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# Demographic Variables and Loyalty Formation: A Systematic Examination

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# DEMOGRAPHIC VARIABLES AND LOYALTY FORMATION: A SYSTEMATIC EXAMINATION

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## ABSTRACT

The objective of the study was to offer a systematic approach to examine the potential differences in loyalty formation process across different demographic groups. A multiple-groups analysis was conducted and the findings revealed that : 1) travelers in different age and income segments exhibited no significant difference in their perception of the destination image, levels of satisfaction and loyalty; 2) travelers in different gender and education segments had different levels of image perceptions, but they formed comparable level of satisfaction and loyalty across groups; 3) the holistic loyalty formation process remained identical across demographic groups.

**Key Words:** destination loyalty; destination image; tourist satisfaction; market segmentation; multiple group analysis

## INTRODUCTION

Because of rapidly changing demographic composition of the travel market, demographics-based research has drawn increasing attention. A number of studies have been conducted to investigate the effects of tourists' demographics on their image perceptions and destination choices; and mixed results were generated from these studies. Some researchers identified tourists' personal characteristics such as age and education as one of the key forces that affected destination image; while others found no relationship between tourists' demographics and their image perceptions. Similarly, prior research showed mixed results in terms of the relationship between satisfaction / loyalty and demographics (Snyder 1991). Some studies found little difference in demographics between customers who were loyal and those who were not (Exter, 1986). Other studies found that age may influence consumer loyalty (Hsu, 2000; Schiffman and Kanuk, 1997). Taken together, previous studies found that destination image, tourist satisfaction and destination loyalty as separate constructs were affected by tourists' personal characteristics. However, only a few researchers have investigated the relationships in a systematic framework (Oh, Parks and DeMicco, 2002). Moreover, most of the previous studies utilized attribute- or factor-level descriptions and examined univariate or multivariate comparisons, which may explain the mix results reported. Therefore, the main objective of this study was to examine if various tourist

groups differed in the systematic relationships depicted in the destination loyalty model presented in Figure 1.

This study focused on the comparison of an entire process rather than on attribute- or factor-level description. More specifically, this study investigated 1) if there were any differences between the latent means of different demographic groups' evaluations of destination image, tourist attribute, overall satisfaction and destination loyalty; and 2) whether travelers' demographic characteristics were likely to influence the magnitude of the relationships among destination image, tourist attribute and overall satisfaction, and destination loyalty as specified in the destination loyalty model.

**LITERATURE REVIEW**

**Destination Loyalty Model**

Chi and Qu (2008) developed an integrated approach to understanding destination loyalty by examining the theoretical and empirical evidence on the causal relationships among destination image, tourist attribute and overall satisfaction, and destination loyalty. Their results supported the proposed destination loyalty model, which suggested that destination image directly influenced attribute satisfaction; destination image and attribute satisfaction were both direct antecedents of overall satisfaction; and overall satisfaction and attribute satisfaction in turn had direct and positive impact on destination loyalty (see Figure 1). However, they did not examine how tourists' demographics can affect the destination loyalty model.

**Demographic Variables' Effects on Image, Satisfaction and Loyalty**

It has been widely acknowledged that market segmentation is a prerequisite for planning a consumer-oriented marketing strategy and coping with the large diversity of vacation behavior within the travel market. Segmentation is often based on social-demographics, psychographics, behavioral characteristics, trip characteristics or other variables of interests. One of the most common approaches is to first assign consumers to groups by using demographics; and then the differences, if any, between the matching groups are analyzed. Even though several studies examined tourists segments for their homogeneity, or lack of it, in developing destination loyalty based on age, gender, education and income, only a few studies analyzed them in a systematic framework beyond univariate comparisons.

Age-based research has received increasing attention in the travel literature, thanks to the growing size and economic importance of the senior travel market. Most age-based travel research has concentrated on the sub-segmentation, motivation, constraints, and behaviors of the senior market (Kim, Wei, and Ruys, 2003). Some studied the age effects in consumer decisions. For example, Lepsito and McCleary's empirical study (1988) concluded that age did not affect customer preference for a particular type of hotel for pleasure travel. However, others argued that travelers' age was likely to significantly influence their travel behavior patterns, satisfaction and loyalty ( Moisey and Bichis 1999). Others stated that older customers ($\geq$ 50 years old) tended to show higher satisfaction and loyalty than the younger group (< 50 years old) (Pritchard and Howard, 1997; Hsu, 2003).  Gender-based research has also inspired growing interests in the travel literature, as women become an increasingly important market segment in the tourism and hospitality industry. Most gender-based travel studies have focused on addressing the needs and preferences of female travelers (Howell, Moreo and DeMicco, 1993). A few have investigated the similarities and differences between the two gender segments. For example, Crawford-Welch (1988) observed that female and male business travelers had similar consumption patterns. McCleary, Weaver, and Lan (1994) investigated if male and female business travelers employed different

criteria for hotel selection and service use. They found that the two gender groups differed only at some selected attribute levels.

**Figure 1 Destination Loyalty Model**
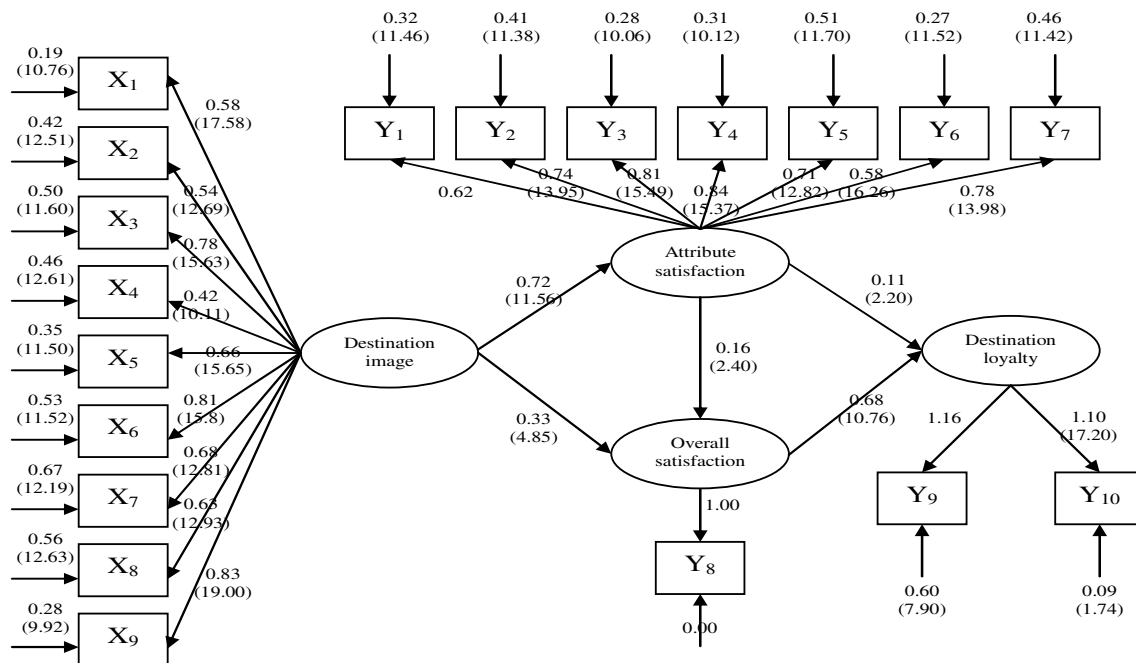
Where:

* $X_1$…..$X_9$: travel environment, natural attractions, entertainment and events, historic attractions, travel infrastructure, accessibility, relaxation, outdoor activities, and price and value
* $Y_1$…..$Y_{10}$: lodging, dining, shopping, attractions, activities and events, environment, accessibility, overall satisfaction, revisit intention, referral intention
* Values in parenthesis are t-statistics (t critical value at 0.05 level = 1.96)

Oh, Parks and DeMicco (2002) studied the age- and gender-based effects on tourist satisfaction and behavioral intentions utilizing a theory-based decision making process. They found that 1) while the young (< 55 years old) and senior travelers (> 55 years old) exhibited similar levels of expectations and perceptions of a destination, they formed different levels of satisfaction and behavioral intention -- senior travelers tended to develop higher satisfaction and behavioral intention than their younger counterparts; 2) while male and female travelers had different levels of expectations and perceptions, they showed comparable satisfaction levels and behavioral intentions; and 3) in spite of the heterogeneity at the univariate attribute or multivariate constructs level, the age and gender groups demonstrated theoretical invariance, i. e., the holistic decision-making process were similar across matching segments. They concluded that despite the mean differences in the latent constructs, the decision-making process in the structural model remained similar across age and gender groups. A number of empirical studies (e. g., Baloglu and McCleary, 1999) have been conducted to explore relationship between the perceived image and demographic characteristics such as gender, age, education, occupation, income, marital status, and country of origin. Such studies have revealed mixed results: some studies found differences in the perceived image depending on all demographic variables; while others found such differences only in the cases of age and education.

Prior researchers also studied the effects of different demographic variables on satisfaction and loyalty (e. g., Snyder 1991). Exter (1986) found that people's loyalty towards a brand did not vary based on their demographic background. Other researchers found that age may have influence on consumer loyalty, and older customers tended to be more satisfied and loyal than younger ones (Pritchard and Howard, 1997; Hsu, 2000). Mykletun, Crotts and Mykletun (2001) studied the relationship between a number of demographic variables including age, household income, and education vs. visitors' perception of a destination and revisit probability. They found that 1) none of the demographic variables (age, education and income) was significantly related to visitors' revisit probability; and 2) only age was an important predictor of visitor satisfaction - senior tourists ($\geq$ 60 years old) held the most positive evaluations of a destination compared with the younger visitor segment; no other demographic variable (income and education) had any significant effect on visitor satisfaction.

Based on the above studies, it was posited that:

$H_1$: the structural paths in the destination loyalty model differed based on tourists' gender.

$H_2$: the means of the latent constructs in the destination loyalty model differed based on tourists' gender.

$H_3$: the structural paths in the destination loyalty model differed based on tourists' age.

$H_4$: the means of the latent constructs in the destination loyalty model differed based on tourists' age.

$H_5$: the structural paths in the destination loyalty model differed based on tourists' education level.

$H_6$: the means of the latent constructs in the destination loyalty model differed based on tourists' education.

$H_7$: the structural paths in the destination loyalty model differed based on tourists' income level.

$H_8$: the means of the latent constructs in the destination loyalty model differed based on tourists' income.

## METHODOLOGY

### Survey instrument

This study employed a causal research design using a cross-sectional sample survey. The survey questionnaire consisted of the following major sections: 1) questions that measured the constructs in the destination loyalty model - destination image, tourists' attribute satisfaction, overall satisfaction, destination loyalty and 2) Questions designed to gather tourists' demographic information, including gender (male vs. female), age ($\geq$ 50 years old vs. < 50 years old), educational level ($\geq$ four-year college education vs. < four-year college education), and income ($\geq$ $50,000 vs. < $50,000). Destination image was measured by nine composite variables: travel environment, natural attractions, entertainment and events, historic attractions, travel infrastructure, accessibility, relaxation, outdoor activities, and price and value. Attribute satisfaction was measured by seven composite variables: accommodation, dining, shopping, attractions, activities and events, environment, and accessibility. A single overall measure of satisfaction was used in this study. Two single-item measures were used for assessing tourist destination loyalty as the ultimate dependent construct: tourists' intention to revisit and their willingness to recommend the destination to others. All items utilized in this study were measured with a 7-point Likert scale.

### Sampling plan

The empirical data for the study was collected in a major tourism destination in the state of Arkansas— Eureka Springs. A two-stage sampling approach was used: proportionate stratified sampling was applied for deciding on the strata sample size, and systematic random sampling (SRS) was used to select the survey participant within each stratum, which involved choosing every k[th] element after a random start.

**Data Analysis**

Multi-sample structural equations analyses were utilized to examine whether the hypothesized destination loyalty model was comparable across different demographic groups such as age, gender, income, and education. Before comparing the structural model, measurement equality / invariance (ME/I) of theoretical variables across samples in the measurement model were established. Afterwards, structural model were compared to examine if regression equations are equivalent across samples. Finally, comparisons of the latent means of the construct were conducted to identify statistical differences across samples.

**RESULTS**

A total of 345 questionnaires were returned, about 90% of the targeted sample size. Over 60% of the respondents were female (66%). More than half of the respondents (57%) were aged under 50, with 4-year or above college education (55%). About seventy percent (69%) of the respondents' annual household income was above $50,000.

**Effects of Tourists' Demographic Characteristics on Destination Loyalty Model**

It was posited that the structural parameter estimates and the latent means of the destination loyalty model were different based on tourists' demographic characteristics, specifically, gender, age, education level and income level ($H_1 - H_8$). Multiple-groups analysis assessed the potential differences in the destination loyalty model between male vs. female, senior ($\geq$ 50 years old) vs. younger vacationers (< 50 years old), tourists with higher level of education (four-year college or above) vs. lower level of education (less than four-year college), tourists with higher household income ($\geq$ $50,000) vs. lower household income (< $50,000). Since the establishment of measurement invariance across groups is a prerequisite to conducting cross-group comparisons (Vandenberg and Lance, 2000), the researcher started with tests of measurement invariance across different demographic segments.

Measurement Invariance

Following the approach recommended by Vandenberg and Lance (2000), three tests were conducted in the following order: 1) test of configural invariance; 2) test of tau equivalence; 3) test of parallel model. A series of $\chi^2$ difference tests were then employed to determine whether the measurement was configural invariant, tau equivalent, or parallel across groups. The results revealed that the measurement models for the age, gender, education and income groups were tau equivalent, i. e., the factor loadings for the observed variables were invariant across different demographic groups.

Structural Models Comparison

After confirming the metric invariance of the measurement model, invariance of structural coefficients across different demographic groups was examined. With the measurement scale being held tau equivalent, three multiple-group structural models were run: 1) the unconstrained model ($M_u$); 2) the parallel model ($M_p$); and 3) the equal model ($M_e$). A series of $\chi^2$ difference tests were then used to examine if the structural parameter estimates were identical across groups. The findings showed that the destination loyalty model did not vary across any of the demographic groups based on gender, age, education and household income. The hypotheses $H_1$, $H_3$, $H_5$, and $H_7$ were not supported.

<u>Latent Means Comparison</u>

$H_2$, $H_4$, $H_6$ and $H_8$ postulated that different demographic groups would have different mean values for the latent constructs in the destination loyalty model. To test these hypotheses, the means of destination image, attribute satisfaction, overall satisfaction, and destination loyalty were computed for different demographic groups. To estimate the latent means, all factor loadings on the latent constructs were held invariant across groups; the latent means were set to zero for the reference group, and were unconstrained for the comparison group.

*Gender:* The results showed that 1) female held more positive destination image ($\kappa = 0.22$, p<.05) than male and the difference was significant; and 2) female reported higher level of attribute satisfaction ($\kappa = 0.13$, p>.05), overall satisfaction ($\kappa = 0.02$, p>.05) and destination loyalty ($\kappa = 0.11$, p>.05) compared with male respondents, though the differences were not statistically significant. It can thus be concluded that male and female tourists were similarly satisfied with the products/services provided by the destination and displayed comparable loyalty towards the destination, but female had more favorable image of the destination than their male counterparts. The findings provided partial support for $H_2$.

*Age:* Between the younger (< 50 years old) and senior ($\geq$ 50 years old) tourists, there were no significant mean difference in terms of destination image ($\kappa = 0.05$, p>.05) attribute satisfaction ($\kappa = -0.02$, p>.05), overall satisfaction ($\kappa = 0.03$, p>.05) and destination loyalty ($\kappa = -0.09$, p>.05). Therefore, the researcher concluded that senior and younger travelers were homogeneous groups based on their perception of a destination, satisfaction judgment, and loyalty intentions. $H_4$ was rejected by the findings.

*Education:* Tourists with four-year college education or more had a significantly lower regards of the destination image ($\kappa = -0.17$, p<.05) than those with less than 4-year college education, resulting in support for $H_{6a}$; but their satisfaction level (attribute satisfaction $\kappa = -0.11$, p>.05; overall satisfaction $\kappa = 0.02$, p>.05) and their loyalty towards the destination ($\kappa = -0.08$, p>.05) did not vary because of the education level. The findings suggested that tourists with lower education level perceived the destination more favorably than those with higher education level, although their education background did not influence their satisfaction evaluation and loyalty level. $H_6$ was partially supported.

*Household Income:* Tourists with different levels of household income (high level $\geq$ \$50,000; low level < \$50,000) did not show significant differences in their assessments of destination image ($\kappa = -0.16$, p>.05), attribute satisfaction ($\kappa = -0.09$, p>.05), overall satisfaction ($\kappa = 0.05$, p>.05) and destination loyalty ($\kappa = -0.01$, p>.05). As a result, the researcher concluded that tourists' view of a destination, their level of satisfaction and level of loyalty towards a destination did not vary based on their household income. $H_6$ was not substantiated.

**DISCUSSION**

Previous studies found that tourists' demographics affected destination image, tourist satisfaction, and destination loyalty as separate constructs (Baloglu and McCleary, 1999; Hsu, 2000); however, few studies have looked into the potential differences in the systematic relationships among these constructs for various tourist groups. This study examined the destination loyalty model across various mutually exclusive tourist segments to

see if different segments had different loyalty formation process. This study not only investigated differences across groups in the *levels* of key constructs (latent means) in the destination loyalty model, it also focused on differences across groups in the *relationships* among the constructs (structural paths) in the model.

The latent mean analyses produced interesting findings. Travelers in different age and income segments exhibited no significant difference in their perception of the destination image, levels of satisfaction and levels of loyalty. Travelers in different gender and education segments had different levels of image perceptions: female travelers held more positive image perceptions than did male travelers, and travelers with lower level of education perceived the destination more favorably than those with higher level of education; but they formed comparable level of satisfaction and loyalty across groups. These findings reflected the mixed results generated from prior research regarding the demographic variables' effects on consumer behavior. Some researchers failed to find a relationship between any demographic variables and consumer behavior; while others found such link in the case of age. For example, several studies concluded that age did affect tourists' image perception, satisfaction evaluation and behavioral intentions (Oh et al. 2002; Mykletun et al. 2001; Schiffman and Kanuk, 1997). In spite of the evidenced heterogeneity in the means of some of the latent constructs, the different demographic segments demonstrated structural invariance in the theoretical model, i. e., the relationships between the latent constructs as depicted in the destination loyalty model (see Figure 1) were similar for different traveler segments. The finding showed that, although the *levels* of univariate attributes or multivariate constructs could be different for different traveler segments, as suggested by previous research and current study, the holistic loyalty formation process remained identical across demographic groups.

Several implications can be drawn. First, different levels of image perceptions lead to similar level of satisfaction and loyalty, dependent upon the traveler's gender and education. Female travelers and travelers with lower education level tended to develop higher image perceptions than did male travelers and travelers with higher education; but this did not translate into different levels of satisfaction and loyalty for these gender and education segments. Is this finding sample specific or can it be applied to the whole population? Future studies could probe into this question. Second, regardless of their demographic background, travelers seem to develop their loyalty in the same way as posited by the destination loyalty model. This finding deserves notice from destination marketers because it suggests that basic theories of consumer loyalty could be developed that would encompass all demographic segments in a single conceptual scheme. The finding also indirectly confirmed the usefulness of the destination loyalty model in future travel research. Lastly, it should be noted that studying age as a major variable may be a worthwhile effort, with surging research focusing on senior market finding the difference between seniors and younger travelers (Oh et al. 2002; Mykletun et al. 2001). Therefore, further studies designed to address different age segments seem to be justifiable.

**LIMITATIONS & RECOMMENDATIONS**

The results presented in this study need to be qualified in light of several limitations. First, the study was conducted in the summer, thus findings were limited to summer travelers. Tourists who travel in different seasons may form different opinions of a destination. To overcome this limitation, future researchers could conduct similar surveys in different seasons. Further, the population of this study was limited to visitors of a tourist destination in the southern US. Therefore, the results from the study may not be generalized beyond this population. Replicating similar studies in other tourist destinations would be imperative for increasing the

generalizability of these findings. Secondly, overall satisfaction, repurchase, and referral intention (used to infer destination loyalty) were all measured by a single question. The use of a multiple-item measurement scale in future studies may enhance the interpretation and prediction of overall satisfaction and destination loyalty. Thirdly, 'destination image,' 'attribute satisfaction 'and 'overall satisfaction' were studied as antecedents to destination loyalty. There might be additional factors influencing and interacting with tourists' loyalty. Future researchers are advised to investigate additional antecedents of tourist loyalty.

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