EXPLORING THE INFLUENCE OF DECISION—MAKING STYLES ON HOTEL CHOICE PREFERENCES: A HYBRID—CHOICE MODEL

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INTRODUCTION

Investigating choice and decision-making have been of particular interest in tourism research. As a result, a large number of studies have been accumulated that suggest tourist decision-making to be a complex process involving several sub-decisions (Smallman & Moore, 2010). Empirical evidence seems to be conclusive in identifying components that are important in the tourist decision-making process. However, in the complex global tourism system, the assumption that individuals follow the same decision-making pattern may be questioned (McCabe, Li, & Chen, 2016).

The importance of past travel experience has been recognized in tourism research in different empirical settings. In the destination choice context, previous studies highlighted the positive influence of past-experience on destination choice outcome (Huang & Hsu, 2009). Further, Crouch, Huyber and Oppewal (2016) found that future vacation activity preferences heavily depend on individuals' past travel behavior. Also, when travelers evaluate choice attributes of a long-haul destination (Masiero & Qiu, 2018), as well as of a hotel (Masiero, Pan, & Heo, 2016; Román & Martín, 2016), recent travel experience is considered as a reference point. The above mentioned studies highlight the role of past experience as an explicit predictor of future behavior. While accounting for past experience is important in understanding decisions, it is not clear to what extent past behavior is a direct influence of future behavior or other factors intervene as well.

Past experience not only influences preferences and choice outcomes directly, but it also has an impact on how individuals make choices. Using the social and psychic system approach (Luhmann, 1995), Gnoth and Matteucci (2014) illustrate the tourist decision-making process as a system that should accomplish two functions: keep existing, and keep adapting to exist. That is, resolutions to a specific problem are found by either repeating previously learnt behavior or explore an alternative way that was not used before. By repeating activities providing satisfactory outcomes in the past, the system becomes consolidated in achieving solutions to the problem. Indeed, habitual and learning processes seem to be highly influential in the travel decision-making process (Mckercher & Yankholmes, 2018).

Even though habit is the consequence of previous experience, Verplanken (2006) stressed that habit is rather a mental construct where individuals carry out a behavior unconsciously without thinking about the behavior performed. However, individuals are different in the way they make choices. Decision-making styles (DMS) were developed to explore differences among individuals in making choices. Different conceptualizations of DMS exist in the literature. Driver (1979) defined DMS as habitual patterns used in decision-making. Despite that fact that a specific behavior may be habitual (e.g., hotel booking), DMS can capture differences among individuals. DMS were increasingly adopted in the retail context (Alavi, Rezaei, Valaei, & Wan Ismail, 2016; Rezaei, 2015; Seo & Moon, 2016). However, to date, a systematic integration of DMS in investigating travelers' hotel preferences does not exist. To address the above-mentioned research gap, the overall aim of this study is to account for the influence of DMS with respect to hotel choice preferences. The specific objectives of this study are as follows: (1) identify hotel choice attributes and assess their influence, (2) explore DMS in the hotel choice context, (3) investigate drivers of DMS and (4) assess the importance of DMS in capturing taste heterogeneity.

METHOD

Data was collected with a questionnaire, which had three sections. The first part asked about respondents' sociodemographic characteristics and past travel behavior. The second section involved a stated choice experiment. The choice attributes presented to respondents were developed in a three-step procedure, including semi-structured interviews, pilot study and main study. After a thorough literature review and interviews with travelers and digital marketing experts, the choice attributes and their corresponding levels to be included in the choice experiment were defined. Next, preliminary information on the choice behavior in a pilot study was collected (n=96). The experiment was then finetuned using the information from the pilot study with an efficient design (Rose & Bliemer, 2009). In reducing the amount of choice tasks per respondent, 3 statistically independent blocks of 10 choice tasks were created, where individuals were randomly assigned to one of the three blocks.

Lastly, the third section included items related to DMS. Two related measurement scales exist in related literature, namely Consumer Styles Inventory (CSI) (Sproles & Kendall, 1986) and General Decision-Making Style (GDMS) instrument (Scott & Bruce, 1995). Even though both measures were validated in the retail context, their applicability in the tourism context may be in doubt. Thus, the combined measurement scale was first subjected to an academic panel (n=10) consisting of experienced researchers in hospitality and tourism marketing, as well as two pilot studies. Pilot study I (n=268) did not provide a satisfactory solution, therefore the items were rephrased and data collection was repeated (n=250). The second round of data collection deemed to be successful as seven distinctive underlying constructs were identified with Exploratory Factor Analysis. The measurement scale in the main survey was based on the factor solution of Pilot study II, consisting of twenty-nine items measured on a seven-point Likert-type scale. The English version of the questionnaire was back-to-back translated to simplified Chinese. The data collection was administered by a specialized market research company, and data were collected from 702 Mainland Chinese respondents.

In analyzing the data, discrete choice modeling was adopted and a series of models was estimated. First, a multinomial logit model (MNL) (McFadden, 1974) was estimated, followed by the mixed multinomial logit model (MMNL) (McFadden & Train, 2000) capturing random taste heterogeneity. Finally, the hybrid-choice model (HCM) (Ben-Akiva et al., 2002) was estimated, where random taste heterogeneity was attributed to DMS. In the HBC model, we simultaneously estimated (1) joint influence of choice attributes and DMS, (2) drivers of DMS and (3) influence of DMS on indicators (i.e., measurement items), resulting a considerably large model of 212 estimated parameters. Unlike the MMNL model, where the taste parameters are assumed to follow a parametric distribution (e.g., Normal distribution), the HBC model assumes that the random taste variation can be attributed to DMS. In contrast to the MNL model, the likelihood function of MMNL and HBC models do not have a closed-form solution, thus simulation method was required.

FINDINGS

In identifying DMS, Exploratory Factor Analysis (EFA) with principal axis factoring and promax rotation was conducted, followed by Confirmatory Factor Analysis (CFA). In the EFA stage, items whose loading were less than 0.5 were excluded from the analysis. In the resulting factor structure, twenty items were retained corresponding to a five-factor solution, where all items loaded on their respective underlying constructs. The solution achieved in EFA explain 65% of the variance, and the underlying factors indicate internal consistency, as the Cronbach's alpha measures were above the widely known threshold (0.7) (Field, 2009). Next, the factor solution from EFA was subjected to CFA. The model fit indices (CFI: 0.951, RMSEA: 0.059, SRMR: 0.051) suggested that the estimated model fits the data well. Results from CFA suggest acceptable level of reliability, as Average Variance Extracted (AVE) exceeded the threshold of 0.5 and the composite reliability scores were above 0.7, thus convergent validity was established. Finally, discriminant validity was assessed by comparing AVE with the squared correlations among constructs. The correlation measures were considerably lower than constructs' AVE, which suggests discriminant validity. That it, the solution seems robust to be carried to the next phase of

analysis. The underlying constructs were named as brand preference, variety seeking, last-minute decision-making, effortful decision-making and effortless decision-making. Next, the choice models were estimated.

The MNL model suggested that all attributes except for discount significantly influenced hotel choice. The non-significant influence of discount may be explained by its presentation in the experiment. Because the price of each alternative included the level of discount, it is possible that individuals did not consider the discount attribute separately. In terms of sign and statistical significance, the parameter estimates of the MMNL model were in-line with the MNL model. The coefficients of the standard deviation indicated significant random taste heterogeneity for all attributes, except for availability.

From the parameter estimates of the measurement model component in HBC model, we observe that sociodemographic (e.g., gender, age, income) and travel characteristics (e.g., typical booking channel, loyalty membership, information source, travel frequency) significantly influence DMS. Given that each decision-making style was predicted by the same demographic and travel characteristics variables independently, we observe parameter estimates having a different magnitude. Turning to the parameter estimates of the choice model component in the HBC model, we see that all attributes expect for discount significantly influence hotel choice. Also, we found evidence that random taste heterogeneity was attributed to DMS. That is, in contrast to the MMNL model, we were able to factor out a portion of random taste heterogeneity and ascribe it to underlying behavioral constructs, namely the five underlying DMS. Results indicate that differences in choice attribute preferences can be explained by DMS.

CONCLUSION

Recent discussion in tourism research suggest that the tourist decision-making process cannot be explained by a uniform process. This study sought to explore whether observed choice behavior and taste heterogeneity could be explained by DMS. The different degree of heterogeneity in the choice attributes that could be attributed to the DMS indicates that preferences are constructed depending on the specific decision-making style. In that regard, this research identified decision-rules that are distinct from those offered by the literature in terms of attribute processing.

In tourism research, as well as the decision-making style literature, this is the first study that provides explicit evidence to (1) the varying degree of influence of individual specific characteristics (e.g., socio-demographics, past behavior) on DMS, (2) capturing random taste heterogeneity with DMS. Thus, this research may be considered as an important step in examining heterogeneity.

This study has important implication for practitioners, including hotel and digital marketing managers. We identified that the past behavior is a function of DMS that in turn captures random taste heterogeneity. Given the large amount of hotel offers presented on online channels, results of this study intend to offer assistance to managers, in more effectively targeting travelers that are sensitive to specific choice attributes explained by DMS.

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