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Power of profile name in online sharing

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ABSTRACT

Theories of social exchange and social identity are extensively introduced to explain the motivation to share online. However, the first step to be social or identified in an online community is to have a profile name because online status and reputation should be assigned to an owner. The effect of profile name on online sharing is rarely explored in the literature, which is crucial in understanding the initial impulse of online sharing. We select a unique platform that enables users to use a profile name or remain anonymous and collect 2,109,555 reviews. Two main findings are drawn from our big data analysis. (1) Users who provide profile names are more involved in online sharing: they write longer text and upload more photos in comparison with anonymous users. (2) Users with profile names gain more recognition from peers. This study concludes by presenting the theoretical and managerial implications of these findings.

1. Introduction

Hotel booking sites provide beneficial platforms for users to obtain information from peers and post reviews after their experiences (Chan et al., 2017). However, sharing one's experience online is voluntary and requires effort to write text and upload photos (Liu et al., 2018). What motivates users to share online remains a major research question. Prior studies have drawn on social exchange and social identity theories to explain the motivation to contribute online (Forman et al., 2008; Luo et al., 2017). These motivations include information exchange (Xiang and Gretzel, 2010), self-enhancement (Yoo and Gretzel, 2008), and sense of belonging (Cantallops and Salvi, 2014).

Research in online contexts has suggested that self-verification plays an important role in shaping online behavior (Forman et al., 2008). The first step to be social or identified in an online community is to have a profile name because status, reputation, and social identity should be assigned to an owner. Compared with anonymous users, users with profile names are more concerned about their status and reputation in the community which can be obtained from their online contributions. Furthermore, voluntary contributions from users with profile names could be more salient owing to their higher sense of belonging in the community. Therefore, it is expected that users with profile names are more involved in online sharing in comparison with anonymous users.

The pursuit of status and reputation makes users with profile names pay more attention on the quality of their contributions, hence reviews posted by users with profile names could be more thorough and informative. In addition, readers would trust reviews posted by users with profile names more than anonymous users (Forman et al., 2008). Thus, it is expected that users with profile names are more recognized than anonymous users in an online community.

In this study, we select a hotel booking platform that enables users to use a profile name or remain anonymous. This unique research context offers an opportunity to empirically analyze the influence of self-verification on sharing intention. In particular, we aim to investigate the following research questions:

- Do users who provide profile names are more involved in online sharing?
- Do users with profile names gain more recognition from peers?

2. Data and methodology

We obtain data from Ctrip.com (NASDAQ: CTRP), a leading hotel booking platform in China that covers over 1.3 million hotels and has over 90 million registered users (2017 annual report). A Python-based crawler is developed to collect the dataset used in this study. First, we retrieve all hotels listed on Ctrip.com in Beijing, the capital city of China. Second, we select star-rated hotels and download the reviews

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posted from 2015 to 2017 for each hotel. Third, we exclude the reviews posted over three months after the check-in date and those with missing data. Eventually, we construct a dataset that comprises 2,109,555 valid observations.

We introduce two dependent variables to document the sharing behavior of users, namely the text length of a review (*TextLength*) and the number of photos uploaded in a review (*PhotoNum*). We utilize the number of helpful votes (*VoteNum*) that each review received to measure recognition from peers (Liu et al., 2018). The explanatory variable in this study is a dummy variable *Name* that equals 1 if the poster of a review has a profile name and 0 for anonymous posters.

Other factors may also affect online behavior. For example, recent studies have obtained consistent evidence on the association between user online behavior and travel type, rating score, and posting date (Liu et al., 2019). Therefore, we control for the travel type (i.e., business, friends, couple, family, and alone: dummy variables), the rating score, and the posting date (i.e., weekend and peak seasons: dummy variables) of a review in the following analysis.

We run regressions based on Models (1) and (2) to explore whether users with profile names are more involved in online sharing. Moreover, we run regressions based on Model (3) to investigate whether users with profile names gain more recognition from peers.

$$TextLength_i = \beta_0 + \beta_1 Name_i + \beta_2 Controls_i + \varepsilon_i \quad (1)$$

$$PhotoNum_i = \beta_0 + \beta_1 Name_i + \beta_2 Controls_i + \varepsilon_i \quad (2)$$

$$VoteNum_i = \beta_0 + \beta_1 Name_i + \beta_2 Controls_i + \varepsilon_i \quad (3)$$

3. Results

Table 1 presents the descriptive statistics of the main variables used in the following analysis. The text length of each review ranges from 1 to 1457 with an average of 28, while the average number of photos uploaded in each review is only 0.2. This result indicates that users tend to post short reviews without photos. The average number of helpful votes that each review received is 0.155, thereby suggesting that many reviews failed to receive helpful votes. Among the 2,109,555 reviews, only 28% are posted by users with profile names, while 72% are anonymously posted. In addition, about 69% of the reviews are posted at peak season (April to October in Beijing), while approximately 28% are written during weekends.

Table 2 reports the regression results on text length. In Column 1, we use the whole samples. As the coefficient (positive and significant at the 0.01 level) of *Name* shows, users with profile names write 13.8% longer than anonymous users. This result indicates that users with profile names exert additional effort when writing reviews. We also conduct robustness check using reviews posted on 2-, 3-, 4-, and 5-star hotels. Columns 2–5 show that the sign and significance of *Name* are consistent as reported in Column 1.

Although uploading photos is easier than writing text, the former evidently entails effort. Thus, we further analyze whether profile names can motivate users to share more photos when posting reviews. Table 3 presents the regression results. The positive coefficient (0.024^{***}) of *Name* indicates that users with profile names share more photos than anonymous users when posting reviews, which is robust across 2- to 5-star hotels (see Columns 2–5).

Table 4 presents the effect of profile name on peer recognition. The first row shows that users with profile names gain more helpful votes from readers (information searchers), indicating that reviews posted by users with profile names are considered more useful or informative by peers. This result is robust across 2- to 5-star hotels (see Columns 2 to 5).

Table 1
Descriptive statistics.

Variable	Obs.	Mean	S.D.	Min.	Max.
TextLength	2,109,555	28.353	36.333	1	1457
PhotoNum	2,109,555	0.200	0.913	0	18
VoteNum	2,109,555	0.155	1.499	0	1,648
Name	2,109,555	0.283	0.450	0	1
Rating	2,109,555	4.428	0.861	1	5
Weekend	2,109,555	0.279	0.448	0	1
Season	2,109,555	0.692	0.462	0	1
Business	2,109,555	0.484	0.500	0	1
Family	2,109,555	0.180	0.385	0	1
Friends	2,109,555	0.096	0.295	0	1
Couple	2,109,555	0.086	0.281	0	1
Alone	2,109,555	0.061	0.239	0	1

Table 2
Effect of profile name on sharing (*TextLength*).

	Whole	2-star	3-star	4-star	5-star
Name	0.138^{***}	0.121^{***}	0.147^{***}	0.155^{***}	0.137^{***}
	(0.00291)	(0.00565)	(0.00568)	(0.00604)	(0.00524)
Rating	-0.176^{***}	-0.152^{***}	-0.171^{***}	-0.196^{***}	-0.231^{***}
	(0.00246)	(0.00306)	(0.00443)	(0.00684)	(0.00654)
Weekend	-0.0191^{***}	-0.0113^{***}	-0.0239^{***}	-0.0209^{***}	-0.0281^{***}
	(0.00187)	(0.00320)	(0.00369)	(0.00391)	(0.00423)
Season	−0.000265	0.0134^{***}	−0.00220	0.00172	-0.0239^{***}
	(0.00288)	(0.00469)	(0.00616)	(0.00661)	(0.00562)
Business	-0.0493^{***}	-0.0664^{***}	-0.0428^{***}	-0.0230^{**}	-0.0235^{**}
	(0.00473)	(0.00741)	(0.0102)	(0.00996)	(0.0102)
Family	0.341^{***}	0.277^{***}	0.338^{***}	0.390^{***}	0.433^{***}
	(0.00663)	(0.00953)	(0.0139)	(0.0151)	(0.0126)
Friends	0.0520^{***}	0.0336^{***}	0.0649^{***}	0.0727^{***}	0.0572^{***}
	(0.00604)	(0.00908)	(0.0120)	(0.0163)	(0.0112)
Couple	0.0963^{***}	0.0325^{***}	0.114^{***}	0.154^{***}	0.189^{***}
	(0.00605)	(0.00887)	(0.0123)	(0.0136)	(0.0134)
Alone	0.0923^{***}	0.0650^{***}	0.114^{***}	0.124^{***}	0.100^{***}
	(0.00567)	(0.00810)	(0.0139)	(0.0130)	(0.0144)
Cons.	3.539^{***}	3.425^{***}	3.546^{***}	3.606^{***}	3.783^{***}
	(0.0117)	(0.0149)	(0.0207)	(0.0344)	(0.0305)
Hotel FE	Yes	Yes	Yes	Yes	Yes
Categories	4907	3637	664	408	198
F (p)	1333.64^{***}	540.49^{***}	473.89^{***}	422.28^{***}	428.87^{***}
R^2	0.078	0.081	0.082	0.076	0.075
Obs.	2,109,555	771,103	440,830	499,256	398,366

Note: The dependent variable is the natural logarithm of *TextLength*. The robust standard errors (reported in parentheses) are clustered at the hotel level. The *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

4. Conclusion and implications

We use a dataset of 2,109,555 hotel reviews collected from Ctrip.com in drawing two main findings from our big data analysis. First, users with profile names are more involved in online sharing. That is, they write longer text and upload more photos when posting reviews. Second, users with profile names gain more recognition from peers. These results are robust and consistent across different levels of hotels.

This study is among the first to reveal the power of profile name in online sharing in the context of hotel reviews, enriching the expanding stream of literature on online sharing and big data analysis in hospitality. Social exchange and social identity theories are extensively introduced to explain users' online behavior when social media (e.g., online reviews, tweets, etc.) is involved. This study seeks to explore the first step to be social (have a profile name), thereby helping to better understand theories involving social. Our findings yield direct implications for the operation of UGC (user generated content) websites, particularly for hotel booking platforms and hotel review sites. Online reviews play an important role in the experience goods market, such as hospitality related products or services that consumers cannot evaluate prior to purchase. Therefore, high-quality reviews are a valuable resource for these websites to attract new users and retain current ones.

Table 3
Effect of profile name on sharing (*PhotoNum*).

	Whole	2-star	3-star	4-star	5-star
Name	0.0240***	0.0212***	0.0274***	0.0225***	0.0263***
	(0.000783)	(0.00129)	(0.00198)	(0.00138)	(0.00180)
Rating	0.00510***	0.00343***	0.00709***	0.00605***	0.00782***
	(0.000531)	(0.000790)	(0.00132)	(0.00108)	(0.00146)
Weekend	0.00637***	0.00606***	0.00380***	0.00544***	0.0108***
	(0.000592)	(0.000883)	(0.00127)	(0.00121)	(0.00154)
Season	−0.00329***	−0.00167	−0.00330*	−0.00230	−0.00669***
	(0.000728)	(0.00110)	(0.00172)	(0.00145)	(0.00176)
Business	0.00512***	0.00372***	0.0130***	0.0108***	0.00844***
	(0.000941)	(0.00137)	(0.00209)	(0.00177)	(0.00266)
Family	0.0732***	0.0435***	0.0763***	0.0900***	0.118***
	(0.00203)	(0.00186)	(0.00425)	(0.00374)	(0.00635)
Friends	0.0140***	0.00666***	0.0166***	0.0174***	0.0290***
	(0.00129)	(0.00168)	(0.00296)	(0.00251)	(0.00432)
Couple	0.0283***	0.00892***	0.0293***	0.0402***	0.0744***
	(0.00163)	(0.00163)	(0.00365)	(0.00,351)	(0.00548)
Alone	0.0484***	0.0310***	0.0509***	0.0622***	0.0893***
	(0.00177)	(0.00191)	(0.00394)	(0.00455)	(0.00655)
Cons.	0.0350***	0.0420***	0.0279***	0.0217***	0.0201**
	(0.00281)	(0.00384)	(0.00744)	(0.00590)	(0.00803)
Hotel FE	Yes	Yes	Yes	Yes	Yes
Categories	4907	3637	664	408	198
F (*p*)	247.96***	128.66***	70.82***	101.27***	56.12***
R^2	0.056	0.048	0.070	0.053	0.059
Obs.	2,109,555	771,103	440,830	499,256	398,366

Note: The dependent variable is the natural logarithm of *PhotoNum*. The robust standard errors (reported in parentheses) are clustered at the hotel level. The *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

Our findings suggest that users who provide profile names are more likely to post high-quality reviews that contain more words and photos and attract more recognition from readers. Thus, we suggest that UGC websites encourage users to use profile names, thereby placing them in a community and increasing their sharing intention. Among our research samples, only 28% of the users have profile names. Evidently, the website is not sufficiently encouraging their users to use profile names.

This study also has limitations. First, the dataset collected from Ctrip.com does not contain the ID of each poster. Thus, individual fixed effect is not employed (only hotel fixed effect is employed in this research). Second, although the systems are the same between mobile devices (app) and personal computers (desktop) that users can choose to use a profile name or keep anonymous, the posting behaviors can be heterogeneous regarding mobile vs. desktop (Mariani et al., 2019). Future research can collect data from various platforms to test and enhance the results of this study.

Table 4
Effect of profile name on peer recognition (*VoteNum*).

	Whole	2-star	3-star	4-star	5-star
Name	0.00577***	0.00267***	0.00695***	0.00688***	0.00857***
	(0.000528)	(0.000982)	(0.00118)	(0.000974)	(0.00113)
Rating	−0.0317***	−0.0278***	−0.0240***	−0.0332***	−0.0530***
	(0.00101)	(0.00127)	(0.00154)	(0.00289)	(0.00346)
Weekend	0.000149	0.000351	−0.00124	0.00111	−0.000226
	(0.000481)	(0.000761)	(0.000979)	(0.00114)	(0.00105)
Season	−0.00438**	−0.00244*	0.00248	−0.0119*	−0.00548***
	(0.00196)	(0.00132)	(0.00525)	(0.00610)	(0.00154)
Business	−0.00303***	−0.00307***	−0.00258*	0.000311	−0.00258*
	(0.000707)	(0.00106)	(0.00154)	(0.00164)	(0.00152)
Family	0.0405***	0.0291***	0.0371***	0.0477***	0.0592***
	(0.00120)	(0.00156)	(0.00316)	(0.00263)	(0.00286)
Friends	0.00951***	0.00909***	0.00852***	0.00769***	0.0125***
	(0.000936)	(0.00141)	(0.00210)	(0.00210)	(0.00218)
Couple	0.0192***	0.0117***	0.0193***	0.0247***	0.0332***
	(0.00109)	(0.00147)	(0.00243)	(0.00274)	(0.00302)
Alone	0.0176***	0.0107***	0.0199***	0.0252***	0.0281***
	(0.00114)	(0.00146)	(0.00302)	(0.00284)	(0.00332)
Cons.	0.211***	0.194***	0.171***	0.223***	0.305***
	(0.00474)	(0.00550)	(0.00861)	(0.0139)	(0.0157)
Hotel FE	Yes	Yes	Yes	Yes	Yes
Categories	4907	3637	664	408	198
F (*p*)	238.74***	91.16***	69.47***	66.51***	69.59***
R^2	0.108	0.123	0.087	0.117	0.096
Obs.	2,109,555	771,103	440,830	499,256	398,366

Note: The dependent variable is the natural logarithm of *VoteNum*. The robust standard errors (reported in parentheses) are clustered at the hotel level. The *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

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