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In Search of Patterns among Travellers' Hotel Ratings in TripAdvisor

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ABSTRACT

This paper sheds light on ways travellers' rating patterns in the hotel review website TripAdvisor differ between independent and chain hotels. To delve deeper, travellers were classified according to their profiles, namely, business, couple, family, friend and solo. Besides, hotels straddled across four geographical regions, namely, America, Asia Pacific, Europe as well as Middle East and Africa. A 5 (profiles) x 4 (regions) two-way factorial analysis of variance was conducted separately for independent and chain hotels. A qualitative analysis was further conducted to tease out the findings from the quantitative analyses. Travellers' rating patterns were found to differ substantially between independent and chain hotels across both profiles as well as regions. The paper concludes by highlighting its implications, limitations and potential directions for future research.

Keywords: user-generated ratings; e-tourism; web 2.0; travellers' profiles; geographical regions; independent hotels; chain hotels.

1. Introduction

As users increasingly broadcast their opinions through Web 2.0 applications, the role of these platforms as a mass influencer is gradually being enhanced. A popular form of Web 2.0 applications includes online review websites. These allow users to effectively disseminate their post-purchase experiences of products and services to the online communities at little cost.

Online review websites such as TripAdvisor that are dedicated to rating of hotels have been gaining immense popularity (Buhalis & Law, 2008). This is perhaps because tourism, which contributes to 9.4% of global GDP (Baumgarten & Kent, 2010), has become a worldwide phenomenon (Page & Connell, 2006). Travellers visiting different parts of the world with varying purposes tend to seek advice prior to booking. It is therefore no surprise that almost half of all travellers around the world—regardless whether they tour for business or leisure, irrespective whether they globe-trot with acquaintances or alone—browse ratings in hotel review websites before confirming their accommodation (Chipkin, 2012).

Most hotel review websites solicit ratings from travellers in two parts: a star value generally ranging from one to five and a textual description. Travellers' rating patterns may vary across hotel's ownership structure: independent or chain. Independent hotels are self-proprietary properties not affiliated to any brand, whereas chain hotels refer to those belonging to the same hotel group or consortium (Kirk, 1995; Namasivayam et al., 2000). Given their differences, rating patterns attracted by independent and chain hotels may not necessarily be always comparable (Ariffin & Maghzi, 2012; Yeung & Law, 2004).

Within the independent-chain dichotomy of hotels, rating patterns can be further shaped by travellers' expectation-experience congruence. When their experience exceeds their expectation, their delight often resonates in their ratings. Conversely, when their experience fails to meet their expectation, their discontent could also be reflected in their ratings.

Stemming from the expectation-experience congruence, two factors can have a bearing on rating patterns. The first factor includes the profile of a traveller. Travellers who stay in hotels are commonly classified into five profiles, namely, business, couple, family, friend and solo (Dolnicar, 2002; O'Connor, 2008). A hotel recommended for one profile can be appalling for another given the difference in expectations (Keates, 2007). After all, a

single hotel may not cater to the needs of travellers from all profiles (Weaver & Oh, 1993). It is quite possible for a hotel to delight a solo traveller without necessarily meeting the expectation of those travelling with family (Choi & Chu, 2001; Wu et al., 2010b).

The second factor entails the geographical region in which a hotel is located. In the context of tourism, four geographical regions—America, Asia Pacific, Europe, as well as Middle East and Africa—are widely studied both by the scholarly community (e.g., Aramberri, 2009; Chen, 2001; Singh, 1997) as well as by destination marketers and organizations such as the United Nations World Tourism Organization (UNWTO, 2013), and the World Economic Forum (Blanke & Chiesa, 2011). Whether travellers' experience meet expectation is in part dependent on the image of the destination (Chen & Hsu, 2000). However, the ways in which rating patterns for independent and chain hotels vary as a function of the interplay between profiles of travellers and geographical regions of the properties remain largely unknown.

For these reasons, this paper seeks to analyze differences in rating patterns between independent and chain hotels. To enhance granularity of the analysis, travellers are categorized into five profiles, namely, business, couple, family, friend and solo, while hotels are studied across four geographical regions, namely, America, Asia Pacific, Europe, as well as Middle East and Africa.

The paper has the potential to contribute to both theory and practice. On the theoretical front, it seeks to explicate travellers' rating patterns as a function of hotels' ownership structure—-independent and chain. Few studies hitherto have shed light on the independent-chain dichotomy of hotels. Additionally, the paper attempts to enrich the tourism literature by examining variations in rating patterns across travellers' profiles and hotels' geographical regions. Previous studies often failed to concurrently take these into account. Thus, this paper calls for more nuanced scholarly inquiry in the tourism domain.

Furthermore, on the practical front, the findings of this paper may suggest ways for hotel managers and destination marketers to target specific market segments in various geographical locations.

The rest of the paper proceeds as follows. The next section reviews the extant literature, which is followed by the Methods in Section 3. Thereafter, the Results and the Discussion are presented in Section 4 and Section 5 respectively. The paper concludes with Section 6.

2. Literature Review

Travellers have a variety of motivations to rate hotels. For example, they may rate hotels to voice their pleasure and satisfaction, or to vent out their anger and frustration about their post-stay experience in hotels (Hennig-Thurau et al., 2004; Sundaram et al., 1998). Also, travellers often rate hotels out of altruistic concerns for other potential travellers (Hennig-Thurau et al., 2004; Munar & Jacobsen, 2014). They are generally motivated to recommend good hotels, and warn about sub-par ones (Yoo & Gretzel, 2008). Furthermore, travellers can rate hotels to reflect their attitude toward the properties. While some are interested to help hotels improve their service quality, others could be determined to show their disdain (Oliver & Swan, 1989; Sundaram et al., 1998; Yoo & Gretzel, 2008).

The motivations may however elicit different rating patterns from travellers toward independent and chain hotels. This is because on the one hand, ratings for independent hotels may reflect the degree to which the properties offer personalized services. On the other hand, ratings for chain hotels are shaped by the extent to which the properties uphold their brand values (Ariffin & Maghzi, 2012; Choi & Chu, 2001; Holverson & Revaz, 2006). Unlike independent hotels, chain properties use their brand names to promote confidence and loyalty. Brand presence hence gives the latter an unfair advantage in influencing travellers'

perceptions (Yeung & Law, 2004), which in turn may shape the rating patterns. Given that prior studies have not widely differentiated hotels based on their ownership structure, it is therefore interesting to study how travellers' rating patterns differ between independent and chain properties. Besides, rating patterns may further vary as a function of travellers' profiles and hotels' geographical regions.

2.1. Rating Patterns across Travellers' Profiles

Travellers are commonly classified into one of the five profiles, namely, business, couple, family, friend and solo (Dolnicar, 2002; O'Connor, 2008). Given their different purposes and expectations (Ariffin & Maghzi, 2012), inadequacies pointed out by travellers of one profile can appear trivial to another while blemishes that are diminutive to some may be completely unacceptable to others (Keates, 2007).

Travellers of different profiles possess varying preference levels toward hotels in terms of attributes such as cleanliness, safety, value for money and location (Atkinson, 1988; Lewis, 1985). For instance, business travellers are extremely concerned about the convenience of location, and availability of the Internet irrespective of room price (Bulchand-Gidumal et al., 2011; Rivers et al., 1991). Satisfaction of those who travel as couples is largely affected by extraneous factors such as weather and perceived romanticism of the destination (Lee et al., 2010). Those who travel with families or friends tend to emphasize more on safety and security compared with solo travellers (Lai & Graefe, 2000). Ratings provided by travellers of different profiles are thus likely to depend on their specific preferences (Poston, 2008).

Furthermore, when travellers rate hotels, they are often guided by commitment toward others of similar profiles (Hennig-Thurau et al., 2004). They generally tend to post their entries with a target audience in mind. A survey with users of TripAdvisor as its participants

found that most travellers looked into ratings contributed by only those with a similar profile (Gretzel et al., 2007). Travellers of one profile rarely bother to go through ratings provided by those of other profiles. Hence, it is interesting to study the ways in which rating patterns vary across travellers' profiles.

2.2. Rating Patterns across Hotels' Geographical Regions

For the purpose of this paper, four geographical regions are considered. These include America, Asia Pacific, Europe, as well as Middle East and Africa. Globalization has resulted in making every part of the world accessible to all and sundry, thereby promoting worldwide cross-border tourism (Page & Connell, 2006). In particular, Europe attracts the highest world tourism arrivals followed by Asia Pacific, America, as well as Middle East and Africa. Again, the tourism growth rate is the highest in Asia Pacific followed by Middle East and Africa, America as well as Europe (Aramberri, 2009; UNWTO, 2013).

Scholars have long demonstrated that travellers' expectations vary based on the perceived image of their destinations (Chen & Hsu, 2000; Milman & Pizam, 1995; Pearce, 1982). Travellers' perceptions about destinations are often shaped by designative and evaluative attributes (Baloglu & Brinberg, 1997; Walmsley & Jenkins, 1992; Walmsley & Young, 1998). The former relates to perceptual attributes such as friendly people and good highways (Fakeye & Crompton, 1991), while the latter deals with affective components such as pleasant and arousing environment (Walmsley & Young, 1998). Factors such as security, environmental conditions, lifestyle, language barrier, and cost of living also influence travellers' expectations from hotels in a given region (Chen, 2001). This in turn may shape their rating patterns. Hence, it is quite unsurprising when entries in TripAdvisor warn about the smell of mildew in hotels located in regions that had recently encountered natural

calamities such as hurricanes or tsunamis (Keates, 2007). This sets an interesting context to study travellers' rating patterns as a function of hotels' geographical regions.

3. Methods

3.1. Data Sources

This paper uses TripAdvisor as the test case for investigation due to three reasons. First, it is one of the most popular sources of hotel ratings on the Internet with more than some five million registered users who visit the platform 30 million times per month on average. It boasts of archives of some 10 million ratings on over a quarter million hotels (O'Connor, 2008). Collecting data from such a popular platform facilitates gleaning findings that would hold practical significance.

Second, among the scholarly community, TripAdvisor represents one of the most widely investigated hotel review websites. It has been chosen as the website for data collection in numerous studies over the years (e.g., Duan & Zirn, 2012; Wu et al., 2010a; Yoo & Gretzel, 2008). However, travellers' rating patterns for independent and chain hotels in TripAdvisor have not been widely investigated hitherto.

Third, TripAdvisor not only allows travellers to state their profiles—business, couple, family, friend or solo—while rating hotels but also facilitates filtering of properties in a given region based on brands. The availability of both these functionalities makes the website particularly suitable for the context of this paper.

Hotels featured in TripAdvisor were selected for data collection in January, 2013 using a two-step process. In the first step, a total of 20 tourist destinations uniformly distributed across the four regions—America, Asia Pacific, Europe as well as Middle East and Africa—were identified. Each of them had been consistently ranked as popular in their respective regions by the Travel and Tourism Competitiveness Reports over the last five

years from 2008 to 2012. From America, the tourist destinations include Canada, Costa Rica, Mexico, Puerto Rico, and the United States; those from Asia Pacific include Australia, Hong Kong, Japan, New Zealand, and Singapore; those from Europe include Austria, France, Germany, Switzerland and the United Kingdom; and those from Middle East and Africa include Israel, Mauritius, South Africa, Tunisia as well as the United Arab Emirates.

In the second step, a total of 200 hotels (100 independent hotels + 100 chain hotels) uniformly distributed across the 20 tourist destinations were short-listed. In other words, from each of the 20 tourist destinations, 10 hotels (five independent hotels + five chain hotels) were randomly chosen. For identifying independent and chain properties, TripAdvisor's hotel filtering feature based on brand was utilized. Hotels not linked to any brand were considered independent. On the other hand, chain hotels included those affiliated to brands such as Hilton, Marriott and Sheraton. All the selected hotels consistently attracted more than 100 ratings in TripAdvisor over each of the last five years from 2008 to 2012.

3.2. Data Collection and Analyses

In March 2013, a web scraper was used to collect the ratings attracted in TripAdvisor by the selected hotels. Specifically, a total of 39,747 ratings posted between January 2008 and February 2013 were drawn. For every entry, five data fields were obtained, namely, star value, textual description, date of posting, traveller ID, and travellers' profile (business, couple, family, friend or solo). From the initial pool, entries with non-English text were eliminated. The final dataset admitted for analysis included 37,652 ratings (14,966 ratings for independent hotels + 22,686 ratings for chain hotels).

To address the objective, a 5 (profiles: business, couple, family, friend, solo) x 4 (regions: America, Asia Pacific, Europe, Middle East and Africa) two-way factorial analysis of variance (ANOVA) was conducted. The analysis was done separately for independent

hotels and chain hotels. The dependent variable included star values of ratings. Prior to the analysis, the distribution of ratings in the dataset was examined for normality.

To further tease out the findings obtained from the ANOVA results, a qualitative analysis was conducted. Specifically, after eliminating stop words, AntConc 3.2.2 text analysis toolkit was used to find some of the most frequently occurring words and phrases (Anthony, 2011), which were then used as keywords to search matching entries. Excerpts from the matched entries are provided to illustrate the ways in which travellers generally used those frequently occurring words and phrases.

4. Results

4.1. Quantitative Analysis

Table 1 provides the descriptive statistics of the star ratings. Specifically, they are summarized separately for independent and chain hotels across the five profiles, namely, business (BUS), couple (COU), family (FAM), friend (FRI) and solo (SOL) as well across the four regions, namely, America (AME), Asia Pacific (ASP), Europe (EUR), as well as Middle East and Africa (MEA). It generally seems that chain hotels garner greater volume of ratings vis-à-vis independent properties. The latter was generally rated higher than the former.

In terms of profiles, couples were the most lenient in rating both independent and chain hotels. On the other hand, business travellers were found to lie at the other end of the spectrum. Travellers of all profiles rated chain hotels more strictly vis-à-vis independent hotels.

In terms of regions, independent hotels in Europe were rated most highly whereas those in Asia Pacific lagged behind in the rear. On the other hand, chain hotels in Asia Pacific were rated most highly while those in America were found to lie at the opposite end of the

spectrum. Interestingly, Asia Pacific emerged as the only region where independent hotels were rated more strictly vis-à-vis chain hotels.

Table 1
Descriptive statistics of hotel ratings across profiles and regions.

Profile/ Region	Independent hotels		Chain hotels	
	N	Mean ± SD	N	Mean ± SD
BUS	2,466	4.14 ± 0.96	6,573	4.03 ± 0.98
COU	6,634	4.40 ± 0.88	8,192	4.22 ± 0.95
FAM	3,494	4.32 ± 0.92	4,606	4.15 ± 1.00
FRI	1,394	4.39 ± 0.89	1,971	4.16 ± 1.04
SOL	978	4.34 ± 0.88	1,344	4.20 ± 0.93
AME	2,571	4.10 ± 1.08	4,994	4.02 ± 1.01
ASP	4,286	4.06 ± 0.94	8,590	4.24 ± 0.90
EUR	4,661	4.56 ± 0.73	5,236	4.13 ± 0.97
MEA	3,448	4.54 ± 0.81	3,866	4.14 ± 1.08
Total	14,966	4.33 ± 0.91	22,686	4.15 ± 0.90

The overall nature of the distribution of star ratings in the dataset is summarized as follows: Mean = 4.22, Median = 4.00, Mode = 5.00, SD = 0.96, Skewness = -1.35, Kurtosis = 1.63. Normality was ascertained based on skewness and kurtosis. Specifically, absolute skewness and kurtosis values less than 2 denote unsubstantial departure from normality (Kim, 2013; West et al., 1995). For star ratings, the values were respectively -1.35 and 1.63. Therefore, using ANOVA was appropriate.

The result of the 5 (profiles) x 4 (regions) two-way factorial ANOVA for independent hotels indicated a significant simple effect of profiles [$F(4, 14946) = 15.20; p < 0.001$], a significant simple effect of regions [$F(3, 14946) = 207.21; p < 0.001$], as well as a significant interaction between profiles and regions [$F(12, 14946) = 4.12; p < 0.001$]. The significant interaction indicates that among all profile-region combinations, business travellers for independent hotels in Asia Pacific exhibited the most stringent rating patterns while couples

for hotels in Middle East-Africa were found to lie at the opposite end of the spectrum. As shown in the interaction plot for independent hotels (Fig. 1) supplemented with Table 2, business travellers were generally stricter in rating than other profiles in all regions except America, where travellers with family or friend were more stringent. Ratings for independent hotels in America and Asia Pacific were generally lower than those in Europe as well as Middle East and Africa.

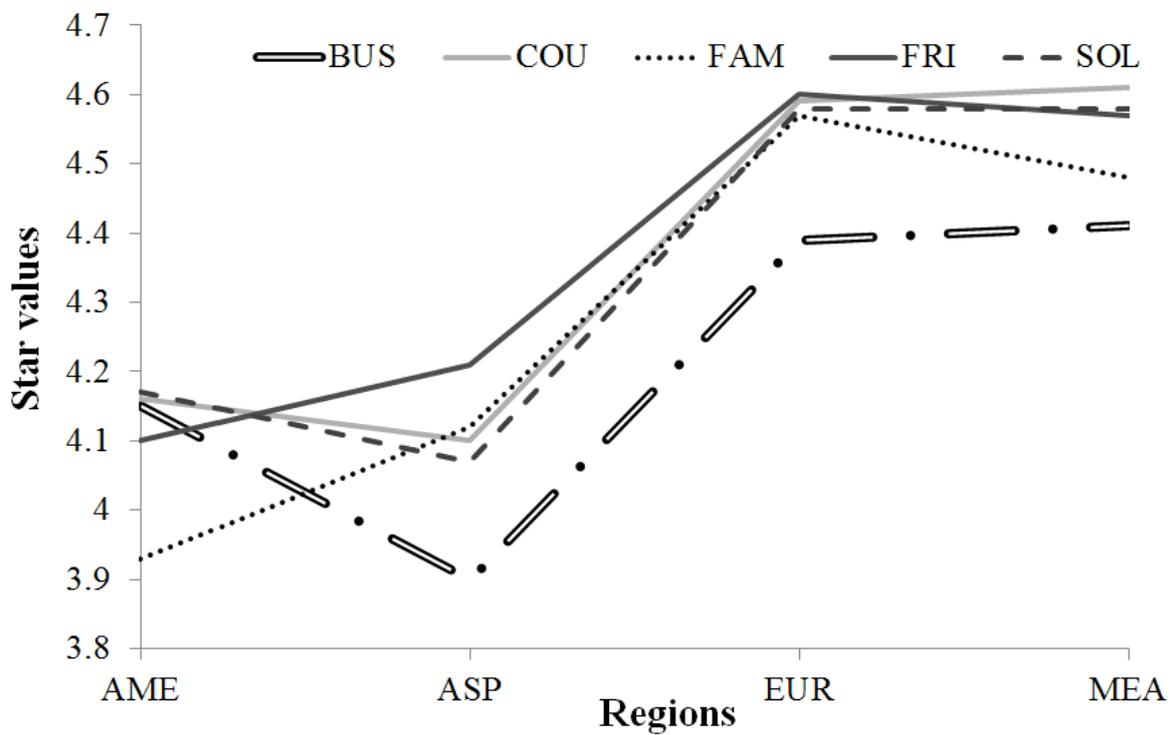


Fig. 1. Interaction plot for independent hotels across profiles and regions.

Table 2

Means and SDs of ratings for independent hotels across profiles and regions.

	BUS	COU	FAM	FRI	SOL
AME	4.15 ± 1.05	4.16 ± 1.07	3.93 ± 1.13	4.10 ± 1.12	4.17 ± 0.95
ASP	3.90 ± 0.97	4.10 ± 0.94	4.12 ± 0.91	4.21 ± 0.86	4.07 ± 0.94
EUR	4.39 ± 0.88	4.59 ± 0.70	4.57 ± 0.71	4.60 ± 0.66	4.58 ± 0.72
MEA	4.41 ± 0.86	4.61 ± 0.74	4.48 ± 0.86	4.57 ± 0.82	4.58 ± 0.76

The result of the 5 (profiles) x 4 (regions) two-way factorial ANOVA for chain hotels indicated a significant simple effect of profiles [$F(4, 22666) = 32.02$; $p < 0.001$], a significant simple effect of regions [$F(3, 22666) = 37.55$; $p < 0.001$], as well as a significant interaction between profiles and regions [$F(12, 22666) = 3.71$; $p < 0.001$]. The significant interaction indicates that among all profile-region combinations, business travellers for chain hotels in both America and Europe exhibited the most stringent rating patterns while those travelling with friends for hotels in Asia Pacific were found to lie at the opposite end of the spectrum. As shown in the interaction plot for chain hotels (Fig. 2) supplemented with Table 3, business travellers were generally stricter in rating than other profiles in all regions except Middle East and Africa, where travellers with family were more stringent. Ratings for chain hotels in America and Europe were generally lower than those in Asia Pacific as well as Middle East and Africa.

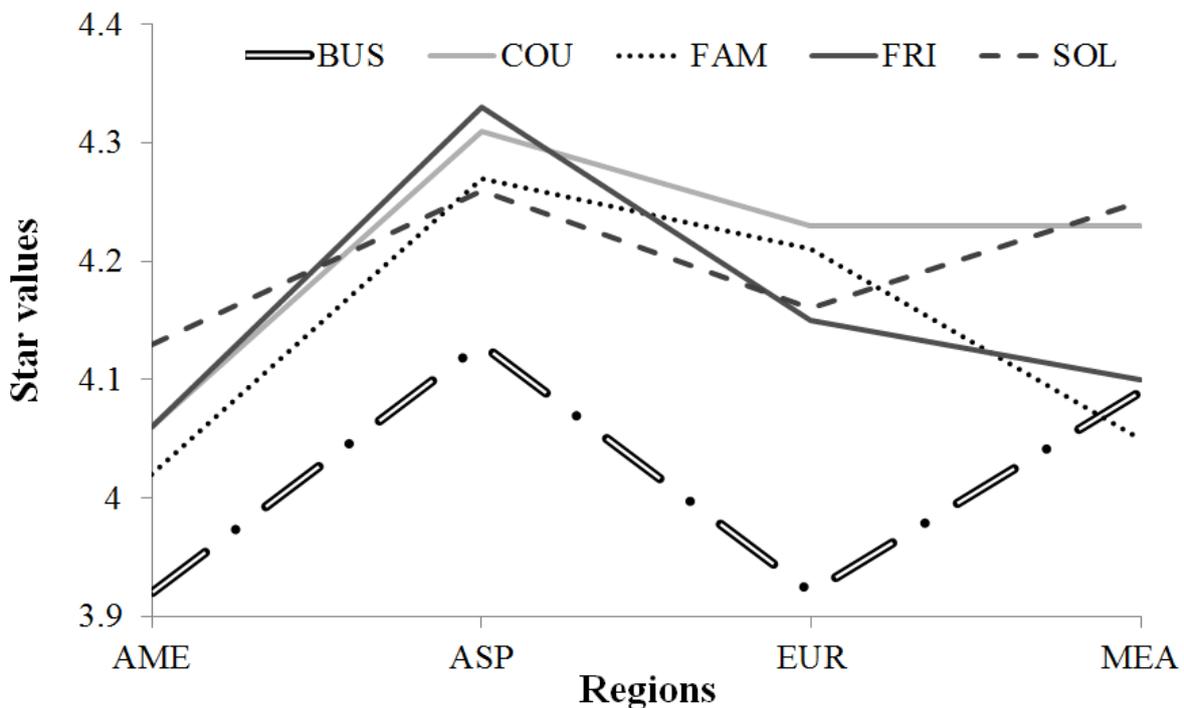


Fig. 2. Interaction plot for chain hotels across profile and regions.

Table 3

Means and SDs of ratings for chain hotels across profiles and regions.

	BUS	COU	FAM	FRI	SOL
AME	3.92 ± 1.06	4.06 ± 0.98	4.02 ± 1.00	4.06 ± 1.07	4.13 ± 0.89
ASP	4.13 ± 0.93	4.31 ± 0.86	4.27 ± 0.91	4.33 ± 0.89	4.26 ± 0.90
EUR	3.92 ± 0.99	4.23 ± 0.93	4.21 ± 0.94	4.15 ± 1.06	4.16 ± 0.98
MEA	4.09 ± 0.95	4.23 ± 1.07	4.05 ± 1.14	4.10 ± 1.17	4.25 ± 1.03

Based on the quantitative analysis, two interesting findings were gleaned. First, even though business travellers were generally more stringent than other profiles, family travellers occasionally emerged as being pickier. Specifically, family travellers were found to exhibit stringent rating patterns toward independent hotels in America as well as chain hotels in Middle East and Africa.

Second, even though independent hotels generally attracted higher ratings than chain hotels within a given geographical region, Asia Pacific showed lower mean rating for independent hotels than that for chain hotels. The interaction plots (Fig. 1 and Fig. 2) suggest that independent hotels in Asia Pacific received the lowest ratings from business travellers, whereas chain hotels in Asia Pacific attracted the highest ratings from those travelling with friends.

These two findings are delved deeper through the qualitative analysis. Specifically, arising from the first finding, the qualitative analysis seeks to shed greater light on the following: the reasons for which independent hotels in America attracted stringent ratings from travellers with family, and the reasons for which chain hotels in Middle East and Africa received stringent ratings from travellers with family. Besides, arising from the second finding, the qualitative analysis attempts to explicate the following: the reasons for which independent hotels in Asia Pacific were rated strictly by business travellers, and the reasons for which chain hotels in Asia Pacific were rated leniently by those travelling with friends.

4.2. Qualitative Analysis

For independent hotels in America, there was a collection of 94 ratings that had received one or two stars from travellers with family. Among those, the phrase “*front desk*” appeared 31 times (henceforth, collection frequency or CF) spread across 22 entries (henceforth, document frequency or DF). The entries stated that front desk was “*not very helpful*”, “*rude and ignorant*,” and even “*disgusting*”. Other commonly used words included “*dirty*” (CF = 22; DF = 17), “*bathroom*” (CF = 21; DF = 15), and “*price*” (CF = 20; DF = 18). Some examples include “*the hotel was very dirty*,” “*the bathroom had mildew*,” and “*Considering the price, the worst hotel stay ever*.” A co-occurrence analysis among these major concerns indicated a highest co-occurrence value of four between “*dirty*” and “*bathroom*” as well as between “*bathroom*” and “*price*.” Although independent hotels of America might not be cheap, they do not seem to live up to the expectations in terms of front desk and cleanliness.

For chain hotels in Middle East and Africa, there was a collection of 105 ratings that had received one or two stars from travellers with family. Some of the most commonly indicated concerns were related to “*staff*” (CF = 69; DF = 37), “*service*” (CF = 52; DF = 35) and “*reception*” (CF = 42; DF = 18). Among the 52 occurrences of “*service*”, 14 were more specifically devoted to “*customer service*.” Some examples include “*rude staff*,” “*service level was abominable*,” “*long queues for reception, with reception staff pretending that you are invisible*,” and “*the worst customer service I have ever had*.” The highest co-occurrence value of 21 was recorded between “*staff*” and “*service*”. It appears that families are generally dissatisfied with the treatment meted out to them in chain hotels of Middle East and Africa.

For independent hotels in Asia Pacific, there was a collection of 85 ratings that had received one or two stars from business travellers. Some of the most commonly mentioned concerns included “*staff*” (CF = 52; DF = 32), “*breakfast*” (CF = 39; DF = 26) and “*service*” (CF = 36; DF = 24). Some examples include “*staff had unpleasant attitude*,” “*breakfast was*

rather disappointing,” and *“staff seem inexperienced and not service-oriented.”* The highest co-occurrence value was 12 between *“staff”* and *“service”*. Perhaps the employees of independent hotels in Asia Pacific are not professional enough to meet the service expectations of business travellers.

For chain hotels in Asia Pacific, there was a collection of 476 ratings that had attracted four or five stars from travellers with friends. Some of the most frequently praised aspects of the chain hotels included *“staff”* (CF = 309; DF = 170), *“service”* (CF = 290; DF = 163) and *“location”* (CF = 242; DF = 136). Some examples include *“the staff is well trained and professional,” “staff providing excellent service,”* and *“the location is spot on.”* The highest co-occurrence value was 107 once again between *“staff”* and *“service.”* It appears that employees of chain hotels in Asia Pacific are adequately trained to meet the service expectations of travellers with friends.

5. Discussion

This paper demonstrates that travellers’ rating patterns for independent and chain hotels vary across profiles. In particular, business travellers generally showed the most stringent rating patterns. Independent hotels in Asia Pacific were rated most strictly by business travellers compared with other profiles. They rated chain hotels in America and Europe most strictly compared with other profiles. Consistent with prior studies (Bulchand-Gidumal et al., 2011; Choi & Chu, 2001; Dolnicar, 2002; Rivers et al., 1991), business travellers specifically appeared concerned about service quality, convenience of location and availability of the Internet. This is evident from complaints such as *“what I cannot afford is the poor and unprofessional service,” “asking 2 times to the guest service to have a hotel car for airport transfer...the car came 20 minutes late,”* and *“the wifi was too slow to work.”*

This paper further indicates that travellers' rating patterns for independent and chain hotels vary across regions. Among independent hotels, those in Europe received the highest ratings while those in Asia Pacific attracted the lowest ratings. Among chain hotels on the other hand, those in Asia Pacific attracted the highest ratings while those in America were at the other end of the spectrum. Ratings often appeared to have been shaped by designative attributes of regions (Fakeye & Crompton, 1991) as denoted in "*location of the hotel was perfect with quick access to the major highways,*" and by evaluative attributes (Walmsley & Young, 1998) as hinted in "*the [hotel] had all the warmth and hospitality you could hope for.*" As suggested previously (Chen, 2001; Keates, 2007), ratings were also found to reflect on aspects such as natural disasters and communication problems. Instances include "*stayed in this hotel during the Mar 11 quake tsunami disaster,*" "*Even though we got there a day after Hurricane Irene, the property was very nice and clean,*" and "*waitress did not speak english.*"

Additionally, this paper finds that independent hotels generally receive higher ratings compared with chain hotels. Among all the 20 profile-region combinations studied in this paper, highest mean rating for independent hotels was 4.61 (couples for independent hotels in Middle East and Africa; cf. Table 2), while that for chain hotels was 4.33 (travellers with friends for chain hotels in Asia Pacific; cf. Table 3). This suggests that travellers' rating patterns in review websites are largely shaped by the ownership structure of hotels (Ariffin & Maghzi, 2012). Since hotels belonging to recognizable brands are expected to offer better services than those which do not (Choi & Chu, 2001; Namasivayam et al., 2000), travellers remain discontent when chain hotels fail to effectively meet their expectation. For example, some ratings in evaluation of chain hotels included textual descriptions like "*The [brand] is poorly represented here,*" and "*The [hotel] was well below the quality offered by [brand].*"

Such discontentment perhaps entices them to vent out their frustration through ratings fraught with disapproval (Hennig-Thurau et al., 2004; Sundaram et al., 1998).

6. Conclusion

This paper investigated ways in which travellers' rating patterns in TripAdvisor differed between independent and chain hotels. To delve deeper, travellers were classified according to their profiles, namely, business, couple, family, friend and solo. Besides, hotels straddled across four geographical regions, namely, America, Asia Pacific, Europe as well as Middle East and Africa. Rating patterns were found to vary substantially between independent and chain hotels across both profiles as well as regions.

6.1. Contributions

This paper contributes to both theory and practice. On the theoretical front, it represents one of the earliest attempts to study differences in rating patterns between independent and chain hotels further taking into account travellers' profiles and hotels' geographical regions. By exploring a relatively uncharted research area, it serves as a dovetailing effort to the extant tourism literature. The findings contribute to a deeper understanding of patterns among travellers' hotel ratings in online hotel review websites.

Specifically, the findings of this paper suggest that travellers' rating patterns are largely shaped by their expectation-experience congruence (Leung et al., 2011). Individuals travelling with different purposes seem to have varying priorities (Bulchand-Gidumal et al., 2011; Lai & Graefe, 2000; Lee et al., 2010). Hotels' geographical regions might also shape travellers' expectations (Keates, 2007; Milman & Pizam, 1995; Pearce, 1982). Given that few studies have shed light on hotels' ownership structure and geographical locations, as well as

travellers' profiles concurrently, this paper calls for more nuanced scholarly inquiry in the tourism domain.

On the practical front, this paper recommends all hotels—regardless independent or chain—to monitor their ratings continuously across different profiles of travellers. It indicates that business travellers are generally the most stringent in their rating patterns among all profiles. Besides, travellers with family occasionally exercised stringent rating patterns. Increased tendency to complain among family travellers has also been documented in prior studies (Wu et al., 2010b). This suggests that in order to minimize chances of receiving negative ratings, hotels could primarily focus to meet the expectations of business and family travellers.

This paper offers implications to hotel managers in terms of resource allocation. It reveals that travellers often complain about front desk, staff and cleanliness of bathrooms. Criticisms pertaining to front desk and staff could be attributed to the 'moment of truth' (Carlzon, 1989). It explains how the first impression that travellers derive by interacting with hotels' front-line staff determines their last impression, which is perhaps manifested in their rating patterns (Guillet & Law, 2010). Complaints regarding the cleanliness of bathrooms serve to remind hotel managers to allocate appropriate resources for house-keeping. Overall, hotels with limited resources might do well to improve front desk service and cleanliness to minimize chances of receiving negative ratings (Stringam & Gerdes Jr, 2010).

This paper has implications for designers of hotel review websites. Although independent hotels were generally rated more leniently than chain properties, travellers who browse ratings mostly remain unapprised of these nuances. Therefore, review websites could conspicuously indicate average ratings as a function of hotels' ownership structure— independent or chain—as well as travellers' profiles—business, couple, family, friend and solo. Such additional cues would offer travellers a glimpse into how their hotels of interest

had been performing with respect to other properties with a similar ownership structure. This might help travellers make fairer comparisons, thereby allowing for better informed booking decisions.

Finally, this paper offers insights into how destination marketers could identify strengths and weaknesses of accommodation options in a given region. They could harness ratings to understand aspects in which hotels of a given region are superior, and those in which the properties are inferior vis-à-vis other regions. This understanding could further inform tourism-related service delivery and product development in order to boost the image of a given location as an attractive tourist destination.

6.2. Limitations and Future Work

Three limitations of this paper need to be addressed by future works. First, its findings are constrained by the scope of the dataset. Data were collected from a single website. Hotels were classified as either independent or chain irrespective of their reputation—luxury or budget. The chosen countries in the geographical regions were not always internally homogeneous. Besides, only ten hotels selected from each country could not yield a representative sample. Future studies could draw data from multiple websites to facilitate greater triangulation (Decrop, 1999). To yield richer findings, granular country-wise analysis could be conducted by encompassing representative samples of independent as well as chain hotels across different reputation levels such as luxury and budget (Maier, 2012).

Second, this paper considered ratings as face value. However, it is possible that some ratings could be contributed fictitiously by non-bona fide travellers (Banerjee & Chua, 2014; Duan & Zirn, 2012; Wu et al., 2010a). Such fictitious ratings, which have the potential to distort travellers' perceptions, might have interfered with the results. Future studies therefore

need to explore ways to distinguish between authentic and fictitious ratings submitted for independent as well as chain hotels.

Third, this paper analyzed ratings without considering travellers' motivation to evaluate independent and chain hotels in the first place. Future research could conduct user studies to examine the ways in which travellers' motivation to share post-trip experience might interact with their expectation-experience congruence, which in turn could influence their rating patterns (Munar & Jacobsen, 2014). Such studies will further expand and enrich the scholarly understanding of the tourism literature.

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