Race and Rating on Sharing Economy Platforms: The Effect of Race Similarity and Reputation on Trust and Booking Intention in Airbnb

Short Paper

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Abstract

Stories about the "sharing economy" are increasingly making the headlines in the media and research. While the sharing economy is booming and attractive, research has found evidence of racial discrimination on these sharing economy platforms. To begin to address this issue, this research in-progress paper proposes a theoretical model to examine the effects of racial similarity and ratings on an accommodation-sharing platform, Airbnb. We also propose a 2 (the racial origins of the guest and host are the same vs. different) × 2 (high vs. low reputation) between-subjects experiment to test the model. Then, we discuss the implementation of the experiment followed by a brief discussion of the study's potential theoretical contributions.

Keywords: Sharing economy, Racial bias, Racial Discrimination, Reputation systems, Airbnb

Introduction

Stories about the growth and opportunities of the sharing economy are increasingly making the headlines in the media and research. In this paper, we refer to sharing economy platforms as platforms that rely on "marketer-managed systems that provide customers with the opportunity to enjoy product benefits without ownership" (Lamberton and Rose, 2012). One popular sharing economy platform, Airbnb, allows property owners to rent their entire home or a single room to guests. Founded in 2008, this accommodation sharing startup has now supported more than 100 million guests with 2.3 million room listings in 192 countries (Chafkin and Newcomer, 2016). The company is expected to increase their revenue from about $79 million to half a billion dollars in the next five years and a billion dollars per year by 2025 (Verhage, 2016). Airbnb is only one example of the booming online sharing economy companies. Other major sharing economy companies include Uber and Lyft which facilitate urban transportation, Getaround and RelayRides which assist car sharing, JustPark that helps individuals find parking, and Eatwith that allows for people to dine in a stranger's kitchen. These sharing economy companies are growing at a rapid pace and the global revenues are expected to exceed $335 billion by 2025 (PwC, 2014).

While the concept of sharing is not new, the dramatic growth of the sharing economy, also known as collaborative consumption, is accredited with modern digital technologies, including mobile devices and applications, electronic payments, and reputation systems (Benjaafar, Kong, Li, and Courcoubetis, 2015). These technologies help to coordinate the demand and supply as well as to facilitate the collaboration between service providers and receivers. For example, a consumer in China can easily get information of available rooms in Chicago on Airbnb.

Although the sharing economy has afforded easier and cheaper access to some products and services, there have been growing concerns how trust affects participation in the sharing economy (Botsman and Rogers, 2011; Mittendorf, 2016; Teubner, Hawlitschek, and Gimpel, 2016). Trust refers to individual's willingness to become vulnerable to the behaviors of another individual (Mayer, Davis, and Schoorman, 1995). While trust is critical to interpersonal relationship in general, it is especially important in computer-mediated environment due to the high complexity and uncertainty (Kim, Ferrin, and Rao, 2008; McKnight, Choudhury, and Kacmar, 2002; Robert, Denis, and Hung, 2009). For example, in the sharing economy, providers take the risk of the overuse or abuse of their shared product (Lamberton and Rose, 2012), and consumers assume the risk associated with low-quality products or services. Additionally, both the providers and consumers have safety concerns.

To reduce uncertainty and facilitate trust, sharing economy companies have developed platforms that make photos and other information about the service providers available. However, a recent study found that the profile photos unintentionally increased racial discrimination (Edelman and Luca, 2014). While controlling other factors, such as location and rental characteristics, non-Black Airbnb hosts were found to charge about 12% more than their Black counterparts. Edelman and Luca (2014) also indicated that racial discrimination could be a potential reason, such that some consumers may be less willing to book a room from a Black landlord.

In light of these findings, there is reason to suspect that racial similarity between the host and guest instead of the host's race itself determines the booking intention. To this point, similarity-attraction theory (Byrne, 1971) suggests that individuals are attracted to others who are similar to them. Similarity between the seller and buyer has been found to have positive relationship with trust, which can further lead to increased purchase intention in online and offline businesses (e.g., Ert et al., 2016; Lu, Zhao, and Wang, 2010; Zucker, 1986). Taken together, this raises two important questions concerning the degree to which historical information about the service provider and their products or services based upon rating scores and reviews reduce such biases. First, how effective are rating systems in reducing racial bias? Second, under what conditions are rating systems effective at reducing racial bias?

Addressing such questions has pragmatic implications for sharing economy users. For instance, sharing economy platforms like Airbnb offer new opportunities for individuals to earn not only a primary source of income, but also provide individuals the potential to earn a supplemental income or to bridge an income during employment gaps (Heller, 2017). However, on Airbnb, African American hosts and hosts of other racial minorities receive 3.3% to 20% less for renting similar properties than White hosts (Kakar et al., 2016; Laouénan and Rathelot, 2016). While this income gap may seem minor, they can have profound short term impacts by decreasing the ability of workers to afford healthcare and long term impacts by undermining retirement savings (John, 2010). As our society becomes increasingly digital (Bersin, 2016), it becomes important for IS researchers to study solutions to counteract digital discrimination in online marketplaces.

To begin to answer these questions, we propose an experimental study to examine the effect of racial similarity and ratings on Airbnb's platform. In the next section, we provide a set of hypotheses derived from a theoretical model. To examine these relationships, we further propose a 2 (similar vs. different race of the guest and the host) × 2 (high vs. low reputation based on star rating and reviews) between-subjects experiment. Then, we discuss the implementation of the experiment followed by a brief discussion of our theoretical contributions.

Background

The concept of sharing has been around for hundreds of years, however, digital technologies, such as Internet and social network technologies, have created a resurgence for products and services sharing (Botsman and Rogers, 2011). These sharing practices have been highlighted in different terms, such as "collaborative consumption" (Botsman and Rogers, 2011), "peer-to-peer economy systems" (Bellotti et al., 2015) and most frequently now "sharing economy" (Lamberton and Rose, 2012; Sundararajan, 2016). Thus, scholars have yet to agree on a common definition of the sharing economy. In this paper, we defined the sharing economy as a market provided by a third-party platform that provides customers the opportunity to enjoy the use of a product from a private owner without taking ownership of that product.

Although there is no widely accepted definition of sharing economy, researchers have commonly agreed on some key factors that characterize this phenomenon. For example, sharing economy is typically large market-based, which suggests that the number of participants is large enough to provide enough choices and meet consumer needs (Botsman and Rogers, 2011; Sundararajan, 2016). In addition, these participants are usually crowd-based rather than organized in centralized hierarchies as traditional institutions and companies (Sundararajan, 2016). The goods or services shared in the sharing economy results from idling capacity, which refers to the excess capacity in goods or underused assets (Botsman and Rogers, 2011) Furthermore, the providers and consumers need to have mutual trust in order to make transactions (Belk, 2014; Botsman and Rogers, 2011). In this paper, we explore how racial bias and reputation system affect the development of trust on sharing economy platform.

Racial Bias and the Sharing Economy

Research has found consistent evidence of racial discrimination on sharing economy platforms (Edelman and Luca, 2014; Edelman, Luca, and Svirsky, 2017; Hannák et al., 2017). One explanation for racial discrimination in this context is because we trust those that are similar to us and often distrust those that are dissimilar (Doleac and Stein, 2013; Robert et al., 2009). Yet, trust is vital to facilitating transactions online (Resnick and Zeckhauser, 2002). Pope and Sydnor (2011) conducted one of the first studies to identify racial bias on sharing economy platforms. They found that African-American lenders were less likely to get loans and paid higher interest on a peer-to-peer lending website (Pope and Synder, 2011). Since then, many studies have found racial bias on Airbnb's platform (e.g., Kakar et al., 2016; Laouénan and Rathelot, 2016).

Specifically on Airbnb, Edelman and Luca (2014) were among the first set of studies examining racial bias on the platform. They found that Black hosts on Airbnb in New York received 12% less for the equivalent accommodation listings (referred to as listings herein) than non-Blacks, controlling all other information visible on Airbnb. Wang, Xi, and Gilheany (2015) conducted a similar study but focused on Asian hosts in California. Asian hosts were found to receive 20% less than non-Asian hosts with similar listings. Another study found evidence of racial bias against Hispanic and Asian hosts in San Francisco on Airbnb. After controlling neighborhood property values, reviews and property characteristics, Hispanic and Asian hosts had a 9.6% and 9.3% lower listing price relative to White host (Kakar et al., 2016). Another Airbnb study examining rental markets in 19 cities of 8 countries in Europe and North America found that ethnic minorities charged anywhere from 15.5% to 3.3% less for similar property (Laouénan and Rathelot, 2016). Finally, a recent empirical paper studied hosts' bias toward African American guests and found that guests with distinctively White names were 19 percentage points more likely to be accepted than those with distinctively African American names (Cui, Li, and Zhang, 2016). Cui et al. (2016) also found that reviews help to reduce this bias. However, the racial bias of guests toward hosts and the effect of reputation system (both rating and review) remain unknown.

In this paper, we propose a research model based upon swift trust and similarity-attraction theory to understand how racial bias affects trust development and whether reputation system is effective in facilitating trust in sharing economy. We additionally incorporate risks to explore how risks and trust interplay in making purchasing decision. An experimental approach is proposed to test the model.

Theoretical Development and Hypotheses

Trust

Trust indicates individual's willingness to become vulnerable to the behaviors of another individual (Mayer et al., 1995). Literature on trust has differentiated two forms of trust based on whether the trustor and trustee have enough past interaction history: swift trust developed prior to interaction and knowledge-based trust developed through interactions (Robert et al., 2009). When the guest looks for listings in Airbnb, swift trust is developed before their peer-to-peer interaction. Due to the lack of personal knowledge about the trustees before sufficient interaction, trustors have to use simple heuristics, such as the trustee's social categories, roles and third party information to forming trust (Hung, Dennis, and Robert, 2004). Therefore, race information, an obvious and observable social category, and reputation, the third party information, are very likely to determine the initial trust in the hosts in Airbnb. After a guest has contacted and eventually stays with the host, the guest is able to observe the host's actual

performance and behaviors. In this way, the guest is able to use this observed information to develop knowledge-based trust.

Similarity-attraction

Based on the similarity-attraction theory, individuals are attracted to others who are similar to themselves (Byrne, 1971). Early work on similarity-attraction phenomenon focused on attitudinal similarity and personality similarity (e.g., Byrne, 1971; Byrne and Griffitt, 1969; Byrne, Griffitt, and Stefaniak, 1967). However, research later has shown that surface-level attributes, such as race and gender are also determinants of interpersonal attraction (Farh, Tsui, Xin, and Cheng, 1998; Green, Anderson, and Shivers, 1996; Pelled, 1996; Tsui, O'reilly, and others, 1989). For example, in supervisor-subordinate relationship, Judge and Ferris (1993) found that when supervisors had high demographic similarity with their subordinates, they gave higher liking score to their subordinates. In interviews, race similarity showed strong effect on overall interview assessment and offer decisions (Goldberg, 2005). Furthermore, once the relationship between two people is established, the tie between people of the same race are more likely to last longer (Lizardo et al., 2015). In addition, homophily between people has been found to be more important than peer influence in product adoption decision in the social network (Aral et al., 2009). One possible explanation of the similarity-attraction mechanism derives from social identity theory. Social identity theory suggests that individuals tend to categorize themselves and others, and attaching value to different social categories (Tajfel, 1982; Turner and Tajfel, 1986). Self-affirmation theory further indicates that people have a drive to maintain consistent identities and perceiving similar others as more favorably than dissimilar others can facilitate positive identity maintenance (Steele, 1988).

Race Similarity and Trust in the Host

Race similarity between the host and the guest in Airbnb should facilitate guest's trust in the host. Zucker (1986) identified three mechanisms to establish trust: characteristic-based trust, institutional-based trust, and process-based trust. Characteristic-based trust, also known as similarity-based trust, is produced on the basis of social similarities, such as racial origins. When the individuals consider the others as more similar to themselves, it's more likely that they hold common beliefs and attitudes behaviors (Doney and Cannon, 1997). The shared understanding fosters communication and reduces misunderstanding, both leading to a higher level of trust (Zenger and Lawrence, 1989). Empirical studies have found that similarity in demographics and values has significant relationship with trust in both offline and online contexts (Doney and Cannon, 1997; Lu et al., 2010; Morgan and Hunt, 1994). The above results provide theoretical and empirical evidence to hypothesis 1:

Hypothesis 1: Racial similarity between a guest and the host will increase the guest's trust in the host.

Trust in the Host and Trust in Airbnb

Trust in the host can increase trust in the platform for the following reasons. First, gathering trustworthy members on the platform is an indicator that the platform has the ability to screen the trustable people (Porter and Donthu, 2008). Airbnb has put a great effort on quality check and identity verification (Mittendorf, 2016). The trust in the host implies the successful management of the platform. Second, a member's behavior in one community partially results from the community culture and rules (Doney and Cannon, 1997). The trust between different members is a representative of the platforms' effort in facilitating good relationship (Porter and Donthu, 2008). The study on traditional commerce showed that the trust in the salesperson could be transferred to the trust in the salesperson's firm (Doney and Cannon, 1997). Similar result has been found in the virtual community, where trust among community members had a positive effect on trust in the platform (Chen, Zhang, and Xu, 2009). Therefore, the second hypothesis captures the relationship between trust in the host and trust in Airbnb.

Hypothesis 2: Trust in the host is positively related to trust in Airbnb.

The Role of Reputation

Reputation system on Airbnb includes the rating score (represented by 1-5 stars), the number of reviews and each individual review. The overall rating score is aggregated across individuals and across sub

dimensions related to both the host and the listing (i.e., accuracy, location, communication, check in, cleanliness and value). Similar to e-commerce, this consumer feedback information indicates the performance of host (similar to a seller) and the quality of the accommodation listing in the history, acting as the reputation of both the host and the listing. Reputation system has been found useful in e-commerce. For example, buyers on eBay and on a hotel website would like to pay more if the seller has a higher rating score (Resnick, Zeckhauser, Swanson, and Lockwood, 2006; Yacouel and Fleischer, 2012). Since individuals infer the trustworthiness of the platform through both the "product" and the member on the platform (Chaudhuri and Holbrook, 2001; Chen et al., 2009), good reputation can increase the trust in the platform. Therefore, we arrive at hypothesis 3 and hypothesis 4.

Hypothesis 3: High reputation increases trust in the host.

Hypothesis 4: High reputation increases trust in the website.

Perceived Risk

Perceived risk refers to a personal assessment of the degree to which the outcome will be disappointing (Sitkin and Pablo, 1992). When engaging in the sharing economy, a participant can perceive risks in different aspects, such as financial, social, physical risk (Zhang, Yan, and Zhao, 2016). Rating score in the reputation system is design to indicate the quality of the listing and the interaction experience with the host. The feedback from a third party, provide information for individuals to assess the likelihood of a disappointing outcome. Therefore, good reputation of the host should have direct negative effect on guest's risk perception.

Hypothesis 5: High reputation of the host decreases one's perceived risk.

Perceived risk has been identified as an important element of trust (Mayer et al., 1995; Rousseau, Sitkin, Burt, and Camerer, 1998) and a key factor to differentiate the trust belief and trust behaviors— the difference between the willingness to assume risk and actually assuming risk (Mayer et al., 1995; Robert et al., 2009). Trust, defined as an individual's willingness to be vulnerable, should increase the likelihood of an individual's trusting behavior. However, whether the individual will take a specific action is also influenced by the perceived risk inherent in the behavior (Malhotra, 2004). Perceived risk is therefore situational and takes both the potential losses and gains in the context into consideration (Coleman and Coleman, 1994). Mayer et al. (1995) suggested that individuals compare the level of trust and the level of perceived risk in the interaction context when they make decisions. If the trust is higher than the perceived risk, individuals are more likely to engage in trusting behavior. Otherwise, if the trust is lower than the perceived risk, people are less likely to engage in the trusting behavior. Therefore, we have hypothesis 6 and hypothesis 7. Figure 1 shows the theoretical model including hypothesis 1-7.

Hypothesis 6: The positive difference between trust in the host and perceived risk will positively influence booking intention.

Hypothesis 7: The positive difference between trust in the website and perceived risk will positively influence booking intention.

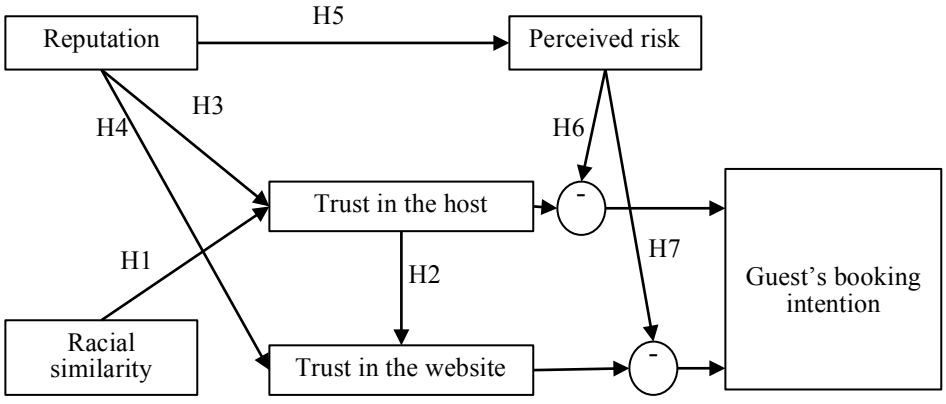

Figure 1. Theoretical model

Method

To test these hypotheses, a 2 (the race similarity: same vs. different) × 2 (reputation: high vs. low) between-subjects experiment is designed.

Participants

Participants will be recruited on Amazon Mechanical Turk (MTurk). To exclude confounding variables (such as country) and guarantee the data quality, only MTurk workers located in the United States with a Human Intelligence Task (HIT) approval rate higher than 95% and the number of approved HIT larger than 1000 will be recruited. A pre-test is launched before the experiment to screen out participants whose race is neither Black nor White. 320 participants (160 White and 160 Black Mechanical Turk workers) will be recruited so that there will be 80 participants in each condition. The participants of the same race will be randomly assigned to each treatment.

Treatment

Race Similarity

Race similarity refers to the similarity between the race of the participant (i.e., the potential guest) and the host. There will be two levels for this variable: same race and different races. To exclude confounds, only Black and White race will be tested in this experiment[1]. Therefore, participants in the group of same race will see a listing of host from the same race (i.e., a Black participant will see a listing of Black host and a while participant will see a listing of White host.) Otherwise, if the participant is assigned to the group of different races, he or she will see a listing of the host from the other race.

Reputation

In this study, there will be two levels of reputation valence: low reputation and high reputation. Reputation will be represented by the overall rating score with corresponding reviews. For the group with high reputation, a full rating score of 5 stars will be listed together with all "very good" reviews. For low reputation group, an overall rating of 4 star appears on the website adapting a few "very good" reviews to "okay" reviews with other reviews the same as those in the high-reputation condition. According to Ert et al. (2016), 97% of the hosts in their dataset received review scores between 4.5 and 5 out of 5 stars. Therefore, 4 should trigger the perception of low reputation.

Pre-test and Construction of the Experiment Stimulus

Host's Profile Photo

Photos of participants who have the same facial expressions, wear the same clothing and rated as average in attractiveness will be used in this experiment. An email will be sent to the undergraduate email list in a large national university to ask for photo shooting and usage. All participants 20-30 years old who agree that we can use the photo in our experiment will be taken to a professional photographer. To eliminate the effect of confounds, all of them will wear the same clothes and be taken a photo in front of the same background (white), smiling. Since previous studies have identified attractiveness as one of the determinants of trust (Ert et al., 2016), we will ask 30 MTurk workers to rate all the photos on the attractiveness. Photos of the similar attractiveness will be selected for later use. In addition, since gender is not of interest in this study, both female and male hosts will appear in a random manner.

[1] According to the U.S. census (2016), Black Americans are the largest racial minority. White and Black Americans make up 90.2% of the population. Therefore, we choose only to explore Black and White race in the current study for simplicity. Future extensions can include other racial minorities, such as Asian.

Listing Photo of the Room

About 50 Airbnb property photos will be collected. MTurk workers will be recruited to rate on a 7-point Likert scale about "to what degree would you like to spend a night in the room that appears in the picture?" Photos of the mean ratings will be selected for experimental stimulus.

Listing Website Design

The property listing website will be adapted from Airbnb. However, to eliminate the effect of prior experience and existing trust in the website, the logo and the name "Airbnb" will be removed in the experimental setting.

Dependent Variables

Trust in the Host

Trust in the host will be measured by a 7-point Likert scale adapted from Lu et al., (2010) and Doney and Cannon (1997). Example items include: "the host is frank in presenting the information", "the host is concerned about the guest", "the host is concerned about what is important to me", and "the host will do everything within his/her capacity to help me."

Trust in the Website

Items to measure trust in the website will be adapted from Hsin Chang and Wen Chen (2008) on a 7-point Likert scale. Example items include: 1) This platform is competent; 2) This platform knows how to provide excellent service.

Perceived Risk

This variable will be measured by a 7-point Likert scale adopted from Hsin Chang and Wen Chen (2008). Items include: 1) I believe that booking room from this platform is risky because the rooming services may fail to meet my expectations; 2) I believe that booking room from this platform is risky because rooming services may be inferior.

Booking Intention

Booking intention will be measured by 1) the price willing to pay for this listing and 2) items taken from Lu et al., (2010). Participants will be asked to rate on to what degree they agree with the following items on a 7-point Likert scale: 1) I would consider booking this room for this trip to Chicago; 2) It is likely that I will actually book this room in the near future in real day life; 3) I intend to book this room.

Control Variables

Demographic variables, such as age, education, annual income, and country, will be controlled. In particular, to control the effect of gender and gender similarity, two dummy variables will be created to represent the four situations: male host with male guest, male host with female guest, female host with male guest, and female host with female guest.

To exclude personal preference on room, participants will be asked about to what degree they like the location, appearance and facilities of the room. Participants will be also asked for their disposition to trust and risk propensity. Items measuring disposition to trust will be adapted from Jarvenpaa, Knoll, and Leidner (1998) and Schoorman, Mayer, and Davis, (1996). Items measuring risk propensity will be adapted from Lopez-Nicolas and Molina-Castillo (2008). In addition, familiarity with room sharing platform, such as Airbnb will be controlled. Items measuring familiarity to room sharing platforms will be adapted from Gefen, Karahanna, and Straub (2003) and Gefen and Straub (2004) : 1) I am familiar with room sharing platforms, such as Airbnb, through reading magazines/newspaper articles or ads; 2) I am familiar with Airbnb through visiting the site and searching for listings; 3) I am familiar with Airbnb; 4) I am familiar with Airbnb through booking the listing on this site.

Procedure

We will recruit 160 White and 160 Black MTurk workers. They will be randomly assigned to each condition: the high vs. low race similarity and high vs. low reputation. Participants will be told that "we are collaborating with a company that provides property pricing consulting service for RoomToShare.com hosts. RoomToShare.com is a website similar to Airbnb that allows accommodation listing and booking. This survey is conducted to better understand how RoomToShare.com users perceived price and make decisions. In the following sections, you will be asked to indicate your booking intentions and preferences among different RoomToShare.com accommodation options. Please click "continue" if you would like to proceed with this task." Questionnaire 1 containing all the control variables, except for the listing attractiveness, will be presented after their agreement to participate.

Next, the experiment context will be provided: "You are planning a leisure travel to Chicago and looking for a room to book. Now, your friend recommended a property listed on RoomToShare.com. Please click "continue" to see the listing. Then, you will see a listing webpage." Once the participant has seen the listing, they will be asked to rate their intention to book the listing on a 7-point Likert scale. Next, participants will be asked to complete the perceived risk, trust in the host and trust in the website scales. To ensure that the dependent variables were successfully manipulated, a manipulation check questionnaire will be shown before the debriefing page at the end of the experiment.

Limitations and Future Work

This study has several limitations, which could inspire future work. First, participants on MTurk may include online experiment sample bias such that these participants have higher familiarity with sharing economy platforms than other participants. Second, we only include hosts and guests who are either White or Black. If the hypotheses are supported, future work could examine whether this model holds for other races. Third, to mimic a similar environment to Airbnb, we only compare hosts of different photos. However, future work could further examine differences among profiles that do not have a personal photo, personalized avatar photo and human face photo of various races. If hosts of no-photo profiles are perceived as more trustworthy than Black hosts, removing the hosts' personal photo could potentially help to reduce racial biases in sharing economy.

Conclusion

In this paper, we propose to explore the effects of reputation and race on booking intention on Airbnb platform. Specifically, we propose a theoretical model based on similarity-attraction theory and a between-subjects experiment to empirically test the model. Racial similarity is expected to increase guest's perception of trust in the host and that high reputation of the host can improve trust in both the specific host and the entire website, as well as alleviating risk perception. We also expect to see that guests make booking decision by taking a difference between trust and risk.

If our hypotheses are supported, this study can make several contributions to the literature of racial discrimination, demographic similarity and reputation systems in the sharing economy. First, it will contribute to the theory by shedding light on the impact on reputation systems and race on sharing economy. Second, it will contribute to research on the sharing economy by identifying a key mediator, trust in the host, which contributes to explain the theoretical linkage between race and booking intention. Finally, our work can also further our understanding about the interplay between trust and perceived risk in decision making on sharing economy platforms. Taken together, this study has the potential to extend current theories regarding the impact of trust by clarifying the boundary conditions of its effect on sharing economy platforms.

References

Aral, S., Muchnik, L., and Sundararajan, A. 2009. "Distinguishing influence-based contagion from homophily-driven diffusion in dynamic networks." in *Proceedings of the National Academy of Sciences*, 106(51), 21544–21549.

Belk, R. 2014. "You are what you can access: Sharing and collaborative consumption online." *Journal of Business Research*, *67*(8), 1595–1600.

Bellotti, V., Ambard, A., Turner, D., Gossmann, C., Demkova, K., and Carroll, J. M. 2015. "A muddle of models of motivation for using peer-to-peer economy systems." in *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. ACM., pp. 1085–1094.

Benjaafar, S., Kong, G. C., Li, X., and Courcoubetis, C. 2015. "Peer-to-peer product sharing: Implications for ownership, usage and social welfare in the sharing economy." *Working Paper*. Retrieved from http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2669823

Bersin, J. 2016. "Everything Is Becoming Digital: Talent, Business, And HR Predictions For 2017." *Forbes*. Retrieved from https://www.forbes.com/sites/joshbersin/2016/12/11/how-everything-is-becoming-digital-and-why-businesses-must-adapt-now/#425acdba819a

Botsman, R., and Rogers, R. 2011. "What's mine is yours: how collaborative consumption is changing the way we live." *Collins London*. Retrieved from http://appli6.hec.fr/amo/Public/Files/Docs/241_fr.pdf

Byrne, D. E. 1971. "The attraction paradigm." Academic Pr, Vol. 11.

Byrne, D., and Griffitt, W. 1969. "Similarity and awareness of similarity of personality characteristics as determinants of attraction." *Journal of Experimental Research in Personality*.

Byrne, D., Griffitt, W., and Stefaniak, D. 1967. "Attraction and similarity of personality characteristics." *Journal of Personality and Social Psychology*, 5(1), 82.

Chafkin, M., and Newcomer, E. 2016. "Airbnb Faces Growing Pains as It Passes 100 Million Guests." *Bloomberg*. Retrieved from https://www.bloomberg.com/news/articles/2016-07-11/airbnb-faces-growing-pains-as-it-passes-100-million-users

Chaudhuri, A., and Holbrook, M. B. 2001. "The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty." *Journal of Marketing*, 65(2), 81–93.

Chen, J., Zhang, C., and Xu, Y. 2009. "The role of mutual trust in building members' loyalty to a C2C platform provider." *International Journal of Electronic Commerce*, 14(1), 147–171.

Coleman, J. S., and Coleman, J. S. 1994. "Foundations of social theory." *Harvard university press*.

Cui, R., Li, J., and Zhang, D. J. 2016. Discrimination with Incomplete Information in the Sharing Economy: Field Evidence from Airbnb. *Working paper*. SSRN Scholarly Paper No. ID 2882982. Rochester, NY: Social Science Research Network. Retrieved from https://papers.ssrn.com/abstract=2882982

Doleac, J. L., and Stein, L. C. 2013. "The visible hand: Race and online market outcomes." *The Economic Journal*, 123(572), F469–F492.

Doney, P. M., and Cannon, J. P. 1997. "An examination of the nature of trust in buyer-seller relationships." *The Journal of Marketing*, 35–51.

Edelman, B. G., and Luca, M. 2014. "Digital discrimination: The case of airbnb. com." *Harvard Business School NOM Unit Working Paper*, pp. 14–054.

Edelman, B., Luca, M., and Svirsky, D. 2017. "Racial discrimination in the sharing economy: Evidence from a field experiment." *American Economic Journal: Applied Economics,* 9(2), 1–22.

Ert, E., Fleischer, A., and Magen, N. 2016. "Trust and reputation in the sharing economy: The role of personal photos in Airbnb." *Tourism Management*, 55, 62–73.

Farh, J.-L., Tsui, A. S., Xin, K., and Cheng, B.-S. 1998. "The influence of relational demography and guanxi: The Chinese case." *Organization Science*, 9(4), 471–488.

Gefen, D., Karahanna, E., and Straub, D. W. 2003. "Trust and TAM in online shopping: an integrated model." *MIS Quarterly*, 27(1), 51–90.

Gefen, D., and Straub, D. W. 2004. "Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services." *Omega*, 32(6), 407–424.

Goldberg, C. B. 2005. "Relational demography and similarity-attraction in interview assessments and subsequent offer decisions are we missing something?" *Group and Organization Management*, 30(6), 597–624.

Green, S. G., Anderson, S. E., and Shivers, S. L. 1996. "Demographic and organizational influences on leader–member exchange and related work attitudes." *Organizational Behavior and Human Decision Processes,* 66(2), 203–214.

Hannák, A., Wagner, C., Garcia, D., Mislove, A., Strohmaier, M., and Wilson, C. 2017. "Bias in Online Freelance Marketplaces: Evidence from TaskRabbit and Fiverr." in *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing*. New York, NY, USA: ACM, pp. 1914–1933.

Heller, N. 2017. "Is the Gig Economy Working? The New Yorker." *The New Yorker*. Retrieved from http://www.newyorker.com/magazine/2017/05/15/is-the-gig-economy-working

Hsin Chang, H., and Wen Chen, S. 2008. "The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator." *Online Information Review*, 32(6), 818–841.

Hung, Y.-T., Dennis, A. R., and Robert, L. 2004. "Trust in virtual teams: Towards an integrative model of trust formation." *In System Sciences. Proceedings of the 37th Annual Hawaii International Conference. IEEE.*

Jarvenpaa, S. L., Knoll, K., and Leidner, D. E. 1998. "Is anybody out there? Antecedents of trust in global virtual teams." *Journal of Management Information Systems*, 14(4), 29–64.

John, D. C. 2010. "Disparities For Women and Minorities in Retirement Saving." *Brookings*. Retrieved from https://www.brookings.edu/testimonies/disparities-for-women-and-minorities-in-retirement-saving/

Judge, T. A., and Ferris, G. R. 1993. "Social context of performance evaluation decisions." *Academy of Management Journal*, 36(1), 80–105.

Kakar, V., Franco, J., Voelz, J., and Wu, J. 2016. "Effects of Host Race Information on Airbnb Listing Prices in San Francisco." *Working paper*. Retrieved from https://mpra.ub.uni-muenchen.de/id/eprint/69974

Kim, D. J., Ferrin, D. L., and Rao, H. R. 2008. "A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents." *Decision Support Systems*, 44(2), 544–564.

Lamberton, C. P., and Rose, R. L. 2012. "When is ours better than mine? A framework for understanding and altering participation in commercial sharing systems." *Journal of Marketing*, 76(4), 109–125.

Laouénan, M., and Rathelot, R. 2016. "Ethnic Discrimination on an Online Marketplace of Vacation Rentals." Retrieved from http://www.sole-jole.org/16377.pdf

Lizardo, O., Penta, M., Chandler, M., Doyle, C., Korniss, G., Szymanski, B. K., and Bakdash, J. Z. 2015. "Analysis of opinion evolution in a multi-cultural student social network." *Procedia Manufacturing*, 3, 3974–3981.

Lopez-Nicolas, C., and Molina-Castillo, F. J. 2008. "Customer Knowledge Management and E-commerce: The role of customer perceived risk." *International Journal of Information Management*, 28(2), 102–113.

Lu, Y., Zhao, L., and Wang, B. 2010. "From virtual community members to C2C e-commerce buyers: Trust in virtual communities and its effect on consumers' purchase intention." *Electronic Commerce Research and Applications*, 9(4), 346–360.

Malhotra, D. 2004. "Trust and reciprocity decisions: The differing perspectives of trustors and trusted parties." *Organizational Behavior and Human Decision Processes*, 94(2), 61–73.

Mayer, R. C., Davis, J. H., and Schoorman, F. D. 1995. "An integrative model of organizational trust." *Academy of Management Review*, 20(3), 709–734.

McKnight, D. H., Choudhury, V., and Kacmar, C. 2002. "Developing and validating trust measures for e-commerce: An integrative typology." *Information Systems Research*, 13(3), 334–359.

Mittendorf, C. 2016. "What Trust means in the Sharing Economy: A provider perspective on Airbnb.com." in *AMCIS 2016 Proceedings*.

Morgan, R. M., and Hunt, S. D. 1994. "The commitment-trust theory of relationship marketing." *The Journal of Marketing*, 20–38.

Pelled, L. H. 1996. "Demographic diversity, conflict, and work group outcomes: An intervening process theory." *Organization Science*, 7(6), 615–631.

Pope, D. G., and Sydnor, J. R. 2011. "What's in a Picture? Evidence of Discrimination from Prosper. com." *Journal of Human Resources*, 46(1), 53–92.

Porter, C. E., and Donthu, N. 2008. "Cultivating trust and harvesting value in virtual communities." *Management Science,* 54(1), 113–128.

PwC. 2014. "The sharing economy: How will it disrupt your business? Megatrends: The collisions." *PwC*. Retrieved from http://pwc.blogs.com/files/sharing-economy-final_0814.pdf

Resnick, P., and Zeckhauser, R. 2002. "Trust among strangers in internet transactions: Empirical analysis of ebay's reputation system." *The Economics of the Internet and E-Commerce*, 11(2), 23–25.

Resnick, P., Zeckhauser, R., Swanson, J., and Lockwood, K. 2006. "The value of reputation on eBay: A controlled experiment." *Experimental Economics*, 9(2), 79–101.

Robert, L. P., Denis, A. R., and Hung, Y.-T. C. 2009. "Individual swift trust and knowledge-based trust in face-to-face and virtual team members." *Journal of Management Information Systems,* 26(2), 241–279.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., and Camerer, C. 1998. "Not so different after all: A cross-discipline view of trust." *Academy of Management Review,* 23(3), 393–404.

Schoorman, F. D., Mayer, R. C., and Davis, J. H. 1996. "Empowerment in veterinary clinics: The role of trust in delegation." in *the 11th Annual Meeting of the Society for Industrial and Organizational Psychology*, San Diego, CA.

Sitkin, S. B., and Pablo, A. L. 1992. "Reconceptualizing the determinants of risk behavior." *Academy of Management Review,* 17(1), 9–38.

Steele, C. M. 1988. "The psychology of self-affirmation: Sustaining the integrity of the self." *Advances in Experimental Social Psychology,* 21, 261–302.

Sundararajan, A. 2016. "The Sharing Economy: The End of Employment and the Rise of Crowd-Based Capitalism." *MIT Press*.

Tajfel, H. 1982. "Social psychology of intergroup relations." *Annual Review of Psychology*, 33(1), 1–39.

Teubner, T., Hawlitschek, F., and Gimpel, H. 2016. "Motives in the Sharing Economy: An Empirical Investigation of Drivers and Impediments of Peer-to-Peer Sharing." *Working paper*. Retrieved from https://im.iism.kit.edu/downloads/Motives%20in%20the%20Sharing%20Economy.pdf

The U.S. Census Bureau. 2016. "The United States Census." Retrieved from https://www.census.gov/quickfacts/fact/table/US/PST045216

Tsui, A. S., O'reilly, C. A., and others. 1989. "Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads." *Academy of Management Journal*, 32(2), 402–423.

Turner, J. C., and Tajfel, H. 1986. "The social identity theory of intergroup behavior." *Psychology of Intergroup Relations*, 7–24.

Verhage, J. 2016. "One Wall Street Firm Expects Airbnb to Book a Billion Nights a Year Within a Decade." *Bloomberg*. Retrieved from https://www.bloomberg.com/news/articles/2016-04-11/one-wall-street-firm-expects-airbnb-to-book-a-billion-nights-a-year-within-a-decade

Wang, D., Xi, S., and Gilheany, J. 2015. "The Model Minority? Not on Airbnb. com: A Hedonic Pricing Model to Quantify Racial Bias against Asian Americans." *Technology Science*.

Yacouel, N., and Fleischer, A. 2012. "The role of cybermediaries in reputation building and price premiums in the online hotel market." *Journal of Travel Research*, 51(2), 219–226.

Zenger, T. R., and Lawrence, B. S. 1989. "Organizational demography: The differential effects of age and tenure distributions on technical communication." *Academy of Management Journal,* 32(2), 353–376.

Zhang, K. Z., Yan, R., and Zhao, S. J. 2016. "Understanding Participation in Sharing Economy: The Roles of Convenience, Risk, and Regulatory Foci." in *Proceedings of the 20th Pacific Asia Conference on Information Systems (PACIS)*.

Zucker, L. G. 1986. "Production of trust: Institutional sources of economic structure, 1840–1920." *Research in Organizational Behavior*.