

# SEGMENTING INTERNATIONAL TRAVELERS IN SHANGHAI BY ACTIVITY PREFERENCE

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## ABSTRACT

*This paper aims to investigate the activity preferences of international business and leisure travelers in Shanghai. Data were collected from questionnaires completed by 5,976 business and leisure travelers. The study employed multiple-step factor analysis in segmenting activity preference among the business and leisure groups. The findings revealed that both business and leisure travelers preferred four tourism categories (Traditional Tourism Activities, Local Life, Special Tourism and Entertainment) but business travelers had much more interests in them. Significant implications for destination marketing organizations and academia are included and future research avenues are discussed.*

**Keywords:** *Activity Preference, International Travelers, Segmentation, Shanghai.*

## INTRODUCTION

Ever since Deng, Xiaoping launched an open door policy, Shanghai has been undergone a fast metamorphosis into a tourism giant. The plentiful tourism attractions are drawing more and more attention from all over the world. The international tourists to Shanghai increased from 1,657 thousand in 1999 to 6, 404 thousand in 2008. And the revenues from inbound tourists increased from 1,364 million dollars in 1999 to 5,027 million dollars in 2008, which is spurred overall national economic growth (Shanghai Municipal Government, 2009).

Shanghai tourism authorities realized the importance of international tourist segment and expect to further expand the market of the long-haul visitors. Therefore, it is necessary to understand the activity preference of international tourists (Littrel, Paige, & Song, 2004). Preferences have been regarded as one of the most critical elements to explain traveler behavior (Yong, & Gartner 2004) and the industry practitioners are interested in exploring patterns and preferences of the various market segments. Kotler (1999) argued that every market consists of groups or segments of customers with different needs and wants. Market segmentation by different approaches can help industry practitioners understand what customers are seeking and

predict their consequent behavior (Sung, Morrison & O'Leary, 2001). As a result, by understanding the distinctive and unique characteristics in each segment, the industry can design products and services effectively to satisfy the needs and wants of target customers. As the most influential economic, financial, international trade, cultural, science and technology center in East China, Shanghai not only attracts international leisure tourists, but also international business tourists. Yong & Gartner (2004) indicated that both pleasure and business trip travelers have different preferences on the hypothetical trip activities. Certain travelers may prefer sightseeing or visiting historic places as activities, while others may focus on different ones such as sports or tasting local food. The goals of this study were to explore the activity preferences of international leisure and business travelers in Shanghai. Further comparison between them was undertaken in order to better understand the difference in the two market segments.

This research is significant to both industry and academia. This study helps Shanghai tourism marketers better understand the international business and leisure travelers' preference in activities, and provide meaningful suggestions. Additionally, it proposes a new approach in investigating and comparing the activity preference among multiple groups. The study employs exploratory factor analysis to identify the tourism activity categories. Using the four-factor solution indicated by the EFA analysis, the authors test the first-order correlated factor model of activity preference. And then, the second-order single factor models, where four factors comprised a unifying construct of activity preference, are tested separately for business and leisure groups. The second-order factor models in the two groups are further compared. This is the first paper using multiple-step factor analysis in segmenting activity preference among multiple groups, which provides one more alternative for the tourism scholars investigating activity preference.

## LITERATURE REVIEW

### *Market segmentation*

Market segmentation is the first stage in formulating an effective marketing strategy. Much has been written about market segmentation and how it applies to tourism (Frochot & Morrison 2000; Sung, Morrison & O'Leary 2001). Sollner & Rese (2001) defined segments as customer groups that share a similar problem and respond to market stimulus in an identical way. Every market consists of groups or segments of customers with somewhat different needs and wants (Kotler, 1999). Segmentation represents a powerful marketing tool because it discloses the visitors' preferences (Formica & Uysal, 1998) and by understanding tourists' activity preferences, marketers are able to predict tourist behavior. Effective market segmentation helps optimize marketing activities and profitability (Richardson, 1996). Additionally, according to Hsieh, O'Leary, & Morrison (1992) market segmentation leads to a more precise setting of market objectives and can offer significant advantages as a guide to market planning and promotional strategies. Researchers have utilized different means to segment the market such as: travel motivation (Formica & Uysal, 1998), activities (Morrison, Hsieh & O'Leary, 1994) benefit sought (Gitelson & Kerstetter, 1990), product bundles (Oh, Uysal & Weaver, 1995), use levels (O'Brien, 1996), expenditure (Mok & Iverson, 2000). In this study, the authors segment international travelers by the trip purpose: business and leisure.

## *Activity Preference*

Preferences have been regarded as one of the most critical elements to explain traveler behavior at a destination and tourism professionals have been endeavored to apprehend more about tourists' activities. This can be done by segmenting the market by activity preference. The activity-based segmentation defines groups of visitors by their behavior or visitation patterns. For example, certain travelers may prefer sightseeing or visiting historic places, while others may focus on different activities such as sports or sunbathing. In using activity as a segmentation base, it is hypothesized that the international market is not homogeneous and that different types of attractions will appeal to different types of visitors (Hsieh, O' Leary, & Morrison, 1992; Morrison et al., 1994). Activity preference segmentation has been often used in conjunction with motivation, value, and behavior variables to explain group characteristics, as well as with socioeconomic and/or demographic variables (Sung, Morrison & O'Leary, 2001).

According to preceding studies, tourists' travel activities can be explained through different research. Huang & Xiao (2000) sampled visitors to Changchun, Jilin Province in China in order to observe tourist behavior in the region with respect to socio-cultural context. Additionally, researchers argued that psychographics of tourists are more convincing determinants to demonstrate travel activities conducted in a destination (Keng & Cheng, 1999). This argument was originally supported by Mill & Morrison (1985), which explicated the fact that psychographics can explain lifestyle and personality of an individual tourist which ultimately affect travel behavior. In the same vein, Kim & Jogaratnam (2003) segmented a market on the basis of Asian international and domestic American university students' travel activity preferences. Their study provided ample evidence on university students' travel activity preference which accounts for twenty percent of an overall world travel. Additionally, Mazzarol & Soutar (2002) examined the factors influencing international students when selecting a host country. The objective of this research was to elucidate factors greatly influencing students' choice of a travel destination. A major theory that often has been exploited to authenticate travelers' destination choice was 'Push and Pull' factor which encompasses many aspects of tourists' behavior including destination attributes, choice of a travel destination and travel activities conducted in a selected destination. Law, Cheung & Lo (2004) perused perceptions of the essential travel activities of Hong Kong travelers. In their analytical debate, push and pull factors were the notion for Hong Kong outbound travelers' destination selection process as well as for their perception to the travel activities in the selected destination.

To append more theoretical evidence on the relationship between destination selection and on-site travel activities, Raaij & Francken's vocation sequence can be added to the argument. According to Raaij & Francken (1984), 'vacation sequence' begins with a 'generic decision' stage which continued to 'information acquisition' process that can again affect 'joint decision making'. Once the 'joint decision making' is performed, 'vacation activities' stage will be faced which determines 'travelers' on-site travel activities' and concluded at the 'satisfaction and complaints' stage'. With no doubt, they also highlighted that vacation activities can be explained with vacation lifestyle which is a broader concept of vacation activities. To conduct a research on Shanghai international visitors' travel activities can definitely provide more systematical approach to welcome visitors of Shanghai.

## METHODOLOGY

This study was conducted on behalf of Shanghai Municipal Tourism Administrative Commission to scrutinize international visitors' experience during their stays in Shanghai. The research team gathered information in Shanghai's top attractions and hotels where interviewers could encounter visitors from each targeting market. With an assistance from Shanghai Municipal Tourism Administrative Commission, several top attractions and 5 starred international business hotels were selected for survey locations; Jinjiang International Hotel, The Westin Hotel, Shanghai Conference Hall, Yu Garden, Shanghai Museum, The Pearl Tower, The Bund and Xintiandi area. This research adopted a one-to-one interview method to explore more detailed information of each international visitor. To increase accuracy of individual interview, research group was formed with professional tourism marketing consultants speaking fluent multiple languages. If there was a necessity in terms of a language, the project team hired tourism majored master's course attending students after a serious screening process in English. Main language used was English but Japanese, Korean, Italian, Portuguese and Spanish were used additionally. The survey process was initiated on September 23<sup>rd</sup>, 2009 and continued till the end of January, 2010. More than 6,200 surveys were collected. After excluding incomplete ones, 5,976 surveys were retained and analyzed.

The questionnaire included trip purposes, visit experience, preferred tourism activities in Shanghai, and demographic information. In order to measure preferences of international visitors in Shanghai, a set of travel activity items identified from previous researches were adopted. These survey instruments, however, did not take Shanghai's culture and uniqueness into consideration. Therefore, after having several meetings with Shanghai Municipal Tourism Administrative Commission, the survey team had decided to include some of the other activities that make Shanghai different. Additional items were closely linked to special interest tourism category; visiting historic water villages, taking an agricultural tour, taking an industrial tour and visiting and enjoying creative industry clusters. A total of 25 questions were asked under the sector of preferred travel activities while staying in Shanghai. Every activity was measured with a 5-point Likert scale ranging from 1 (not interested at all) to 5 (very interested).

## RESULTS

### *Data Preparation*

After cleaning the data there were 2,005 usable responses of business travelers and 3,971 usable responses of leisure travelers. Data were analyzed in two stages and the responses were assigned to two data sets. These two data sets were subjected to a two-stage factor analysis. The 2,005 responses of business travelers were randomly classified into two groups: 984 responses were used for exploratory factor analysis (EFA); 1021 responses were used for confirmatory factor analysis (CFA). Additionally, the 3,971 responses of leisure travelers were randomly classified into two groups: 1,986 responses were used for EFA; 1,985 responses were used for CFA. EFA and CFA have different sample size requirements.

There are two basic assumptions to be met for factor analysis: normality and inter-item correlations among variables (table 1). The skewness in this study ranges from -1.113 to 0.975, and the kurtosis ranges from -1.045 to 0.929. The skewness and kurtosis satisfy the requirement of normality. Both Bartlett test of sphericity (33999.202 at  $p = .000$ ) and the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO= 0.869) indicated that there were sufficient inter-item correlations within the data for performing factor analysis.

**Table 1. Descriptive Statistics (N=5,976)**

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Modern City	4.08	0.995	-1.097	0.912
Historic Buildings	4.10	0.922	-1.020	0.900
Water Villages	3.65	1.070	-0.555	-0.230
Religious Buildings	3.44	1.090	-0.340	-0.505
Scenic Areas	3.60	1.018	-0.481	-0.202
Museums	3.73	1.037	-0.651	-0.069
Theme Parks	2.65	1.268	0.189	-1.045
Agricultural	2.42	1.162	0.430	-0.704
Industrial	2.49	1.249	0.367	-0.972
Watch Shows	2.96	1.202	-0.122	-0.891
Sports Event	2.46	1.293	0.436	-0.954
Nightlife	3.52	1.188	-0.634	-0.406
Shanghai Food	4.03	1.016	-1.113	0.929
Cruise	3.48	1.095	-0.423	-0.427
International Brands	2.79	1.226	0.109	-0.917
Handicrafts	3.55	1.080	-0.590	-0.199
Local People	3.44	1.136	-0.396	-0.516
Hiking	2.53	1.191	0.365	-0.775
Play Golf	2.01	1.175	0.975	-0.050
Spa	2.58	1.278	0.273	-1.042
Green Spaces	3.08	1.126	-0.270	-0.606
Festivals	3.21	1.153	-0.420	-0.580
Folklore	3.42	1.114	-0.499	-0.335
Creative	3.02	1.207	-0.173	-0.831

*Exploratory factor analysis*

Exploratory factor analysis (EFA) was used to uncover the underlying structure of a relatively large set of variables. In order to achieve a meaningful and interpretable solution, it was necessary to delete some items with low loadings or those loaded on more than one factor. The communalities lower than 0.35 and cross-loadings higher than 0.40 were considered for removal (Kline, 1994). Eight items were deleted, which include theme park, international brand, creative activity, cruise, play golf, spa, folklore, and healthcare. As a result, a four-factor solution was obtained from the remaining 17 items, which explains 50.22% of the total variance. The factors were named as Traditional Tourism Activities, Local Life, Special Tourism, and Entertainment. Although the communality of the item “Scenic Areas” was .33, it was kept for further analysis because it fits well into its respective of Traditional Tourism Activities. Cronbach’s reliability alphas of the four categories were .71, .67, .70, and .62, respectively. Nunnally (1978) indicated 0.7 to be an acceptable Cronbach’s reliability alpha for the items within a given construct. However, lower thresholds are sometimes used in the prior literature, since the magnitude of the coefficient also depends on the number of factors comprising it. The EFA results are shown in Table 2.

**Table 2. Results of Exploratory Factor Analysis**

Variable	Communality	Factor 1 Traditional Tourism Activities	Factor 2 Local Life	Factor 3 Special Tourism	Factor 4 Entertainment
Modern City	.502	.579			
Historic Buildings	.625	.782			

Water Villages	.487	.644			
Religious Buildings	.477	.605			
Scenic Areas	.331	.493			
Museums	.374	.591			
Shanghai Food	.490		.421		
Handicrafts	.382		.411		
Local People	.510		.662		
Hiking	.536		.639		
Green Spaces	.462		.622		
Festivals	.445		.603		
Agricultural	.635			.740	
Industrial	.557			.714	
Watch Shows	.551				.657
Sports Event	.630				.697
Nightlife	.544				.684
Variance Explained		15.96%	12.88%	10.88%	10.50%
Cronbach's alpha		.71	.67	.70	.62

### First-Order Confirmatory Factor Analysis

The hypothesized relationships between the 17 activities and the four first-order factors were examined to determine how well the relationships fit the data. The results of the estimation of the first-order factor model provide a satisfactory result:  $\chi^2(113) = 2044.902$ ,  $p = .000$ ,  $\chi^2/df = 18.01$ ,  $GFI = .919$ ,  $AGFI = .891$ ,  $CFI = .804$ ,  $RMSEA = .075$ ,  $AIC = 2124.902$ . By checking “modification indices”, “Shanghai food” and “museum” were highly correlated to other factors or constructs. Therefore, they were deleted. Modification indices indicate that “modern city” and “historic building” variables had high covariance. Hence, the errors of these two variables were correlated. The model of fit improved with the correlation between the two variables ( $\chi^2(83) = 1108.88$ ,  $p = .000$ ,  $\chi^2/df = 13.36$ ,  $GFI = .951$ ,  $AGFI = .929$ ,  $CFI = .879$ ,  $RMSEA = .064$ ,  $AIC = 1182.88$ ). Apart from the CFI which is a bit lower, the other model of fit indicates an acceptable fit between the model and the data.

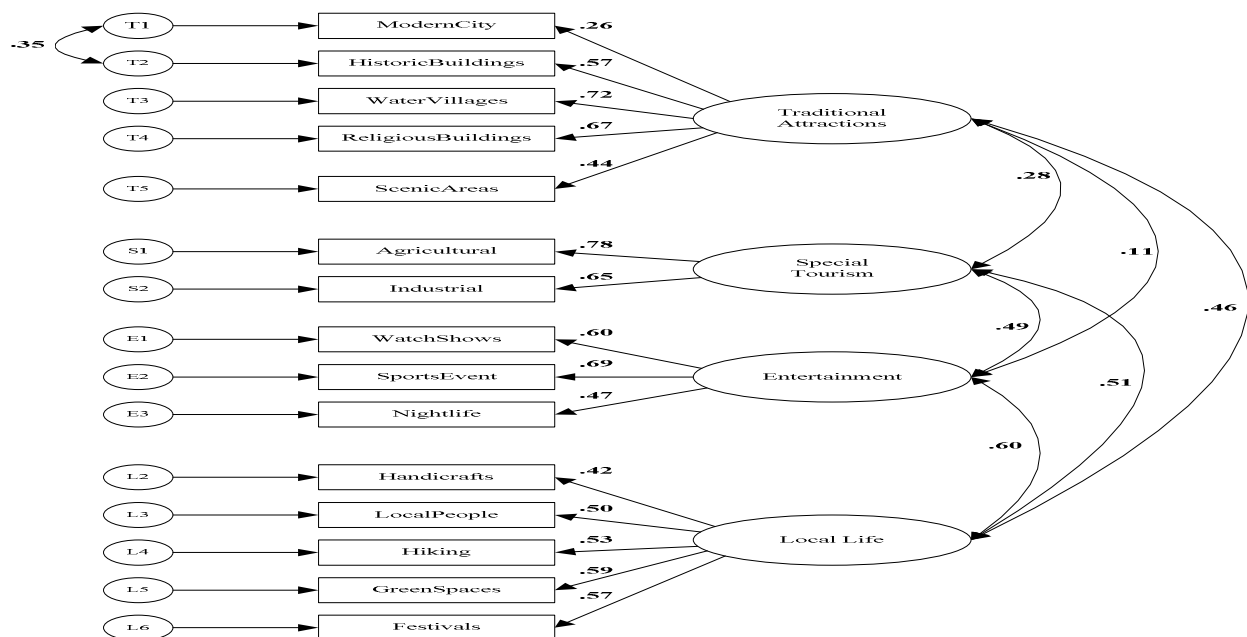
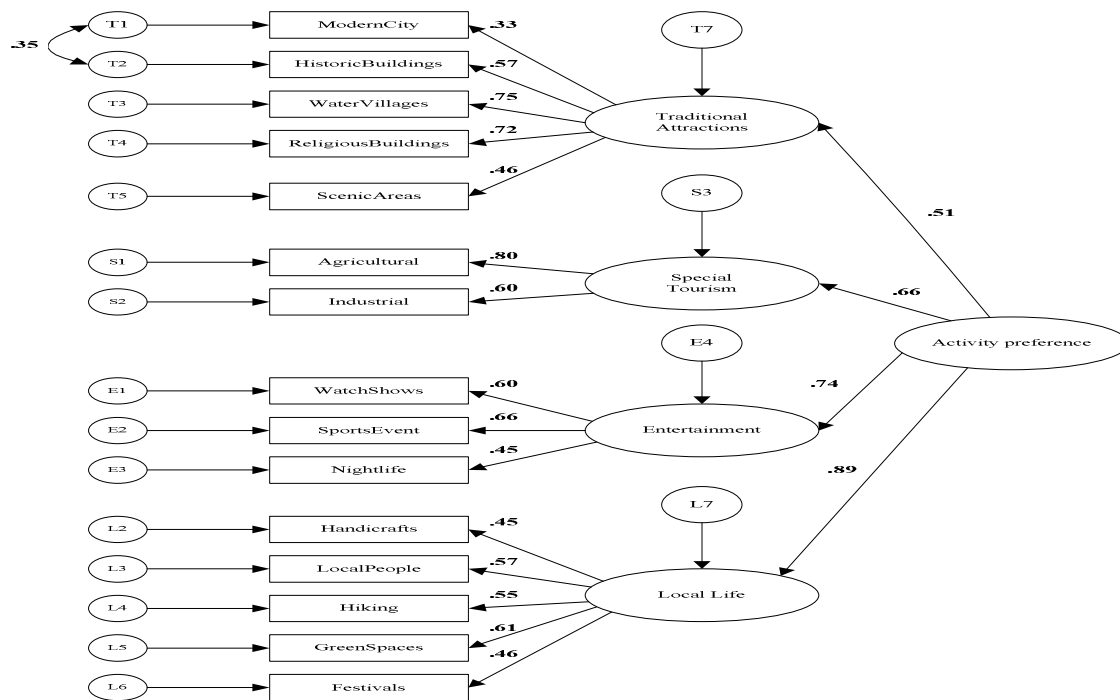


Figure 1. First Order CFA

*Second-Order Factor Analysis*

The second-order CFA involved the evaluation of the relationship between the four first-order factors and a second-order factor (activity preference) for business and leisure travelers. In other words, the structure model examined how the four group factors contributed to an overall activity preference construct. Figure 2 and 3 show the standardized coefficients. The model of fit for the second-order factor model in the business traveler group is acceptable ( $\chi^2 (85) = 448.575$ ,  $p=.000$ ,  $\chi^2/df = 5.277$ , GFI=.942, AGFI= .918, CFI=.881, RMSEA= .065, AIC= 518.575). All the path estimates are highly significant. Additionally, the model of fit for the second-order factor model in the leisure traveler group is acceptable ( $\chi^2 (85) = 915.714$ ,  $p=.000$ ,  $\chi^2/df = 10.773$ , GFI=.939, AGFI= .914, CFI=.850, RMSEA= .070, AIC= 985.714). All the path estimates were highly significant.



**Figure 2.** Second-Order CFA for business travelers' group

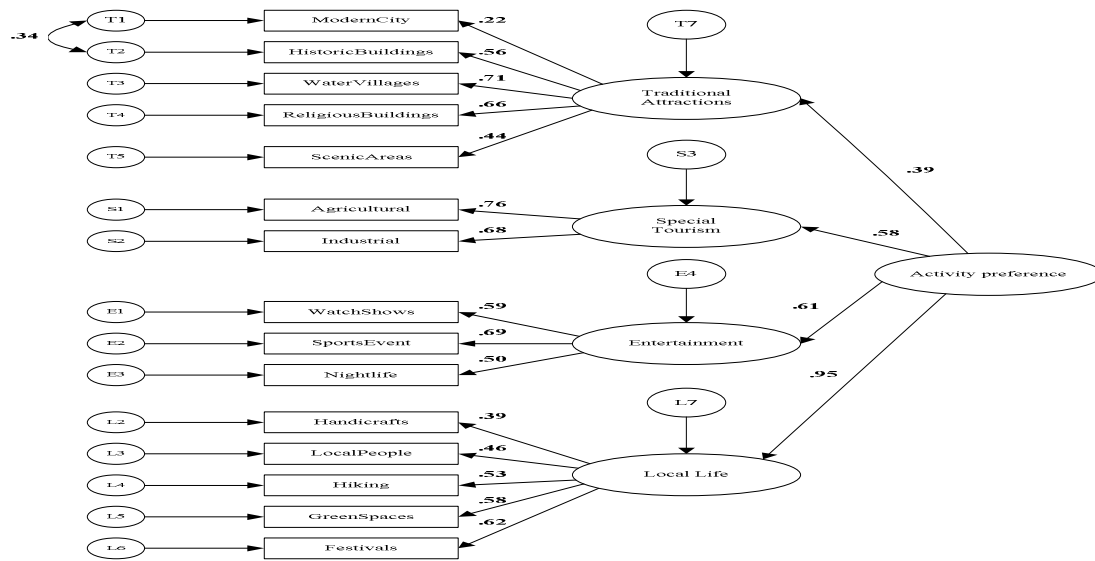


Figure 3. Second-Order CFA for leisure travelers' group

### Model Comparison

The second-order CFA in business and leisure travelers are compared between business and leisure travelers. The initial step in the comparison of the second-order factor analysis between two groups is to test for measurement invariance. Five multi group-models were tested each representing an increasingly more restricted parameterization than its predecessor. These models are indicated to be hierarchically nested. Results from the related tests for invariance are summarized in Table 3. The five models were set and compared, which include model 1 (no constraints), model 2 (first-order factor loadings invariant), model 3 (first and second order factor loadings invariant), model 4 (first and second order factor loadings invariant, first-order intercept invariant), and model 5 (first and second order factor loadings invariant, first-order and second-order intercept invariant). Yuan and Bentler (2004) revealed that, for virtually every SEM application, evidence in support of multigroup invariance has been based on the  $\Delta \chi^2$  test. If this value is statistically significant, in the comparison of two nested models, it suggests that the constraints specified in the more restrictive model do not hold. The invariance also can be tested by  $\Delta CFI$ . Cheung & Rensvold (2002) suggested that  $\Delta CFI$  should not exceed 0.01. Moreover, McGaw & Jöreskog (1971) and Tucker & Lewis (1973) suggested that the cutoff line is 0.05. Although  $\Delta CFI$  for model 4 and 5 is a little higher than 0.01, it is still acceptable. From the findings based on these criteria, we conclude that the second order structure is operating equivalently across business and leisure groups. Therefore, measurement invariance is guaranteed in the second-order CFA between leisure and business travelers.

Table 3. Tests for Measurement Invariance; Goodness-of-Fit Statistics

Model	$\chi^2$	DF	CFI	RMSEA	RMSEA 90% CI	Model Comparison	*difference of CFI
Model 1 Configural, no constraints	1364.290	171	0.861	0.048	0.046, 0.051		



Model 2 First-order factor loadings invariant	1407.069	182	0.858	0.047	0.045, 0.050	2 vs1	0.003
Model 3 First and second order factor loadings invariant	1416.627	186	0.857	0.047	0.045, 0.049	3 vs1	0.004
Model 4 First- and second-order factor loadings, first-order intercepts invariant	1536.331	201	0.845	0.047	0.045, 0.049	4 vs 1	0.016
Model 5 First-and second-order factor loadings, first-order and second-order intercepts invariant	1556.521	205	0.843	0.047	0.045, 0.049	5 vs1	0.018

The second step in the comparison of the second-order factor analysis between two groups is to test for latent mean difference. In testing for latent mean differences in the four first-order factors of traditional attractions, special tourism, entertainment, local life: (1) all first-order factor loadings and all first-order intercepts are constrained equal across groups, (2) the first-order latent means are estimated for Group 1 (business travelers) and constrained to zero for Group 2 (leisure travelers) and (c) the higher order factor loadings are freely estimated for both groups and not constrained equal across groups. As shown in Table 4, these tests reveal statistically significant mean differences between business and leisure travelers on both the lower order and higher order factors. The results show that business travelers have much more interests in all the four types of tourism activities. In the higher order factor, the result further indicates that business and leisure tourists are different in their activity preference overall (CR is significant at p=0.01).

**Table 3. Tests for Latent Mean Differences**

<i>Factor</i>	$X^2$	<i>DF</i>	<i>CFI</i>	<i>RMSEA</i>	<i>RMSEA 90% CI</i>	<i>Difference Estimate</i>	<i>C.R.</i>
<i>1<sup>st</sup> order latent factor means</i>	1493.898	193	0.849	0.047	0.046, 0.051		
Traditional Attractions						0.589	10.206***
Special tourism						2.154	7.721***
Entertainment						1.835	7.378***
Local Life						1.413	7.169***
<i>2<sup>nd</sup> order latent means</i>							
Activity Preference	269.641	200	0.783	0.056	0.054, 0.058	1.825	1.914*

\* p<.05, \*\*p<0.01, \*\*\* p<.001

## IMPLICATIONS

The findings of this study provide an evidence of the activity preference of the international business and leisure travelers in Shanghai. The study revealed four important tourist

activity categories in Shanghai: Traditional Tourism Activities, Local Life, Special Tourism and Entertainment. The result showed that the four tourism activity categories were preferred by both leisure and business travelers but business travelers had much more interests in the four of them. Furthermore, the findings indicated that business and leisure travelers were different overall in their activity preference being consistent with Yong & Gartner (2004). From the theoretical perspective, this study contributes to the literature by suggesting and showcasing a new method of measuring travelers' activity preference. This is the first study using multiple-step factor analysis in segmenting activity preference among multiple groups and provides one more alternative for the tourism scholars investigating activity preference.

These findings have implications for the tourism authorities in Shanghai. By understanding the activity preferences of international leisure and business travelers, it is helpful for them to produce appealing attractions that are specifically designed to satisfy the diverse needs and make their products fit better with their potential customer' wants. The traditional tourism, local life, special tourism and entertainment that our study indicated as important activity categories, should be taken seriously into account by tourism marketers in Shanghai and be promoted effectively to both international business and leisure travelers. The findings also suggest that international travelers' intent not only to experience but also interact with the host culture. With respect to Middleton's notion (1998), social interactions (to experience local culture) are regarded as a positive tourism activity. Our results also support Kwek & Lee (2008) who identified two significant activity preferences for travelers: (1) attractions and (2) cultural experiences. Additionally, according to Chow & Murphy (2008) "Dining/Eating" was the first ranked preference of outbound tourist in overseas destination. This preference falls into our local life category.

This research also suggests that Shanghai's tourism marketers should consider promoting more tourism activities relative to the four tourism categories so that both business and leisure travelers can have a wider range to select while being in Shanghai. Marketing efforts to promote tourism activities like "lifestyle experiences" can provide unlimited opportunities in the future (Kwek, & Lee 2008). In addition, according to Beerli & Martin (2004), China has the tendency to depend on travel agents. Their findings revealed that information provided by travel agency staff was a significant factor in influencing travelers in a destination. It is vital then for tourism marketers in Shanghai to regularly educate, update and familiarize the travel agents with the new and diverse tourism activities.

Our results also, indicated that business travelers have more interests than leisure travelers in the four tourism activities. One can assume that business travelers have a more flexible budget to spend while being to a destination. According to Yong & Gartner (2004) business travelers spent significantly more per day than pleasure travelers. This implies that business travelers might be more likely to participate in touristic activities in a city, although their main purpose of the trip is not pleasure but business. Marketing efforts for business travelers should be enhanced and include a variety of activities for touristic pursuits. The study additionally indicated that international business travelers were though mostly interested in local life activities. This result is consistent with Yong & Gartner (2004) regarding the relative importance that business travelers (especially from Europe and North America) put on "experiencing local culture".

It is also important to consider the limitations of this study. We included only 25 items in the questionnaire for the different tourism activities. More items can be considered in future research. Another point lies with the fact that this study did not include psychographic factors to

consider activity preference segmentation among the international travelers' groups. By including psychographic variables, future studies can more comprehensively explain travelers' activity preference and behaviors. Furthermore, the study did not segment the activity preferences by the travelers' geographical origins as cultural differences may definitely affect their preferences. For example, travelers from Middle East do not desire to drink alcohol and the entertainment oriented activities may not be their favorites. Future research can segment the activity preference by taking into account the tourist origins, as well.

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