Moreover, as people value objects included in their endowment more than those not included, the degree of PO they perceive with respect to a psychologically owned supplier object also likely affects the value in use they receive from that object.

To analyze such effects of PO on service usage processes, we chose the field of car sharing, which is "primarily designed for shorter time and shorter distance trips as an extension of the transportation network, providing a public service designed to enhance mobility options" (Carsharing Association, 2016). During the service process, customers can use a car that is legally owned by a supplier firm or another individual; thus, car sharing represents a typical example of an access-based service (Bardhi & Eckhardt, 2012; Belk, 2014), as in the course of usage, customers may feel that the car is "theirs".

3. QUALITATIVE PRE-STUDY

3.1Study Design

To investigate whether PO affects the value in use customers perceive in service usage processes and to identify the respective value-in-use dimensions, we first conducted a qualitative pre-study. Within this study we led semi-structured interviews with a sample of 20 people (12 men, eight women) who had used car-sharing services in a large German city. The respondents were between 22 and 39 years of age, with an average age of 28.6 years. To reach a cross-cultural perspective, the interviewees were internationally mixed; 13 were German citizens, two of whom had an Asian background; four were from China; and one each was from Austria, France, and the United States. All respondents had used

car-sharing service in the last months. The interviews took 418 minutes in total, with an average duration of 21 minutes, and were conducted in German, English, and Chinese. For this purpose, the interview guide, which was originally developed in German, was translated into English, and the research team discussed both versions to gain common understanding.

Semi-structured interviews were used because usage processes are complex and possess a variety of influencing factors, which users, at least partially, do not consciously perceive (Gummerus & Pihlström, 2011). Furthermore, in addition to its high efficiency in generating detailed and empirical data (Eisenhardt & Graebner, 2007), this method offers the possibility of gaining extensive insights into how individuals perceive usage processes and value in use through the combination of problem-focused interviews and narrative approaches.

At the beginning of the interviews, the researchers briefly defined the concept of PO, to ensure that the interviewees had a similar understanding of the object of the

investigation. As the initial aim of the study was to investigate the relevance of the overall concept of PO for value-in-use generation, the interviewees, in the following, first filled out a questionnaire based on the PO measurement model of Avey et al. (2009) to measure the degree of PO with respect to car sharing of each interviewee. This questionnaire consisted of 15 items measured on a Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). Each three of the items corresponded to one of the five components of PO (see Appendix). For this measurement, the PO concept needed to be transferred to the car-sharing context, and the term itself needed to be defined even more narrowly. Considering the customers' deliberate choice of a car-sharing service and the main part of the interviews, they were asked to explain more precisely their previously stated judgments with respect to the five PO motives as well as the resulting impact of their PO perceptions on their usage behavior. After this, the value-in-use dimensions

identified by Bruns and Jacob (2016) were discussed with respect to their perceived importance during usage. The goal of this procedure was to reveal variations in the existence and importance of usage dimensions between individuals with higher and lower degrees of PO. At the end of the interviews, participants were asked to provide possible enhancements to car-sharing services that, in turn, could also improve their own personal benefits.

3.2 Findings

3.2.1 Relevance of PO within the Usage of Car Sharing

In order to first determine the relevance of the overall concept of PO for value-in-use generation, the degrees of PO as perceived by the interviewees were measured. In line with Avey et al. (2009), the aggregated average scores of the three measurement items per PO motive of each individual were calculated. The average values for the various motives have an average value higher than 2.5, with the lowest score being 1. This means that all motives are at least somewhat important for the usage of car-sharing services. Subsequently, to obtain an overall PO score for each individual, the average of all five scores per category was calculated. These values ranged from 2.73, as the lowest, to 4.60, as the highest. In combination with these results, further indication of the importance of PO is present in the wording the respondents used. Especially those with a self-stated high PO used terms of possession such as “my car” and “my car sharing” when speaking about the usage of a car-sharing service. This suggests a certain connection between the user and the used object and, thus, feelings of ownership (Pierce et al., 2001).

3.2.2 Perceived Value-in-Use Dimensions

To identify relevant value-in-use dimensions the researchers pursued a coding and construct categorization process that followed the one as described by Macdonald et al. (2016). Interviews were transcribed into 107 pages of text, with an average of 5.35

pages per interview. The researchers reviewed each transcript to identify similar meanings related to the value-in-use dimensions. Each of these raw construct were transferred into separate sections of the transcripts.

One of the researchers then used quotes from the first seven interviews in German to develop an initial construct categorization, which resulted in five cognitive value-in-use dimensions (“Convenience”, “Productivity”, “Price-performance ratio”, “Flexibility”, and “Freedom”) and four affective value-in-use dimensions (“Self-realization”, “Hedonistic benefit”, “Self-portrayal”, and “Interaction”). The literature was also examined to identify where an existing term matched the data (e.g., “Price-performance ratio”); otherwise, an appropriate term was derived from the data (e.g., “Freedom”).

The other researchers then used this categorization to individually code the remaining 13 interviews. Because five of these interviews were held in Chinese, another Chinese-speaking, independent researcher also coded those transcripts. Thus, each interview was coded by two judges independently. The researchers then compared their allocations of the quotes with the constructs, discussed differences, and adjusted allocations, if necessary. Through this process, “Privacy”, as another cognitive value dimension, and “Environmental sustainability”, as another affective value dimension, were added to the list. The discussion ended when total accordance between the researchers involved was reached. Table 2 gives an overview of the resulting value-in-use dimensions.

The first group of the cognitive value dimensions contains the dimensions “Convenience”, “Productivity”, “Price-performance ratio”, “Flexibility”, “Freedom”, and “Privacy”. The first four dimensions already appear in previous studies on value in use and, accordingly, were defined similarly to prior concepts (see Bruns & Jacob, 2016; McDougall & Levesque, 2000). The category of affective value dimensions comprises “Self-realization”, “Hedonistic benefits”, “Self-portrayal”, “Interaction”, and

"Environmental sustainability". Again, three of the five value dimensions correspond to those appearing in previous value-in-use studies in the field of consumer goods (Bruns & Jacob, 2016).

Category	Value dimensions	Definition	Exemplary quote
Cognitive	Convenience	The user appreciates a pleasant and easygoing usage of car sharing.	"I just like the pragmatic of this concept. It just starts and it is unproblematic." (Interviewee 1)
	Productivity	The user likes to better organize his or her everyday life and uses car sharing to achieve his or her goals.	"It makes my everyday life easier as I don't need to rent a car from a rental car firm in those situations when I need one." (Interviewee 7)
	Price–performance ratio	The user appreciates a good price–performance ratio.	"It's cheaper than a taxi, but it's quite like a taxi, it's just another form of taxi." (Interviewee 10)
	Flexibility	The user likes to be unrestricted, flexible, and independent in terms of time and place of usage of car sharing.	"Doesn't matter in which city I arrive, there is always a car available for me." (Interviewee 5)
	Freedom	The user likes to be unbound by the obligations of car ownership.	"I don't have to maintain a car by paying insurance, paying for gas, buying a car and all of that." (Interviewee 9)
	Privacy	The user likes to be independent of others and to feel safe while being alone in a car.	"When it's late, I don't want to go by train. Because I don't feel comfortable with drunk people in the train, so I go by car for the purpose just to get home quick and safe."(Interviewee 15)
Affective	Self-realization	The user takes advantage of car sharing to pursue his or her own personal interests.	"In principle I would say that I am very car-affine." (Interviewee 7)
	Hedonistic benefit	The user likes to have fun and be entertained through the usage of car sharing.	"Sometimes I just took somebody with me, driving down the city just for fun." (Interviewee 10)
	Self-portrayal	The user wants to be noticed and views the usage of car sharing as a status symbol.	"I guess, that I like to show that I'm part of this hip image and that it represents my convictions." (Interviewee 4)
	Interaction	The user appreciates the social interaction with other actors.	"That's the reason why I think, the more user there are, the

			better will be my situation." (Interviewee 1)
	Environmental sustainability	The user appreciates car sharing as a contribution to protecting the environment.	"Since cities are already crowed and full of cars. So there is a possibility to reduce the problems of cars and pollution. And we need space, so this is a big plus of car sharing." (Interviewee 11)

Table 2: Value Dimensions

Overall, the majority of respondents identified most, if not all, of these value dimensions. Therefore, it is assumed that all the dimensions are present during the respective usage situation and that they affect value in use. However, the respective manifestation of these dimensions varied from person to person. This diversity was the starting point for the following quantitative study that investigated how PO affects the various value-in-use dimensions and through this drives relational outcomes.

4. QUANTITATIVE STUDY

4.1 Research Model

The results of the qualitative study confirmed the basic assumption we derived from our literature review, that PO is an important driver of value-in-use perceptions when using car-sharing services. Accordingly, our first hypothesis is:

H1: The higher the PO is a customer perceives towards a car-sharing car, the higher is the perceived value in use of the car-sharing service.

Moreover, the results of the qualitative pre-study indicated that this positive effect of PO on value in use is valid for all previously identified value-in-use dimensions. Hence, starting from the aforementioned basic hypothesis, eleven identical sub-hypotheses can be derived, which are not listed here for the sake of clarity (e.g., for the first value-in-use dimension "Convenience": "The higher the PO is a customer perceives towards a car-sharing car, the higher is the perceived convenience of the car-sharing service.").

Moreover, studies in the field of organization have also shown that positive evaluations of one's own objects contribute to a general satisfaction of the individual (Pierce et al., 2009; Van Dyne & Pierce, 2004). According to Jussila et al. (2015), this relation also applies in the context of market offers. Hence, one can assume that consumers who perceive PO for a product or service will have a positive usage experience that results in feelings of satisfaction (Jussila et al., 2015). This is in line with current literature that shows that value-in-use perceptions are important drivers of relational outcomes such as satisfaction, commitment, and WOM (Bruns & Jacob, 2016; Lemke et al., 2011; Macdonald et al., 2011). We thus assume that PO also has a positive effect on relational outcomes and that this effect is mediated through value-in-use perceptions. Therefore, we hypothesize:

H2: The higher the perceived value in use of a car-sharing service, the higher is a customer's satisfaction with a car-sharing service.

A further effect of PO is related to affective commitment (Jussila et al., 2012, Pierce & Gardner, 2004; Van Dyne & Pierce, 2004). It results from the intrinsic motivation of the individual to continue the relationship with the object for which he or she feels PO (Asatryan & Oh, 2008). This is mainly driven by the emotional attachment to the object, as the individual is not willing to replace the object by a different one (Van Dyne & Pierce, 2004). With respect to a market offer, this means that consumers tend to continue to use the same products or services in the future (Jussila et al., 2015). In a similar vein, Asatryan and Oh (2008) show in the context of restaurants that PO leads to neglecting other attractive market offers. Moreover, consumers are willing to pay higher prices or even premium prices in order to be able to continue the relationship with the object (Asatryan & Oh, 2008). Again, we assume that this effect is mediated through value in use and thus hypothesize:

H3: The higher the perceived value in use of a car-sharing service, the higher is a customer's affective commitment towards a car-sharing service.

Finally, Asatryan & Oh (2008) also show that PO has a positive impact on customers' WOM intention. This is seen as a result of the motivation to act in the sense of the community (Jussila et al., 2015). In line with our argumentation with respect to H2 and H3, we again assume a mediating effect of value in use in this respect and thus hypothesize:

H4: The higher the perceived value in use of a car-sharing service, the higher is a customer's WOM intention with respect to a car-sharing service.

In analogy to H1, we assume that each of the eleven identified value-in-use dimensions may have a positive effect on the three investigated relational outcomes. Again, for the sake of clarity, the respective sub-hypotheses of hypotheses H2 to H4 are not listed in detail here (e.g., for the impact of first value-in-use dimension "Convenience" on "Satisfaction": "The higher the perceived convenience of the car-sharing service, the higher is a customer's satisfaction with a car-sharing service"). Figure 3 summarizes our research model.

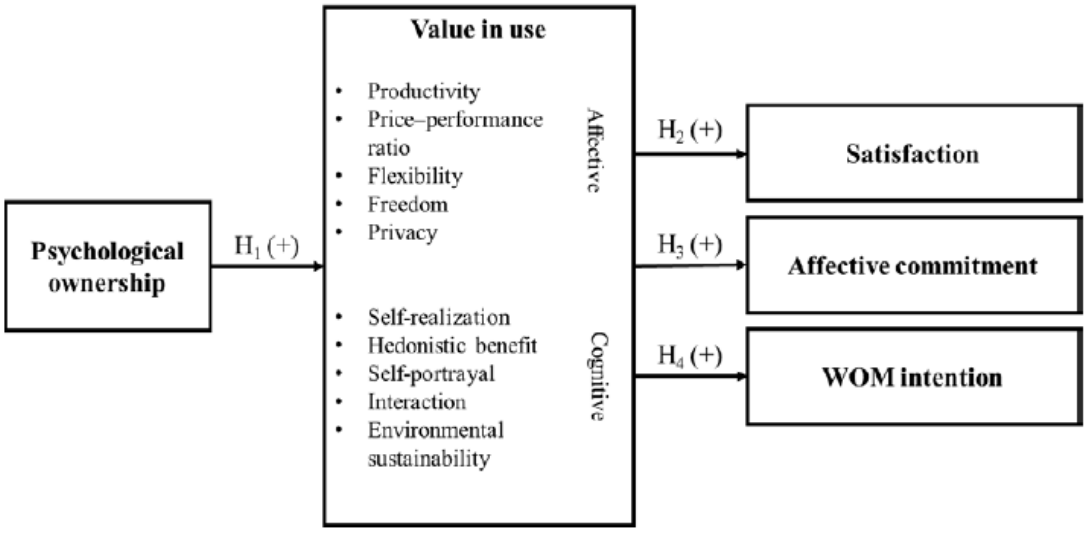

Figure 3: Research model

4.2 Study Design

Based on the literature review and the results of our qualitative pre-study, an online questionnaire was developed. As the study was focusing on the usage of car-sharing services, a filter question at the beginning of the questionnaire ensured that all persons that participated in the survey met the criterion of having used such a service within the last three months. Moreover, at the beginning of the questionnaire, the concept of car sharing was briefly defined in order to ensure that all participants had a unified understanding of the concept.

4.2.1 Sample

The questionnaire was distributed on various online platforms, such as *Facebook* and *Xing*. In addition, the link was sent to students and lecturers of a German university by email. In order to reach further car-sharing users, a flyer with a QR code was developed that was attached to cars of the most popular car-sharing providers in a great German city. With this QR code, the car-sharing users were able to access the questionnaire immediately after the trip.

Overall, 210 persons participated in the survey. The data sets of 152 respondents were used for further analysis. The remaining 58 questionnaires were excluded for the following three reasons: First, 41 respondents did not fully complete the questionnaire (drop-out rate of 20%). Second, 12 participants stated that they did not have used a car-sharing service during the last three months. Third, five respondents did not answer correctly the in-built control question monitoring whether the participants read and answered the questions carefully. The characteristics of the sample are provided in Table 3. Overall, according to information provided by the “Bundesverband CarSharing”, the sample shows a great structural similarity with the total of car-sharing users in Germany.

Category	*n*	%
Gender		
male	80	53%
female	70	46%
N/A	2	1%
Age (average = 31yrs; min= 21yrs; max= 61yrs)		
21-30	99	65%
31-40	32	21%
41-50	15	10%
51+	4	3%
N/A	2	1%
Car ownership		
yes	63	41%
no	89	59%
Use of car sharing		
daily	0	0%
several times a week	14	9%
several times per month	49	32%
at least once a year	50	33%
seldom	39	26%

Table 3: Sample characteristics (n=152)

4.2.2 Measurement Items

The constructs were measured reflectively with multi-item scales in order to reduce the risk of content distortions (Weiber & Mühlhaus, 2014) using established scales as well as self-developed items.

Psychological Ownership: For the measurement of PO we used the same multidimensional measurement we applied in our qualitative study that was originally developed by Avey et al. (2009) and that has been adapted to the car-sharing context (see Appendix).

Value-in-use dimensions: To measure the eleven value dimensions that were identified in the qualitative study, four scales were used from literature and seven were developed newly. For the more general value-in-use dimensions “Hedonistic benefit”, “Productivity”, “Self-realization”, and “Self-portrayal”, we used the items that were developed by Bruns and Jacob (2016). For the context-specific dimensions of

"Convenience", "Price-performance ratio", "Fexibility", "Freedom", "Privacy", "Interaction", and "Environmental sustainability", we developed multi-item scales that reflectively measured the constructs (see Appendix). In order to ensure content validity the respective items were discussed in advance with two car-sharing users.

Relational outcomes: For the measurement of the relational outcomes established scales from literature were used. Satisfaction was measured with the well-established scale of Oliver (1980), affective commitment with four items developed in a study by Allen and Meyer (1990), and WOM intention was assessed using the scale from the study of Zeithaml et al. (1996). All items were adjusted marginally to the context of car sharing (see Appendix).

4.2.3 Questionnaire

Before publishing the questionnaire, five persons, who were car-sharing users themselves, tested the questionnaire for orthography, formulations, and comprehensibility. One person checked the questionnaire in the presence of one of the researchers and voiced all thoughts about the individual items. Through this procedure, it was ensured that all items were understood in a meaningful way (Bruns & Jacob, 2016). The comments of the five persons were then incorporated into the questionnaire so that some of the items measuring the value-in-use dimensions needed to be adjusted slightly.

As some of the constructs used in the study were not based on established scales, the questionnaire was pre-tested in order to achieve reliability of the reflective measurement model (Weiber & Mühlhaus, 2014). For this reason a pre-study was conducted with 20 persons. Based on its results, all self-developed measurements were tested for internal consistency reliability using Cronbach's alpha. All constructs except for the value-in-use dimensions "Interaction" (0.58) and "Price-performance ratio" (0.62) exceeded the threshold of 0.7 (Nunnally, 1978, p. 245). Following Churchill (1979), we successively excluded those items with the lowest contribution in order to reach the

threshold. After eliminating one item, the Cronbach's alpha of the dimension "Price-performance ratio" reached the score 0.85, and after removing another item, the dimension "Interaction" reached the score 0.76. As the measures for both value-in-use dimensions thus exceeded the threshold, both items were deleted from the final questionnaire and a new item each was developed for the main study being closer to the content of the other items of the dimensions. The resulting items are shown in the Appendix.

4.3 Results

4.3.1 Model Evaluation

To evaluate the reflective measurement models, we considered three criteria: convergent validity, internal consistency reliability, and discriminant validity. The Appendix presents the specific results. We deleted some items because of unsatisfactory factor loadings (<.60) and average variance extracted (<.50). In the final model, all outer loadings are above .60, and constructs' average variance extracted values are higher than .50. For internal consistency reliability, we examined Cronbach's alphas and composite reliabilities, which should be higher than .70 (Nunnally, 1978) and .60 (Bagozzi and Yi, 1988), respectively. All constructs fulfil these criteria.

Moreover, we investigated whether the five motives of PO are addressed by car sharing. For this purpose, the average of the item scores per person was calculated for each motive. Based on this result, the minimum and maximum score per motive was determined. In addition, the total average score per motive was calculated. As shown in Table 4, each motive of PO is addressed by car sharing, since the average score is at least 1.9, with maximum scores for each motive of 5.5 or higher. The motive "Accountability" has the highest average score and is therefore the one that is most strongly addressed by car-sharing usage, followed by the motives "Self-efficacy" and "Self-identity", whereas the motive "Territoriality" has the lowest average score.

PO Motif	Average	Minimum score	Maximum score
Territoriality	1.9	1.0	5.5
Self-efficacy	3.9	1.0	6.0
Accountability	4.4	1.0	6.0
Having a Place	3.0	1.0	6.0
Self-identity	3.2	1.0	6.0

Tab. 4: Importance of PO motives

4.3.2 Hypotheses Tests

Method To test our hypotheses we used variance-based Partial Least Square in SmartPLS. The data was first examined for outliers and the constructs were tested for possible multicollarity. As a result, no data had to be eliminated and as all VIF values were less than 5, no further adjustments were necessary (Weiber & Mühlhausen, 2014, p. 364).

To analyze the relationships between the variables, all constructs of the investigation were included in the structural model, with the exception of the value dimensions “Self-realization” and “Self-portrayal”. In the course of the EFA, these two value-in-use dimensions were combined into one named “Self-fulfillment”. Consequently, only ten value-in-use dimensions were incorporated into the structural model and taken into account within the hypotheses tests.

The hypotheses were tested in SmartPLS using bootstrapping at a significance level of 5%. As hypotheses assume a positive relationship between the variables tests were carried out for all relations to be investigated. The decision as to whether a null hypothesis can be rejected was made based on the p-values (p) and standardized path coefficients. If the p-value was <0.05 or the t-value was >1.65 (critical value) and the standardized path coefficient assumed a positive value, the null hypothesis was rejected. In addition, the standardized path coefficients were used to determine whether a relationship could be classified as meaningful. According to Chin (1998), all standardized path coefficients must reach a threshold of at least 0.2 in order to have a significant

relationship. According to Lohmöller (1989, p. 60f.), however, a value of 0.1 and higher is already acceptable. In order to check the robustness of the model, R2 was also checked for each latent endogenous variable in the structure model. According to Chin (1998, p. 323) the R2 should have a value of at least 0.19.

Influence of PO Dimensions Table 5 shows that psychological ownership has a significantly positive effect on each of the value dimensions at a significance level of 5% ($p<0.01$ for each path). Accordingly, H1 (and all sub-hypotheses) can be confirmed. As all standardized path coefficients also reach the recommended value of 0.2 (Chin, 1998), all relations are of importance. Based on the standardized path coefficients, PO has the strongest influence on the value-in-use dimension "Self-fulfillment", followed by "Productivity", "Hedonistic benefit", and "Privacy"; the least influence is on "Interaction".

Influences on Relational Outcomes For all further hypotheses a more multifaceted picture emerges. As shown in Table 5, only the value dimensions "Convenience" ($p<0.01$), "Price-performance ratio" ($p<0.05$) and "Hedonistic benefit" ($p<0.001$) have a significantly positive influence on satisfaction. However, the standardized path coefficients between the "Price-performance ratio" dimension and satisfaction does not reach the recommended threshold of 0.2, but exceeds the recommended value of 0.1 (Lohmöller, 1989). Hence, the hypotheses H2a, H2c, and H2g can be confirmed. The standardized path coefficients show that the value-in-use dimension "Hedonistic benefit" has the greatest influence on satisfaction, followed by the dimension "Convenience". However, since no significant influence is present here ($p>0.05$), the other sub-hypotheses of H2 can thus not be confirmed. Overall, H2 can only be partially confirmed.

As also shown in Table 5, the value-in-use dimensions "Convenience" ($p<0.05$), "Privacy" ($p<0.01$), "Hedonistic benefit" ($p<0.05$) and "Self-fulfillment" ($p<0.001$) have a significantly positive influence on affective commitment. The standardized path

coefficients for the relationships of the dimension “Convenience” and affective commitment as well as the dimension “Hedonistic benefit” and affective commitment fall below the threshold of 0.2, but are still above 0.1. The hypotheses H3a and H3f-3h can therefore be confirmed. Here, the value dimension “Self-fulfillment” has the greatest influence on affective commitment followed by the dimensions “Privacy” and “Hedonistic benefit”. In contrast, the p-values of the other dimensions are larger than 0.05 and are thus higher than the error probability of 5%. An exception builds the “Flexibility” dimension. Here, the p-value is less than 0.05. However, the path coefficient shows a negative value. Thus, there is no significant positive influence. As a result, the hypotheses H3b-3e as well as the hypotheses H3i and H3j cannot be confirmed. For this reason, hypothesis H3 can also only be partially confirmed.

Finally, the influence of the value-in-use dimensions on WOM intention was tested. As shown in Table 5, the influence of “Convenience”, “Price-performance ratio”, “Freedom” and “Hedonistic benefit” on WOM intention is significantly positive (all p values <0.01). The standardized path coefficients for the relationships between the value-in-use dimension “Price-performance ratio” and WOM intention as well as the relationship between the dimension “Freedom” and WOM intention fall short of the threshold of 0.2, but is thus well above the threshold of 0.1. The hypotheses H4a, H4c, H4e, and H4g can therefore be confirmed. All other relationships do not show any significant results. Therefore the null hypotheses cannot be rejected. Accordingly, hypothesis H4 can only be confirmed partially.

Hypotheses		Pyx	T value	Accepted
H_1	**PO → Value in use**			
H_{2a}	PO → Convenience	0.33	4.56***	√
H_{2b}	PO → Productivity	0.49	8.07***	√
H_{2c}	PO → Price-performance ratio	0.31	3.51***	√
H_{2d}	PO → Flexibility	0.30	4.34***	√
H_{2e}	PO → Freedom	0.28	3.56***	√
H_{2f}	PO → Privacy	0.45	6.92***	√
H_{2g}	PO → Hedonistic benefit	0.49	7.38***	√
H_{2h}	PO → Self-fulfillment	0.65	12.47***	√
H_{2i}	PO → Interaction	0.20	2.43**	√
H_{2j}	PO → Sustainability	0.38	5.16***	√

H_2	**Value in use → Satisfaction**			
H_{2a}	Convenience → Satisfaction	0.22	2.83**	√
H_{2b}	Productivity → Satisfaction	0.03	0.43	X
H_{2c}	Price-performance ratio → Satisfaction	0.14	1.79*	√
H_{2d}	Flexibility → Satisfaction	0.04	0.39	X
H_{2e}	Freedom → Satisfaction	0.08	1.14	X
H_{2f}	Privacy → Satisfaction	0.14	1.57	X
H_{2g}	Hedonistic benefit → Satisfaction	0.28	3.49***	√
H_{2h}	Self-fulfillment → Satisfaction	0.06	0.65	X
H_{2i}	Interaction → Satisfaction	0.11	1.33	X
H_{2j}	Sustainability → Satisfaction	0.03	0.36	X

H_3	**Value in use → Affective commitment**			
H_{3a}	Convenience → Affective commitment	0.14	1.70*	√
H_{3b}	Productivity → Affective commitment	0.04	0.45	X
H_{3c}	Price-Perf. Ratio → Affective commitment	0.09	1.23	X
H_{3d}	Flexibility → Affective commitment	-0.25	2.15	x
H_{3e}	Freedom → Affective commitment	0.04	0.46	X
H_{3f}	Privacy → Affective commitment	0.20	2.80**	√
H_{3g}	Hedon. benefit → Affective commitment	0.17	1.91*	√
H_{3h}	Self-fulfillment → Affective commitment	0.41	5.06***	√
H_{3i}	Interaction → Affective commitment	0.02	0.34	X
H_{3j}	Sustainability → Affective commitment	0.08	1.03	X

H_4	**Value in use → WOM intention**			
H_{4a}	Convenience → WOM intention	0.31	2.96**	√
H_{4b}	Productivity → WOM intention	-0.03	0.35	X
H_{4c}	Price-perf. ratio → WOM intention	0.19	2.50**	√
H_{4d}	Flexibility → WOM intention	-0.07	0.65	x
H_{4e}	Freedom → WOM intention	0.18	2,42**	√
H_{4f}	Privacy → WOM intention	0.09	1.21	x
H_{4g}	Hedonistic benefit → WOM intention	0.23	2.77**	√
H_{4h}	Self-fulfillment → WOM intention	0.03	0.34	x
H_{4i}	Interaction → WOM intention	0.12	1.31	x
H_{4j}	Sustainability → WOM intention	0.02	0.19	x

Pyx = standardized path coefficient; *p<0.05, **p<0.01, ***p<0.001

Table 5: Results of hypotheses tests

5. DISCUSSION

5.1 Relevance of PO in the Service Field

This study contributes to the stream of research that delineates PO as a phenomenon that exists not only within organizations (by employees) but also in customer-provider relationships. That is, PO also occurs in service fields where consumers relate with provider firms through service contracts. In both cases, the individuals do not legally own the specific objects; however, employees *are payed* to use the PO target, whereas in services customers *pay* for its usage. Thus, feelings of ownership are independent of the legal relationship through which an individual is connected with a specific PO target. In addition, it is not necessary for an individual to have a long-lasting relationship with a PO target to develop feelings of ownership. The car-sharing example in this study represents only a short-term relationship between an individual and the PO target (the car), which is in contrast with the typically long-term working relationship of employees. Nevertheless, feelings of ownership still occur.

5.2 Impact of PO on Value-in-Use

With respect to RQ 1, this study shows that each PO motif (self-identity, self-efficacy, having a place, accountability, and territoriality) is relevant within the car-sharing context. However, the discrepancies between the minimum and maximum value per PO motif indicate that individuals differ with respect to the importance of certain PO motives in the context of car sharing. There are three reasons. First, the motives are anchored in people to different degrees (Pierce et al., 2003). For example, while the need for effectiveness and competence may be very pronounced in one person, it may take a rather low priority for another one. Second, people attribute a different personal meaning to different objects (Pierce & Jussila, 2011). For one person, for instance, the feeling of PO arises because the car serves as an expression of identity, which will not necessarily be the case for another individual. Third, the mechanisms of PO may vary from person to person (Pierce et al., 2001). For example, the longer and more frequently car-sharing customers use the cars, the better they get to know the car and thus form PO through investing themselves into the target.

In addition, the study shows that PO significantly and positively influences each of the identified value-in-use dimensions, either cognitive or affective. The more car-sharing users perceive the car as theirs, the higher the different value-in-use dimensions are perceived during the usage processes. The results are thus in line with literature assuming that in interactions people generally perceive and value their own objects more positively than objects they do not consider to be their possessions (Jussila et al., 2015; Nuttin, 1987; Reb & Connolly, 2007).

PO has the strongest impact on the value-in-use dimension “Self-fulfillment”, followed by “Productivity”. This could be due to the fact that these value dimensions correspond mostly to the motives of PO. Hence, when car-sharing users perceive PO with respect to certain cars as they enable them to express their identity through their usage, a high value-in-use perception regarding “Self-fulfillment” is obvious. Moreover, car-

sharing users who perceive feelings of PO due to “Self-efficacy” will experience a high value-in-use with respect to “Productivity”. The least, nevertheless significant influence PO has on the value-in-use dimension of “Interaction”. For instance, car-sharing users whose PO is mainly motivated by territoriality are unlikely to benefit greatly from interacting with other car sharing users. However, our study reveals that only relatively few car-sharing users develop PO based on this motif.

5.3 Impact of Value-in-Use on Relational Outcomes

Regarding RQ 2 we analyze how PO mediated through value in use effects the relational outcomes satisfaction, affective commitment and WOM intention. Our findings show that the value-in-use dimensions “Convenience” and “Hedonistic benefit” significantly affect all investigated relational outcomes. In addition, “Price-performance ratio” also has a positive effect on satisfaction and WOM intention, whereas “Self-fulfillment” and “Privacy” increase affective commitment, and “Freedom” has a positive effect on WOM intention (see Figure 4). PO thus is an important factor influencing these relational outcomes through its positive impact especially on the value-in-use dimensions “Hedonistic benefit”, “Self-fulfillment”, and “Privacy”. As shown in Figure 3, the R2 of these dimensions is 0.2 and higher, with “Self-fulfillment” having an R2 of even 0.42. Thus, PO explains a relatively high proportion of the variance of the perceptions of these dimensions.

However, although PO has a positive influence on the mentioned value-in-use dimensions, the overall R2 has a relatively low value. Hence, there are other important factors that influence these dimensions. For instance, previous studies identified consumer expertise, product quality, and service quality as key drivers of customer perceived value-in-use (e.g., Bruns & Jacob, 2016; Cronin et al., 2000; Lemke et al., 2011). Service quality, for instance, could play a key role with respect to “Convenience”. Assuming that the search function in a car-sharing app of a specific provider does not

work properly, a user will probably perceive a lower convenience compared to a user of the service of another provider that works properly – regardless of PO. Moreover, for the value-in-use dimension "Price-performance ratio", a user's income may have a decisive influence on its perception. And the perception of the value-in-use dimension "Freedom" may depend on the insurance regulations of the respective service provider.

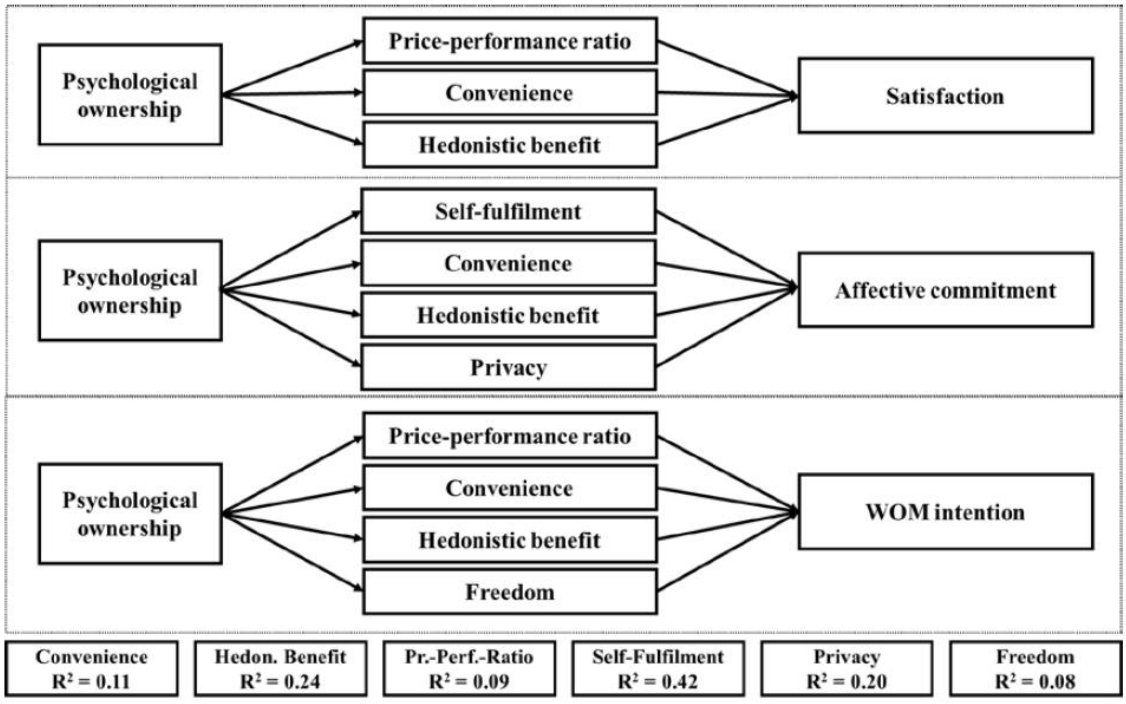

Figure 4: Significant effects of value-in-use dimensions on relational outcomes

The study also shows that the value-in-use dimensions "Environmental sustainability", "Interaction", "Flexibility", and "Productivity" have no significant impact on any of the investigated relational outcomes. This may be due to the prioritization of the consumers' goals consumers want to achieve through the usage of specific services (Woodruff, 1997; Bruns & Jacob, 2016). These goals do not have the same importance, but are rather parts of a hierarchical cognitive network (Sandström et al., 2008). A car-sharing user, for example, with a high perceived value in use with respect to "Environmental sustainability" may achieve this goal on the one hand, but ascribing less importance to this goal compared to others, this would lead to a lower contribution of this dimension to satisfaction on the other hand.

6. MANAGERIAL IMPLICATIONS

Our study reveals that in the car-sharing context the value-in-use dimensions "Convenience" and "Hedonistic benefit" have the highest impact on the relational outcomes satisfaction, affective commitment and WOM intention, followed by "Price-performance ratio", "Self-fulfillment", "Privacy", and "Freedom". As these relational outcomes have a high impact on customer loyalty and firm performance, car sharing providers should try to improve the experience of these value-in-use dimensions. For instance, an increase in "Hedonistic benefit" might be achieved by upgrading the cars with enhanced entertainment systems. Perceptions of "Convenience" may be enhanced by a better usability of the car-sharing app or the car itself. Through this, PO as perceived by the customers will be increased and as a consequence also satisfaction, affective commitment and WOM intention with respect to the car-sharing provider. Since "Self-fulfillment" has the greatest impact on affective commitment, investments into PO seem to be very important, especially in this respect.

As a consequence, companies should adapt their service offerings to the PO motives or relate them accordingly. For example, companies can customize their service offerings with respect to individual consumers so that "Self-identity" will be enhanced. Moreover, a provider firm could also include various car models into its fleet to give a higher number of users the opportunity to express their identity through interaction with the car. For example, while one user may view a sports car as being suitable to underline his or her identity, another user will more likely consider a convertible to be appropriate in this sense. The choice of a greater variety of models can therefore address different personality types.

Moreover, as car-sharing users differ with respect to the importance of certain PO motives (see Table 4), the extent of the PO motives may serve as a segmentation criterion to identify customers with different value-in-use appraisals without needing to precisely

capture the difficult-to-measure value in use itself. Through such a segmentation, customers could be identified relatively easily for more targeted marketing efforts in order to increase satisfaction, affective commitment and WOM intention. For this purpose, the items adapted to measure PO in the field of car sharing (see Appendix) provide a starting point for such a segmentation approach.

7. LIMITATIONS AND FURTHER RESEARCH

As with all research, this study has some limitations. First, the results of the quantitative main study are based on users of a car-sharing service in Germany. Thus, they might not be generalizable to other countries or different contexts in the service field. Second, PO might be only one component of a greater psychological system influencing the consumers' behaviors in service usage processes. Correspondingly, further research should be conducted in a variety of other service fields and/or countries to identify psychological factors that might also influence the presence and effects of PO. It would be especially worthwhile to investigate whether feelings of ownership also occur for services that consist of more or less intangible components and for which consumers are not able to take something with them, such as banking and insurance.

Moreover, as many consumers use car-sharing services typically several times, it will be interesting to investigate whether this has an impact on the characteristics and the degree of PO motives as well as on value-in-use perceptions. Using longitudinal data would allow gaining insights on how such changes in PO over time lead to changes in the experienced value in use.

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APPENDIX: Measurement models for PO dimensions, value-in-use dimensions, satisfaction, affective commitment and WOM intention

Construct		Final measurement model			
		Loading	Alpha	CR	AVE
PO dimensions (Avey et al. 2009)	**Measures (Scales 1 – strongly disagree to 6 – strongly agree)**				
Self-efficacy			0.66	0.81	0.59
	Effi1: Using car sharing helps me to organize my daily life.	0.78			
	Effi2: By using car sharing I can avoid problems, which would otherwise accompany me in my daily life (e.g., search for a parking space in the city)	0.78			
	Effi3: By using car sharing, I am in a better position to achieve my goals efficiently in daily life.	0.75			
Self-identity			0.73	0.85	0.65
	Iden1: I use car sharing because it corresponds to my personal self-conception.	0.82			
	Iden2: The car sharing usage gives me positive self-esteem.	0.80			
	Iden2: When the concept of car sharing is publicly criticized, I feel compelled to defend it.	0.80			
Having a place			0.89	0.93	0.83
	Place1: When I use car sharing, it is important to me to be driving a specific car.	0.90			
	Place2: I use a specific car-sharing provider because only this one offers the car model I prefer.	0.89			
	Place3: The model of the used car is an important aspect to me when using car sharing.	0.93			
Accountability			0.42	0.78	0.63
	Acco1: I find it important to give feedback to the car-sharing providers directly to keep improving the service.	0.78			
	Acco2: I have to make sure that the car sharing car is left in good condition.	(excl.)			
	Acco3: I find it annoying when the car sharing car has not been left in a good condition by other users.	0.81			
Territoriality			0.54	0.81	0.68
	Terri1: When I use car sharing, I previously reserve a specific car to be sure that no one else books it.	(excl.)			
	Terri2: I park the car sharing car deliberately in places where it is unattractive to collect the car for other users.	0.78			
	Terri3: It annoys me when the car I used beforehand is booked by another user, so that it is no longer standing at the parking lot where I have left it.	0.87			

Value-in-use dimensions *When using a car sharing car…*	**Measures** **(Scales 1 – strongly disagree to 5 – strongly agree)**	**Loading**	**Alpha**	**CR**	**AVE**
Convenience			0.76	0.86	0.67
	…I appreciate the easy usage use of the car	0.78			
	…I appreciate the user-friendly concept of car sharing	0.87			
	…I appreciate the ease of use	0.81			
Productivity (Bruns & Jacob 2016)			0.85	0.91	0.77
	…I better structure my daily routines.	0.90			
	…I arrange my daily activities.	0.87			
	…I organize my personal tasks (to dos).	0.86			
Price-performance ratio			0.79	0.87	0.70
	…I save money (compared to similar offerings).	0.85			
	…it creates an economic benefit for me	0.85			
	…I find the price reasonable	0.81			
Flexibility			0.75	0.85	0.66
	…I appreciate the possibility to park the car flexibly	0.73			
	…I appreciate the mobility	0.88			
	…I appreciate the temporal independence	0.82			
Freedom			0.74	0.84	0.64
	…I am glad I do not have to worry about possible repairs	0.80			
	…I appreciate not being responsible for maintaining the car	0.74			
	…I appreciate being released of obligations of a car owner	0.85			
Privacy			0.70	0.83	0.63
	…I feel safe (e.g. at night compared to public transport)	0.77			
	…I appreciate being independent of other persons	0.81			
	…I appreciate my privacy	0.79			
Hedonic benefit (Bruns & Jacob 2016)			0.91	0.94	0.79
	…I have a lot of fun.	0.91			
	…it is very entertaining to me.	0.91			
	…it gives me a lot of pleasure.	0.87			
	…I feel really good.	0.86			

Self-fulfillment (Bruns & Jacob 2016)			0.81	0.87	0.63
	…I am perceived and seen by others	0.83			
	…I make a good impression with others	0.83			
	…I express myself	(excl.)			
	...I unfold myself.	0.77			
	...I follow and enjoy personal interests.	0.76			
	...I fulfill things that are of personal importance to me.	(excl.)			
	...I pursue my own personal hobby.	(excl.)			
Interaction			0.85	0.93	0.87
	…I feel the interaction with other users as enriching	0.94			
	…I benefit from many car-sharing users (offer improvement)	0.92			
	…I am annoyed by other users *(inverse item)*	(excl.)			
Environmental Sustainability			0.92	0.95	0.87
	…it is for me a climate-friendly mobility alternative	0.91			
	…I contribute to environmental protection	0.94			
	…I reduce environmental pollution	0.94			
Relational outcomes	**Measures (Scales 1 – strongly disagree to 5 – strongly agree)**	**Loading**	**Alpha**	**CR**	**AVE**
Satisfaction (Oliver 1980)			0.84	0.89	0.67
	I am overall satisfied with my car-sharing provider.	0.82			
	I am always enthusiastic about my car-sharing provider.	0.79			
	It was the right choice when deciding for my car-sharing provider.	0.85			
	It was wise to select my car-sharing provider.	0.81			
Affective commitment (Allen & Meyer 1990)			0.84	0.89	0.67
	I can very strongly identify with my car-sharing provider.	0.77			
	As a customer of my car-sharing provider, I feel like part of a family.	0.80			
	I feel emotionally attached to my car-sharing provider.	0.87			
	My car-sharing provider is emotionally very important for me.	0.82			
WOM intention (Zeithaml et al. 1996)			0.84	0.90	0.76
	I would like to talk positively about my car-sharing provider to others.	0.88			
	I would recommend my car-sharing provider, if persons would ask for advice this regard.	0.89			
	I would encourage friends and acquaintances to use my car-sharing provider.	0.84			

6. THE DYNAMIC NATURE OF PSYCHOLOGICAL OWNERSHIP AND ITS IMPACT ON A MULTI-ACTOR VALUE CREATION PROCESS

ABSTRACT

Research in a car sharing context has shown that different degrees of customers' perceived psychological ownership (PO) lead to different perceptions of value in use, which in turn affect customers' usage behavior. However, since usage represents a dynamic process and customers regularly change their value assessments through their usage experiences, we can assume that the degree of customers' perceived PO may not stay at the same level either. Moreover, sharing services depend quite largely upon the active involvement of various customers in the usage center. Individuals who are more promotion-oriented may experience feelings toward the targets of ownership that are quite different from those who are prevention-oriented, which led to different usage behaviors that might affect the value perception of one another. Based on this notion, this paper investigates how customers' perceived PO towards a sharing target changes over time and its impact on their own usage behaviors as well as the behavior of other resource integrators in the field of bike/car sharing. Semi-structured interviews were conducted towards this object, which uncovered the dynamic nature of PO and its impact on interactive usage processes through which customers benefit in some form but might also, in some cases, become worse off.

keywords: Psychological Ownership, value in use, dynamic process, bike/car sharing, usage process, usage center

INTRODUCTION

Sharing economy has been identified as one typical form of access-based consumption (Bardhi & Eckhardt, 2012). Within the tremendous rise in the forms of commercial sharing systems, bike/car sharing has become extremely popular in recent years. Due to insufficient monetary means, concerns of space constraints, or environmental issues, customers choose not to own the product, but can still obtain the benefits of certain products and services through rental or access-based services (Lovelock & Gummesson, 2004). This type of access-based consumption can be viewed as a market mediated transaction in which no exchange of ownership takes place (Bardhi & Eckhardt, 2012). Although property continues to exist, it does not necessarily have to be exchanged to get access to a resource like a bike or a car. Thus, ownership is no longer the only, or highest, pursuit for customers (Chen, 2009; Tantalo & Priem, 2016). Nevertheless, feelings of ownership can also occur even when an individual is not the legal owner, and only has access to certain resources. This so-called psychological ownership (PO) is defined as "the state in which individuals feel as though the target of ownership or a piece of that target is 'theirs'" (Pierce, Kostova, & Dirks, 2003, p. 86). PO has been shown to have a positive impact on employees' attitudes towards an organization he or she is working for, which in turn increases organizational commitment, job satisfaction, and organization-based self-esteem, as well as improving employees' work behavior and performance (Van Dyne & Pierce, 2004). Recent research has shown that PO exists not only in organizations (from the perspective of their employees) but also in service areas where customers do not legally own the specific resources but pay for their usage in a form of access-based consumption (Kleinaltenkamp et al., 2018).

In a car sharing context, Kleinaltenkamp et al. (2018) have posited that PO not only exists within this service field, but, moreover, that different degrees of PO (as perceived by the customers) will lead to different perceptions of value in use. This value in use is defined as "all customer-perceived consequences arising from a solution that

facilitate or hinder achieving the customers' goals" (Macdonald et al., 2016, p. 97), which in turn affect customers' usage behavior (Kleinaltenkamp et al., 2018). However, since usage represents a dynamic process (Warde, 2005; Richins 1994; Day & Crask, 2000), we can assume that the degree of customers' perceived PO towards the sharing target may not stay at the same level throughout the entire process. This is because:

1. The value (on a monetary level) of a focal resource itself in a sharing service is changing – bikes/cars in a bike/car sharing case, for example, can depreciate over time. Thus, it will lead to a different value perception from the resource integrator which leads to a different level of PO.

2. Bike/car sharing providers, on the other hand, will try to update their products, service and technology, which will affect the way customers use a certain product or service. Customers' preferences on service providers, bike/car models etc. are changing and developing over time, so are their individual experiences that also may result in a changing level of PO.

3. Actors usually do not use products and services in isolation. Even if single actors are on their own (spatially) during a usage process, it is more common that they are connected virtually with other users through an internet platform, software system, social media or common understanding (Kleinaltenkamp et al., 2017). Thus, the perceived PO of other resource integrators will impact not only on their own usage behaviors but also affect the behavior of the focal resource integrator which in turn shape their PO.

Although research has demonstrated the impact of PO on customer behavior, it has not yet explored whether PO itself evolves, or how PO evolves in the dynamic process of customer usage activities. Moreover, since sharing is an activity in which typically multiple actors are involved, the evolvement of PO will adversely affect the entire usage center. Beyond this backdrop, this study addresses the following research questions:

1. How does the perceived degree of PO evolve over time?
2. How does PO influence value creation in multi-actors' usage processes over time?

The remainder of this paper is organized as follows: after presenting a review of literature on the roots (motives) of PO and the routes (mechanisms) to PO, on value creation and the concept of the usage center, we will conceptualize why PO evolves in a dynamic way and how it affects value creation in multi-actor usage processes. We will then describe the method and analyze how PO evolves step-by-step, seeking to analyze what impact it has upon the resultant behaviors of the members of a usage center of a bike/car sharing community. Finally, we will discuss managerial implications and offer suggestions for future research.

CONCEPTUAL DEVELOPMENT

Value co-creation/co-destruction in the usage center

Literature on the service-dominant-logic highlights that service ultimately is experienced by customers through their usage. (Vargo & Lusch, 2008). Consequently, value creation is a process that requires customer action in creating value in use (Vargo & Lusch, 2006). Customers are thus seen as resource integrators (Vargo & Lusch, 2008) who operate on resources that are made available to them by providers, other market actors, or by themselves in order to increase their well-being (Vargo et al., 2008).

Service systems are "configurations of resources (including people, information, and technology) connected to other systems by value propositions" (Vargo et al., 2008, p.145). These service systems interact either directly (person-to-person) or indirectly (via appliances such as goods) through resources integration (Plé & Cáceres 2010). Interactions between these service systems have an inherent tendency to result in value co-creation or, on the other hand, value co-destruction (Plé & Cáceres, 2010). Woodruff and Flint (2006) state that devaluation processes can occur which can diminish co-created

value. Inappropriate or unexpected use of the available resources will result in value co-destruction for at least one of the parties (Plé & Cáceres, 2010).

One major mechanism for value co-creation is resource integration (Vargo & Lusch, 2006), which includes actors that might either be individuals or multitudes of individuals such as an organization, a family, a group of acquaintances, etc. (Macdonald et al., 2016). In the process of resource integration, the various individuals each perceive multiple dimensions of both collective and individual value-in-use. Collective value-in-use relates to the perceived goals of the collective entity the individuals believe themselves to be a member of, whereas individual value-in-use corresponds to the goals of the individuals alone (Macdonald et al., 2016).

According to Kleinaltenkamp et al. (2017, p. 721), a usage center comprises "all resource integrators that draw on a focal resource within a usage process. A usage center thus contains four components (1) the focal resource integrator, (2) the focal resource, (3) other resource integrators, and (4) other resources. Applying this understanding to the bike/car sharing case leads to the following characterizations: The customer of the bike/car sharing service can be seen as the focal actor, while the involved providers – other bike/car sharing users in the same region, or family members/friends who join a shared car ride as a group – represent peripheral actors of the usage center. Moreover, the bikes/cars that build the focal resource within this process might play differing roles for the various actors involved. For instance, while one user may use the bike/car as a way of transporting goods, other users may use it as a way of saving time in commuting, or for easy parking. Family members or friends who join the customer for a ride may see the car as a free ride option, or use it as a means to enjoy a positive experience with close acquaintances. Further, providers may use the bike/car as a way of their bike/car brand promotion or market testing. In doing so, particular actors' usage processes of the shared bikes/cars may be heavily influenced by these various other actors (e.g. initiating, co-

using, ending) and even other resources (e.g. bike/car sharing apps). The co-created value is assessed by these usage center members on the basis of how they perceive not only the quality of the actor's own resources and the resources of other participating resource integrators, but also based on the perceived quality of the joint resource integration process in a specific context (Macdonald et al., 2016). As a result, other resources may affect the process and the outcome of this specific resource integration and the resulting co-creation of value (Kleinaltenkamp et al., 2017).

The Dynamic Nature of Customer Value

In usage processes value propositions are transformed into value in use (e.g., Grönroos, 2011; Vargo & Lusch, 2008). Grönroos (2011) claims that usage processes are interactive processes in which suppliers integrate their offers into the activities of their customers. Customers thus have the role of active contributors and of interpreters of their experience (Gummerus, 2013). Following a phenomenological approach, experience is described as internal and subjective (Helkkula, 2011). Beyond the acknowledgement in literature of experience as being individual, dynamic, cumulative and context-bound (e.g. Chandler & Vargo, 2011), there is also evidence in literature addressing the context-bound nature of experience: Experience thus contains both individual and sociocultural levels involving social groups and many interactions (Akaka et al., 2015; Helkkula, 2011; Ramaswamy, 2011). Consequently, the "experience of a usage process" can be viewed as a value creation experience that involves the individual customer's unique responses and phenomenological perceptions.

However, customers regularly change their value assessments, and for some customers in certain industries, such change of evaluation can be perceivably more rapid and intensive (Flint et al., 2002). According to Richins (1994), value changes might be influenced by usage experiences. Day and Crask (2000) note that customer desired value change (CDVC) can occur at any time in the buying cycle, i.e. before, during and after a

purchasing process. Perceptions of the magnitude of CDVC might differ between customers and sellers. Suppliers may unknowingly contribute to these changes in the customer's desired value by placing new adjustments, such as an increase in price.

The Roots and Routes of Psychological Ownership

PO is defined as “the state in which individuals feel as though the target of ownership or a piece of that target is theirs” (Pierce et al., 2003, p.86). Pierce et al. (2001) propose that both hereditary and learned factors constitute the basis for the formation of psychological ownership. They highlight three roots of why a person develops perceived feelings of ownership:

1. Efficacy and effectance: the freedom of controlling one’s behavior is a psychological component that may generate self-efficacy (Bandura, 1997) and may promote a sense of psychological ownership concerning a particular task, process, and procedure.

2. Self-identity: encompassing the personal cognitive relation of a person towards a distinct object. When individuals begin to intimately understand the meaning of an object and finds themselves present in it, the individuals tend to experience the target as their own and as part of their extended self (Dittmar, 1992).

3. Having a place to dwell in (home) (Polanyi, 1962): expounding upon a person’s inherent desire for ownership of a personal domain or area. Individuals have a need to find a preferred space and a fixed point of reference around which to structure their daily lives, allowing them to feel cared for and distracted (Duncan, 1981; Porteous, 1976).

Based on this categorization, Avey et al. (2009) added another root of PO consisting two components:

4. Accountability: it is seen to be a root of psychological ownership through two mechanisms: "(1) the expected right to hold others accountable and (2) the expectation for one's self to be held accountable" (Avey et al. 2009, p.177). For example, the CEO of a company holds others (employees) accountable for business performance, while they themselves are held accountable by other constituents (sponsors) for the business' failures and successes.

Moreover, in accordance with Higgins' (1997) regulatory focus theory, which states that individuals have two basic self-regulation systems, promotion and prevention, Avey et al. (2009) proposed that there are two unique and independent forms of ownership as well: (1) a more defensive, prevention-based ownership, and (2) a more constructive, promotion-focused ownership. In line with this argument they claim that the four roots of PO mentioned above represent forms of a promotive PO, while another root they propose stands for a preventative PO:

5. Territoriality: it can be seen as a person's reluctance to share a respective object with others, which tends to be preventative and usually leads to negative outcomes (Avey et al., 2009). It may induce a person's intention to exclude others from the usage of that object – typically in a bike/car sharing case, people might deliberately park the car in a location that other customers cannot find.

In addition to the roots outlined above, Pierce et al. (2001; 2003) highlight three different mechanisms – referring to a person's behavior – through which psychological ownership is generated:

1. Controlling the target: control of an object appears to be a key characteristic of the phenomenon of ownership, which comprises the ability to use and to control the use of objects (Pierce et al., 2001).

2. Coming to intimately know the target: through intimate knowledge (of an object, person, or place) people can feel that something is theirs by virtue of being

associated and familiar with it. The deeper the relationship between the self and the object, the stronger the sense of ownership becomes (Pierce et al., 2001).

3. Investing the self into the target: Locke (1690) and Marx (1976) offered similar explanations, proposing that by putting spiritual and physical energy through labor into objects that individuals create, shape or produce, these objects become representations of their self. Thus investing time, effort, and attention into objects causes the self to become one with the object, and to develop feelings of ownership toward that object. The more individuals invest themselves into a target, the stronger is their PO related to that target (Pierce et al., 2001).

In a nutshell, PO has been described as a cognitive-affective construct that reflects an individual's awareness, thoughts, and beliefs regarding the target of ownership (Pierce et al., 2003), which draws from an individual's practice with respect to a certain target. Pierce et al.'s (2001; 2003) theory emphasizes that learned factors constitute the basis for the formation of psychological ownership. By controlling the target, coming to intimately know the target and investing the self into the target (routes to PO), PO is finally formed (Pierce et al., 2001; 2003). Taking the case of car sharing as an example – through a customer's individual usage of car sharing cars (a focal resource) – car sharing customers gain intimate knowledge of the car and start investing the self into the respect (type of) car (routes to PO), which finally contributes to the generation of PO. As a result, PO is uniquely and subjectively propagated through individual's usage processes of certain target objects.

The dynamic nature of PO and its interrelations with multi-actor usage processes

As PO is being formed, it in turn affects individual's usage process. A recent study has shown that an increase in PO leads to an increase in substitutive value and usage intensity (Fritze et al., 2020). Conceptually, "consumers should perceive an ABS [access-

based service] as a substitute for a corresponding material possession if that service psychologically satisfies their need for possession" (Fritze et al., 2020, p.4). A further study expounds that in car sharing services, three behaviors related to the degree of PO were identified: people with a higher degree of PO show (1) greater commitment to the service provider; (2) more pronounced territorial behavior, in that they try to exclude other customers from using the respective cars; and (3) enhanced WOM intention (Kleinaltenkamp et al., 2018).

However, learned factors – namely the experience of practice – are changing and developing over time. While Reckwitz (2002) emphasizes that practice is "routinized behavior", Warde (2005) highlights that practice involves mental processes and develops from the past. Recognizing the temporal nature of value creation is a key component of this study: "it draws from the past, is situated in the present and influences the future" (Ellway & Dean, 2016). Thus, the perception of the value creation experience that refers to the perception of PO also evolves over time. In other words, individuals' perceived PO is not only uniquely and subjectively determined but also mediated and shaped through their value creation experience.

Hence, the question arises of what happens after PO is formed. Further, how is PO shaped by ongoing value creation experiences in usage process? To the best of our knowledge, no study has yet focused on the dynamic nature of PO and how it is developing over time.

Moreover, while both PO and usage processes have been recognized as important concepts in marketing and service research, the concept of the usage center has not been incorporated into investigations on their intersection yet. However, bike/car sharing services depend quite largely upon the active involvement of the various customers. Consequently, with respect to psychological ownership, individuals who are more promotion-oriented may experience feelings toward the targets of ownership that are

quite different from those who are prevention-oriented. Hence, people who are more prevention-oriented may not want to share car sharing cars with others, as they seek to maintain their own continuous use of the cars. Thus, this might diminish the value perception of other customers. In contrast, those individuals with a more promotive focus may carefully take care of the car sharing cars and are willing to share information, including benefits which they "co-own" with other customers, because they are willing to make improvements within their sharing community. The second purpose of this paper, therefore, is to demonstrate the links between the dynamic nature of PO and value creation in multi-actor usage centers. By linking PO and multi-actor usage processes, this paper explores the phenomenon of interactive usage processes through which customers benefit in some form but might also, in some cases, become worse off. Figure 1 summarizes the conceptual model of this study: the left portion of the figure within the solid lines capture the existing theoretical insights which represent the five basic roots (motives) of PO: how PO is generated (e.g. Avey et al., 2009; Pierce et al., 2001; 2003) and its impact upon usage process and value creation (Kleinaltenkamp et al., 2018). The right part of the figure, within the dashed line, represents the current literature gaps that relate to the questions of

1. how PO towards a certain focal resource impacts multi-actor value creation processes, involving other resource integrators and other resources,
2. how PO is evolving over time, based on the focal resource integrator's value creation experience.

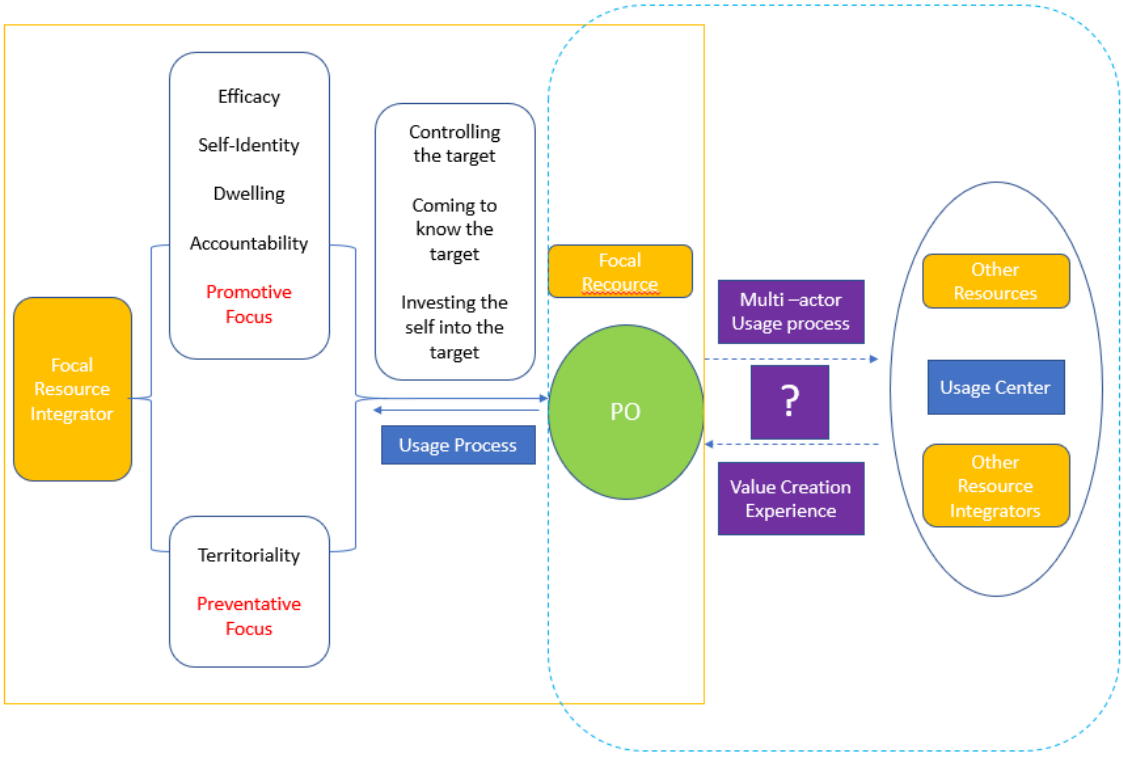

Figure 1. Conceptual Development and Literature Gaps

METHOD

In order to address the research questions, this study focused on a group of bike/car sharing users who had been using the service between at least three months to three years in Germany and in China. The 20 respondents were between 20 and 36 years of age. Among them, 10 were bike sharing service users and 10 were car sharing users. The interviews were conducted in Chinese, as the investigator and the interviewees were all Chinese natives. All interviews were recorded, with an average length of 22 minutes resulting in a total of 121 pages of transcribed text.

The primary purpose of this study was to gain insights into the dynamic nature of PO. Consequently, an inductive research approach was pursued. Thus, the key driver of interviewing was to identify the degree of respondents' PO at different stages of their usage process: namely how high/low their perceived PO was based on each PO root, and whether this perception changed after a certain period. Prior to the interviews, the interviewees were briefly introduced to the concept of PO in order to ensure that they had

a similar understanding regarding the research topic. In the following, they were asked to fill out a questionnaire based on the PO measurement model of Avey et al. (2009), measuring the degree of each root of their PO towards bike/car sharing in the early stage of their bike/car sharing usage. To ensure the results of the questionnaire fully represented the interviewees' early perceived PO, they were asked to complete this questionnaire based on their experiences and feelings within the first quarter of their entire bike/car sharing usage history. This questionnaire comprised of 15 items developed from a Likert-type scale ranging from one (strongly disagree) to six (strongly agree). Every three items referred to one of the five roots of PO. In this measurement, the PO concept was transferred to the bike/car sharing context, and the five terms (self-efficacy, self-identity, having a place, accountability, and territoriality) were defined even more narrowly. With reliability checks conducted by peer reviews – and guided by the methods constructed by Avey et al. (2009) – the measurement model is likely to accurately measure the degree of PO in the bike/car sharing context (e.g. Kleinaltenkamp et al., 2018). Appendix A summarizes the measurement items for the roots of PO from using bike/car sharing.

The main goal of the study was to investigate how respondents' perceived the degree of PO towards bike/car sharing influences value creation in a multi-actors' usage process. Consequently, the complexity and the broad scope of value creation in this context had to be taken into account. Therefore, semi-structured interviews were used as they represent an appropriate approach to exploring attitudes, values, beliefs, motives, and further provided an opportunity to assess the validity of respondents' answers by observing nonverbal indicators (Barriball & While, 1994). Interviews were conducted either in a café or in participants' homes – wherever the participants felt most comfortable. The interviews aimed to explore the interrelations between PO and value creation which involved individual and collective social contexts, with the opportunity to seek "before and after" insights. Participants were first asked to talk about when they

began using bike/car sharing, to what extent each root of PO (involved in the measurement model) meant to them, and if their perceptions changed after a certain time. Following established procedures, deeper questions then investigated their experiences at various stages. Participants were asked to tell their story in their own words about their very first, their most unforgettable, and their most recent usage of bike/car sharing services. In order to obtain more precise insights into the development of participants' thoughts and emotions during their usage process, questions such as "Do you still think the same way today?", "Did the story you just shared change your way of using it ever after?", "Can you elaborate on that?", "Could you explain in more detail?" were raised accordingly. Finally, at the end of the interviews, participants were asked if their general view towards bike/car sharing had changed, compared to the time before they started using the service, and how long they could see themselves still using the service.

FINDINGS

The Dynamic Nature of PO in Usage Processes

In line with the theory developed by Avey et al. (2009), the first section of the investigation was designed to detect how important each of the five PO roots were for the interviewees at the beginning of their usage of a bike/car sharing service. The average scores of the three measurement items per PO root of each participant were calculated just before the interview, so that the interviewer had an initial understanding of how high/low the participants' PO was towards bike/car sharing and, more importantly, which PO root scored the highest/lowest in participant's early usage stage. In this way, the data provided a better direction for the interviewer to lead the interview, and further enabled the interviewer to ask spontaneous, data-informed questions in order to explore how and why participants' perceived feelings changed with regard to certain roots of PO. All PO

roots had an average value ranging from 2.6 to of 4.8, which means that all roots were at least somewhat important for the interviewees' usage of car sharing services.

To provide an inter-subjective comprehensible text analysis, the analysis of the transcribed interviews followed the process of Mayring's (2002) qualitative content analysis. Therefore, the text from the transcripts was summarized through paraphrasing important aspects of major findings, using inductive categories. However, as linking parts of the text to categories is admittedly vulnerable to subjective influences, the interpretation of the data followed a rule-governed interpretation process (Mayring, 2002) that consisted of the three steps of (1) paraphrasing, (2) building first order categories, and (3) building second order categories. After reconsidering the categories, general findings were derived from the second order categories (see Appendix B for an example of the application of qualitative content analysis within this study). Through this process, the following three procedures of customers' perceived PO evolvement were identified:

Forming

Forming refers to the process where a number of customers' activities are taking place toward the focal resource so that PO emerges within. In the practice of forming, similar activities of "controlling the target", "coming to intimately know the target", "investing the self into the target" (Pierce et al., 2001; 2003) were found.

Interviewee 10 shared her story of her first bike sharing experience and how she became a bike sharing fan, whereby she began with lower expectations towards this service. After a specific usage experience she began to feel a high level of freedom in controlling the target, easy access to the target, and easy parking, thus investing herself more into the scheme thus forming a feeling of PO:

"After I got off the subway, I unlocked a clean bike very easily. I felt different immediately after riding it – I was even singing while riding because it is much more convenient when you look at the cars in traffic jams. After I arrived at the restaurant, I

*found a bike parking lot right away while my friends who came with cars spent a long time lingering around for parking space. I was more than delighted that I made a wise decision. Slowly I increased the frequency of using bike sharing service. It represents my way of daily travelling now."(*I10*)*

Fulfilling and Hindering

Fulfilling refers to the process where a certain root of the formed PO leads to a certain usage behavior in which the motive is fulfilled. For instance, Interviewee 19 perceived booking a car as necessary due to the reluctance to share a certain car with other users, which was propagated by his territorial intention of PO. Sporadically, his intention became fulfilled, which enhanced the territorial root of PO. Therefore, he formed a natural usage behavior - booking the car continuously to make sure the car was always at his service:

"*Because I found a small bug (on the app). For example, if I want to use a sharing car an hour later, I will book it in advance. After 15 minutes, I will continue to renew the booking – not on the basis of the previous booking, you have to cancel it and then reselect the car immediately. In this way, this car will always be mine*." (I19)

In contrast to fulfilling, hindering refers to the process whereby a certain root of the formed PO leads to a certain usage behavior during which the motive is hindered. For instance, Interviewee 9 had developed a relatively high degree of accountability and therefore she also had a strong sense of responsibility towards the focal resources and the service provider. However, she shared a negative experience with her service provider which led to a decreased feeling of accountability, which in turn reshaped her perceived PO:

"Once, in the morning on my way to work, I just got out of the subway station and I saw there was a sharing bike so I used the app to unlock it. But while riding I realized that this bike was damaged and it could not function normally. So I got in touch with the

service provider to report this information to them. It took some time and at that moment I couldn't use this bike anymore… It for sure affected my mood because I really needed to get to work earlier, and I felt it would have been faster even with walking… I wouldn't want to use this service in the future if I am in a hurry, remembering this experience." (I9)

Reassembling

Reassembling takes place after fulfilling and hindering, and refers to the process of reassessing each PO root based on the past activities occurring within the actor's psychological state. This contains two aspects: the original high/low degree of each perceived PO root becomes even higher or lower or, on the other hand, leads to a certain shift of the weight of each of the PO roots. The perceived feeling resultant of a certain PO root – originally appearing as unimportant – can eventually emerge as being both crucial and dominant within all other roots, while the degree of another (higher) perceived PO root becomes lower.

For instance, Interviewee 1 was identified with a higher degree of self-belongingness (finding a place) towards the car sharing service especially towards her service provider in the beginning. She only used DriveNow compared with other service providers in Berlin: DriveNow offered different car models whereas Car2go only offered Smart at the time. Moreover, she needed a BMW X1, which has a bigger storage place, for when she went for grocery shopping. Additionally, Interviewee 1 and her partner had become electric car fans through the usage of the electric cars provided by their service provider. They started to think of this service as being particularly environmentally friendly, which matched their value of promoting green energy solutions, and therefore generated a high degree of self-identity:

"It has changed my values - I should say it's not just matching my values but rather, this thing makes my values different. It makes me realize that in this world, cars can also be shared. This sharing service makes the quality of my life better." (I1)

However, the shift of the weights of the PO roots happened only after a longer period of time, whereby usage led Interviewee 1 to develop a higher degree of territoriality over other motives:

"But later I felt, a lot of times, it cannot really help that much. When you want to use a car, after you finally walk there you realize the car is not there anymore (without booking). Or when you want to book a car, you find out there is no car nearby... I mean, compared with before, it actually makes more sense to book a car in advance. This leaves me no other choice, because without the possibility to book a car and make sure there is at least a car available, you don't even need to think about choosing a car model or anything comes after that." (I1)

Similarly, Interviewee 10 communicated a higher degree on self-efficacy in the beginning of her bike sharing experiences, experiencing a shift to a very strong feeling of self-identity towards the sharing target:

"I feel that preferences are closely related to personal values. This thing (bike sharing) makes me happy, and it meets my values of consumption. I didn't expect this at first. But I felt very happy after I got on the bike. And I personally think this is a very good way to travel. This is the reason that has influenced me to choose this service until now." (I10)

From these insights, we propose that the three processes of forming, fulfilling and hindering, and reassembling operate as a loop, with reassembling leading to *re*forming, through which a new round of forming – fulfilling and hindering – and reassembling begins. Thus, a new perceived PO emerges, with a different weight of

each PO root within. Figure 3 illustrates the dynamic nature of PO and how the change within PO occurs:

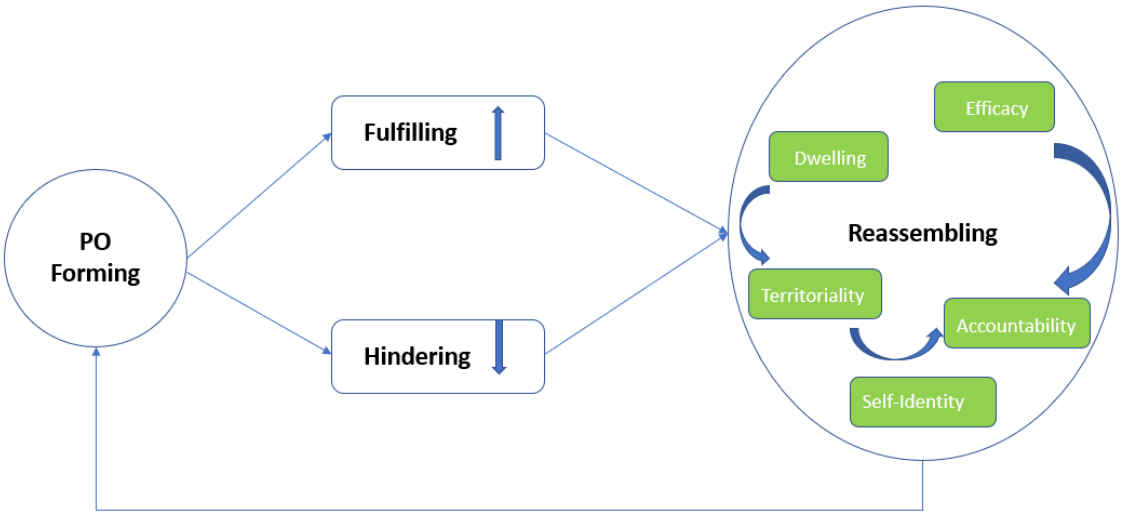

Figure 3: The Circular Approach of PO: Forming – Fulfilling and Hindering – Reassembling

The Impact of PO in a Multi-Actor Value Creation Process

According to goal theory, individuals are equipped with a goal hierarchy, in which higher-level abstract goals are associated with lower concrete ones (Barsalou, 1991; Peterman, 1997). These abstract goals, which are often envisioned as the functional and/or hedonic outcome from the perspective of a single actor, are achieved through usage to constitute value-in-use (Woodruff & Flint, 2006). In line with this understanding, similar behaviors can be found within the evolving process of PO of a focal resource integrator, namely a single user in the bike/car sharing case. Hence, when the degree of a perceived PO root becomes the highest of all, this PO root becomes dominant and thus emerges as being the leading driver of the focal actor's resource integration process. Consequently, a range of activities are undertaken by customers, such as comparing different service providers, advanced booking, choosing a favorite car model, parking in a certain spot, interacting with the service provider or with other customers. Through

these activities, the individuals seek to enhance efficiency, flexibility or hedonic effect, and self-awareness – or look to achieve other personal purposes.

However, in addition to the focal resource integrator, the usage center of a bike/car sharing service also comprises other actors whose perspectives and actions are peripheral from the perspective of the focal resource integrator. These various individual users of the resources may perceive and define the resources and their conditions differently (Kleinaltenkamp et al., 2017). Thus, an individual value driven by one's PO does not necessarily equate to the value of the other resource integrators in the usage center. Moreover, even value co-destruction might occur for at least one of the parties when the individual value perceptions do not match. This observation has received significant support in this research, where two typical conditions have been identified: preventative PO and discord, promotive PO and symbiosis.

Preventative PO and Discord

Preventative PO and discord refers to the situations where the preventative root of PO of a focal actor evolves to be the leading factor of a service user's PO towards the focal resource. In such a situation, activities driven by territoriality emerge as being dominant among the activities actors conduct within the resource integration process. This might have a negative impact on the whole bike/car sharing community which operates in the same business areas as the focal actor. This is in line with Kleinaltenkamp et al. (2017) who argue that once several actors have access to a certain resource, rivalry between these actors may occur, causing negative external effects within the usage of a resource. This is strongly evidenced especially in car sharing services since the purpose of the focal resource is sharing, and the number of the resources may not be sufficient in certain areas and times. Activities such as intentional parking in areas where other resource integrators have no easy access to and reserving bikes/cars for longer periods are identified as being related to the actors whose PO is dominated by the preventative

focus. These activities thus conflict with other resource integrators' value perceptions and may even result in shifting the dominant PO motive to a preventative focus. As a result, it may lead to a negative impact upon the value perceptions of whole usage center of the bike/car sharing service users in the same business areas.

For instance, a booking behavior became necessary for Interviewee 6 after some time because he could not use the car sharing car on multiple occasions due to other users having booked it, which led to an increased territoriality:

"I always book now… I have had such experiences twice: it was about three or four in the morning. I thought who would use the car this late? There is no need to book it. And when I finally walked close to the car, maybe just 10 meters away, I watched the car being taken by someone else. I felt heartbroken while watching it change from green to yellow [the sign on the app indicating the car becomes unavailable], *and it took half an hour for me to find the next car because there were no taxis and the buses had stopped already."* (I6)

Similar to Interviewee 6, Interviewee 9 started to park the bike right next to her work for their own, personal usage. As she witnessed that a lot of users were doing the same, she also started to experience an increased feeling of territoriality:

"Normally you have to park in a certain designated parking space, but the parking space is not everywhere. For example, there is no parking space for sharing bikes outside of my company, but I would park it outside of my company anyways because I mainly need the sharing bikes after I got out of the subway , to ride to work... I even saw people parking the bikes right under their apartments within the residence area. So even other users saw the app displaying a bike being available, they would eventually come to see the bicycle being parked in premises that they cannot enter." (I9)

On the other hand, when the degree of the preventative focus of PO of a certain focal resource integrator decreased, the intention of service users conducting such negative activities (intentional parking, reserving) will be relatively lower, leading to a diminishment of the phenomenon of discord. For instance, although booking a bike was necessary for Interviewee 10 in the beginning, she very soon learned that this action was unnecessary. There were always plenty of bikes available and booking reduced the efficiency:

"Nowadays I always just go directly and pick one bike on the spot. Unless I realize the neighborhood I am in really has no sharing bikes, then I might consider looking in the app. But it's really rare since the sharing bikes are everywhere in the city of Chengdu, especially right next to Metro stations. Using this function actually reduces my efficiency since you have to go over to the place and look for the bike you booked one by one in a sea of bikes... I even discussed this with my friends, a lot of them in the beginning would also book a bike but then they realized there is no need for that…moreover, there are several service providers in the market. If Mobikes are not available at one spot, you can probably find an ofo [competing bike sharing brand] *instead which also make more sense to just look for a bike on spot than booking in advance through a certain provider."* (I10)

Promotive PO and Symbiosis

In contrast to preventative PO and discord, promotive PO and symbiosis refers to the constellations when the focal actor's perceived feeling based on promotive roots of PO evolves to be the most important with respect to the focal resource. In such situations, activities driven by the promotive motives, namely efficacy, self-identity, dwelling, and accountability (e.g. being responsible for the sharing target, making a positive recommendation, showing more commitment) become dominant within the resource integrating activities the actors conduct. This, in turn, leads to a positive impact on the whole bike/car sharing community within the same business area.

For instance, Interviewee 2 developed higher perceived feelings of PO based on the promotive focus (highest on efficacy and accountability) through his integration process, and at the same time expressed a very high sense of responsibility towards the sharing target and a tendency to speak positively about this service to friends:

"I would be more careful [with the sharing cars]*. It's like when you borrow something from a friend, you would usually take care of it very carefully. I think it's the same, and the responsibility should be even stronger… Generally speaking, after my friends have gotten their driver's licenses, I will recommend car sharing before they decide whether to buy a car or not, or before they decide which car to buy. I have recommended a few friends already."* (I2)

DISCUSSION

Contributions

This paper contributes theoretically and practically in three important ways:

First, by proposing the circular approach of PO development: forming – fulfilling and hindering – reassembling, this study extends the current literature on how PO is being generated (Pierce et al., 2001; 2003). In contrast with existing models, this paper identifies further ways of how PO develops after it has been originally generated, thus emphasizing its dynamic nature. The circular approach of PO development analyzes in detail how the weight of each root of PO changes, based on the resource integrator's experiences and learned factors. This is especially important because a higher degree of PO has been posited to affect important relational outcomes such as commitment, loyalty and word-of-mouth (WOM) (Kleinaltenkamp et al., 2018). According to the findings of this study, collective usage processes contribute to the shaping and changing of customer's perceived degree of PO, which leads to important impacts on value creation at both collective and individual levels.

Second, by conducting an in-depth investigation into bike/car sharing customers' value creation processes – associated with different motives of PO through the customer's role as a resource integrator – the study identifies the various contributions all different actors (providers and customers) to value creation in a usage center (Macdonald et al., 2011; Kleinaltenkamp et al., 2017). Moreover, the findings have highlighted deeper insights regarding how the different weight of each PO root impacts a focal resource integrator's usage processes, which in turn affects other resource integrators' perceived PO in a usage center. Thus, the newly perceived levels of PO in turn influence other integrators' usage processes, and vice versa. This weight-shifting of PO as a cognitive process shapes the view of other actors and the focal actor themselves, hence capturing how individual and collective values are formed through the interplay of their ongoing intertwined experiences (Huber & Kleinaltenkamp, 2020; Helkkula et al., 2012).

Third, this paper also offers service providers guidance and indications for improving service quality, confirming that while value co-creation may occur during an interactive process, value co-destruction is also a possible outcome. It demonstrates the fact that the dominance of preventative PO can lead to discord (value co-destruction) whereas the dominance of promotive PO can lead to symbiosis (value co-creation). It is crucial for companies to understand that a customer's PO focus can be influenced *and* changed, thereby increasing customer value co-creation and avoiding value co-destruction.

Implications

This study demonstrates that customers' perceived PO may differ over time, resulting in different behaviors and integrating resources in different ways, through the interactions with their collaborators. Thus, the following implications for service providers can be derived:

It is important that service providers understand the dynamic aspects of PO. PO is not a fleeting or temporary phenomenon, but consistently reassembles thus affecting customers' future usage behavior. In general, the goal of service providers is to achieve promotive PO and symbiosis. Consequently, providers should explicitly consider, from a design perspective, how to embed customers' interests into value propositions. As a result, the design of service offerings should aspire to a commitment that will enable customers to generate a promotive focused PO which sustains the connection.

Moreover, this study shows that a strong focus on preventative PO may lead to negative attitudes within the bike/car sharing service community (via preventative PO and discord). Hence, to achieve value co-creation, service providers need to take opportunities to interact with customers in order to contribute to the shaping of customers' perceived PO, seeking to change customers' existing PO from preventative to promotive. The results of this study support the understanding that the weight of each PO root for a focal integrator can be shifted over time. Hence, service providers are able to perform actions to enhance service users' promotive PO in order to achieve symbiosis by providing services such as introducing various bike/car models, performing regular updates and reassessing sharing targets, keeping the sharing target in good condition, and providing better customer contact services. Further, service providers should also try to reduce customers' preventative focus of PO as much as possible. In order to do so, service providers might consider creating strict regulations about parking areas, or releasing a sufficient number of sharing targets into the market.

Future Research

This paper constitutes a base for future research in the realm of PO. Future research should be conducted beyond bike/car sharing services, to test the applicability of the circular approach of PO development (forming – fulfilling and hindering –

reassembling) proposed by this study to other service fields. We assume that this approach is transferable – especially to sharing economy-oriented settings. However, it would be prudent to investigate whether PO still evolves the same way in fields where property rights boundaries are either blurred, or absent. For example, does the sense of PO evolves the same way towards resources like public goods, such as parks? It would also be beneficial to investigate PO's development in services which offer intangible goods, such as insurance and banking.

Appendix A: Measurement for the Roots of PO in Bike/Car Sharing.

Motive	**Measurement Items**
Self-efficacy	*Item 1*: Using bike/car sharing helps me to organize my daily life.
	Item 2: By using bike/car sharing I can avoid problems, which would otherwise accompany me in my daily life (e.g., search for a parking space in the city)
	Item 3: By using bike/car sharing, I am in a better position to achieve my goals efficiently in daily life.
Self-identity	*Item 4*: I use bike/car sharing because it corresponds to my personal self-conception.
	Item 5: The bike/car sharing usage gives me positive self-esteem.
	Item 6: When the concept of bike/car sharing is publicly criticized, I feel compelled to defend it.
Having a place	*Item 7*: When I use bike/car sharing, it is important to me to be driving a specific car.
	Item 8: I use a specific bike/car sharing provider because only this one offers the bike/car model I prefer.
	Item 9: The model of the used bike/car is an important aspect to me when using bike/car sharing.
Accountability	*Item 10*: I find it important to give feedback to the bike/car sharing providers directly to keep improving the service.
	Item 11: I have to make sure that the sharing bike/car is left in good condition.
	Item 12: I find it annoying when the sharing bike/car has not been left in a good condition by other users.
Territoriality	*Item 12*: When I use bike/car sharing, I previously reserve a specific car to be sure that no one else books it.
	Item 13: I park the sharing bike/car deliberately in places where it is unattractive to collect the car for other users.
	Item 14: It annoys me when the bike/car I used beforehand is booked by another user, so that it is no longer standing at the parking lot where I have left it.

6-point Likert for each item (1 = I strongly disagree; 2 = I disagree; 3 = I somewhat disagree; 4 = I somewhat agree; 5 = I agree; 6 = I strongly agree)

Appendix B: Example of coding agenda based on qualitative content analysis

1-st Category	Paraphrase	Quotes	Coding Rules
higher perceived PO over time	A higher perceived PO based on one PO root or an overall higher perceived feeling of PO towards the sharing target: -to feel the importance and the frequency of adopting a certain action derived from a certain motive is higher than before -to have a positive feeling towards the sharing target after certain experience. -to be sure that one's effort based on a certain motive had positive impact on improving the current situation	"It is for sure becoming more important, otherwise less people would take care (of the sharing car). Then the trust between the company and the customers will decrease, which might make the service hard to continue." (I4) "You can experience the different function and performance between each car model, which is pretty cool. This is one advantage I haven't thought of before." (I2)	Any of the three aspects of paraphrase point to higher perceived PO over time
stable perceived PO over time	No particular fluctuations from both mental state or practical behavior recognizable	"It seems that there is not much change for me. Convenience is always the main reason behind it." (I5)	If not any aspect of paraphrase point to "High" or "Low"
lower perceived PO over time	A lower perceived PO based on one PO root or an overall lower perceived feeling of PO towards the sharing target: - to feel the importance and the frequency of adopting a certain action derived from a certain motive is lower than before -to have a negative feeling towards the sharing target after certain experience. -to be sure that one's effort based on a certain motive had no impact on improving the current situation	"Sometimes you just cannot unlock the bike. Sometimes it's because of the app, sometimes it's because of the bike itself being damaged, or sometimes because the internet of your phone is not good, anyway those moments were really annoying." (I8)	Any of the three aspects of paraphrase point to lower perceived PO over time

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7. INTERRELATIONS AND CONFLICTS BETWEEN PRICING SYSTEMS AND VALUE IN USE PERCEPTIONS IN BUSINESS MARKETS – A CONCEPTUAL FRAMEWORK AND RESEARCH PROPOSITIONS

1. Introduction

In B2B markets, it is crucial to understand and grasp value for both customers and suppliers in order to understand further purchasing and marketing decisions (Eggert et al., 2019). For both sides, this value is very much dependent on the price that is paid for a product or service. However, despite its great importance in B2B marketing, pricing is one of the, if not the most neglected topic in this field (Brennan et al., 2007). In the past decades, lots of effort have been drawn on investigating the impact of pricing systems on consumers' usage behavior and their pricing perceptions in the B2C context. For instance, there is a big probability that the customers will make an ex ante mistakes in their tariff choices when being confronted with different tariffs (e.g. pay-per-use, flat-rate etc.) by their telecommunication service providers. They may find out at a later stage that another tariff option would have been more appropriate with respect to their actual consumption behavior (Miravete, 2003). The same holds for the situation of choosing a contract from a health club. DellaVigna & Malmendier (2006), for instance, claimed that on average, customers who chose a monthly flat fee could have saved $600 during their membership, if they had chosen the pricing scheme of a 10-visit card. Another example is the usage behavior of German railway travelers. Here, research shows that the German railway cards (e.g. Bahncard 25, Bahncard 50 etc.) are used far too little to actually take advantage of the possible price advantage (Schmale et al., 2011). These findings as well as others that are, for instance, related to internet access plans (Lambrecht & Skiera 2006), all-you-can-eat buffets (Just & Wansink, 2011), or online newspapers (Krämer & Wiewiorra, 2012) have already shown that pricing systems do affect consumers' usage behaviors and perceptions. In contrast, research on the relation between pricing systems and customer value perceptions in the B2B field remains scarce. However, in contrast to the lack of

academic attention on this topic, usage-based pricing systems are quite popular in B2B settings in practice. For instance, non-linear pricing schemes are also applied to telecommunication services in business markets (e.g., internet access or local, long-distance, and wireless phone services). This is of great relevance, as telecommunication revenues generated by business customers are growing consistently each year. Consequently, Deutsche Telekom AG (2015) launched a SME campaign to boost revenues by 600 million euros in the business customer segment. Moreover, it is assumed that 63% of companies prefer to buy packaged software instead of building their own in the future (Roe, 2011). This will impact significantly the total cost of ownership for software usage (Bibi et al., 2012). Moreover, flat rates show a growing potential in other B2B markets such as the machine construction industry. For instance, Trumpf, Inc., a German machine tool manufacturer, prices value-added services like maintenance agreements at a flat fee (Trumpf 2010).

Considering the highly popular usage-based pricing systems in B2B practice and the lack of academic attention to this field compared to B2C, understanding the impact of pricing systems on customers' usage process and value perceptions becomes essential since pricing has a multidimensional impact on costs, margins, revenues, and customer perceptions (Homburg and Totzek 2011). Thus, this paper is aiming at offering insights into the interrelations between pricing systems and value in use in B2B markets. More specifically, it focuses on seeking the answer to how pricing systems impact value-in-use perceptions in B2B settings where value-based pricing is possible. By addressing this question, this study contributes to the current state of knowledge in three ways. First, this paper is the first to present a conceptual framework that incorporates pricing systems and value in use as critical components trying to integrate the two research streams into one coherent concept that opens vast research opportunities. Second, a major contribution of this paper is providing testable research propositions that identify the conflicting pursuit

of each party's goal achievement in a given pricing system. Future research with different focuses are thus derived and possible methods to investigate the derived research questions are presented. Third, this paper helps give guidance to both supplier and customer firms in designing and/or choosing optimal pricing systems that help enforce price premiums by understanding the customers' perceptions on each level and their conflicting value pursuit.

The remainder of the paper proceeds as follows: After presenting an overview on pricing systems and value concepts, the author presents a conceptual framework linking these two previous illustrated concepts. By putting pricing systems at the central part of the suppliers' and customer's sphere in the conceptual frame, the author describes how pricing systems can affect customers' value perceptions in service usage. The paper concludes with a discussion of its contributions and implications.

2. Conceptual Development

2.1 Pricing

2.1.1 Pricing systems

Overall speaking, pricing systems, also known as pricing models, can be defined as "the manner in which a company offers its products or services and monetizes the value in the form of a price" (Simon & Fassnacht, 2019, p.522). Pricing systems can mainly be divided into linear pricing systems and non-linear pricing systems. In a linear pricing scheme, the price per unit is fixed. Let P represent the price per unit, and quantity is represented by X, such that total revenue is E(x) = PX (DeSalvo & Huq 2002). This equation explains that the linear pricing systems are those with a usage-independent average price per unit. In contrast, non-linear pricing systems are usage-dependent as the average price per unit is influenced by the volume or intensity of usage. Ever since new technologies such as smart cards and internet being introduced, which allow firms to track

their customers' usage volume, sophisticated non-linear pricing systems became quite popular in practice (Lambrecht & Skiera 2006). Non-linear pricing systems can be differentiated into single-part and multi-part pricing systems. Here, flat-rate, pay-per-use and bucket pricing are the most common single-part pricing systems:

1. Within a **flat-rate system**, customers have the right to use a product or a service with an unlimited usage volume during a certain period at a fixed price. To receive and keep the right to use, customers have to pay the fixed fee by the end/beginning of every period again (Lambrecht & Skiera 2006). Thus, a flat-rate represents a usage-dependent pricing system as the average cost drops while the usage increases. More typically, its marginal cost is zero. An example for flat-rate pricing is when customers subscribe to online streaming platforms like HBO or Netflix. They pay a fixed price per month or per year and get access to an unlimited number of movies and shows. A further B2B-specific example is given by the online advertising industry. Here, some agencies charge a flat fee for their clients instead of using a bill-by-the-hour model.
2. Within a **pay-per-use system**, customers (only) pay for the products/the amount of service that they have actually used without any fixed cost or base fee. Examples are given by the offerings of gyms or sports clubs, where customers can choose not to join a one-year membership but just pay for the training per visit. Another example in the B2B field are mobile payments services. Here, providers like SumUp charge their clients with a certain rate of a transaction fee per card payment.
3. Similar to a flat-rate pricing system, **bucket pricing** also requires a fixed fee for every period. However, a difference exists with respect to the amount of usage. While bucket pricing only provides a limited usage volume, a flat-rate system offers an unlimited one (Schleret & Skiera 2012). Moreover, typically, the service

cannot be used again once the so-called “bucket” is empty. Meanwhile, when there is still a certain amount of usage volume left by the end of one period, it cannot be transferred to the next period. An example for bucket pricing is giving by mobile/internet services where only a fixed amount of data (e.g. the amount of texts, call minutes, internet surfing volume etc.) is being provided and charged.

Moreover, also multi-part pricing systems exist, of which two-part systems and three-part pricing systems are the most prominent. **Two-part pricing systems** usually consist of a usage-independent base fee and additional fees for every marginal usage (Schlereth & Skiera 2012). For instance, an electricity supply contract typically contains a monthly base fee with used units getting invoiced additionally. **Three-part pricing systems** are usually combinations of two-part pricing systems and a bucket pricing system. For example, such a system may consist of a usage independent base fee and, similar to bucket pricing, a certain volume of usage for the customer. On top, however, unlike bucket pricing when no more usage is allowed, the third level of the system allows the customers to buy additional marginal units (Schlereth & Skiera 2012). Such two-part and three-part pricing systems are quite popular in IT industry in B2B markets. For example, a hypothetical web analytical vendor may introduce the software to the clients either with two-part pricing which includes a pay-per-use pricing system being on top of a base investment fee, or with three-part pricing which consists of a base platform fee and a fixed fee for the first 100K events, afterwards each analytical event beyond that “bucket” processed by the system would cost a certain price.

2.1.2 Pricing system choice biases

Facing the various pricing systems described above, choosing a pricing system can be complex. The rational assumption would be that customers choose the pricing system that maximizes their utility based on their future consumption frequency (Della Vigna & Malmendier, 2006). Rational customers would thus choose from a menu of

contracts with the pricing system of the lowest billing rate for a given amount of usage. However, to do so, customers would have to forecast their usage of the specific product or service. Yet, prospect theory indicates that individuals do not always act as what utility theory predicts (Harnisch & Knaf 2014). This is also supported by empirical studies that show that customers do not always choose the pricing system that offers utility maximizing over time (Wolk and Skiera, 2010).

In contrast, facing different offers of pricing systems, customers have certain decision-making biases that prevent them from taking rational or optimal decisions. Among those, two types of biases have been mostly discussed. First, individual customers are often influenced by their preferences to choose a flat rate contract rather than a pay-per-use contract. This "flat rate bias" (Train, 1991) thus refers to cases when people choose flat-rate pricing systems even if a pay-per-use system would cause less cost for their actual usage. This bias was first been discovered in studies on households' choices for telephone services in the 1980s. Ever since, the flat-rate bias has been identified in many studies (e.g. Krämer & Wiewiorra 2012, Schmale et al. 2011, DellaVigna & Malmendier 2006, Lambrecht & Skiera 2006, Kridel, D.J. 1993, Train et al. 1987). However, further studies (e.g. Lambrecht & Skiera 2006) also identified a "pay-per-use bias". In contrast to the flat-rate bias, a pay-per-use bias relates to decisions when individuals choose a pay-per-use system even if their actual usage causes higher costs compared to other pricing systems. However, this happens less often and less regular than the flat rate bias (Wolk and Skiera, 2010).

2.1.3 Causes for pricing system choice biases

In literature, four different causes have been identified explaining the existence of flat-rate and pay-per-use biases: (1) insurance effect, (2) taximeter effect, (3) convenience effect, and (4) over- or underestimation effect (Lambrecht & Skiera 2006).

Insurance Effect: This effect relates to the observation that a flat-rate pricing system provides an unlimited allowance to insure against exploding pay-per-use costs (Miravete 2003). Customers, especially those who are risk-averse, tend to choose a flat rate to ensure false predictions about future consumption (Lambrecht & Skiera 2006). In addition, a flat rate provides an option value that is independent of actual use and gives customers the opportunity to use more services at the same price (Kridel et al., 1993).

Taximeter Effect: The continuous increase of the total fee on a taxi meter keeps customers from enjoying a taxi ride. Consequently, being reminded on the payment during consumption lessens the pleasure of usage (Prelec & Loewenstein 1998, Soman & Gourville 2001). Hence, a pay-per-use tariff reduces the joy of consumption, while a flat rate tariff helps customers to separate the payment from usage mentally and even leads usage to be enjoyed as being "free" (Prelec & Loewenstein 1998, Thaler 1999, Lambrecht & Skiera 2006).

Convenience Effect: Customers might believe that calculating and comparing alternative tariffs is not worthwhile (Winer 2005). Hence, they often strive to minimize the information cost (Lambrecht & Skiera 2006) and might also choose the tariff they experienced before (Train, 1991). Consequently, if customers have already used a flat-rate, a flat-rate bias might occur, and if they have applied a pay-per-use tariff beforehand, a pay-per-use bias might occur.

Over- or Underestimation Effect: Customers tend to overestimate usage beyond the break-even volume of two optional tariffs which then typically results in choosing a flat-rate (Nunes, 2000; Lambrecht & Skiera, 2006).Especially in B2B settings, it is typically even more difficult to predict precisely the exact amount of usage since the buying decision often refers not just to the usage of a single user but to a number of different users. Therefore, overestimation leads to flat-rate bias whereas underestimation leads to pay-per-use bias (Backhaus et al. 2011).

In a number of studies, all four previously mentioned effects, have been identified when consumers make decisions on a pricing system in B2C settings. In contrast, with respect to B2B markets, there exists only one study that investigates these relationships so far. According to this study, the taximeter effect is not relevant in B2B settings (Backhaus et al. 2011). The reason is that, unlike individual decision-making and usage processes in B2C settings, the role of deciders and users are often separated in firms. For instance, for a firm, oftentimes one department is in charge of deciding which product/service the company will buy, while the members of a different department actually use the respective product/service, e.g., a software. Thus, the actual user/consumer is not responsible for the resulting costs so that the "pain" of paying for consumption becomes irrelevant.

With respect to the convenience effect, decision makers in B2B markets are typically professionals whose job it is to base decisions on economic measurements and to control cost. However, the study of Backhaus et al. (2011) suggests that the convenience effect still has an impact on choosing a pricing system with a flat-rate bias. This is mainly because the estimated level of a usage is usually set higher as companies seek to avoid unexpected billing results caused by pay-per-use pricing systems. Moreover, the insurance effect may also strongly support the emergence of a flat-rate bias. As the individuals taking decisions on a pricing system and the users are usually separate in B2B settings, there is almost no influence from the deciders on the users' usage behavior. Therefore, the best way to control cost and to prevent additional costs is to introduce a cost insurance through a flat rate system. Otherwise, decision makers might end up making wrong decisions, thus putting their work at risk. Lastly, due to uncertainty and group-decision effects, supportive evidences has also been found for over- or underestimation effects in B2B settings (Backhaus et al. 2011).

2.1.4 Sunk cost effect in pricing systems

Apart from the phenomenon of pricing system biases, many studies in B2C settings also identified a sunk cost effect in this regard (e.g. Dick & Lord 1998, Gourville & Soman 1998, Just & Wansink 2011). Sunk costs are defined as costs that have already incurred and cannot be recovered (Heath 1995). Consequently, rational customers should not take sunk cost into account for future decisions (Thaler 1985). However, people's desire not to appear wasteful (Thaler 1985) and to justify a prior course of action to themselves or others (Brockner 1992) often leads them to nevertheless consider sunk costs. Thaler (1985) argues that a "mental account" is created when a consumer enters a transaction and is closed upon completing the transaction. This psychological link of transaction costs and benefits is also defined as coupling (Prelec & Loewenstein 1998). In B2C contexts, in various studies empirical evidence has been found for supporting this sunk cost effect on usage process. For instance, Dick and Lord (1998) point out that, within a two-part-pricing system, the usage independent base fee was identified as sunk costs that can increase the usage invoiced as pay-per-use.

In contrast, in B2B settings, the impact of sunk costs from a certain pricing system on customers' perceptions has not been studied so far. The main reason for this might be that the users are not aware of possible sunk costs since they are not paying for their usage themselves. However, sunk costs are well acknowledged as having an influence on decision-making within business relationships in B2B literature (e.g. Buchheit & Feltovich 2008; Kleinaltenkamp et al. 2013). As illustrated before, professional decision makers within firms are human beings as well who maybe or often are irrational. As a result, companies may consider certain elements of the pricing system as sunk costs, thereby affecting their usage behavior and their perceived value. The perceived value, on the other hand, changes what customers expect from the price they pay and what pricing systems to choose in the future exchanges.

Pricing may be the closest reflection of value, yet it only covers the money 'leaving the pocket'. However, it does not capture the value of a product or service as it is experienced in its usage. Therefore, the following chapter attempts to align the two concepts, pricing and value, together.

2.2 Value in business markets

At the very moment of transaction, a buyer agrees to pay the provider a specific price required for its product or service. From the seller's perspective, the price reflects the value that the product or service delivers to the customer. The price thus reveals a kind of an 'objective' perspective of value that is captured in the term value in exchange, which "as reflected in market prices, represents the objective conceptualization of value (i.e. the power of purchasing other goods)" (Eggert et al., 2019, P.14). On the contrary to the concept of value in exchange where the value 'is set in stone' at the very moment of transaction (Merz et al., 2009), value in use (Vargo & Lusch, 2004) acknowledges that providers of goods and services are just offering a value proposition at the moment of exchange. The actual value is left to be determined within the customers' usage processes (Kleinaltenkamp, 2013; Pfisterer & Roth, 2018).

Accordingly, Eggert et al. (2019) have disaggregated value further into expected value in use, experienced value in use and relationship value:

1. Expected value in use represents the expected benefits and costs for both suppliers and customers that is derived from a value proposition (Payne et al., 2017). A value proposition makes promises on expected value as companies sell promises and create expectations among customers (Vargo & Lusch 2008). In a B2B setting, expected value in use typically reflects the monetary value of a market offering from the supplier that meets the customer's needs and results in their willingness to pay (Kumar & Reinartz, 2016). Suppliers and customers in B2B markets will only agree on an exchange when both parties reckon that no better alternatives can be found and

the expected value in use would only make them better off (Plinke & Wilkinson, 2015, Eggert et al., 2019).

2. Experienced value in use represents all perceived consequences arising from the usage of a product or service which reflects the value of the customer's or supplier's outcome, purpose or objective (Macdonald et al. 2011; Macdonald et al. 2016). Literature emphasizes that the perception of value in use is mainly determined by the experiences customers make within usage processes, as without usage there is no experienced value in use as perceived by the customer and as a result, the value proposition becomes invalid (e.g. Grönroos 2011, Vargo & Lusch 2008). Moreover, Grönroos (2011) distinguishes between three dimensions of customer perceived value: (1) effects on the customer's growth- and revenue-generating capacity; (2) effects on the customer's cost level; and (3) effects on perceptions. The former two can be measured in monetary terms whereas the latter is a rather 'soft' category. Ideally, the feeling of "being better off" can be transferred into hard economic measures, for example, the customer's revenue generating capacity and costs (Grönroos 2011).
3. Relationship value represents "the sum of the experienced as well as expected benefits and cost reductions generated in ongoing exchanges with a business partner" (Eggert et al., 2019, P.15). The key to maintain a long-term mutually profitable customer relationship is to create superior value for the customer, which requires the provider to take customer satisfaction, customer's need of quality improvements and willingness to pay as fundamental aspects (Ravald & Grönroos, 1996). Ulaga & Eggert (2006) demonstrate relationship value from the customer's perspective and disaggregate it into relationship benefits and relationship cost.

Eggert et al. (2019) describe all three conceptualizations of value as contextual: The common marketing assumption is that usage processes transform value expectations

into experienced value in use (e.g. Grönroos 2011, Vargo and Lusch 2008). On the other hand, experienced value in use is crucial in forming relationship value (Eggert et al., 2019). In turn, past experiences from a business relationship as well as the value propositions of a business partner keep on shaping expected value in use in future exchanges (Payne et al., 2017). This is in line with the acknowledgement in literature of experience being individual, dynamic, cumulative and context-bound (e.g. Chandler & Vargo, 2011). Therefore, learned factors based on past experiences are changing and developing over time which leads to newly formed expectations with regard to value in use.

2.3 Collective value vs. individual value in business markets

According to Vargo and Lusch (2006, 2008), the core process of value creation is resource integration in which customers participate as resource integrators. Customers operate on resources that are made available to them by other actors, a given provider or other market actors in order to increase their well-being (Vargo et al., 2008). The indicated actors might either be individuals or multitudes of individuals such as an organization, a family, a group of acquaintances etc. (Macdonald et al., 2016). The participants of such a multi-actor usage process are termed the "usage center" (Macdonald et al., 2016, p.97) that comprises "from the perspective of a single actor, all resource integrators that draw on a focal resource within a usage process" (Kleinaltenkamp et al. 2017, p.721). In the process of resource integration, individuals within a usage center each perceive multiple dimensions of both collective and individual value in use. Collective value in use relates to the perceived goals of the collective entity the individuals believe to be a member of, whereas individual value in use corresponds to the goals of the individuals themselves (Macdonald et al., 2016). In B2B markets, collective value can be understood as company value or team value (Macdonald et al., 2011) that reflects the effects on the achievement of organizational goals such as cost and risk

reduction or being innovative (Macdonald et al., 2016). Individual value, on the other hand, is related to individual goals such as personal reputation, social satisfaction or stress reduction (Macdonald et al., 2016). Individuals within one usage center usually follow several different goals on both individual and collective levels (Epp & Price, 2011), resulting in assessing the same product, service or business relationships in different ways (Eggert et al. 2019).

It is important to note that in purchasing organizations, buyers and users are oftentimes separated (Backhaus et al. 2011). Consequently, typically, also the goals of the decision-makers within the purchasing department and the users of the respective products or services differ, leading to different assessments of individual as well as collective value. Rolfes (2007) further distinguishes between the direct users as those users who actually use a product or service, and indirect users who benefit from direct users' product or service usages. For example, a CEO of an advertising agency may never actually use the software PowerPoint. Nevertheless, he or she profits from a brilliant presentation which his or her staff prepared with PowerPoint when pitching to the client. This is in line with the logic of Kleinaltenkamp et al.'s (2017) concept of the usage center that consists of a combination of interdependent actors that draw on resources across their individual usage processes to create value. Another important aspect of the user role which is stated by Wilson (1999) is that the user is the person using or declining to use a product. Following this logic, it is in line with Grönroos's (2011) presumption that if the direct user rejects to use a product, then there is no impact on perceived value, thus no experienced value in use at all. Ultimately, direct users can refuse to use a certain product and therefore blur the value propositions sold by vendors and purchased by the ones involved in usage center, thus diminishing collective value.

In a nutshell, this paper acknowledges the difference between collective and individual value, the role difference between direct and indirect users, the contextual

nature of value, as well as the value conceptualizations from Eggert et al. (2019). Based on this foundations, a conceptual framework is provided in the next section that (1) incorporates pricing systems and value in use as critical components; (2) details the two spheres of suppliers and customers; (3) differentiates between collective and individual value, and (4) shows how these value conceptualizations are linked through pricing systems.

3. A Conceptual Framework

In B2B markets, pricing systems and usage process have been largely treated separately despite acknowledging that they are related (e.g. Backhaus et al. 2011). In order to articulate the precise nature of their relationship, this paper adopts the integrative framework of value in business markets (Eggert et al., 2019) as a theoretic lens. A dynamic model (Figure 1) is built upon this theoretical lens linking pricing systems with value in use through usage process in B2B settings.

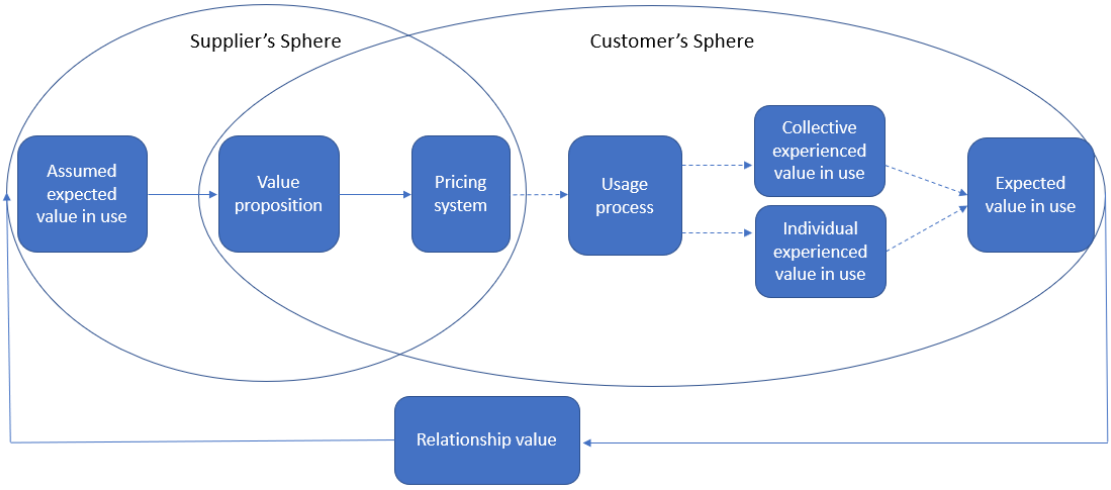

Figure 1. Conceptual framework for linking pricing systems and value in use in B2B markets (based on Grönross & Voima 2011)

The conceptual framework acknowledges the interplay between expected and experienced value in use as well as relationship value, and further disaggregated

experienced value in use into collective and individual experienced value in use. It consists of two spheres: the supplier's sphere and the customer's sphere:

The supplier's sphere represents the phase where assumptions on expected value in use, namely expected benefits and costs are being integrated into value propositions that are presented together with price offerings/pricing systems to the customer.

The overlapping part of the supplier and customer sphere represents a transaction episode in which both parties interact with each other. Typically in B2B markets, where suppliers and customers are organizations that follow a similar logic of building goals and expected value (Plinke & Wilkinson, 2015), a transaction will only take place when both parties' expected benefits and costs match with each other and no better alternatives can be found (Plinke & Wilkinson, 2015, Eggert et al., 2019). This phase of interaction and communication between supplier and customer builds the pre-step for experiencing value in usage processes. Integrating suppliers' offers into customers' activities makes the supplier a co-creator of value (Grönroos, 2011). Weiber and Hörstrup (2009) make the call that this phase of interaction and respectively the integration of supplier's offerings in the customer's usage process is key to create value in use.

The customer sphere encompasses the generation of experienced value in use through customer's usage of supplier's offerings. Specifically, different members of the same company do not necessarily pursue the same goals on individual and collective levels, which results in different usage processes and perceptions of the same products or services. Thus, even when individuals share the same organizational resources, their individual value experience may vary (Macdonald et al., 2016) which in turn shapes customer's expected value in use in the furure. Notably, both individual and collective value are being perceived from the perspective of a single individual, but a shared understanding and assessment of collective value can be reached through communication between individuals based on their value experience (Eggert et al., 2019).

The linkages of the dashed lines in the conceptual framework represent the gap in literature as no study has analyzed the impact of pricing systems on individual and collective value in use in a B2B context so far. The crucial difference between B2B and B2C settings in analyzing the interrelation between pricing systems and value in use lies in the fact that decision makers and actual users are mostly different individuals in B2B settings, who may be driven by different goals that may result in different value assessments and may even create conflicts between individual and collective value. In general, this makes it not as straight-forward as analyzing this topic in B2C settings. However, our literature review has shown that pricing systems do have an impact on customer usage processes also in B2B settings (Backhaus et al. 2011). While the flat-rate bias has been identified in B2B settings as well, other effects that were identified in B2C settings like the sunk costs effect have not been investigated yet. As decision makers and users in B2B settings are human beings as well, we assume that there are overlaps with the customer's decision-making processes and the value perceptions in B2C settings.

This research gap thus also relates to a research gap emphasized in Eggert et al. (2019)'s integrative model. To fill in this underexplored field, the authors claim that "[e]xamining the value concept from an individual actor's perspective and better understanding the concurrent, and sometimes, conflicting pursuit of individual as well as collective goals represents a major research opportunity in business-to-business marketing" (Eggert et al., 2019, P.18). Furthermore, a comprehensive understanding towards value on both individual and collective levels also helps managers to create superior value for the individuals in both the buying and the usage centers of the customer organizations (Macdonald et al., 2016).

4. Research Propositions

In the preceding section, we present empirically testable research propositions focusing on single-part pricing systems based on the conceptual framework to further articulate (1) the impact of pricing systems on individual value-in-use perceptions; (2) the impact of flat-rate/pay-per-use systems on collective value-in-use perceptions; (3) the conflicts between the value perceptions of individual/collective levels and different parties deriving from the opting of different pricing systems. (see Figure 2)

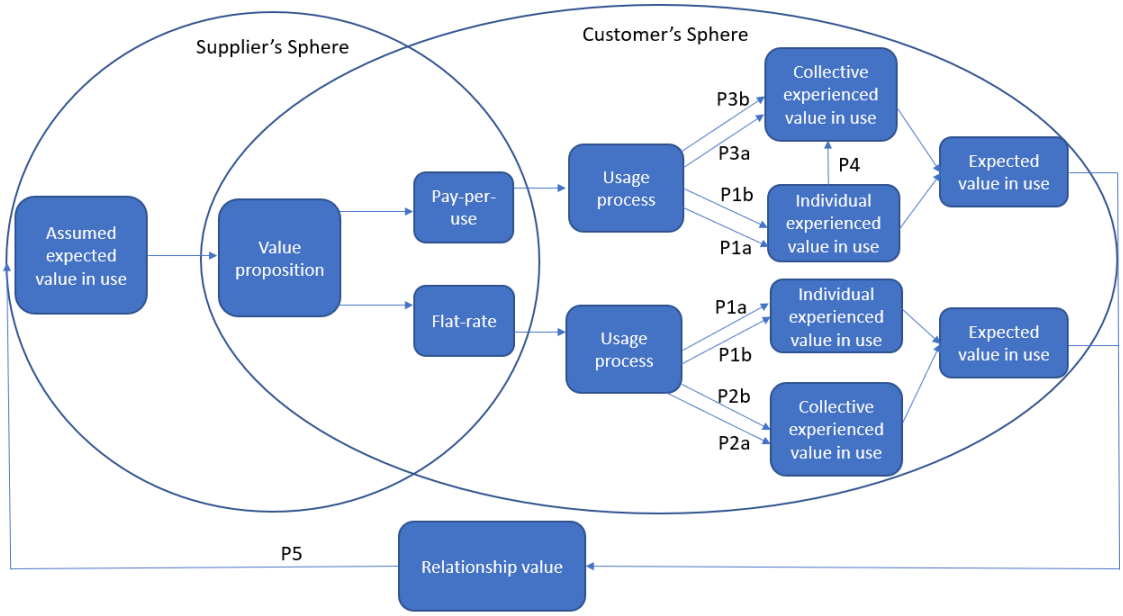

Figure 2. Research Propositions

4.1 The impact of pricing systems on individual value in use

The basic assumption of this paper is that in B2B settings differences may exist between the goals of those individuals being in charge for purchasing decisions and those who use a purchased products or services later. Moreover, as usage processes are often heterogeneous, different value-in-use perceptions may emerge related both to the individual and the collective level. The direct users in business markets are not necessarily buyers and may therefore not be aware of the purchasing costs of a product or service they use. Hence, direct users are free from the 'pain' of paying for consumption and could care less of costs meaning that for them no taximeter effect exists (Backhaus et al. 2011). As in business markets, individual value in use, i.e., the value for a direct user, is distinct

from collective value in use, we can assume that this individual value in use is not directly related to pricing systems since the direct users are neither aware of nor care about purchasing costs. Instead, individual value in use is directly related to users' experiences in usage processes, which is broadly accepted in both literature and practice (e.g. Vargo and Lusch, 2006, 2008; Grönroos 2011). Here, Davis's (1989) technology acceptance model on diffusion of a software identified two factors that drive usage: the ease of use and the perceived usefulness. Based on this model, Lee and Park's (2008) empirical study supported that perceived usefulness and ease of use have an impact on users' satisfaction. This feeling of "easy to use" and "worthwhile to use" (ibid) during direct users' usage process may thus influence the individually experienced value in use. This is especially relevant for B2B settings. For example, in the case of software usage, direct users mainly use software to make their daily tasks simpler and more efficient. At the same time this software usage has an impact on others who belong to the same team or organization (e.g. indirect users, stakeholders) and who might benefit from their usage as well. Therefore, for B2B markets, we propose:

P1a: Regardless of the pricing system, a higher intensity of usage leads to a higher level of experienced individual value in use of a direct user.

P1b: Regardless of the pricing system, a lower intensity of usage leads to a lower level of experienced individual value in use of a direct user.

4.2 The impact of pricing systems on collective value in use

The value a firm receives from a product or service typically results from the identified effects on its cost level and perceptions of assumed degree of goal achievement for the firm (Grönroos 2011). This is in line with the concept collective value being often related to organizational goals like cost and risk reduction (Macdonald et al., 2011). We acknowledge that cost level is one pivotal dimension of the collective experienced value

in use for an organization, especially for actors who are involved in buying processes, or are members of a respective cost center or of C-levels that are rather indirect users than direct users. These indirect users do not perceive the ease of use or usefulness of a product/service like direct users do. Hence, cost level is one of the most crucial factors, or in some situations even the sole factor that affects indirect users' value perceptions. Thus, collective value in use in this section is rather illustrated from the indirect users' view, which is distinct from the direct users' individual value-in-use perspectives.

A classic implication from microeconomic theory is that firms should only base their decisions on prospective costs. Hence, when customers are provided with a flat-rate offer, the price being paid in a flat-rate system are sunk costs that should not affect firm behavior. However, Just and Wansink (2011) demonstrated the sunk cost fallacy in their all-you-can-eat buffet study: The higher the fixed price customers pay, the more they consume. Typically, Just and Wansink (2011) indicate that even when there is no marginal cost for additional consumption, price is still taken into the evaluation of marginal utility by customers (Just & Wansink 2011). Carmichael and Macleod (2003) demonstrate that in the case of bargaining situations, taking sunk cost into consideration may be rational. Buchheit and Feltovich (2008) also pointed out that pricing behavior varied substantially and significantly with the level of the sunk cost in B2B settings. They claim that within "cost-based pricing", firms' price setting is based on average total cost rather than marginal cost (ibid). This stands in contrast to classic economic theory but is oftentimes the case in real-life situations (Buchheit & Feltovich, 2008). Hence, higher sunk costs are seen as higher average total costs that, as a result, lead to higher prices (Buchheit & Feltovich, 2008).

On the other hand, collective value in use that reflects organizational goals is still being perceived from the perspective of a single individual in an organization (Eggert et al., 2019). In a standard B2B setting, especially re-buy decisions involve a number of

departments of an organization, ranging from accounting, finance, IT, purchase to senior management. Most of the actors in these departments are not direct but indirect users whose goal of buying/re-buying a certain product or service is to achieve some sort of business advantage where the cost or price level is oftentimes the primary factor for their evaluation process. For example, to increase shareholder value and to maintain a long-term profit maximization is one of the basic tasks of a CEO while price management plays a crucial role for its realization (Simon & Fassnacht 2019). Even when a flat-rate system already offers a fixed cost, as human beings taking the role of professional decision makers, they oftentimes fail to ignore sunk costs in their decision making (Buchheit & Feltovich, 2008). Especially in system businesses (e.g. telecommunications systems, information technology systems), the intensity of usage is always traceable in the IT system (e.g. user log in, user clicks). This is essential or sometimes even the sole evaluation factor for actors who are involved in a buying center, a cost center or at C-levels in re-buy decisions. It is obvious that within a flat-rate pricing system, a higher amount or intensity of usage results in lower average costs per usage unit whereas a lower amount or intensity of usage leads to higher average costs per unit. Even though there are no marginal costs for any additional usage, the average cost per unit may be taken into the evaluation of marginal utility by these in-direct users. Therefore, we propose:

P2a: In a flat-rate pricing system, a higher intensity of usage leads to a higher level of indirect users' collective experienced value in use.

P2b: In a flat-rate pricing system, a lower intensity of usage leads to a lower level of indirect users' collective experienced value in use.

In contrast to a flat-rate pricing system, in a pay-per-use pricing system, every unit of usage must be paid at a fixed price per unit. Or put differently, the more customers use a product or service, the higher are the total costs, and vice versa. Hence, ideally, a pay-per-use system leads to lower expenses for the customers, if their bill amounts are

predictable and controllable. While giving customers the ability to manage per-use costs, a pay-per-use pricing system may also backfire negatively because of unpredictable usage. As in B2B settings direct users of a certain product or service usually are not aware of pricing topics, high cost level can be generated during frequent use periods. This would contradict the achievement of organizational goals especially those related to cost reduction. Moreover, Backhaus et al.'s (2011) findings also pointed out that 73 percent of all tariff choices are due to flat-rate biases in B2B markets. This explains at least partially decision makers' inability to budget effectively under a pay-per-use pricing scheme which can lead to a premium payment for bursting capacity. Therefore, we propose for B2B markets:

P3a: In a pay-per-use pricing system, a higher intensity of usage leads to a lower level of indirect users' collective experienced value in use.

P3b: In a pay-per-use pricing system, a lower intensity of usage leads to a higher level of indirect users' collective experienced value in use.

4.3 Value conflicts within pricing systems

Following the above logic of distinguishing individual and collective value, it becomes obvious that there might exist a discrepancy between the impact of the usage level on direct users' individual value and indirect users' collective value in a pay-per-use pricing system. Especially in B2B settings, each individual user's usage level and perceived value is solely related to two factors, namely the ease of use and the perceived usefulness (Davis 1989) without taking the cost level into account. Therefore, in a pay-per-use pricing system, a high intensity of usage has a positive impact on increasing direct users' individual experienced value in use, while indirect users' collective value being diminished by the higher total cost level caused by an increase of individuals' usage. The same logic applies to the opposite situation when individual experienced value in use

being low, a decrease in usage will happen leading to a lower total cost level that generates a higher level of collective experienced value in use. Therefore, we propose:

P4: In a pay-per-use pricing system, conflicts exist between direct users' individual experienced value in use and indirect users' collective experienced value in use independent of the intensity of usage.

Furthermore, the conflicts not only exist within the customer sphere, but also extents to supplier sphere in the conceptual framework. Because of the contextual nature of value in use (Kleinaltenkamp & Dimitri 2018), experienced value in use plays the central role in forming relationship value between customers and suppliers that in turn impact expected value in use in the long run (Eggert et al., 2019). This is in line with Richins (1994) stating that value changes might be influenced by usage experiences. Flint et al. (1997) also introduced the concept of "value change" and noted that customers consistently change what they value, while in some industries, the value change can even be rapid and extensive (Flint et al. 2002). Moreover, Day and Crask (2000) noted that customer desired value change can occur at any time in the buying cycle, i.e. before, during and after a purchasing process.

In a typical pay-per-use pricing system, customers' usage intensity has a positive impact on generating supplier revenues exceeding the possible loss they would have had within a flat-rate pricing system. However, the opposite logic applies to the customers, since higher usage means higher total costs, while these total costs show a reverse correlation with customer collective experienced value in use. As a result, maximizing revenue within a pay-per-use pricing system over the product life cycle does not necessarily help suppliers to lock in their customers. This discrepancy between both parties' monetary pursuits and value perceptions during customer's integration of suppliers' resources can lead to a conflict between the both parties involved in a business relationship and their value perceptions as "relationship value is built on a summative

assessment of experiences with the respective business partner as well as on expectations towards the future development of the business relationship" (Eggert et al., 2019). Hence, reassessments of each party's expectations on benefits and costs may occur that might change both sides' expected value in use that plays a central role for rebuy and resell decisions related to future transactions (Akaka et al., 2015).

On the other hand, within a flat-rate system, the motivation to increase usage is mainly on the customers' side because of the need to make full use of an offer as there would be no sense to pay for what is barely used (Buchheit & Feltovich, 2008). However, suppliers do not make any additional revenue based on additional or increasing customer usage and value. This lack of flexibility and scalability that results from flat-rate system is the main disadvantage for suppliers' ability to grow. On the other hand, if, by any chance, the customers' usage level appears to be low due to direct users' perceptions of the offer as useless or hard to use, both customer individual and collective experienced value in use will diminish. This conflict, again, will have a negative impact on suppliers' and customers' relationship value since a product/service perceived as being of no value or not as much value as expected will significantly reduce the probability of reselling and rebuying.

Therefore, both the pay-per-use and the flat-rate approaches are likely to generate conflicts between suppliers and customers in an ongoing business relationship, generating a negative impact on the relationship value and create a discrepancy between their expected value in use in the long run. Even though both systems offer their upsides and are fairly popular in certain business praxis, the downsides are also obvious, especially in B2B settings. For instance, a flat-rate system is simple to communicate and as a result easy to sell, which makes it a good way for early monetization. However the flaws will show in the long run, for instance, it is not likely to suit all customers: bigger clients may have the need for more features than a fixed plan whereas smaller clients may prefer other

providers with a more budget-friendly starter plan. On the other hand, the pay-per-use model offers customers the flexibility to budget accordingly and the possibility of no entry barrier which makes a perfect selling point. However, this model requires the provider more effort in establishing a stable business relationship with customers (e.g. updating services, releasing new features) in order to make continuous profits, otherwise opportunities for competitors may easily open since customers do not need to make a commitment to the usage fee. On top of that, in the long run, it is also difficult for providers to predict revenue from quarter to quarter under a pay-per-use system since customer use the product/service on their schedule, not provider's. Hence, neither approach appears to be the ideal pricing system in ongoing exchange episodes in B2B markets. In a nutshell, we thus propose:

P5: Neither a pay-per-use nor a flat-rate system are ideal for maintaining supplier's and customer's relationship value in B2B markets as the discrepancy between supplier and customer's expected value in use causes conflicts when making resell/rebuy decisions in following exchange episodes.

5. Discussion and Future Research

The conceptual framework proposed by this paper based on Eggert et al.'s (2019) integrative framework and combines pricing systems with the various value conceptualizations and their linkages. We acknowledge that in a marketing scope, value is always subjective and dynamic in nature (e.g. Flint et al., 2002; Woodruff, 1997; Zeithaml, 1988). Moreover, we distinguished between value beneficiaries and their value perceptions (i.e. customer individual and collective value perceptions, suppliers' value perceptions) as well as the reference object of value (i.e. relationship value and transactional value) (Eggert et al. 2019). It thus provides a basis for further analyzing the interrelations between pricing systems and value in use. Considering literature on both

topics, research that links pricing systems with value in use is scarce but important in B2B marketing (Brennan et al., 2007; Eggert et al. 2019). Hence, integrating the two research streams into one coherent concept may open vast research opportunities which will be illustrated in the following section.

A major contribution of this paper is providing testable research propositions and identifying the potential conflicts between direct users' individual experienced value in use and indirect users' collective experienced value in use, as well as the conflicts between supplier and customer expected value in use that may be caused by certain pricing systems. Examining the value concepts from different actor's perspective (e.g. users, indirect users, suppliers), the conflicting pursuit of each party's goal achievement in a given pricing system are obvious. Quantitative methods like survey can potentially give more generalizable results. The intensity of usage can be measured by users' frequency of use (e.g. login/click frequency), or the total amount of usage in a certain period (e.g. clicks per period). On the other hand, the value constructs in the proposed framework can be measured by published measurement approaches. A sophisticated study could test the conceptual framework in sequence – (1) starting within the customer's sphere to test the conflicts between individual and collective value caused from different pricing systems; (2) focusing on the discrepancies between customers' and suppliers' expected value arising from different pricing systems. Table 1 summarizes published value-in-use as well as expected relationship value measurements that future research can build on:

Measurement Methods	Description
Value-in-use Assessment Framework (Macdonald et al. 2011)	• Allowing to articulate value-in-use at both collective and individual levels. • Buying group members assess the quality of their own organization's usage process.
Value co-creation measurement index (Ranjan and Read 2016)	• Containing two dimensions: co-production and value-in-use. • Data collecting through survey of focus group.
Expected relationship value (ERV) measurement (Hogan 2001)	• 4-stage methodology: identification of value centers – assessment of uncertainties – modeling the relationship – analyzing key variables • Highly instructive for the seller and buyer to estimate their ERV distribution as a joint project. • Useful for buying firm's evaluation and selection of a supplier.

Table 1: summary of value measurement approaches

Finally, since pricing strategies have a multidimensional impact on costs, margins, profit, revenues, and customer perceptions (Homburg and Totzek 2011), future research could continue on exploring, how to choose a superior pricing system in order to avoid potential value conflicts within the buying organization, especially by focusing on members of the buying center on the one side and of the usage center on the other. On the other hand, our research propositions suggest that one-part pricing systems are not ideal for business relationship value in the long run. Especially suppliers in business markets are not dealing with individual customers but rather dealing with purchase departments or buying centers using sophisticated tools to assess price offers on a professional level (Homburg and Totzek 2011). Hence, another major research opportunity would be to identify multi-part pricing systems that help to sustain and maximize supplier and customer's relationship value and do not lead to huge discrepancies between each parties' expected value in use. Here, qualitative research such as case studies are considered as suitable to apply since case studies are a viable research tool to synthesize real life observations and to build theory on (Flyvbjerg 2006, Yin 1994). Case studies could follow a certain multi-part pricing system or a portfolio of multi-part pricing systems, investigating its impact on perceived value within the customer firm on both individual

and collective level of direct and indirect users based on published value assessing models (e.g. Macdonald et al. 2011). Meanwhile, case studies can further articulate pricing systems' influence on the relationship value between suppliers and customers. In addition, in-depth interviews of purchasing and other managers as well as further users involved in usage centers, and sales managers from suppliers firms are essential in providing further insights into enriching the conceptual framework.

6. Managerial Implications

Consistent with recent developments in the understanding and application of pricing systems, pricing systems are not supposed to influence usage processes directly but indirectly. Moreover, it is the actual experienced value embedded within an offer based on certain pricing systems that influences usage processes.

Taking customer's usage process into account, is crucial to supplier's pricing management. Understanding customer's usage offers the opportunity to offer tailored value propositions, which in turn gives insights in designing optimal pricing systems that help enforce price premiums. Usage-independent pricing systems like flat-rate offer the benefit of keeping security in terms of revenue and cash flow, which is crucial for start-up suppliers. It also allows suppliers to communicate easily and sell to customers who prefer simplicity with a straightforward solution. However, while large customers may prefer a plan with more features, smaller business may prefer a competitor who provides a more budget-friendly starter plan. Meanwhile, the downside of these usage-independent pricing systems is that they limit revenue potential.

Making decisions on what type of pricing system to invest in is a matter of risk to the customers since it is difficult to forecast usage precisely for a group of people, especially to make decisions on new products/services that are not fully proven of value proposition yet. This is in line with Backhaus et al.'s (2011) argument explaining flat-rate

biases in a B2B context. In a pay-per-use system, customers are given the advantages of facing smaller barrier to entry and no need for commitment to a fixed plan and cost. However, the disadvantage is also obvious: for the customers it is difficult to predict cost and budget effectively, while for the suppliers it is then difficult to predict revenue which is likely leading to conflicts between their value perceptions. Since payment is only made when customer adopt usage, in order to make continuous profits, suppliers need to consistently provide value to the customers in order to establish a stable relationship and to keep the customers engaged, then turn them into recurring customers. However, if using an offer more often does provide additional value to the direct user, then increasing usage is very likely since the actual user oftentimes have a low cost-awareness. This leads to a high cost level for the customer firm, which oftentimes open opportunities for competitors. Consequently, it might be necessary but also challenging to introduce a multi-part pricing system which includes both usage-independent and usage-dependent elements to enforce a more stable business relationship between suppliers and customers. For example, a more customer-tailored two-part pricing system which entails an entry fee that covers a fixed amount of usage that is agreed upon both sides' interests as well as a usage per unit fee when usage goes beyond the entry level.

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APPENDIX

SUMMARY OF THE RESULTS

Value creation is a central concept of marketing which is acknowledged by both scholars and practitioners. A comprehensive understanding of how value creation takes place helps service providers better integrate their offerings into customers' activities and meet customers' needs. Since research has not paid much attention to the impact of psychological ownership (PO) on value in use in the service fields, nor to the impact of pricing systems on value in use in business markets despite their obvious important relations, the focus of this dissertation is therefore to address these research gaps. By providing insights on both important variables (PO and pricing systems), which significantly influence customers' usage process and thus experienced value in use, the research goal of this dissertation is to deepen the understanding of value creation process and is achieved through three different research projects with different focus.

The first research project investigates the impact of PO on value in use in a car sharing context. Specifically, it investigates how the degree of perceived PO affect the value in use customers perceive in service usage processes and the relational outcomes satisfaction, affective commitment and WOM intention. The result of this paper helps researchers and practitioner to extend the understanding of PO's impact from organizational fields to service fields. By confirming PO as a phenomenon that exists not only within organizations (by employees) but also in customer-provider relationships, at the meantime, being an important driver of value-in-use perceptions, it gives practitioners guidance to improve service design in the sense that service offerings should be adapted to the PO motives accordingly. In particular, PO has the strongest impact on the value-in-use dimension "Self-fulfillment", followed by "Productivity". Companies thus can, for instance, customize their service offerings with respect to individual consumers so that

"Self-identity" will be enhanced. Moreover, this study also showcases that the value-in-use dimensions "Convenience" and "Hedonistic benefit" significantly affect all investigated relational outcomes, which helps service providers understand the importance to improve the experience of the identified value-in-use dimensions, as the relational outcomes satisfaction, affective commitment and WOM intention have a high impact on customer loyalty and firm performance.

The second research project follows the research direction pointed out in the first project, which is to investigate how PO changes over time and how it leads to changes in the experienced value in use in a multi-actors' value creation process. The results of this project confirm the dynamic nature of PO and showcases precisely how PO evolves which is driven by the perceptions and weights shifting on each root of PO (self-identity, self-efficacy, having a place, accountability, and territoriality). The results thus help service providers understand PO is not a fleeting or temporary phenomenon, but consistently reassembles and affects customers' future usage behavior. Moreover, this paper identified the process from PO forming to the weight-shifting of PO roots and named it as the circular approach of PO which includes three procedures: Forming – Fulfilling and Hindering – Reassembling. This so-called circular approach of PO as a cognitive process shapes the view of other actors and the focal actor themselves, hence capturing how individual and collective values are formed through the interplay of their ongoing intertwined experiences. Service providers need to understand that customers' PO can be changed and shaped via external efforts. To achieve value co-creation and to avoid value co-destruction, service providers may take opportunities to interact with customers in order to contribute to the shaping of customers' perceived PO, seeking to change customers' existing PO from preventative to promotive, since promotive PO is the key to symbiosis.

The third project investigates the impact of pricing systems in business markets. Despite the tremendous amount of research into the roles and interrelations of the two concepts in B2C markets, pricing systems and usage process have been largely treated separately despite the acknowledgement that they are related in business markets. In order to articulate the precise nature of their relationship, a dynamic conceptual framework is built in this project to link pricing systems and value in use in the two spheres of suppliers and customers. The results of this project help both supplier and customer firms to understand that pricing systems are not supposed to influence usage processes directly but indirectly. Moreover, it is the actual experienced value embedded within an offer based on certain pricing systems that influences usage processes. Moreover, by presenting testable research propositions derived from the conceptual framework which identified potential value conflicts between different parties in a giving pricing system, it opens vast research opportunities. The result of this paper not only listed literatures on measuring each value concepts (e.g. value in use, expected relationship value), it also gave clear guidance on methodologies (e.g. survey, case studies, interviews) on future research in testing the propositions. Lastly, the results showed that none of the single-part pricing systems are optimal in the long run in obtaining a sustainable relationship value, it called out attention in researching and introducing a multi-part pricing system which includes both usage-independent and usage-dependent elements to enforce a better relationship value between suppliers and customers.

In a nutshell, this dissertation investigates value in use with respect to research questions incorporating theory from PO as well as pricing systems. The results contribute to current marketing literature regarding value creation and extend the understanding of customer's usage processes, therefore open vast opportunities for future research. The implications embedded within each project also offer clear paths for practitioners to improve their service offerings.

Die Entstehung von Wert ist ein Themengebiet des Marketings, das sowohl für Wissenschaftler als auch für Praktikern gleichermaßen von Bedeutung ist. Ein umfassendes Verständnis davon, wie sich Wertschöpfung bei den Kunden vollzieht, hilft Dienstleistungsanbietern, ihre Angebote besser in die Aktivitäten der Kunden zu integrieren und die Bedürfnisse der Kunden zu erfüllen. Trotz ihrer offensichtlichen Bedeutung haben existierende Forschungsansätze den Auswirkungen der Psychological Ownership (PO) auf den Value-in-Use im Dienstleistungsbereich sowie den Auswirkungen von Preissystemen auf den Value-in-Use bei Geschäftskunden bislang wenig Aufmerksamkeit geschenkt hat. Das Ziel dieser Dissertation es deshalb, einen Beitrag zur Überweindung dieser Forschungslücken zu leisten. Die gewonnenen Erkenntnisse zu den betreffenden Variablen (PO und Preissysteme) zeigen auf, wie diese Faktoren den Nutzungsprozess der Kunden und damit den erlebten Value-in-Use beeinflussen tragen somit zur Vertiefung des Verständnisses von Wertschöpfungsprozessen bei. Diese Erkenntnisse sind in drei verschiedenen Studien mit jeweils unterschiedlichen Schwerpunkten gewonnen worden.

Das erste Forschungsprojekt untersucht die Auswirkungen von PO auf den Value-in-Use im Carsharing-Kontext. Hierbei wird insbesondere untersucht, inwiefern sich der Grad der wahrgenommenen PO auf den Value-in-Use auswirkt, den die Kunden im Rahmen von Dienstleistungsnutzungsprozessen wahrnehmen. Des Weiteren werden die Auswirkungen auf die Beziehungsergebnisse Zufriedenheit, affektives Engagement und die WOM-Absicht untersucht. Das Ergebnis dieser Arbeit hilft somit Forschern und Praktikern, das Verständnis des Einflusses von PO im Dienstleistungsumfeld zu erweitern. Die Studie zeigt, dass PO ein Phänomen ist, das nicht nur innerhalb von Organisationen z.B. bei deren Mitarbeitern, sondern auch in den Kunden-Dienstleister-Beziehungen existiert, gibt sie den Praktikern eine Anleitung zur Verbesserung der

Dienstleistungsgestaltung in dem Sinne, dass die Dienstleistungsangebote entsprechend an die PO-Motive angepasst werden sollten. PO hat dabei den stärksten Einfluss auf die Value-in-Use-Dimension "Selbstverwirklichung", gefolgt von "Produktivität". Dementsprechend können Unternehmen ihr Dienstleistungsangebot im Hinblick auf den einzelnen Konsumenten so anpassen, dass die "Self-Identity" gestärkt wird. Darüber hinaus zeigt diese Studie auch, dass die Value-in-Use-Dimensionen "Bequemlichkeit" und "Hedonistischer Nutzen" alle untersuchten relationalen Ergebnisse signifikant beeinflussen, was den Dienstleistungsanbietern hilft zu verstehen, wie wichtig es ist, die Erfahrung der identifizierten Value-in-Use-Dimensionen zu verbessern, da die relationalen Ergebnisse Zufriedenheit, affektives Engagement und WOM-Absicht einen hohen Einfluss auf Kundenbindung und Firmenleistung haben.

Das zweite Forschungsprojekt baut auf die im ersten Projekt gewonnenen Erkenntnisse auf und untersucht, wie sich die PO im Laufe der Zeit verändert und wie dies zu Veränderungen des erfahrenen Value-in-Use in einem Wertschöpfungsprozess mit mehreren Akteuren führt. Die Ergebnisse dieses Projekts bestätigen die dynamische Natur von PO und zeigen auf, wie sich PO entwickelt. Hierbei kommt es zu einer Wahrnehmungsverschiebung und Gewichtsverlagerung der Treiber von PO, welche durch die Selbstidentität, Selbstwirksamkeit, Verantwortlichkeit und Territorialität definiert sind. Die Ergebnisse helfen den Dienstleistungsanbietern somit zu verstehen, dass PO kein flüchtiges oder vorübergehendes Phänomen ist, sondern sich immer wieder neu zusammensetzt und das zukünftige Nutzungsverhalten der Kunden beeinflusst. Darüber hinaus identifiziert diese wissenschaftliche Arbeit den Prozess von der PO-Bildung bis zur Gewichtsverlagerung der PO-Treiber und beschreibt diesen als zirkulären Ansatz von PO, der drei Phasen umfasst: formen - erfüllen und verhindern - wiederzusammenfügen. Dieser zirkuläre Ansatz von PO als kognitiver Prozess formt die Sicht der anderen Akteure und des Hauptakteuers selbst und erfasst somit, wie

individuelle und kollektive Werte durch das Zusammenspiel ihrer fortlaufend miteinander verflochtenen Erfahrungen geformt werden. Dienstleistungsanbieter sollten somit verstehen, dass die PO der Kunden durch externe Bemühungen verändert und geformt werden kann. Um eine Kreation von Werten zu erreichen und eine Reduktion von Werten zu vermeiden, können Dienstleister Gelegenheiten zur Interaktion mit Kunden nutzen, um zur Gestaltung der vom Kunden wahrgenommenen PO beizutragen, indem sie versuchen, die bestehende PO der Kunden von einer präventiven PO zu einer fördernden PO zu verändern - da eine fördernde PO der Schlüssel zur Symbiose ist.

Das dritte Projekt untersucht die Auswirkungen von Preissystemen in Geschäftsmärkten. Trotz des großen Forschungsaufwandes über die Rolle und die Wechselbeziehungen der beiden Konzepte in B2C-Märkten wurden Preissysteme und Nutzungsprozesse weitgehend getrennt behandelt, obwohl anerkannt wurde, dass sie innerhalb von Geschäftsmärkten in einer nicht trivialen Beziehung zu einander stehen. Um die genaue Art ihrer Beziehung zu beschreiben, wird in diesem Projekt ein dynamischer konzeptioneller Rahmen geschaffen, der die Preissysteme und den Value-in-Use in den beiden Sphären von Anbietern und Kunden miteinander verknüpft. Die Ergebnisse dieses Projekts helfen sowohl Lieferanten- als auch Kundenunternehmen zu verstehen, dass Preissysteme die Nutzungsprozesse nicht direkt, sondern indirekt beeinflussen. Tatsächlich ist es der sich aus einem Angebot resultierende experienced value-in-use, der basierend auf dem jeweils relevanten Preissystemen die Nutzungsprozesse beeinflusst. Indem überprüfbare Proposition präsentiert werden, die sich aus dem konzeptionellen Rahmen abgeleitet werden, welcher wiederum potenzielle Wertkonflikte zwischen verschiedenen Parteien in einem gegebenen Preissystem identifiziert, werden Wegen für weitere Forschungsmöglichkeiten aufgezeigt. Darüber hinaus werden Hinweise zu den Methoden (z.B. Umfrage, Fallstudien, Interviews) gegeben, wie in künftigen Forschungsarbeiten die betreffenden Propositions überprüft

werden können. Schließlich zeigten die Ergebnisse, dass keines der einteiligen Preissysteme auf lange Sicht optimal ist, um einen nachhaltigen Beziehungswert zu erzielen. Sie zeigen vielmehr auf, wie durch Einführung eines mehrteiligen Preissystems, das sowohl nutzungsunabhängige als auch nutzungsabhängige Elemente enthält, ein höherer Beziehungswert für Lieferanten und Kunden erreicht werden könnte.

Zusammengefasst untersucht die Dissertation somit Auswirkungen von PO und Preissysteme auf den von Kunden wahrgenommenen Value-in-Use. Die Ergebnisse tragen somit zur aktuellen Forschung zu kundenseitige Wertschöpfungsprozessen bei und erweitern das Verständnis für die Nutzungsprozesse der Kunden, wodurch sich interessante Möglichkeiten für zukünftige Forschungsansätze eröffnen. Die sich aus jedem Projekt ergebenden praktischen Implikationen zeigen zudem Wege zur Verbesserung von Dienstleistungsangebote auf.

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LISTE DER AUS DIESER DISSERTATION HERVORGEGANGENEN VORVERÖFFENTLICHUNGEN

Kleinaltenkamp, M.; Storck, F.; Gumprecht, P.; Li, J. (2018). The Impact of Psychological Ownership on Value in Use and Relational Outcomes. *Journal of Service Management Research*, 2 (2), 50-70

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Ort, Datum: Berlin, 15.12.2020

Erklärung gem. § 4 Abs. 2

Hiermit erkläre ich, dass ich mich noch keinem Promotionsverfahren unterzogen oder um Zulassung zu einem solchen beworben habe, und die Dissertation in der gleichen oder einer anderen Fassung bzw. Überarbeitung einer anderen Fakultät, einem Prüfungsausschuss oder einem Fachvertreter an einer anderen Hochschule nicht bereits zur Überprüfung vorgelegen hat.

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Auf dieser Grundlage habe ich die Arbeit selbstständig verfasst.