

How to Communicate Physically Shared Offerings in the Sharing Economy

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How to Communicate Physically Shared Offerings in the Sharing Economy

A key element of the sharing economy is that resources can be physically shared, such as a shared accommodation on Airbnb. Despite the importance of marketing communication for sharing platforms, it is unclear whether and how providers should communicate physically shared offerings differently from non-physically shared offerings. To address this gap, this research takes a psychological ownership perspective and investigates how provider communication drives demand and how these effects are moderated by whether an offering is physically or non-physically shared. Monthly field data of 130,595 Airbnb offerings across six large U.S. cities and close to five years show that for physically (versus non-physically) shared offerings, provider self-investment is less effective in increasing demand, while provided information, provider availability, and price are more effective. A text analysis of Airbnb consumer reviews shows that physically (versus non-physically) shared offerings convey a lower sense of psychological ownership. This finding explains why giving a sense of psychological ownership through marketing communication is especially effective for physically shared offerings. The authors discuss implications for providers and platforms that provide access to physically shared or non-physically shared or both types of offerings.

Keywords: marketing communications, sharing economy, psychological ownership

Track: Digital Marketing & Social Media

1 Introduction

The sharing economy is “a scalable socioeconomic system that employs technology-enabled platforms to provide users with temporary access to tangible and intangible resources that may be crowdsourced” (Eckhardt et al. 2019, p. 3) and is estimated to reach a worldwide value of \$335 billion in 2025 (Tabcum Jr. 2019). Prior research has highlighted the disruptive potential of the sharing economy to challenge the foundations of marketing (Barron, Kung, and Proserpio 2021; Li and Srinivasan 2019; Zervas, Proserpio, and Byers 2017; Zhang et al. 2022).

Importantly, the question of whether to provide access to physically shared or non-physically shared or both types of offerings is also a relevant business model feature that platforms in the sharing economy must decide early on. For example, on Airbnb, consumers can choose between physically shared offerings (e.g., renting a room with a shared kitchen and bathroom) and non-physically shared offerings (e.g., renting an entire home). Despite both physically shared and non-physically shared offerings are key for both platforms and consumers, little is known about whether and how communication about these two options needs to be adjusted to influence consumers’ offering evaluations and ultimately demand. Thus, understanding what communication factors matter for consumers in the descriptions of physically versus non-physically shared offerings and how pricing decisions for these offerings influence demand can improve the outcomes for all parties involved in the sharing economy (i.e., consumers, providers, platforms).

Therefore, we take a consumer-centric perspective and define a physically shared offering as an offering where a consumer is likely to encounter the physical presence of other peers during (part of) the consumption process. To explain the differences in consumer responses to provider communication elements in physically shared and non-physically shared offerings, we explore the role of psychological ownership as a potential underlying process. Drawing on the psychological ownership literature (e.g., Pierce, Kostova, and Dirks 2003; Peck et al. 2020), we suggest that provider communication elements can amplify but also attenuate threats to psychological ownership posed by the co-presence of a provider in a physically shared consumption mode.

This research makes several contributions to the literature. First, we contribute to the literature on marketing and communication practices in the sharing economy (e.g., Costello and Reczek 2020; Fradkin et al. 2021; Luo et al. 2021) by being the first in marketing to investigate how key communication elements of providers on P2P sharing platforms affect consumers as a function of the level of physical sharing. Second, we contribute to the emerging literature on consumers’ decision-making strategies in the sharing economy (e.g., Aspara and Wittkowski

2019; Lamberton and Rose 2012) and address corresponding calls for research (Eckhardt et al. 2019; White, Habib, and Hardisty 2019) by testing whether and how physical sharing changes the effects of provider communication elements on P2P sharing platforms. Finally, we contribute to the psychological ownership literature (e.g., Fritze et al. 2020; Morewedge et al. 2021) by showing that it plays an important role in the sharing economy in a P2P context. Our research offers important managerial implications for providers and P2P platforms operating in the sharing economy that market physically shared, non-physically shared or both types of offerings. Based on the antecedents of psychological ownership, we distinguish between three communication elements widely used in offering descriptions on P2P sharing platforms that may help reduce threats to consumers' psychological ownership and thus prevent the potential decrease in demand for physically (versus non-physically) shared offerings.

2 Conceptual Framework

The literature (e.g., Pierce, Kostova, and Dirks 2003; Peck et al. 2020) outlines three antecedents of psychological ownership: (1) controlling the target of ownership, (2) investing the self into the target, and (3) coming to intimately know the target (Pierce, Kostova, and Dirks 2003). We argue that these three antecedents play a role in how consumers evaluate shared offerings and the associated marketing communication. Based these antecedents, we distinguish between three communication elements widely used in offering descriptions on P2P sharing platforms that may help reduce threats to consumers' psychological ownership and thus prevent the potential decrease in demand for physically (versus non-physically) shared offerings.

Provider Availability. We define provider availability as a provider's willingness to meet in person during consumption, answer questions, and generally be available to interact with individual customers as communicated in the offering description (Ramani and Kumar 2008). Provider availability can signal that a provider is willing to help the consumer with any queries or issues they encounter. Given this signal and consistent with the idea that consumers may be socially motivated and enjoy participating in the sharing community (Sundararajan 2019), we expect that provider availability has a positive effect on demand in the base case of a non-physically shared offering. However, in a physically shared consumption setting, the effect of provider availability is not clear a priori.

Provider Self-Investment. Building on the psychological ownership antecedent "investing the self into the target of ownership," we define provider self-investment as the investment of a provider's time, money, and/or effort into an offering (Peck et al., 2020). In particular, providers' self-related descriptions of offerings (e.g., "I completely renovated the apartment") may indicate that investment of the self into an offering is high. We define provider self-

investment into an offering as the extent to which the description of an offering conveys a notion of high levels of time, money, and/or effort invested by a provider. In both the traditional economy and the P2P sharing economy, a high level of provider self-investment can indicate that providers contribute something of themselves to their offerings for the benefit of consumers. Given the utility that consumers can derive from higher levels of provider investment, we expect that—in the base case of a non-physically shared offering—greater provider self-investment into the offering enhances demand. However, the literature suggests that self-investment may signal greater psychological ownership by a provider (Baxter and Aurisicchio 2018; Peck et al. 2020). Therefore, we expect that physical sharing moderates the positive effect of provider self-investment on demand such that the effect becomes weaker in a physically (versus non-physically) shared consumption mode.

Provider Information. Building on the psychological ownership antecedent “coming to intimately know the target,” the third communication element refers to the amount of information consumers are given about an offering. Knowing an object (or place) intimately makes it become part of the self (Beaglehole 1932), enhancing psychological ownership. Therefore, we expect that supplying more information about the quality of an offering’s attributes has a positive effect on demand in the base case of a non-physically shared offering. Importantly, we expect that physical sharing moderates the positive effect of provider information on demand such that provider information about an offering has a stronger effect on demand in a physically (versus non-physically) shared consumption mode.

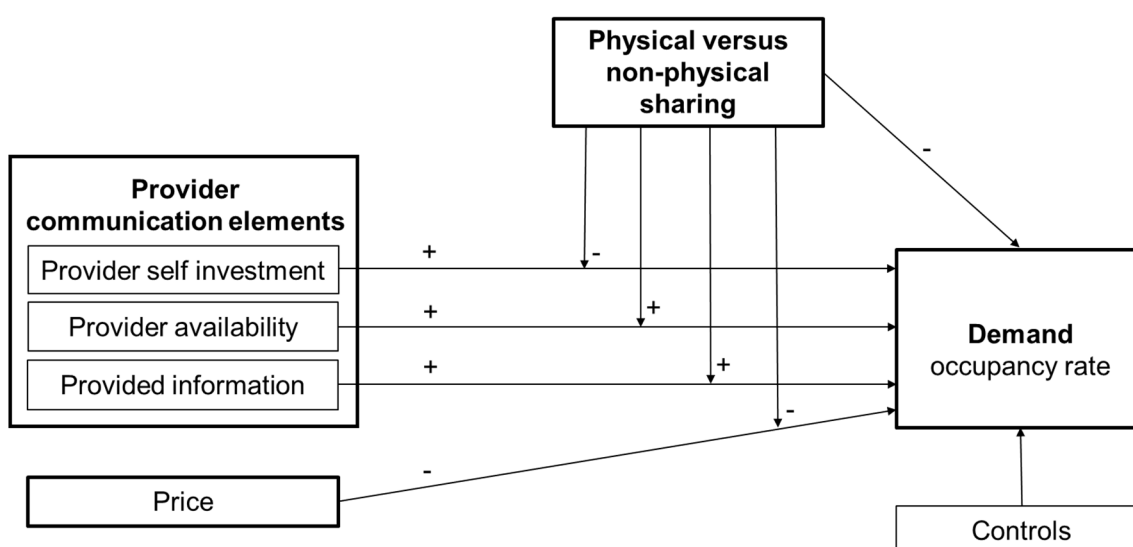


Figure 1: Conceptual Framework

3 Data and Methods

We analyze both physically and non-physically shared offerings (i.e., listings) across six large US cities: Chicago, Los Angeles, New York City, San Diego, San Francisco, and Seattle. The panel dataset covers monthly observations on booking rates, prices, and descriptions for 130,595 properties (38.46% shared) across almost five years, or 56 months (i.e., May 2015 to Dec 2019), for a total of 2,997,169 property-month observations. We decided to use data until December 2019 to avoid the confounding effects of the COVID-19 pandemic. Table 1 provides the measurement and sources for the variables.

Table 1. Variable Operationalizations

Variable	Description	Source
Dependent Variable		
Occupancy rate (demand)	Percentage of days in month t that offering i is rented out	AirDNA
Moderator Variable		
Physical sharing	Dummy taking 1 if offering i is physically shared and 0 if offering i is not physically shared	AirDNA
Communication Elements		
Provider availability	Extent to which the description of offering i in month t conveys a notion of high provider availability, ranging from 0% (very low extent) to 100% (very high extent)	AirDNA & RoBERTa using human-labeled data
Provider self-investment	Extent to which the description of offering i in month t conveys a notion of high provider self-investment, ranging from 0% (very low extent) to 100% (very high extent)	AirDNA & RoBERTa using human-labeled data
Provider information	Composite factor score of the natural logarithms of number of amenities, number of words, and number of pictures in offering i in month t	AirDNA & own calculation
Control Variables		
Overall rating	Average of the consumer ratings of offering i in month t	AirDNA
Price	Published price per night in US dollars for offering i in month t	AirDNA
Competitor price	Published average price per night in US dollars for all offerings in month t in the same borough	AirDNA & own calculation
# of offerings per host	Number of offerings the host of offering i has on Airbnb in month t	AirDNA & own calculation
Time since start of listing	Number of months since offering i entered the platform in month t	AirDNA & own calculation
Minimum stay	Number of minimum nights for offering i in month t	AirDNA
Bedroom	Number of bedrooms in offering i	AirDNA
Zipcode fixed effects	Fixed effects for the zipcode of offering i	AirDNA
Time fixed effects	Fixed effects for every month of the observation period	AirDNA & own calculation

First, we estimate the following log-log model for offering i in month t in a 2SLS procedure:

$$\begin{aligned}
 \ln \text{Occupancy rate}_{it} = & b_0 + b_1 \text{Physical sharing}_i & (1) \\
 & + b_2 \ln \text{Provider availability}_{it} \\
 & + b_3 \ln \text{Provider self-investment}_{it} \\
 & + b_4 \ln \text{Provider information}_{it} \\
 & + b_5 \ln \text{Provider availability}_{it} \times \text{Physical sharing}_i \\
 & + b_6 \ln \text{Provider self-investment}_{it} \times \text{Physical sharing}_i \\
 & + b_7 \ln \text{Provider information}_{it} \times \text{Physical sharing}_i \\
 & + b_8 \ln \text{Provider information}_{it} \times \text{Physical sharing}_i \\
 & + b_9 \text{Consumer rating}_{it} + b_{10} \ln \text{Price}_{it} + b_{11} \ln \text{Competitor Price}_{it} \\
 & + b_{12} \ln \# \text{ of offerings per host}_{it} + b_{13} \ln \text{Time since start of listing}_{it} \\
 & + b_{14} \ln \text{Minimum stay}_{it} + b_{15} \ln \text{Bedrooms}_{it} + \sum_z^{Z-1} \mu_z \text{Zipcode}_{iz} + \theta_t + \varepsilon_{it}
 \end{aligned}$$

For the interaction effects, we mean-center the corresponding variables before calculating the product term. This allows us to interpret the direct effects at the mean level of the independent variables (Papies and Van Heerde 2017). To control for potential endogeneity of the communication elements (e.g., caused by strategic choices of the providers), we follow Lim, Tuli, and Grewal (2020) and calculate peer-based instruments.

Second, we explore whether consumers experience different levels of psychological ownership in physically versus non-physically shared consumption modes to examine the proposed role of psychological ownership. We base our analysis on 800,197 consumer reviews from a sub-sample of 31,410 Airbnb offerings investigated in the field study. Specifically, the offerings are located in New York, and we collected the data during March 2019. We approximate psychological ownership in the reviews based on the prevalence of first-person possessive determiners (my, our) and pronouns (mine, ours).

Psychological ownership is the feeling that a thing is “mine” (Pierce, Kostova, and Dirks 2003; Morewedge et al. 2021), and it is measured accordingly (Peck and Shu 2009; Peck et al. 2020) using scales like “Although I do not legally own this [target], I feel like this is ‘my’ [target].” These scales tend to use possessive determiners and pronouns to measure the extent to which the subject experiences psychological ownership. In line with these approaches, we count all first-person possessive determiners (my, our) and pronouns (mine, ours) separately in reviews of physically and non-physically shared offerings. Next, we compare the reviews of

physically and non-physically shared offerings regarding (1) whether or not such words were used, (2) their count, and (3) their relative share in each review (i.e., relative to the number of all words used in the review). We conduct t-tests to determine the statistical significance of the observed differences.

4 Results

4.1 Field Data: Estimates for Provider Communication Elements

The variance inflation factors for all models are below 2, indicating that multicollinearity is not an issue. Table 2 shows the main effects model and the direct and interaction effects model, each estimated with 2SLS.

Table 2. Results

DV: ln occupancy rate	Expectation	2SLS Model			
		Main Effects		Interactions	
		b	p	b	p
Physical sharing	–	–.191***	.000	–.109***	.000
Provider communication elements					
ln provider self-investment	+	.035***	.000	.028***	.000
ln provider availability	+	.034***	.000	.024***	.000
ln provided information	+	.674***	.000	.281***	.000
price	–	–.463***	.000	–.450***	.000
Interaction effects with physical sharing					
ln provider self-investment × physical sharing	–			–.015***	.000
ln provider availability × physical sharing	+			.011***	.000
ln provided information × physical sharing	+			.024***	.000
ln price × physical sharing	–			–.084***	.000
R ²		.12		.13	

* $p < .10$; ** $p < .05$; *** $p < .01$ (two-tailed)

In an essence, the statistical models support our expectations. Importantly, we show that all provider communication elements have positive main effects. For physically shared offerings, provider self-investment is less effective in increasing demand, while provided information, provider availability, and price are more effective.

4.2 Review Data: Investigating Psychological Ownership in Reviews

In 34.80% of all the reviews of non-physically shared offerings, the writers used one or more first-person possessive determiner and/or pronoun. The percentage is lower for physically

shared offerings (32.24%), and the difference is statistically significant ($t = 24.20$; $p < .01$). We observe similar results for the count of first-person possessive determiners and pronouns. On average, the reviews of non-physically shared offerings included .56 of these words, whereas the reviews of physically shared offerings only included .51 of these words ($t = 22.49$; $p < .01$). Finally, we compare the relative share of first-person possessive determiners and pronouns in the reviews. Again, they are more present in the reviews of non-physically shared offerings (.86% of all words on average) than in the reviews of physically shared offerings (.81%). The corresponding t-test is significant ($t = 13.72$; $p < .01$). These results provide initial evidence that consumers of non-physically shared offerings (compared to physically shared offerings) perceive a higher level of psychological ownership, which they express through first-person possessive determiners and pronouns in their reviews.

These findings suggest that consumers experience emotional attachment to offerings in the sharing economy and thus psychological ownership. Importantly, psychological ownership differs between non-physically shared and physically shared consumption modes, supporting the notion that differences in consumer responses to provider communication elements can be attributed to differences in psychological ownership.

5 Discussion

This research contributes to the emerging literature investigating consumer responses to marketing and communication practices in the sharing economy. While the extant literature indicates that the role of marketing communication is particularly important in the sharing economy (e.g., offering descriptions and photos; Chung et al. 2022, Zhang et al. 2022), very little is known about how communication should be adjusted depending on whether an offering is physically or non-physically shared. However, as physical sharing is a key aspect of the sharing economy (e.g., close to 40% of Airbnb offerings are physically shared), it is important to understand whether and how it affects demand and the effect of marketing communication on demand—a gap this study addresses.

This research uncovers the effects of three communication elements that have hitherto not been studied in the sharing economy and how the consumption mode (physically or non-physically shared) moderates their effects on demand. We demonstrate that in a physically (versus non-physically) shared consumption mode, provider personal attendance and provider self-investment are less effective in driving demand, while provider information (captured by verbal, visual, and numerical information) is more effective.

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