VALUE CO-CREATION IN AIRBNB: A SOCIAL CAPITAL PERSPECTIVE

Research in Progress

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Abstract

In this conceptual study, we dig deeper into the relatively unexplored social aspects of economic P2P transactions that can pose serious implications for peer consumption behavior. As more peers adopt P2P housing accommodation platforms like Airbnb, social interactions among them increase. However, in situations when intermediaries like co-hosts or host-assistants are present, social interactions and subsequent value co-creation for guests and hosts may be affected. This study uses the foundation of social capital theory, which considers relationships as a valuable resource and recognizes its productive value which can be appropriated to an economic form and others as well. We state the formation of social capital in Airbnb and realize it through two different perspectives – resource based and networking - targeting the guest-host and host-host relationships respectively. Our analysis of past research on collaborative platforms and social capital theory, leads to the formation of a framework and eight propositions. We define value co-creation separately for the guest-host and host-host relations and pave the way for future theoretical research in this area. From a practical standpoint, we highlight the role of information representation for the hosts which is critical for pairing with compatible guests for accommodation.

Keywords: Peer-to-peer, Collaborative Platform, Airbnb, Social Capital, Value Co-Creation, Social Exchange, Guest, Host.

1 Introduction

Information technology has enabled pervasive digital networks and spurred the growth of two-sided online marketplaces, like Amazon and eBay. A new wave of platforms has transformed the conventional business to consumer (B2C) transactions into peer-to-peer (P2P) transactions especially disrupting the traditional travel and hospitality markets (Zervas et al., 2014). This study adopts the term ‘P2P collaborative consumption platform’, to refer to a conglomerate of two-sided market platforms like Uber and Airbnb. Airbnb, which has served over 200 million guests across 65,000 cities in 191 countries, describes itself as “a trusted community marketplace for people to list, discover, and book unique accommodations around the world - online or from a mobile phone or tablet” (Airbnb, 2017a). As the platform is adopted worldwide by millions of users, we conclude that users appreciate P2P transactions and support communal interactions. Also, IS (Information System) academics and practitioners have explored several salient aspects of these platforms and the resulting phenomena (Weber, 2014; Gutt and Herrmann, 2015; Sundarajan, 2016; Zhang et al., 2016; Plenter, 2017; Schneider et al., 2017; Wang and Heng, 2017).

An information system is imperative for peer-to-peer collaborative consumption as it provides the underlying technical platform that fulfills the real-time demand and supply of resources. Social aspects are more relevant for commercial (for-profit) P2P collaborative consumption platforms compared to other types of transactions like B2C, B2B and even C2C. The social component and the connections
between the actors in a virtual community is a key component for IS acceptance and usage, in addition to the features of technical system (Junglas et al., 2013). However, very few studies have analyzed the social component, specifically the social ties and the network of social connections enabled by the transactions on such platforms. The transactions on P2P platforms consist of socially altruistic motives permitting social exchange and development of prosocial behaviours (Albinsson and Perera, 2012; Gutt and Herrmann, 2015; Schneider, 2017). Trang et al. (2015) emphasized the importance of human interactions for the acceptance of a collaborative consumption service and underscored the role of personal relationships and trust for collaborative consumption platforms. The association between the social relationships and outcomes of the sharing phenomenon on P2P collaborative platforms remains underexplored and this study lays the groundwork to stimulate research in this direction. Thus, we use the theoretical lens of social capital (SCT) to understand this minimally investigated area, specifically focusing on value co-creation for the actors on the Airbnb platform.

Social capital encompasses multiple aspects like shared goals, social ties, trusting relationships, social networks and value systems that facilitates actions of individuals in a social setting. We present a comprehensive framework that proposes the formation of social capital on Airbnb specially targeting the development of two significant relationships between the actors on the platform; First, the relationship established between guests and hosts through the social interactions during a stay. Secondly, the relationship formed between a host and another host either by communicating with the other hosts on the platform or co-hosting with another host via the platform (Airbnb, 2017b). The possibility of distribution or exchange of resources creates new sources of economic and social value for both the hosts and guests providing them additional advantages which can be leveraged to enhance this collaborative phenomenon. Unfortunately, prior research provides limited guidance to appreciate the role of value co-creation for the actors on collaborative platforms. We conceptualize value co-creation based on arguments made in prior studies of social capital development in firms and its relation to organizational advantage (Nahapiet and Ghoshal, 1998; Lin, 2001a) and the relevant collaborative consumption literature. Value co-creation between the actors on Airbnb are the relative returns they gain by participating in peer-to-peer accommodation sharing or consumption and comprise of three dimensions: positive feedback, low monitoring cost and willingness to transact in future. These dimensions are the values which benefit both the participants in the relation or exchange and are co-created due to their joint participation in each dyad of relationship (Tsai and Ghoshal, 1998). Thus, we focus on the research question (RQ) - “How does Guest-Host and Host-Host relationship affect value co-creation on commercial peer-peer housing accommodation platforms?”

The research question is operationalized by providing a succinct literature review of social capital theory and recent research on collaborative consumption platforms in section 2. In section 3, we discuss the two perspectives of the social capital theory to present our framework which leads to eight propositions exploring the social components of transactions on Airbnb. This also establishes the formation of social capital on Airbnb. Lastly, in section 4 we outline our future research plans to empirically evaluate our proposed framework and offer some conclusions in section 5.

2 Research Background

Social capital theory is a broad topic and has been widely studied in different disciplines from multiple perspectives. The theory gained popularity in the sociology discipline and has received attention from other fields like economics, policy research, and management (Bourdieu, 1986; Lin, 2001b; Portes, 1998; Putnam, 2000). All the theorists’ state relationships are valuable resources of social capital and eventually relationships create productive value. In this study, we adopt the definition proposed by Arregle et al. (2007): “social capital is the relationship between individuals and collectives that facilitates actions and creates value”. The defining characteristics of social capital are - it is created through an exchange, neither party has exclusive ownership and it is owned jointly (Nahapiet and Ghoshal, 1988). Researchers have proposed diverse conceptualizations of the theory mainly based on the context of their individual studies. The two broad perspectives widely acknowledged are the network perspective which postulates social capital in the structure of the network, and the resource
The P2P collaborative consumption platforms are also known by other names like “collaborative consumption”, “sharing economy”, “gig economy”, “gift economy”, among others and they vary on four aspects. First, these platforms are managed by a triad of relationships between peers, platforms and underutilized products or services (Mohlmann, 2016; Hawlitschek et al., 2016). Secondly, social interactions may involve an offline component in addition to the online one. Third, the transactions do not require transfer of the ownership of the resources (Bardhi and Eckhardt, 2012; Fraiberger and Sundarajan, 2015; Mohlmann, 2016). Fourth, the transactions are identified by personal characteristics of the peers. These four aspects contribute towards economic advantages and leads to lower transaction costs (Bardhi and Eckhardt, 2012; Botsman and Rogers, 2010). In the P2P context, researchers have investigated the effect of social capital on lending platforms and online social networks (Greiner and Wang, 2009; Riemer et al., 2015; Musembwa and Paul, 2012). However, the social aspects of the transactions of P2P accommodation sharing have received limited scholarly attention.

Participation on collaborative platforms like Airbnb results in social exchanges between guests and hosts and ensues three types of distinct benefits: economic, social and epistemic (Kim et al., 2015), (see Table 1). In addition to sharing the resource, “shared space” in Airbnb, hosts engage in two types of exchanges. We define hosts providing all the three benefits mentioned above to the guests as “Genuine Hosts” and the ensuing exchange as a “social exchange”. On the other hand, we refer to hosts engaging for only economic benefits as “Dummy Hosts” and the resulting exchange a commoditized exchange. These exchanges are the additional “resources” that hosts share with their guests which could have implications on value co-creation in a consumption behaviour and may be even detrimental. The underlying motive of the value co-creation is to improve the outcome of the exchange process for both the guests and hosts. To explain the role of guest-host relationships, the resource perspective of social capital theory is adopted and the social capital dimensions of: cognitive, relational, and structural are examined (Nahapiet and Ghoshal, 1988). For a guest-host relationship, we define value co-creation as a construct of three dimensions: positive feedback, willingness to transact in future, and low monitoring cost (Table 1). We selected these dimensions based on previous propositions of social capital for value creation in firms and they are adapted to the P2P housing accommodation context. To understand the host-host relationship, the networking perspective of social capital is adopted. For a host-host relationship, we define value co-creation as the operational expertise developed which might help a host in offering satisfying and enhanced hosting experiences.

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<tr>
<th>Benefits</th>
<th>Definitions</th>
<th>References</th>
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<tr>
<td>Economic</td>
<td>Improved use of assets resulting in economic benefits to host and guest.</td>
<td>Kim et al., 2015</td>
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<td>Social</td>
<td>Satisfaction in guest’s and host’s desire to be socially tied and</td>
<td>Schor and Fitzaurnice, 2015</td>
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<td></td>
<td>connected to others within the platform.</td>
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<tr>
<td>Epistemic</td>
<td>Fulfil the desire for new and unique experiences and satisfy curiosity.</td>
<td>Kim et al., 2015</td>
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3 Social Capital Formation on P2P Accommodation Platforms

A host on Airbnb can share a listing which can range from a room, an apartment to an entire home for guests and receives monetary compensation for the shared space. Also, the hosts are evaluated by the guests objectively and subjectively as represented by the numeric and textual reputation and reviews on the platform. Before accepting the accommodation request, the host also reviews the guest’s information, reputation and identity related information. It implies that even though hosts provide the access to the offered space to the guests, hosts lack complete control over the guests’ behaviour and is dependent on the actions and conduct of the guests during the stay. Given the scale and proliferation of such transactions, policing and monitoring transactions on the platform is difficult, thereby increasing the liability of the hosts to monitor the guests’ conduct to prevent occurrences of any opportunistic behaviours like property damage (Yuhas, 2017). There is a lack of guidance in previous P2P accommodation sharing research that uses social relationships to lower monitoring costs. A social relationship is the foundation for social capital. Using social capital theory, we claim that leveraging cooperative behaviour between guests and hosts while encouraging commitment by the later through social relationships can result in co-operative behaviour.

We focus on two types of relationships formed on P2P accommodation platforms like Airbnb. First, we claim that an actor on Airbnb, the guest, evaluates another, the host, originally based on the “shared space”. But their evaluation is also determined by another resource, the nature of exchange, social or commoditized. This results in the formation of a host-guest relationship (Figure 1a). Next, we focus on the formation of another relationship dyad that is host-host (Figure 1b). As listings displayed on Airbnb are personal, and do not belong to any central institutions like hotels, hosts rely on the platform to connect with other hosts to seek information support for successfully hosting the guests.
Thus, hosts value the resources available through the platform, like access to the peer community and social connections which assist them to gather information related to hosting thereby increasing their knowledge and operational expertise. In the next section, we explain the formation of social capital in each of these relationships based on two broad streams of SCT research.

![Figure 1. Dyads of Relationships and Types of Exchanges on Airbnb.](image)

### 3.1 Social Capital Resource Perspective: Host-Guest Relationship

This perspective conceptualizes social capital as a set of resources embedded in social relationships (Burt, 1992; Loury, 1987) and is tied to the tripartite dimensions of SCT namely cognitive, relational and structural (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998) which are widely used in IS studies. We extend this conceptualization in the context of Airbnb and define each of these dimensions below which are the components of our proposed framework (see Figure 2). In this study, we treat the dimensions independent and distinct, although interactions between them can also be explored in future studies. The **cognitive dimension** encompasses common codes, languages and narratives and it represents a shared context that facilitates social interactions. The **relational dimension** summarizes embeddedness of actors in relationships through trustworthy social relations enabled by trust, obligations and norms of reciprocity. The **structural dimension** represents social ties and the nature of the ties between the actors (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998). For each dimension, we state the implications for each relationship mentioned previously and describe the nature of exchanges.

**Cognitive Social Capital:** Guests can have interactions with either genuine hosts or dummy hosts. We first focus on the formation of cognitive social capital for the guest genuine host relationship (GGHR). A guest reviews profile of a host’s self-disclosed information like description, amenities provided, house rules and the decision to transact is primarily formed by these self-reported contents. Apart from this, the reputational information presented by the platform complements the self-disclosed information of the hosts and can influence the guests to form a congruent relationship with the genuine host. We conceptualized GGHR will lead to social exchange which will result in value co-creation. Thus, the information on the platform can influence the formation of GGHR. On other hand, for guest dummy host relationship (GDHR), host’s commitment is not well reflected during the stay as the dummy host does not share meaningful ties with the guest, resulting in an incongruent relationship. Thus, we propose the association between the dummy host and a guest will lead to a commoditized exchange and low cognitive social capital. Hence, chances of conflicts and opportunistic behavior increases in the case of GDHR and will lead to increase in monitoring costs and decrease the likelihood of transaction in future and positive feedback, thus lowering the likelihood of value co-creation in a GDHR.
Relational Social Capital: With regard to relational social capital, guests interact with hosts online by using the messaging feature on Airbnb to establish connections and seek accommodation and clarify any questions. Social interactions also occur during the stay with the host, leading to social exchange. Social interactions of the guest with the genuine host leads to social exchange as they avail social and epistemic benefits in addition to the economic ones and develop strong bonds. The strong bonding relations will increase perceived trustworthiness of the hosts for GGHR only. Trusting relationships also establish relationship norms and obligations and guests might refrain from any opportunist behavior, thereby reducing monitoring costs. Guests might reciprocate social exchange in GGHR in terms of positive feedback, willingness to stay and is obligated to co-operative behavior. Thus, we propose that social exchange due to relational capital can lead to value co-creation for GGHR. But the social exchange is either very limited or totally absent in GDHR, thus resulting in low relational social capital and decreasing the likelihood of value co-creation.

Structural Social Capital: We describe the formation of structural social capital by focusing on the formation of social ties on peer-peer platforms. A new social tie emerges when the true host is unavailable to host the guest, however the host appoints a co-host or assistant-host to complete the hosting experience (Airbnb, 2017b). Adding intermediaries in the hosting experience creates multiple social ties and can affect the nature of social interactions and bonding. Thus, the structure of relationships is altered depending on the presence or absence of tie with the true host. We propose the formation of a new dyadic relationship between guest and host resulting in structural social capital. We term it as guest true host relationship (GTHR) when a social tie is established with the true host and guest while guest intermediary host relationship (GIHR) is developed when there is an existence of a tie with the intermediary host and the true host is absent. GTHR results in strong social interactions and bonding leading to social exchanges and increases the likelihood of value co-creation. Social interaction for GIHR between guests and intermediaries is limited to only certain situations like accommodation access, inquiries about the neighbourhood and in some cases the guests may form preliminary perceptions of the absent true host via the shared space. Hence, GIHR most likely will result in a commoditized exchange and decrease the likelihood of value co-creation for the relation.
Proposition | Social Dimension | Relationship | Propositions
--- | --- | --- | ---
P1 | Cognitive (Shared context, Commitment) | Guest Genuine Host Relationship (GGHR) | Cognitive dimension of GGHR leads to social exchange and increases the likelihood of value co-creation
P2 | Cognitive (Shared context, Commitment) | Guest Dummy Host Relationship (GDHR) | Cognitive dimension of GDHR leads to commoditized exchange and decreases the likelihood of value co-creation
P3 | Relational (Trustworthiness) | Guest Genuine Host Relationship (GGHR) | Relational dimension of GGHR leads to social exchange and increases the likelihood of value co-creation
P4 | Relational (Trustworthiness) | Guest Dummy Host Relationship (GDHR) | Relational dimension of GDHR leads to commoditized exchange and decreases the likelihood of value co-creation
P5 | Structural (Social ties) | Guest True Host Relationship (GTHR) | Structural dimension of GTHR leads to social exchange and increases the likelihood of value co-creation
P6 | Structural (Social ties) | Guest Intermediary Host Relationship (GIHR) | Structural dimension of GIHR leads to commoditized exchange and decreases the likelihood of value co-creation

Table 2. Propositions for Social Capital formation in Guest Host Relationships.

3.2 Social Capital Networking Perspective: Host-Host Relationship

This perspective proposes that social capital is realized due to the structure of the social network and assesses the characteristics of the network ties (Granovetter, 1973). We conceptualize the development of social connections of relationships between the hosts in two ways. First, hosts voluntarily choose to co-host with a host, most probably with their immediate neighbors thus creating host co-host relationship (HCHR). Such relationships can increase hosts ability to conduct their hosting activities by reliably depending on the co-host to look after the guests, thus creating strong trusting relationships and increasing the hosts’ efficiency, which we refer to as operational expertise. Thus, we propose that HCHR in Airbnb leads to strong ties and bonding and efficient utilization of resources which leads to increased productivity for the hosts and increased operational expertise (see Table 3).

Secondly, hosts connect with other members of the virtual community to seek information related to hosting, establishing host member relationship (HMR). Airbnb provides opportunity for hosts to interact with other members online and offline through discussion groups. Discussion groups are classified into several topics and are also differentiated based on geographic locations like cities (Airbnb, 2017c). The virtual community is a medium for the hosts to share information, increase knowledge about hosting and seek support for problems associated with guests’ behaviors and even problems related to the platform (Airbnb, 2017d). Connecting with these members to seek information creates weak ties as the interactions are short lived. But these weak ties provide hosts access to valuable and new information. Hence, we propose, HMR developed through community interactions provides support to the hosts and hence increases their operational expertise.

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<th>Proposition</th>
<th>Relationship</th>
<th>Propositions</th>
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P7 | Host Co-Host Relationship | HCHR develops strong ties leading to increased reliability on co-host and can lead to increase in host’s operational expertise. |
P8 | Host Member Relationship | HMR leads to weak ties but can lead to increase in host’s operational expertise. |

Table 3. Propositions for Social Capital formation in Host-Host Relationships.
4 Research Plan

This study adopts the two most widely acknowledged conceptualizations of social capital. For the resource based perspective, we plan to formulate specific hypotheses based on P1-P6 and implement a quantitative study (Williams, 2006; Wasko and Faraj, 2005). We plan to operationalize each dimension of social capital based on existing measures from the literature and revise them for the study’s context. For capturing the cognitive dimension, we will measure shared vision and shared language, for the relational dimension the items on trust and reciprocity will be used and finally for the structural dimension we will measure the strength of ties and the hierarchy and connectivity in them (Coleman, 1988; Kankanhalli et al., 2005; Nahapiet and Ghoshal, 1988; Lesser and Storck, 2001; Tsai and Ghoshal 1998). To test the effect of the four types of relationships identified, we will design an experiment with four treatments and conduct a survey. The treatments will be randomized to determine the treatment effect and we plan to design the experiment in a way to capture the within subject and between subject effects also. Data will be collected from Airbnb users, both hosts and guests and the data collection will be in two stages. In the first stage, we will collect data from a small sample and pre-test the survey instrument. We will conduct EFA analysis to confirm the factor structures and the reliability and validity of the constructs. Subsequently, we plan to collect data from a larger sample of users of the platform by posting survey on online communities and user forums to test the model and determine external validity. The proposed model and hypotheses will be tested by the covariance based SEM methodology. In addition to the framework, we proposed two supplementary propositions, P7-P8, to capture the networking perspective of SCT in the context. To test P7-P8 for the host-host relationships, we plan to conduct a social network analysis study and collect data from public discussion forums and the content of the discussion topics will be analysed to measure network characteristics like centrality and betweenness to understand bonding and bridging behaviour between the hosts. We will follow up with a qualitative study, by conducting interviews with the hosts on the platform to understand and capture contextual factors relevant to the platform.

5 Discussion and Conclusion

This conceptual work advocates the study of the social aspects of transactions on commercial peer-peer consumption platforms. Specifically, the study aims to broaden the understanding of the role of social capital in P2P context and its outcome as value co-creation for the actors on such platforms. The contributions of the study are multifold. First, based on the two broad sources of social capital formation, resource based and network based, we identified and distinguished two dyads of relationships, the guest-host and the host-host. Secondly, we identified unique benefits, which we conceptualize as value co-creation for the actors in the dyads of relationships. Third, we proposed that social capital can influence the value co-creation for the guest-host relationship and it depends on the type of interaction that is social or commoditized exchange. We proposed that these exchanges can be beneficial and detrimental as well to value co-creation for the actors. Social exchange is critical for successful community based interactions in the P2P collaborative consumption phenomena. But commoditized exchange can reduce the social and epistemic benefits for the guests leading to a regular hotel like experience. Fourth, we assert the risk of adding intermediaries in the hosting experience and propose that it can be detrimental for the social exchange between the actors on the platform. Lastly, we highlight host-host relationship and outline their potential to create value for hosts by increasing their operational expertise. On a practical note, we assert the need for host’s self-disclosure of information to induce co-operative behavior of the guests and thus avoiding conflicts during the stay. Accordingly, practitioners can incorporate informational cues to represent relevant information for the respective actors. We limited the framework to capture host-guest and host-host relationships although guest-guest relationships could be examined in future studies. We focused on positive aspects of social capital and also on both the source and outcome of social capital, which are considered debatable issues in social capital research. This study provides a theoretical conceptualization of the social interactions on Airbnb and empirical testing and validation will reinforce the theoretical contributions presented in this work.
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