

### University of Massachusetts Amherst ScholarWorks@UMass Amherst

Travel and Tourism Research Association: Advancing Tourism Research Globally

2009 ttra International Conference

# Decomposing Joint vs. Separate Evaluation Modes in Destination Choice Sets

Jim Young Chung

Department of Recreation, Park and Tourism Sciences - Texas A&M University

James F. Petrick PhD

Department of Recreation, Park, and Tourism Sceinces, Texas A&M University

Follow this and additional works at: https://scholarworks.umass.edu/ttra

Young Chung, Jim and Petrick, James F. PhD, "Decomposing Joint vs. Separate Evaluation Modes in Destination Choice Sets" (2016). Travel and Tourism Research Association: Advancing Tourism Research Globally. 16. https://scholarworks.umass.edu/ttra/2009/Presented\_Papers/16

This is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Travel and Tourism Research Association: Advancing Tourism Research Globally by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

## **Decomposing Joint vs. Separate Evaluation Modes in Destination Choice Sets**

Jin Young Chung
Department of Recreation, Park, and Tourism Sciences
Texas A&M University
College Station, Texas USA

James F. Petrick, Ph.D.
Department of Recreation, Park, and Tourism Sciences
Texas A&M University
College Station, Texas USA

#### **ABSTRACT**

The purpose of this study was to assess the practical values of the choice sets in the stage 2 by decomposing joint (considering multiple destinations for a pleasure trip) vs. separate (considering only one destination) evaluation modes. Throughout the survey questionnaire, tourists who were in joint evaluation (JE) or separate evaluation (SE) were identified, and significant predictors influencing them to engage in each evaluation mode were found. Logistic regression revealed that female, repeated visitors, and high income tourists living out of the State are more likely to take the SE mode in selecting pleasure destinations. On the other hand, tourists who frequently take overnight trips and were in-state residents were more likely to take the JE mode in their decision making process. The results of this study suggest that tourism practitioners should implement customer-centric marketing and develop customized marketing information that best fit each segment, beyond the passive responses to information requesters

#### INTRODUCTION

It has been argued that all judgments and decisions are made in one of two basic evaluation modes – joint evaluation mode (JE), in which multiple options are provided and can be compared, or separate evaluation mode (SE), in which only one option is provided (Hsee, Loewenstein, Blount, & Bazerman, 1999). However, while various models of the tourist decision-making process have been developed, this dichotomous mode has been rarely researched in a tourism context. It is argued that the application of this principle to the destination selection process is plausible. For instance, under a certain circumstance, people could use a joint evaluation mode: they would compare all possible destinations for their pleasure trips. Conversely, individuals can also use a separate evaluation mode: they consider only one destination for their trips and decide to visit the place or not. In this study, the two evaluation modes (i.e. considering only one destination vs. considering multiple destinations for a pleasure trip) were applied to one of the most widely used destination decision-making process – Crompton's (1992) choice set structure. In addition, significant predictors that lead to each evaluation mode will be examined. The specific independent variables that will be examined include: tourist's demographic profiles, behavioral loyalty, distance to home, travel expenditures, and a type of trip.

#### Destination choice-set

Crompton (1992) integrated notions related to the choice process, and proposed a structure of destination choice sets. He emphasized that the destination choice set is only valid for non-routine and high-involvement decision making processes (Crompton & Ankomah, 1993). He further argued that some situations, such as a low involvement decision, would not fit the funnel-like destination choice set model (Crompton, 1992). However, despite the practical importance of the choice set taxonomy (Sirakaya & Woodside, 2005), empirical testing of the structure has been made by only a few researchers (e.g. Crompton, Botha, & Kim, 1998; Petrick, Li, & Park, 2007; Thompson & Cooper, 1979; Um & Crompton, 1990).

From a destination marketing perspective, destination choice set structure is composed of two layers – the first layer involving stage 1 and the second layer including stage 2 and stage 3 (Figure 1). Guided by Spiggle and Sewell's (1987) conceptualization, the first layer can be called 'external locus of marketer control' (i.e. a destination marketer cannot significantly influence tourists' choice processes), and the second layer can be named 'internal locus of marketer control' (i.e. a destination marketer has more control over tourists' destination selection processes).

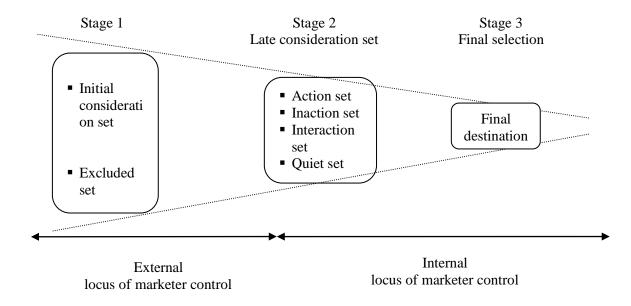


Figure 1. Practical understanding of a destination choice set structure

#### Joint vs. Separate evaluation modes

Various conceptual models for tourists' decision-making have investigated destination evaluations and comparison contexts. However, to the best of the current authors' knowledge, the number of options to be compared has not been examined. Joint and separate evaluation modes are related to the plural or singular options in the evaluation mode, and the two modes are the extremes of the evaluation continuum (Hsee, et al., 1999). These two different response modes have been heavily researched in the decision making literature, and some significant findings such as preference reversal and

evaluability hypothesis have been reported (Zhang, Hsee, & Xiao, 2006). Many researchers have argued that people using two modes are likely to pay attentions to different attributes. This is because, while joint evaluation indicates choice mode – easy to compare attributes of options, separate mode is associated with a matching or rating mode – it is difficult to evaluate one option when given attributes. As seen, although the abnormalities of decision-making including preference reversals have been primarily discussed in the literature (Chapman & Johnson, 1995; Goldstein & Einhorn, 1987; Hsee, et al., 1999; Irwin & Baron, 2001; Slovic & Lichtenstein, 1983), what lead people to utilize each mode has not been examined.

On the basis of practical understanding of tourists' destination choice process, it is believed that a destination marketer should closely examine the second stage because tourists contact the destination marketers during this time (i.e., action and interaction set). Destinations in these sets will have more opportunities to conduct persuasive marketing strategies than others (Crompton, 1992). Therefore, based on the literature review, this study assessed the practical values of the choice sets in stage 2 by decomposing joint and separate evaluation modes. Significant predictors influencing tourists to engage in each evaluation mode were examined.

#### **METHODS**

Data were collected from the sampling frame derived from the email database of information requesters to a state tourism website. The information inquirers were assumed to be individuals in the action set of the stage 2. Crompton (1992) stated that "the action set was composed of all destinations toward which a potential tourist contacts the destination's marketers" (p.425). The web-based survey questionnaires were sent to a total of 218,245 inquirers on November 2008, and consequently, a total of 6,464 responses were obtained for this study via a web-based survey, sent to persons who inquired about additional information about the state.

Since the dependent variable is dichotomous (JE versus SE) and the independent variables include some categorical (gender and state) and continuous (the frequency of overnight trip or daytrip, behavioral loyalty, income, age, travel expenditure, and distance) variables, logistic regression in SAS 9.2 was used to predict an evaluation mode from the set of variables (Long & Freese, 2001; Tabachnick & Fidell, 2007). The dependent variable (JE/SE) was computed as the logarithm of the odds of an event: coded 0 for SE and 1 for JE. To identify whether the respondents belonged to JE or SE, the following dichotomous choice question was asked: "Were you considering other destinations to travel to besides XYZ when you requested information about XYZ?". The respondents who said "Yes" were classified JE, and those who said "No" SE. The frequency of overnight trips (OVERNIGHT) and daytrips (DAYTRIP) were asked: "how many separate overnight trips or day trips have you taken to (or within) "the state" since August 2008?". Distance from home to "the state" (DISTANCE) indicated how far a respondent traveled to reach their destination, and was measured on a scale ranging from 1 (less than 100miles) to 5 (more than 1,000miles). For measuring behavioral loyalty, the frequency of visiting the State (LOYAL) was asked on a scale with 1 (This was my first trip), 2 (once every five years or longer), 3 (once every two to four years), 4 (once a year), 5 (two times a year), 6 (three times a year), 7 (four times a year), and 8 (Five times a year or more). Some demographic profiles including gender (FGENDER), age (AGE), and household income (INCOME) were also asked. In particular, permanent residence was categorized into State, any adjacent states (NEARSTATE), and other states (OUTSTATE).

#### **FINDINGS**

As seen in Figure 2, decomposition of the action set at Stage 2 indicated that tourists take JE (56.3%, n=3,616) somewhat more than SE (43.7%, n=2,806). Among individuals in the JE mode, 30.2 percent (n=1,091) of information requesters were converted to visit the state, whereas, almost half (43.2%, n=1,212) of information requesters in the SE mode actually visited the destination.

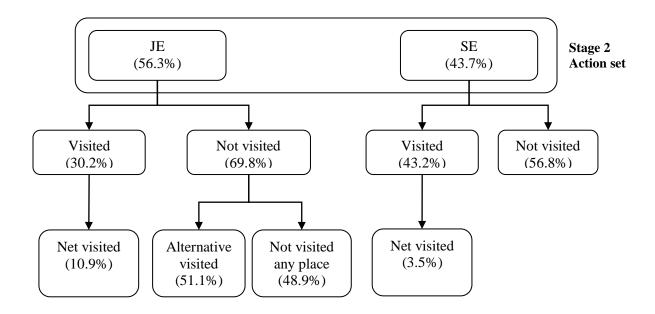


Figure 2. Decomposing JE and SE modes of the stage 2

This difference in conversion rate is understandable because a majority (62.4%) of respondents in the SE mode were repeat visitors who take trips to the destination more than once a year, yet only 10.2 percent of them were first time visitors. Conversely, the net conversion rate (10.9%, n=395) of people in JE was significantly higher than those (3.5%, n=99) in SE. The concept of net conversion was adapted to explain how much the number of leisure travelers who requested destination information were consciously influenced by the information (McWilliams & Crompton, 1997). Accordingly, in this study, a net converted tourist was operationally defined as an individual who was substantially influenced to decide to visit a destination, and was measured using three questions. In other words, net conversion included tourists who responded that travel information either extremely or somewhat positively influenced them, and excluded people who had already decided to visit prior to information inquiring and reported that they would have visited even if they did not receive the information requested.

Results of the logistic regression, likelihood ratio  $\chi^2$  statistic (79.54, df = 10) were statistically significant at p<.0001, and the Wald test equivalent to the square of the z test was used to test individual parameters (Acock, 2006). While OVERNIGHT, LOYAL, FGENDER, NEARSTATE, OUTSTATE, and INCOME were statistically significant at p<0.05, DAYTRIP, COST, DISTANCE, and AGE were not (Table 1).

Table 1. Logistic regression results

Variables	В	SE	Wald	Sig.	Odds ratio	% <sup>4</sup>
COST	.0000	.0003	0.08	.777	1.000	0
OVERNIGHT	.1070	.0378	8.02	.005	1.113	11.3
DAYTRIP	0226	.0201	1.26	.261	0.978	-2.2
DISTANCE	0833	.0682	1.49	.222	0.920	-8.0
LOYAL	2193	.0351	38.97	.000	0.803	-19.7
FGENDER <sup>1</sup>	6047	.1292	21.92	.000	0.546	-45.4
NEARSTATE <sup>2</sup>	4432	.2205	4.04	.045	0.642	-35.8
OUTSTATE <sup>3</sup>	7158	.2566	7.78	.005	0.489	-51.1
AGE	.0429	.0581	0.55	.462	1.044	4.4
INCOME	0399	.0157	6.46	.011	0.961	-3.9
Constant	1.8767	.4717	15.83	.001	-	-

LR  $\chi^2(10) = 79.54$  (p<.0001)

Specifically, for every additional number of overnight trips taken, the odds of being in JE mode increase by 11.3% more than being in SE mode, other things being equal. On the other hand, the more frequently a tourist visits a destination, the odds of being in JE mode decrease by 19.7%. The odds of being in JE mode also decreased by 35.8% for a respondent who lived at any adjacent state other than an in-state resident, and likewise, those in JE mode decreased by 51.5% for an out-of-state resident, other independent variables being equal. In addition, the higher income people have, the odds of being in JE mode decreased by 3.9%, holding the other independent variables constant. Interestingly, the odds of being in JE decreased by 45.4% for females compared to males, other things being equal. Consequently, while the odds of being in JE mode were statistically significantly higher (p < .05) for frequent overnight travelers, those in SE mode were statistically significantly higher for behaviorally loyal tourists, out-of-state residents, high income individuals, and female travelers.

In addition, what a respondent actually did with the received literature information was asked. The ranks of responses from both JE and SE were almost the same, and in both modes respondents reported three major actions: saved the information for future use, shared the information with friends, and/or used the information to decide where to

<sup>1)</sup> Dummy variable coded 1 for female and 0 for male respondent

<sup>2)</sup> Dummy variable coded 1 for a respondent living at any adjacent states

<sup>3)</sup> Dummy variable coded 1 for a respondent living at other states

<sup>4)</sup> Percent change in odds of JE over SE

stay in a destination. On the other hand, 14.5 percent of JE tourists compared prices to other destinations, whereas only 5.8 percent of SE people did.

#### APPLICATION OF RESULTS

Consistent with the claims of previous studies that the choice structure taxonomy is not a conceptual model, but rather a practical analytical tool (Crompton, 1992; Sirakaya & Woodside, 2005; Spiggle & Sewall, 1987), a destination marketer can utilize the results of this study for their strategic marketing. Not surprisingly, potential tourists in a joint evaluation mode are less converted to actual visitation than those using a separate evaluation mode. However, it was revealed that more people in JE were purely influenced by the information provided by a destination than those in SE. The fact that net conversion rate was reverse implies that a destination marketing organization has a greater chance of persuading people in JE, and should invest more resources to individuals in the JE mode. In addition, the frequency analysis of what potential tourists actually did with the received information showed that those in JE are more interested in price information than those in SE. While accurately identifying which mode the information requester belongs when he or she requests information is not easy, yet, based on the results of this study, tourism practitioners are able to predict which mode he or she is more likely to take, and need to implement customer-centric marketing and develop customized marketing information that best fit each segment.

#### **CONCLUSIONS**

The findings of this study revealed that tourists' decision making process can be exclusively decomposed into joint and separate evaluation modes. While some predictors lead to joint evaluation mode, some lead to separate evaluation mode in the destination choice set structure. Specifically, female, repeated visitors, and high income tourists living out of State were more likely to take an SE mode in selecting pleasure destinations. On the other hand, tourists who frequently take overnight trips and in-state residents are more likely to take a JE mode in the decision making process. It is believed that this knowledge can be used by destination marketers, to better cater their marketing efforts to the two different types of decision-making modes. However, it is important to note that this study is not without limitations because this study was conducted with information requesters from only one state-level tourism site.

#### **REFERENCES**

- Acock, A. C. (2006). *A gentle introduction to Stata*. College Station: Stata Press. Chapman, G. B., & Johnson, E. J. (1995). Preference-reversals in monetary and life expectancy evaluations. *Organizational Behavior & Human Decision Processes*, 62, 300-317.
- Crompton, J. (1992). Structure of vacation destination choice sets. *Annals of Tourism Research*, 19, 420-434.
- Crompton, J., & Ankomah, P. K. (1993). Choice set propositions in destination decisions. *Annals of Tourism Research*, 20(3), 461-476.
- Crompton, J., Botha, C., & Kim, S. S. (1998). Testing selected choice propositions. *Annals of Tourism Research*, 26(1), 210-213.

- Goldstein, W. M., & Einhorn, H. J. (1987). Expression theory and the preference-reversal phenomena. *Psychological Bulletin*, *94*, 236-254.
- Hsee, C., Loewenstein, G. F., Blount, S., & Bazerman, M. H. (1999). Preference reversals between joint and separate evaluations of options: a review and theoretical analysis. *Psychological Bulletin*, 125(5), 576-590.
- Irwin, J. R., & Baron, J. (2001). Response mode effects and moral values. *Organizational Behavior & Human Decision Processes*, 84, 177-197.
- Long, J. S., & Freese, J. (2001). *Regression models for categorical dependent variables using Stata*. College Station, Tex.: Stata Press.
- McWilliams, E. G., & Crompton, J. L. (1997). An expanded framework for measuring the effectiveness of destination advertising. *Tourism Management*, 18(3), 127-137
- Petrick, J., F., Li, X. R., & Park, S.-Y. (2007). Cruise passengers' decision-making process. *Journal of Travel & Tourism Marketing*, 23(1), 1-14.
- Sirakaya, E., & Woodside, A. G. (2005). Building and testing theories of decision making by travellers. *Tourism Management*, 26(6), 815-832.
- Slovic, P., & Lichtenstein, S. (1983). Preference-reversals: a broader perspective. *American Economic Review*, 73, 596-605.
- Spiggle, S., & Sewall, M. A. (1987). A choice set model of retail selection. *Journal of Marketing*, 51, 97-111.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston: Pearson/Allyn & Bacon.
- Thompson, J. R., & Cooper, R. D. (1979). Additional evidence on the limited size of evoked and inept sets of travel destinations. *Journal of Travel Research*, 18, 23-26.
- Um, S., & Crompton, J. (1990). Attitude determinants in tourism destination choice. *Annals of Tourism Research*, 17(3), 432-444.
- Zhang, J., Hsee, C., & Xiao, Z. (2006). The majority rule in individual decision making. *Organizational Behavior & Human Decision Processes*, 99, 102-111.

#### **Contact information:**

Jin Young Chung
Department of Recreation, Park, and Tourism Sciences
Texas A&M University
TAMU 2261
College Station, TX 77843-2261
(979) 845-6538
(979) 845-0446 fax
jy0914@tamu.edu