

# The 2009 Hong Kong Polytechnic University Tourist Satisfaction Index

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Tourist Satisfaction Index

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## Foreword

Tourism is one of Hong Kong's major economic pillars, contributing to 3.4% of the GDP. It employs over 190,000 persons, accounting for 5.6% of total employment. Hong Kong recorded a total of 29.5 million visitor arrivals in 2008, representing an increase of 4.7% over 2007. Tourism satisfaction is clearly an important issue for local organisations that depend on inbound tourists. Research indicated that satisfied tourists are likely to stay loyal to a destination.



Developed by The Hong Kong Polytechnic University's School of Hotel and Tourism Management, the PolyU Tourist Satisfaction Index (PolyU TSI) is a pioneering project aiming to fill in the gaps by creating a comprehensive system, which will provide government agencies responsible for tourism-related activities, different sectors of the tourism industry and the general public with much needed information for decision making and planning.

With an improved ability to measure the satisfaction of its customers, the Hong Kong tourism industry will continue to bolster local economic development. The School of Hotel and Tourism Management is proud to support its industry in this new way, and looks forward to the added wellbeing the PolyU TSI will bring to the community.

As a global centre of excellence in hospitality and tourism education for the 21st century, the School is positioned to lead the world's hospitality and tourism education and research. The launch of the PolyU TSI is a testimony of our commitment in this endeavour.

**Professor Kaye Chon**

Chair Professor and Director  
 School of Hotel and Tourism Management  
 The Hong Kong Polytechnic University

## Foreword

The PolyU Tourist Satisfaction Index is the world's first attempt to comprehensively and continuously monitor tourist satisfaction. The research project is supported by the Niche Area Research of The Hong Kong Polytechnic University, and the purpose of this study is to assess Hong Kong's competitiveness as an international tourism destination. It provides an indication of the different tourism sectors' performance from the demand-side viewed from a tourist's perspective.



Based on a sophisticated model and a vigorous research framework, this innovative evaluation system integrates alternative approaches and captures multiple dimensions of tourist satisfaction. The framework is able to produce tourist satisfaction indices for individual tourism sectors which can then be used to estimate an overall destination satisfaction index.

Individual indices can be estimated for various source markets of individual tourism-related sectors on a regular basis to monitor the dynamics of the destination's competitiveness over time. Of particular interest to Hong Kong will be the ability to benchmark the local indices against those of other destinations.

The project has currently produced satisfaction indexes for the seven important regional source markets of the six tourism-related sectors in Hong Kong.

The information provided by the PolyU TSI will be very useful for decision makers in both public and private sectors to enhance the competitiveness of the Hong Kong tourism industry through tourist satisfaction improvement, which will further benefit the growth of the tourism industry and economic development in Hong Kong.

**Professor Haiyan Song**

Project Principle Investigator  
Chair Professor of Tourism  
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## Executive Summary

The PolyU Tourist Satisfaction Index Report presents the evaluation of satisfaction levels of inbound tourists to Hong Kong obtained from the PolyU Tourist Satisfaction Index system which has been developed by the School of Hotel and Tourism management, The Hong Kong Polytechnic University. The purpose of this study is to assess Hong Kong's competitiveness as an international tourism destination using these tourist satisfaction indexes. Tourist satisfaction is an important issue for many organizations that depend on inbound tourists to Hong Kong. Essentially, satisfied tourists are more likely to return and recommend Hong Kong to others, which is an effective way of promoting Hong Kong as an international tourism destination.

To capture the dynamic and complex nature of tourist satisfaction, an innovative framework is proposed by integrating alternative approaches and multiple dimensions of satisfaction. The framework has a sound theoretical underpinning, and is capable of assessing tourists' satisfaction with both individual tourism sectors and the destination as a whole, and more importantly, establishing an internal linkage between them. Due to the linkage of the satisfaction levels for tourism-related sectors, one is able to identify the areas for further improvements, and correspondingly, implement relevant procedures to enhance tourist satisfaction levels.

The project is the first attempt to comprehensively and continuously monitor tourists' satisfaction. The tourist satisfaction indexes can be estimated repeatedly on a regular basis in order to monitor the dynamics of a destination's competitiveness over time. In addition, the tourist satisfaction indexes for Hong Kong could be benchmarked with other destinations that pursue similar initiatives. The current project has successfully produced satisfaction indexes of the six tourism-related sectors for each of the seven important regional source markets for Hong Kong. This report presents the key findings of the study and discusses the practical implications of these findings.

# 1 Introduction

The tourism industry has been seen as one of the major economic pillars in Hong Kong. According to the Hong Kong tourism statistics for 2008, the total visitor arrivals reached 29 million, which represents an increase of 4.7% over 2007. The tourism expenditure associated with inbound tourism was more than HK\$158 billion indicating a double digit increase of 11.7% over 2007 (Hong Kong Tourism Board, 2009). This is partially due to the considerable efforts Hong Kong has made in improving its tourism infrastructure/super-structure over the last few years in order to enhance its overall attractiveness as a world class tourist destination. The tourism enhancement projects include Hong Kong Disneyland, the Hong Kong Wetland Park and Ngong Ping 360. The forthcoming projects that Hong Kong has been engaged in include the development of a new cruise terminal, the improvement of Ocean Park and the Aberdeen tourism area. These projects will undoubtedly provide tourists with more choices and enhance their experience when they visit Hong Kong. However, the provision of high quality 'hardware' should be matched by high quality 'software'. Tourism and hospitality is a people's business, which means that service quality and interaction with visitors is a fundamental element in the industry, which directly affects tourists' satisfaction with their experience in Hong Kong.

Although tourism has become an increasingly important sector for the Hong Kong economy, there have only been minimal efforts to monitor tourists' satisfaction levels among inbound tourists. It is vital to maintain and improve the service performance of the various sectors related to tourism as this can lead to desirable social and economic consequences. Research indicated that increased tourist satisfaction is likely to contribute to the enhanced reputation of tourism product providers and of the whole destination, increased consumer loyalty, reduced price elasticities, lower cost of future transactions and improved productivity (Anderson, Fornell, & Lehmann, 1994; Swanson & Kelley, 2001). Hence, there is a need to evaluate tourists' satisfaction and the tourist satisfaction indexes accurately capture the factors that affect tourist satisfaction and pinpoint the areas for improvement.

The tourism satisfaction indexes provide government offices that are responsible for tourism-related activities, different sectors of the tourism industry and the general public with much needed information for evaluation and planning purposes. The main objectives of this project are summarized as follows:

- To develop a theoretical model to assess tourist satisfaction, which is considered to be more comprehensive and robust as compared with the existing tourist satisfaction assessment measures;

- To identify visitors' perception of service performance of the different service providers (six sectors in total) through large scale visitor surveys;
- To examine how the industry performs in providing services to match up with tourists' expectations based on the model developed;
- To compare and contrast the service performance of different sectors within the industry;
- To inform the stakeholders of the tourism industry about the competitiveness of the tourism-related sectors based on the findings of the study;
- To provide useful quantitative information for enhancement of tourist satisfaction levels of the relevant tourism sectors in Hong Kong.

# 2 Innovating Contributions

The consumer satisfaction assessment has attracted interest from many scholars and industry representatives, which led to the development of various national and regional consumer satisfaction indexes. For example, Chan et al. (2003) developed the Hong Kong Consumer Satisfaction Index to monitor the changes of households' satisfaction with the products and services they purchased over time in Hong Kong. It is not uncommon for tourism-related businesses, government agencies and scholars to carry out tourist satisfaction surveys at both the micro (sector) and macro (destination) levels. Tourism researchers have been interested in measuring both overall tourist satisfaction with a particular destination (Yu & Goulden, 2006) and tourist satisfaction at the service sector level, such as accommodation (Saleh & Ryan, 1992), restaurants (Chadee & Mattsson, 1996), attractions (Dorfman, 1979), travel agencies (LeBlanc, 1992), packaged tours (Pizam & Milman, 1993) and retail shops (Reisinger & Turner, 2002). However, many of them are one-off projects, neglecting the dynamic and complex nature of tourist satisfaction over time. In addition, the long-term aspect of tourist satisfaction processes, such as attitude changes, has been ignored (Oh & Parks, 1997). Moreover, many of the previous tourist satisfaction studies failed to address the linkage between the micro and macro levels of satisfaction evaluations. It is essential to establish this linkage because tourism is an integrated system that consists of a number of sectors at different levels. The tourists' overall satisfaction with a destination is affected by their experience and interaction with a member of certain tourism-related sectors in the destination. Hence, one of the major contributions of this study is to address the association between tourist satisfaction with tourism-related sectors and the overall destination satisfaction. As a result, one is able to identify which particular sector(s) may contribute the most or the least to tourists' overall destination satisfaction. Secondly, the study proposes a continuous evaluation system that facilitates the assessment of tourist satisfaction on a regular basis at both sectoral and destination levels in order to capture the dynamic and complex nature of tourist satisfaction with a destination as a whole. As such, this project

attempts to overcome and address the previous issues by introducing a theoretically sound and comprehensive tourist satisfaction framework combined with an innovative weighting scheme to evaluate tourist satisfaction at both sectoral and destination levels in order to benefit the ongoing tourism practice in Hong Kong.

## 3 Methodology

The proposed tourist satisfaction index system includes two stages of satisfaction evaluation: the sectoral level and the destination level. The sectoral-level satisfaction evaluation is based on a sound theoretical framework, and the destination-level satisfaction evaluation derives from an innovative aggregation scheme. Such a 2-stage framework is more comprehensive because it establishes the linkage between sectoral tourist satisfaction and overall tourist satisfaction. Robustness is introduced by leveraging on the estimation procedure of the structural equation model and the weighting scheme by using a confirmatory factor analysis.

### 3.1 Sectoral-Level Tourist Satisfaction Index

The theoretical framework for sectoral-level tourist satisfaction evaluation is a structural equation model in which tourists' satisfaction is evaluated with relevant antecedents and consequences (see Figure 1). The proposed tourist satisfaction index model is developed based on the expectancy-disconfirmation framework which is often applied in consumer and tourist satisfaction studies such as Chan et al. (2003). Expectancy-disconfirmation model was developed by Oliver (1980) with four elements: expectation, perceived performance, disconfirmation and satisfaction. The idea behind the model is that consumers develop expectations of a product or service before purchasing it, and then compare the actual performance of the product or service with their expectations about the product or service. As such, satisfaction is the consumer's evaluation of the perceived discrepancy between his or her prior expectation and perceived performance of a product or service after consumption (Churchill & Surprenant, 1982; Halstead, Hartman, & Schmidt, 1994). In addition, it has been shown that consumer satisfaction depends on the value of the product or service, which in turn relies on the price paid for the product or service (De Ruyter, Bloemer, & Peeters, 1997; Rust & Oliver, 1994). Adding the value component to the model also allows one to distinguish tourists' satisfaction levels when their demographic and cultural backgrounds are different (Fornell, Johnson, Anderson, Cha, & Bryant, 1996; Lancaster, 1971). According to the exit-voice theory (Hirschman, 1970), when consumers are dissatisfied, they usually choose to either exit (going to a competitor) or voicing out their complaints to seek

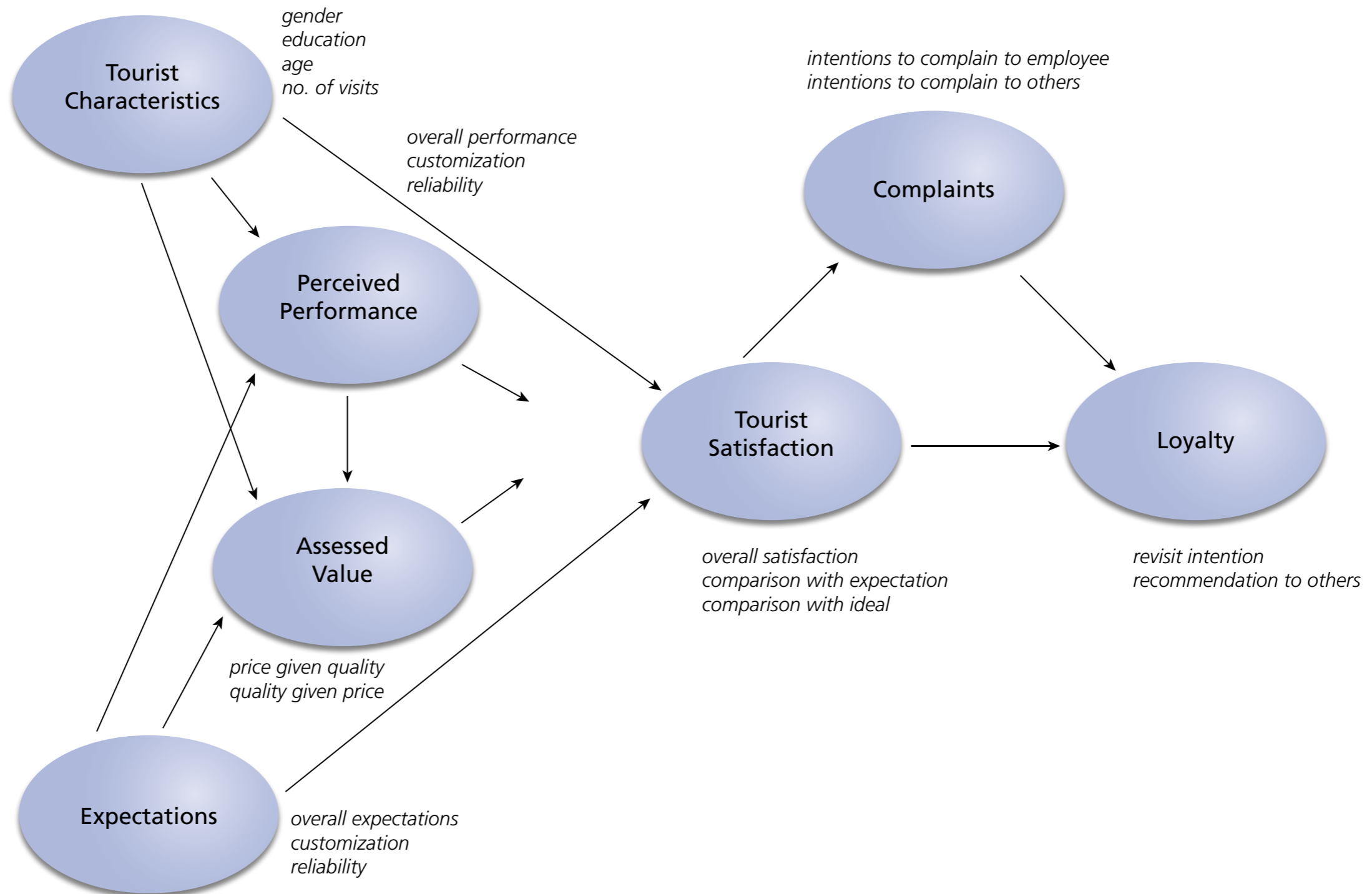
for compensation. On the other hand, an increase in tourist satisfaction should decrease their intentions to complain, while it may increase their loyalty towards the product or service.

The tourist satisfaction index that incorporates multiple dimensions of the satisfaction determinants and is calculated using an alternative approach would be more effective in tourist satisfaction assessment (Yoon & Uysal, 2005). Furthermore, recent consumer satisfaction studies conclude that satisfaction is a latent construct that cannot be measured directly (Fornell, 1992). This corresponds with other studies which show that multi-item scales are significantly more reliable than single-item scales (Conner & Sparks, 1996).

As such, tourist satisfaction in this study is measured as a latent variable associated with three indicators which are the overall satisfaction, comparison with expectations and comparison with ideal. The tourist satisfaction construct, combined with the other constructs (*tourist characteristics, perceived performance, expectations, assessed value, overall satisfaction, complaints and loyalty*), form a theoretical framework for assessing tourist satisfaction. To allow tourists to make better discriminations for each of the survey questions, 11-point rating scales from 0 for "poor" to 10 for "good" are adopted. The use of an 11-point scale, as well as the use of multiple indicators, can help to reduce the negative skewness commonly associated with the distributions of ratings for satisfaction-related indicators (Chan et al., 2003). A principal questionnaire was compiled according to the indicators in the model and then adapted to each sector to take into account the sector's special features (see Appendix 1).

The proposed tourist satisfaction index framework can be used repeatedly to capture the dynamics of tourist satisfaction, which may reflect the changes of a destination's competitiveness over time. Since various relationships are integrated in the model, recommendations can be made to evaluate or revise particular tourism policies in relation to specific dimensions of the model. The tourist satisfaction index model has been applied to six tourism-related sectors in Hong Kong: hotels, restaurants, transportation, paid attractions, retail shops and immigration services for each of the seven important source markets for Hong Kong. The tourist satisfaction index at the sectoral level is directly comparable because each sector is measured by the same set of dimensions and indicators. A similar approach is used to produce an overall tourist satisfaction index separated by sector. These indexes are estimated by pooling all the source markets together in order to obtain an overall tourist satisfaction index for each of the six tourism-related sectors.

Figure 1 Sectoral-Level Tourist Satisfaction Index Model

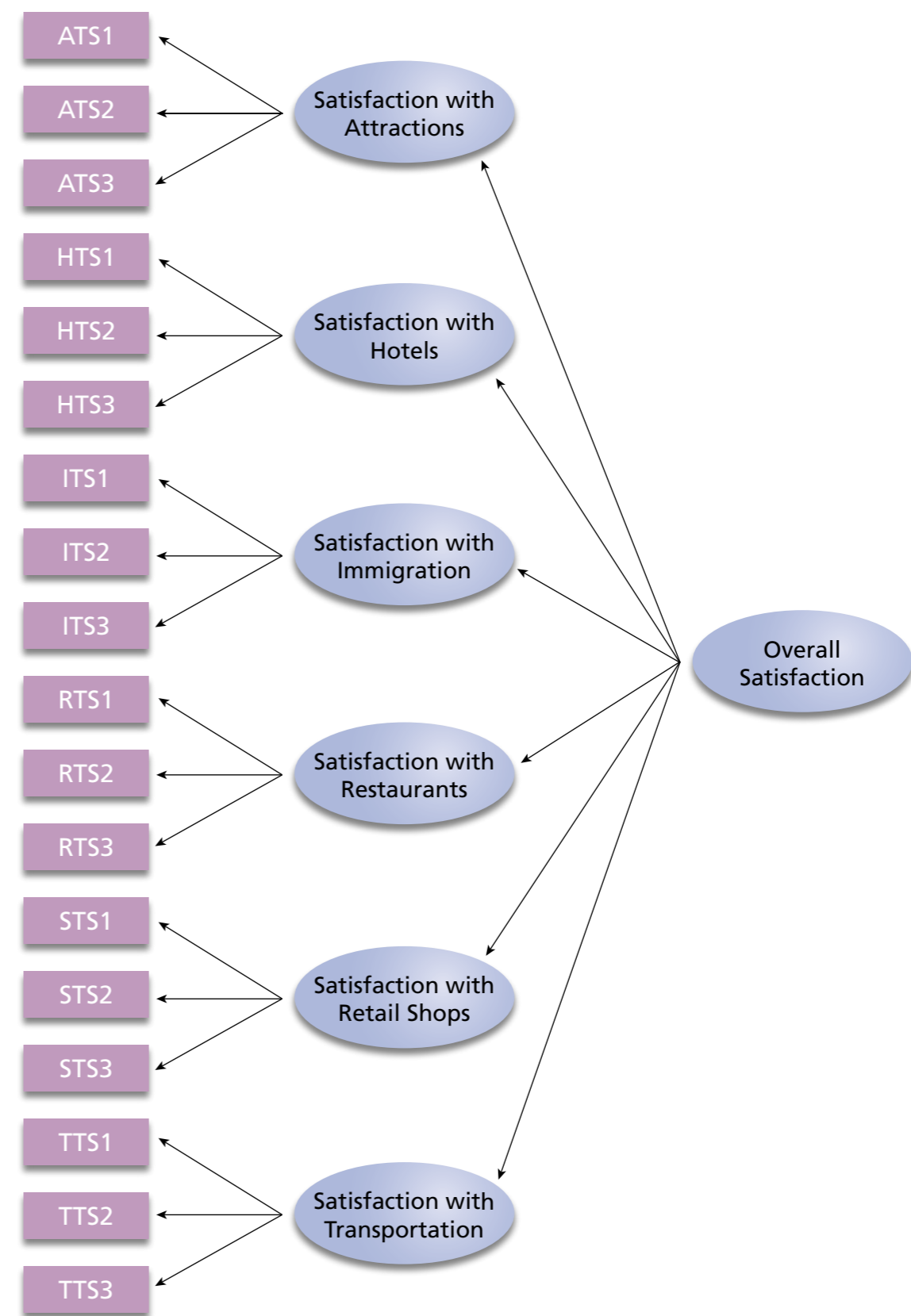


### 3.2 Overall Tourist Satisfaction Index

The satisfaction indexes for the six tourism-related sectors are derived first and obtained from the sectoral model. The second step is to calculate the overall tourist satisfaction index based on the sectoral indexes. The calculation is discussed in the next section with the relevant equations being provided. The weighting scheme for estimating the overall tourism satisfaction index is determined by a second-order confirmatory measurement model (see Figure 2) using AMOS 4.0. The factor loadings indicate the contributions of the sectoral satisfaction to the overall level and, hence, are adopted as the weights for obtaining the overall tourist satisfaction index.

Given the objective weights obtained from the second-order confirmatory factor analysis, the aggregation has a strong scientific basis, which in turn guarantees the robustness of overall tourist satisfaction estimation. Furthermore, the overall index is computed based on sectoral indexes using an innovative weighting scheme that is determined through tourists' own evaluation. As a result, the public sector such as immigration services can be included in the compilation of the overall tourist satisfaction index. The inclusion of this sector would not be possible if the expenditure allocations among different products and services were used as weights, a common practice in aggregating consumer satisfaction indexes. Therefore, more comprehensive information is available for destination management.

Figure 2 Overall Tourist Satisfaction Model





### 3.3 Computation of Tourist Satisfaction Index

By including formative measures, a components-based approach known as partial least square was used to estimate the sectoral-level models using the SmartPLS software program (Ringle, Wende, & Will, 2005). The tourism satisfaction index at the sectoral level is computed first using the model-implied weights ( $\omega_{\eta 31}$ ,  $\omega_{\eta 32}$ ,  $\omega_{\eta 33}$ ). When using a scale for the survey indicators ranging from 0 (poor) to 10 (good), the formula is as follows:

$$\text{Sectoral Tourist Satisfaction Index} = \frac{\omega_{\eta 31} \bar{y}_{31} + \omega_{\eta 32} \bar{y}_{32} + \omega_{\eta 33} \bar{y}_{33}}{\omega_{\eta 31} \bar{y}_{31} + \omega_{\eta 32} \bar{y}_{32} + \omega_{\eta 33} \bar{y}_{33}} \times 10 \quad (1)$$

Tourist satisfaction toward a particular sector equals the weighted average of its three satisfaction indicators' mean values multiplied by a scaling constant of 10. Thus, each tourist satisfaction index is expressed in a comparable 0-100 scale. Essentially, the higher the tourists' average scoring on the satisfaction questions, the higher the calculated sectoral tourist satisfaction. Subsequently the overall tourist satisfaction index is aggregated based on the six sectoral tourist satisfaction indexes using the factor loadings of sectoral satisfaction to overall satisfaction (i.e.,  $\gamma_1, \gamma_2, \gamma_3, \gamma_4, \gamma_5, \gamma_6$ ) determined from Figure 2 as the weights. The calculation of the overall tourist satisfaction index is given in the following equation.

$$\text{Overall Tourist Satisfaction Index} = \frac{\gamma_1 TSI_1 + \gamma_2 TSI_2 + \gamma_3 TSI_3 + \gamma_4 TSI_4 + \gamma_5 TSI_5 + \gamma_6 TSI_6}{\gamma_1 + \gamma_2 + \gamma_3 + \gamma_4 + \gamma_5 + \gamma_6} \quad (2)$$

### 3.4 Research Design

The survey is conducted annually to better reflect the potential fluctuations of tourist satisfaction at both micro and macro levels. A two-stage sampling approach was adopted for data collection. In the first stage, the survey locations (strata) for interviews were determined. In line with the Tourism Commission's recommendation, the following locations were selected to conduct the survey. These locations are (i) Hong Kong International Airport, (ii) ferry terminals, (iii) hotels and (iv) popular tourist sites.

The second stage is to use a quota sampling method to interview inbound tourists. The number of interviewed tourists from a particular region was monitored by the interviewers in the survey. Based on the latest publicly released geographic distribution of the visitors, the sample size for a particular sector for each source market is set to be 100 to secure a statistically sufficient sample size for each origin of visitors. Each interviewee assessed the performance of two sectors that they had encountered during their stay in Hong Kong. The data was collected from May to August 2009 and 2841 completed questionnaires covering six sectors across seven source markets were obtained to fulfill the study's objectives (see Table 1). Information on the

demographic characteristics of the visitors was also collected. Any competitive advancement in these markets should be of interest to the government and the tourism industry in Hong Kong which are discussed in the following sections.

**Table 1 Sample Size by Source Market**

Source Market	Sample Size
Americas	357
Australia, New Zealand and Pacific	350
Europe, Africa and Middle East	412
Japan and Korea	396
Mainland China	635
South and Southeast Asia	372
Taiwan and Macau	319
Total	2841

## 4 Tourist Satisfaction Indexes by Source Market

This section presents the sectoral tourist satisfaction indexes by source market. The source markets are discussed in alphabetical order starting with the Americas. Each of the tourism-related sectors will be discussed for each source market and the ranking is presented according to the index scores. The weights are presented in pie charts, indicating that when satisfaction with a particular sector increases by one, the overall tourist satisfaction increases by the relevant weight (Correia, Moital, da Costa, & Peres, 2008). It reflects the contribution to overall satisfaction.

### 4.1 Americas

This market segment consists of North, Central and South America. Among the six sectors, the respondents from this source market were most satisfied with the transportation sector (85.03), followed by the immigration sector (81.35) and the attractions (81.12). The remaining three sectors are below an index of 80 points. The hotels, restaurants and retail shops achieved index scores of 76.50, 75.56 and 72.08, respectively.

Figure 3 Tourist Satisfaction Index – Americas

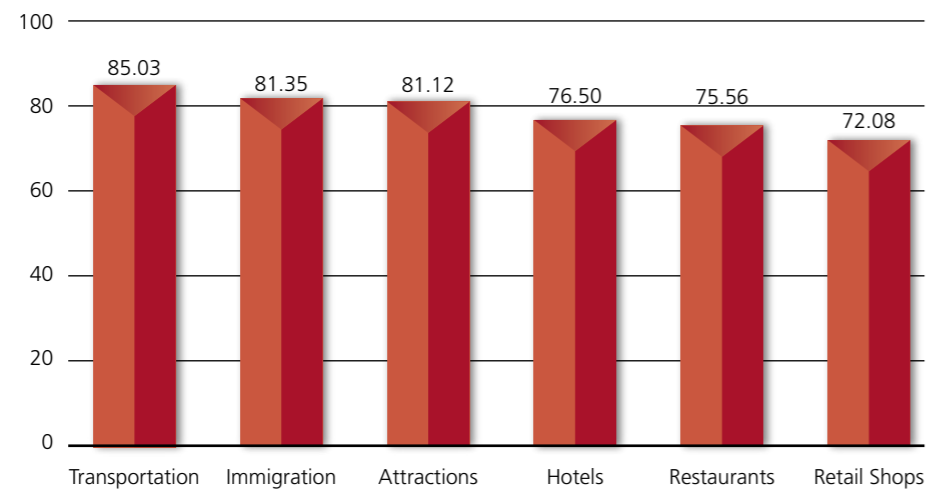
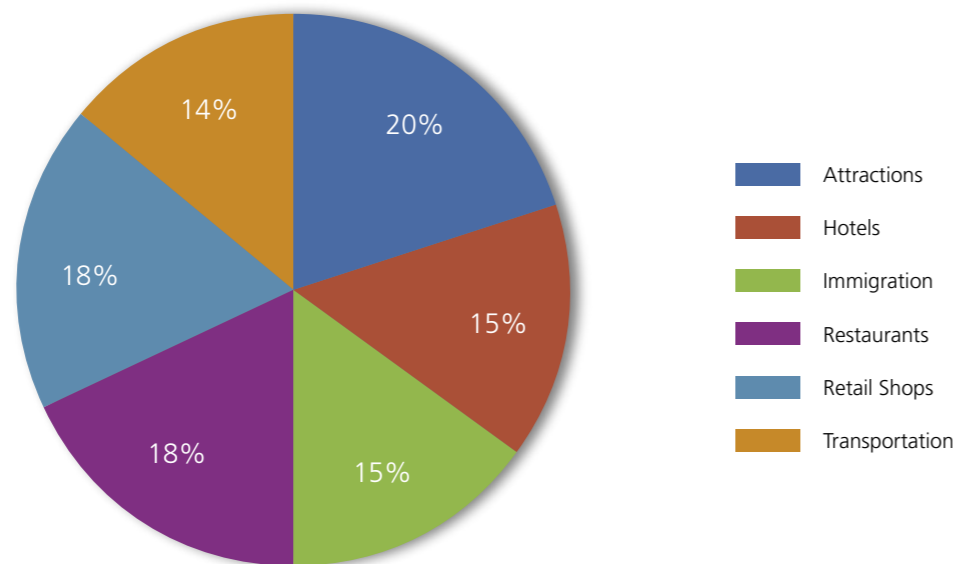


Figure 4 Tourist Satisfaction Index Weights – Americas



### 4.2 Australia, New Zealand and Pacific

As with the Americas source market, the respondents from Australia, New Zealand and the Pacific region were most satisfied with the transportation sector (81.16), followed by the immigration sector (78.30) and attractions (76.74). However, transportation is the only sector that achieves an index score that is above 80. The bottom three sectors are the hotels (76.48), retail shops (73.64) and restaurants (71.18).

Figure 5 Tourist Satisfaction Index – Australia, New Zealand and Pacific

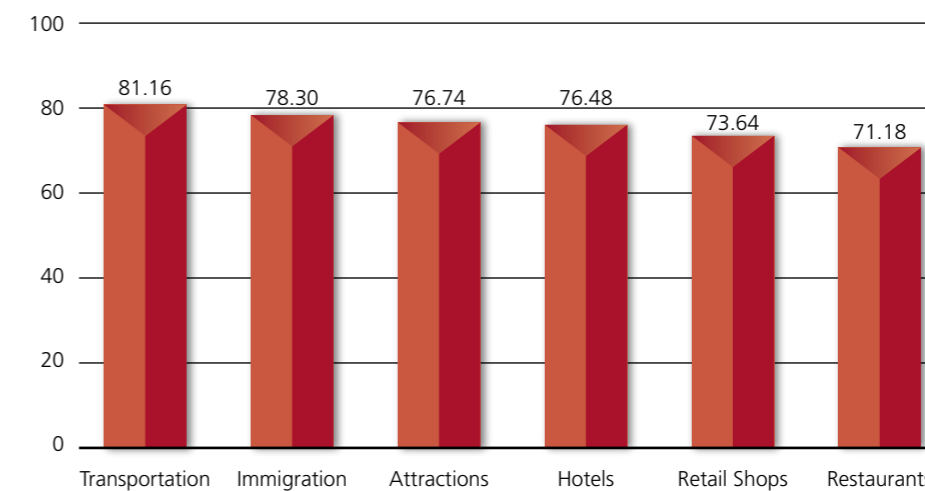
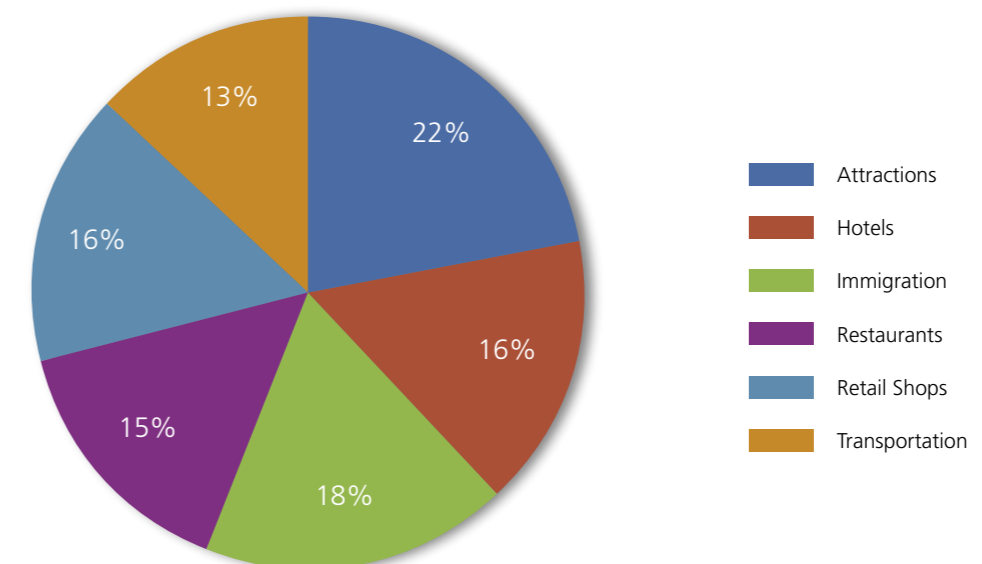


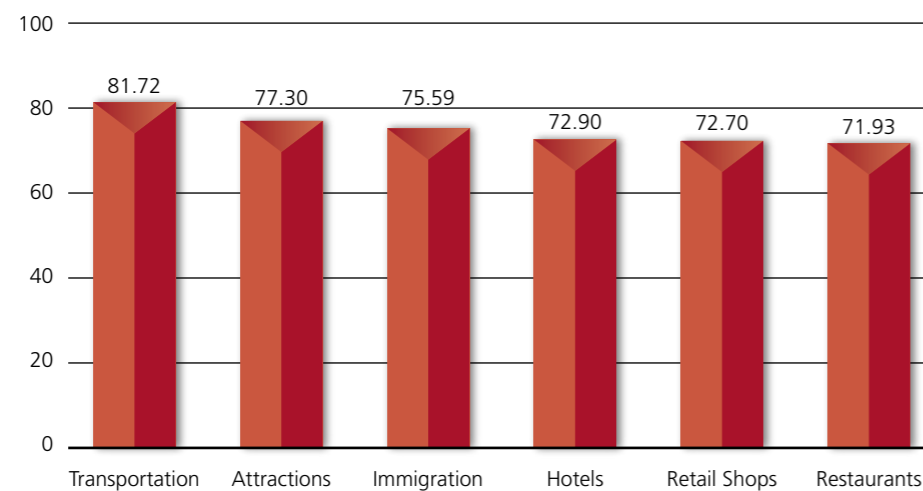
Figure 6 Tourist Satisfaction Index Weights – Australia, New Zealand and Pacific



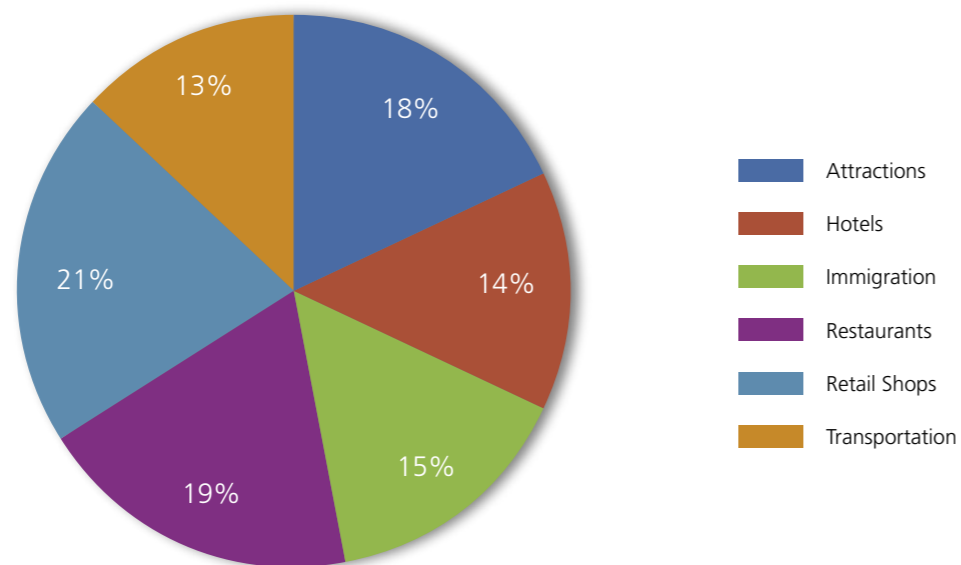
### 4.3 Europe, Africa and Middle East

This source market segment shows a close resemblance with the preceding one. The satisfaction indexes of all sectors are below 80, apart from the transportation sector. Across the six sectors, the respondents from Europe, Africa and the Middle East were most satisfied with the transportation sector (81.72), followed by the attractions (77.30) and the immigration sector (75.59). The last three sectors are all below 75 index points: hotels (72.90), retail shops (72.70), and restaurants (71.93).

**Figure 7** Tourist Satisfaction Index – Europe, Africa and Middle East



**Figure 8** Tourist Satisfaction Index Weights – Europe, Africa and Middle East



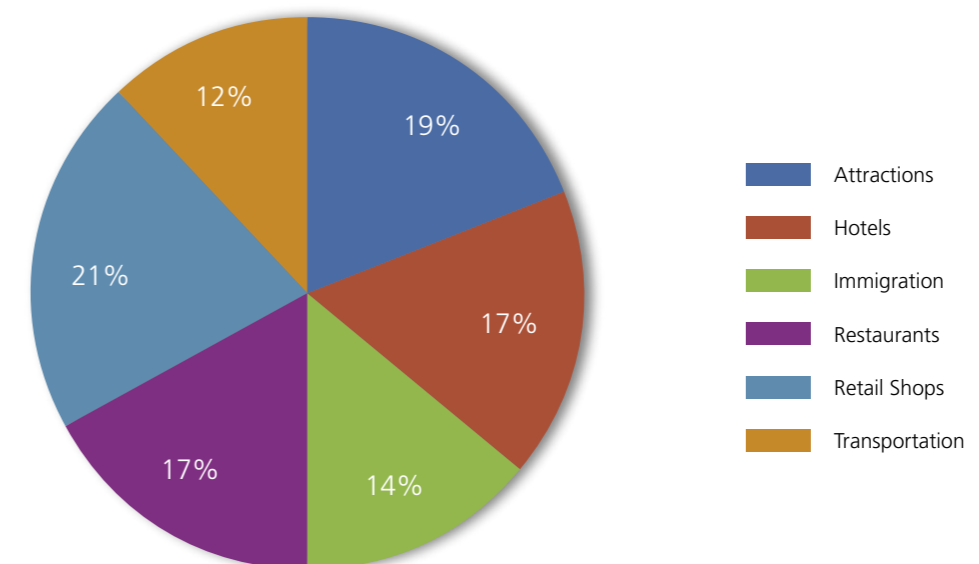
### 4.4 Japan and Korea

The Japanese and Korean respondents illustrate a different picture and only one index figure is above 70. The respondents from this source market were most satisfied with the hotels (70.32), whereas this sector was often found at the bottom end for the other source markets. The hotels are followed by the attractions (67.86) and transportation sector (67.47). The remaining three sectors are all midway between 60 and 70 index points: immigration (65.40), restaurants (64.00) and retail shops (63.25).

**Figure 9** Tourist Satisfaction Index – Japan and Korea



**Figure 10** Tourist Satisfaction Index Weights – Japan and Korea



### 4.5 Mainland China

This source market is the largest and most important one for Hong Kong. However, none of the sectors managed to achieve a score above 80 and even a score below 70 for restaurants (69.49) is noted. The respondents from mainland China were most satisfied with the transportation sector (79.90), followed by the immigration sector (76.78) and attractions (73.97). The other lower bound sectors are retail shops and hotels with indexes of 73.23 and 72.46, respectively.

Figure 11 Tourist Satisfaction Index – Mainland China

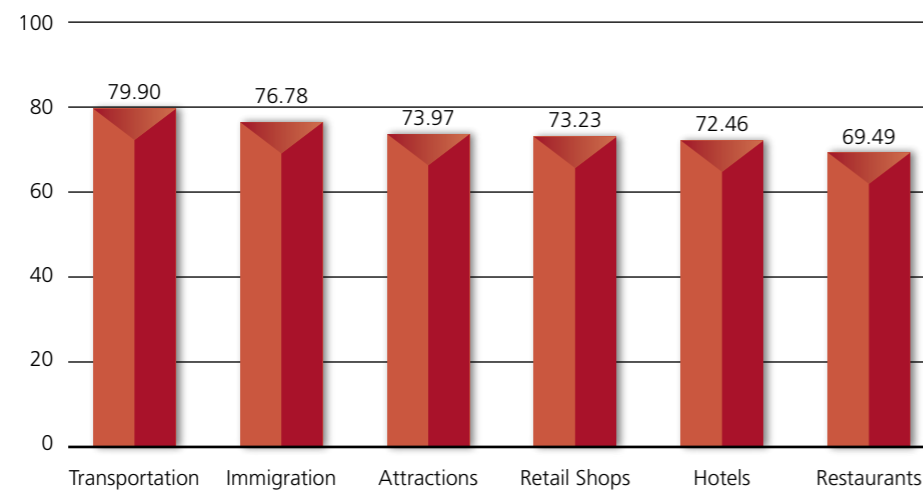
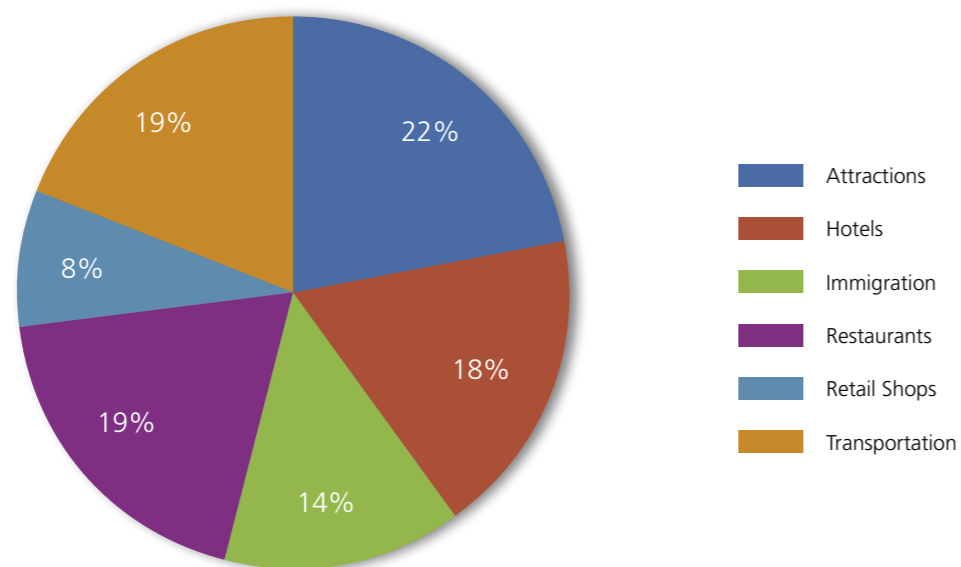


Figure 12 Tourist Satisfaction Index Weights – Mainland China



### 4.6 South and Southeast Asia

This source market also does not indicate any index points that are above 80. The respondents from South and Southeast Asia were the least satisfied with the hotels, indicating an index figure of 65.82, preceded by the restaurants with an index of 67.74 and the retail shops with an index of 69.33. The top three sectors are the transportation (76.75), attractions (74.10) and immigration (72.12).

Figure 13 Tourist Satisfaction Index – South and Southeast Asia

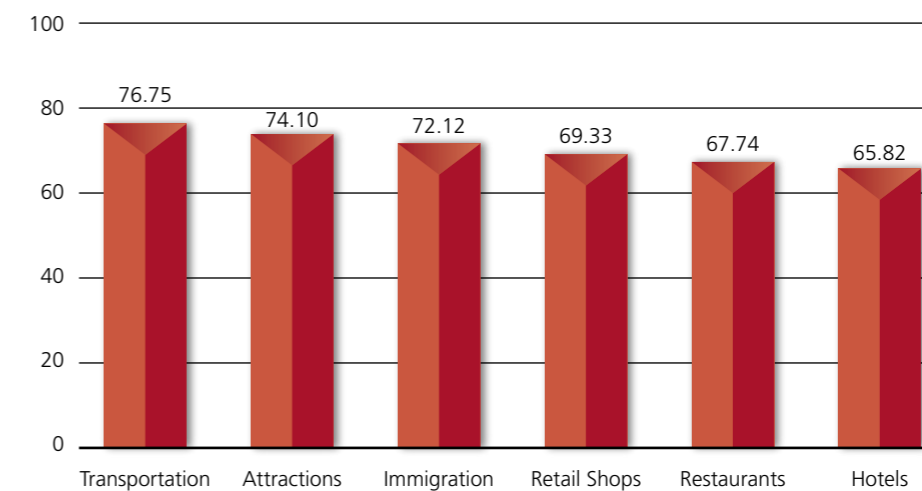
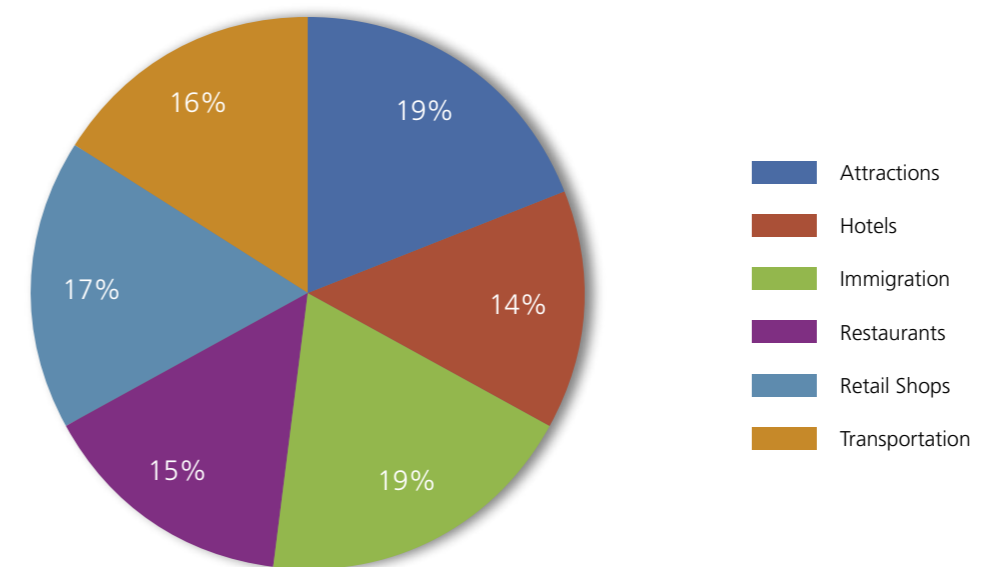


Figure 14 Tourist Satisfaction Index Weights – South and Southeast Asia



### 4.7 Taiwan and Macau

This market segment is within close proximity to Hong Kong and the majority of the index scores are below 70. Among the six sectors, the respondents from Taiwan and Macau were most satisfied with the transportation sector (70.45), followed by the immigration (69.76) and attractions (68.17). The remaining three sectors are hotels (65.82), retail shops (62.66) and restaurants (62.04).

Figure 15 Tourist Satisfaction Index – Taiwan and Macau

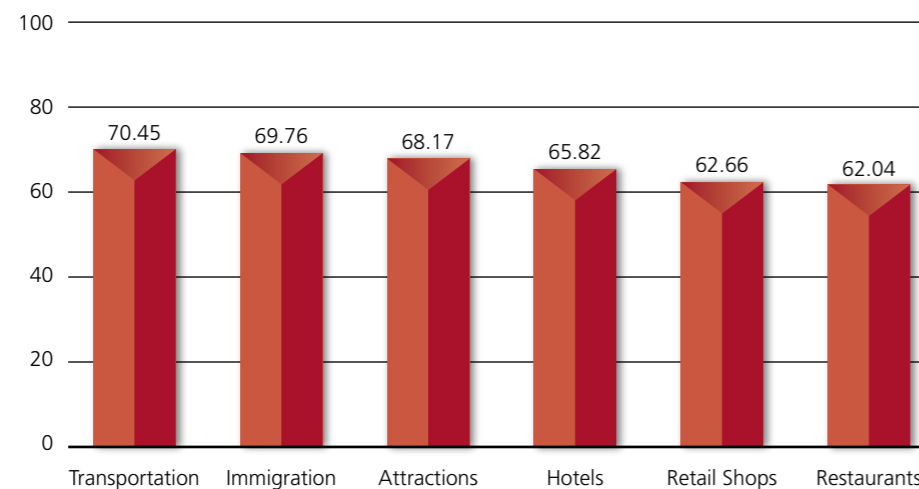
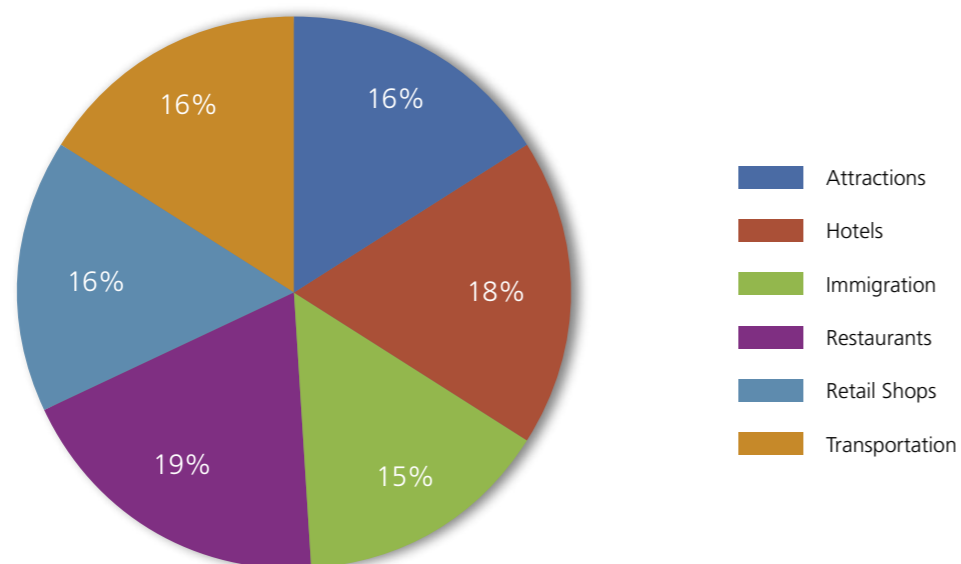


Figure 16 Tourist Satisfaction Index Weights – Taiwan and Macau



### 4.8 Summary

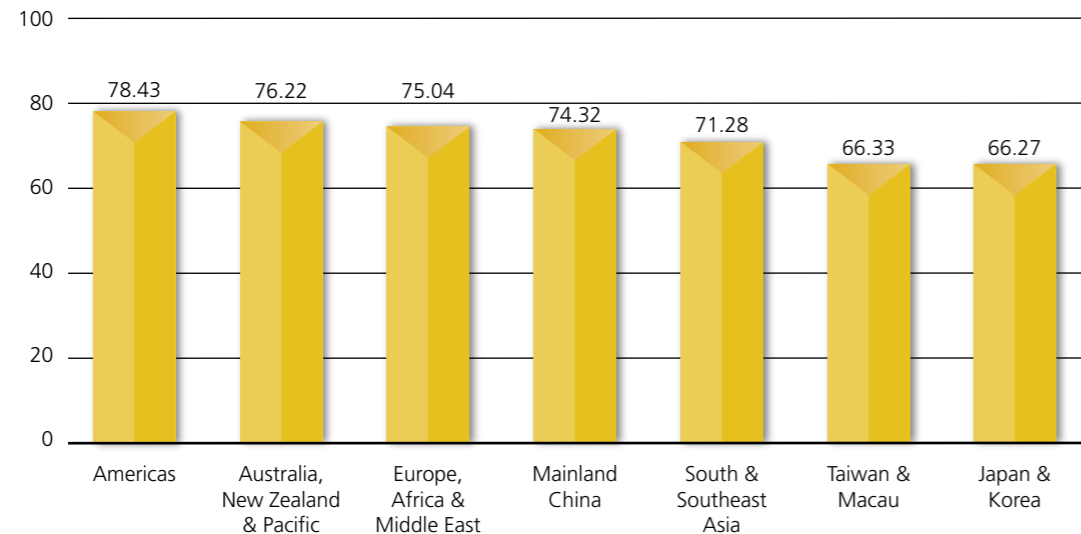
Although, the source markets in Asia indicate lower index figures, the rankings of the sectors are fairly comparable to the western source markets. However, the tourists from Japan and South Korea do show a different picture regarding the hotels as it is ranked at the top. Nevertheless, in general the top three performing sectors are transportation, immigration and attractions across most source markets. It seems that the majority of the tourists are most satisfied with the services provided by these sectors. On the other hand, there is room for further improvement to enhance the levels of tourist satisfaction in the following sectors: hotels, retail shops and restaurants. These three sectors were most frequently found at the bottom of the satisfaction rankings. In particular, the majority of the tourists seem to be least satisfied with the restaurants. The conclusion from the cross-sector tourist satisfaction index comparison is that, the sectors that require more intensive personal services such as hotels, restaurants and shops did not do as well as those sectors with less intensive personal contacts such as immigration service, transportation and attractions visited.

As shown in the pie diagrams across source markets the weights of the six sectors are fairly close to each other, while the lowest is 8% for the retail shops and 22% for the attractions for mainland China. This means that visiting attractions contributes more towards the satisfaction of mainland Chinese tourists than the shopping experience. The attractions also contribute the most to the satisfaction among the tourists from the Americas and Australia, New Zealand and Pacific and the transportation sector contributes the least. The transportation sector also contributes the least to the satisfaction levels of the tourists from Europe, Africa and Middle East while the restaurants are their largest contributor. The satisfaction levels of the tourists from South and Southeast Asia were most influenced by the attractions and immigration and least affected by the hotels. The last source market, Taiwan and Macau, indicates that the restaurants were the largest contributor and the immigration sector is the lowest contributor towards the satisfaction level of tourists from this source market. While recognizing that there are differences between contributions towards each sector across source markets, the differences are minor.

### 4.9 Overall Tourist Satisfaction Indexes by Source Market

This section illustrates the overall tourist satisfaction indexes by source market. The source market with the highest index is Americas with an overall score of 78.43. The respondents from the Americas were most satisfied with many of the sectors and the majority scored well above 70 index points. The Americas is followed by the source market of Australia, New Zealand and the Pacific region with an aggregated overall satisfaction index score of 76.22. The third most satisfied source market is Europe, Africa and Middle East; visitors from these regions attributed to an overall score of 75.04. The remaining source markets are all in Asia. Mainland China appears to be the most satisfied Asian market with an overall tourist satisfaction index of 74.32. Closely following mainland China is the source market of South and Southeast Asia, with an index figure of 71.28. At the bottom end the two source markets are Taiwan and Macau, and Japan and Korea, both showing the lowest overall satisfaction with index scores of 66.33 and 66.27, respectively. The service providers particularly targeting these Asian source markets should take notice of how to satisfy these tourists. Based on these scores, the 7 markets can be separated into 3 levels: Relatively high: (>75.0), medium: (<75.0 and >70.0), and relatively low: (<70.0).

**Figure 17 Overall Tourist Satisfaction Indexes by Source Market**



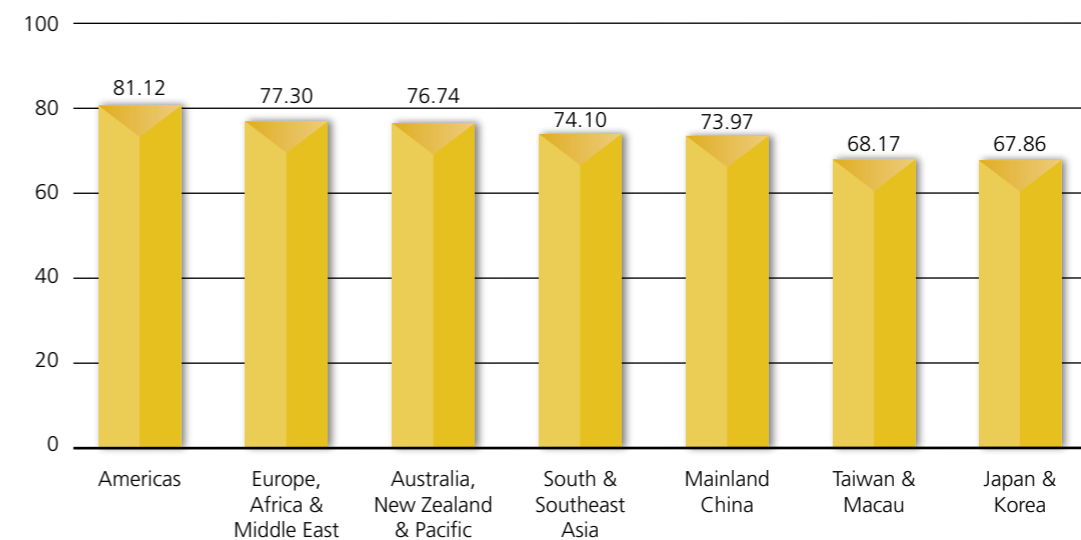
# 5 Tourist Satisfaction Indexes by Service Sector

This section presents the tourist satisfaction indexes by service sector. Six tourism-related sectors are discussed in alphabetical order starting with attraction. Each of the source markets will be discussed for each sector. The overall sectoral tourist satisfaction indexes are presented at the end of this section. The weights used to calculate these overall sectoral indexes follow the interpretation of Section 4.

### 5.1 Attractions

Among the seven major source markets, the respondents from the Americas were most satisfied with the attractions (81.12), followed by Europe, Africa and Middle East (77.30), Australia, New Zealand and Pacific (76.74), South and Southeast Asia (74.10), and mainland China (73.97). The indexes of the remaining two source markets are below 70 points: Taiwan and Macau (68.17) and Japan and Korea (67.86).

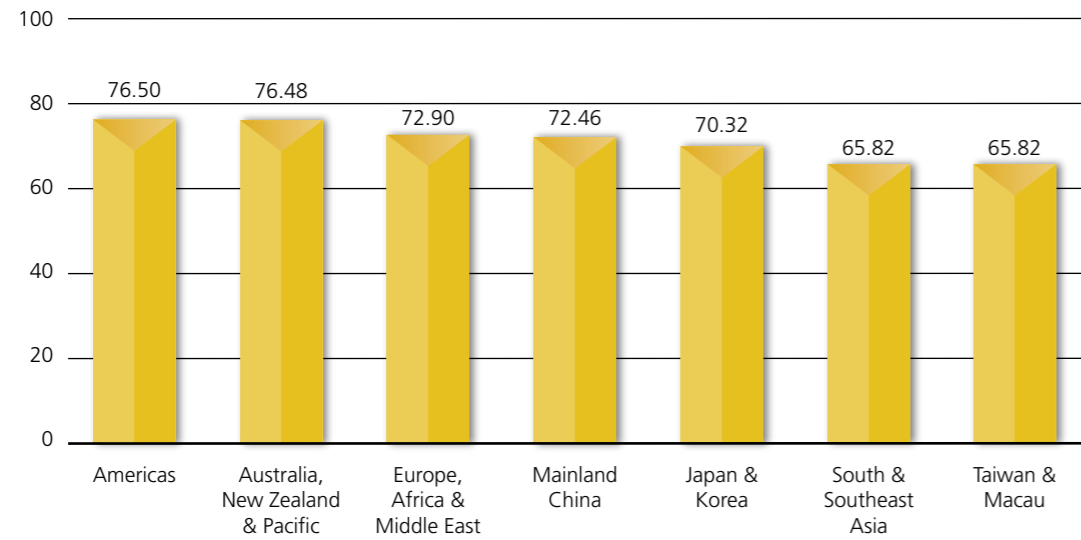
**Figure 18 Tourist Satisfaction Index – Attractions**



### 5.2 Hotels

As with the attractions, the hotels received the highest satisfaction score from the respondents from the Americas (76.50), closely followed by Australia, New Zealand and the Pacific region (76.48). Europe, Africa and Middle East region is ranked third with an index of 72.90. The source markets in Asia indicate lower index scores. The index figures for mainland China and Japan and Korea are 72.46 and 70.32, respectively. South and Southeast Asia, Taiwan and Macau are found at the bottom of the rankings with the same index score of 65.82.

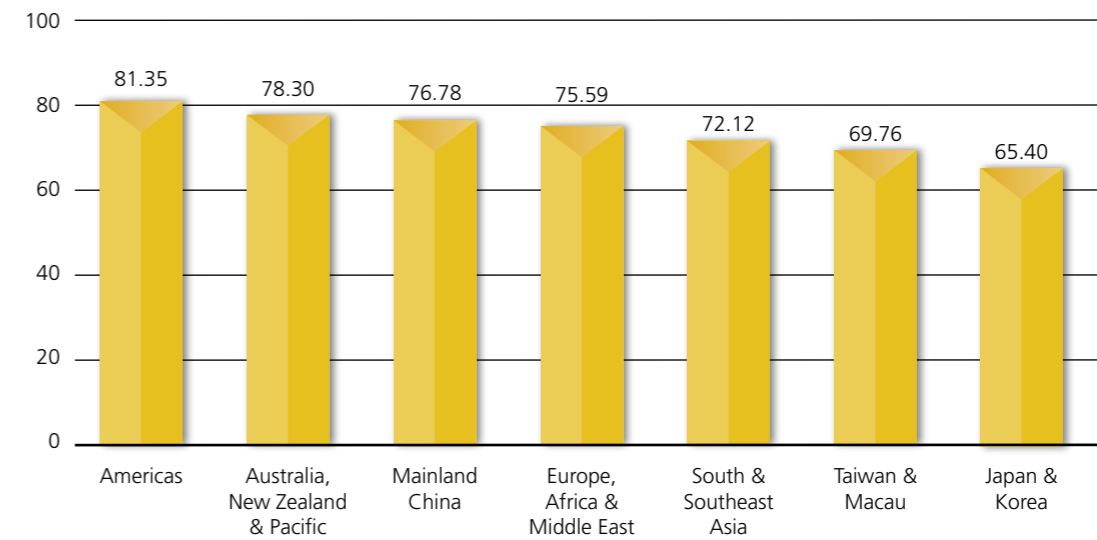
Figure 19 Tourist Satisfaction Index – Hotels



### 5.3 Immigration

The satisfaction indexes for the immigration sector show a slightly different pattern from the attractions and hotels. The American respondents were most satisfied with the immigration sector (81.35), followed by Australia, New Zealand and Pacific region (78.30). However, unlike most cases in which Asian respondents awarded lower index scores than those from western countries, the respondents from mainland China were more satisfied with the immigration sector (76.78) than tourists from Europe, Africa and Middle East region (75.59). The remaining three source markets in Asia are still found at the bottom end. The index figure of South and Southeast Asia is 72.12, followed by Taiwan and Macau (69.76) and Japan and Korea (65.40).

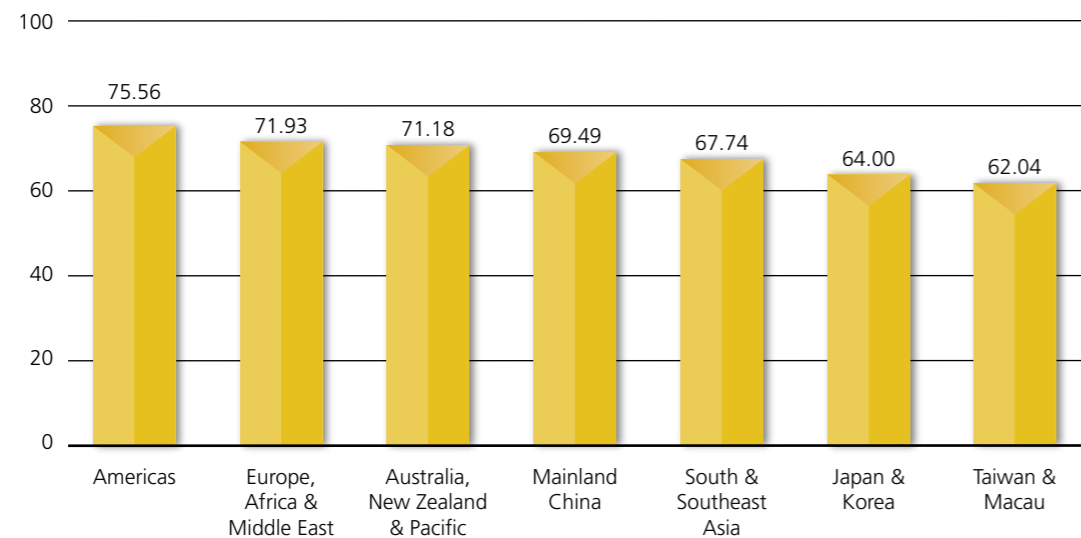
Figure 20 Tourist Satisfaction Index – Immigration



### 5.4 Restaurants

The satisfaction indexes for the restaurants are generally lower than other sectors. In terms of ranking among the major source markets, the restaurants received the highest satisfaction score from the respondents from the Americas (75.56), followed by Europe, Africa and Middle East (71.93), and Australia, New Zealand and Pacific region (71.18). The Asian respondents awarded lower satisfaction score to the restaurants with the index figures below 70 points. The index of mainland China is 69.49, followed by South and Southeast Asia (67.74). Japan and Korea and Taiwan and Macau are at the lower end with the indexes of 64.00 and 62.04, respectively.

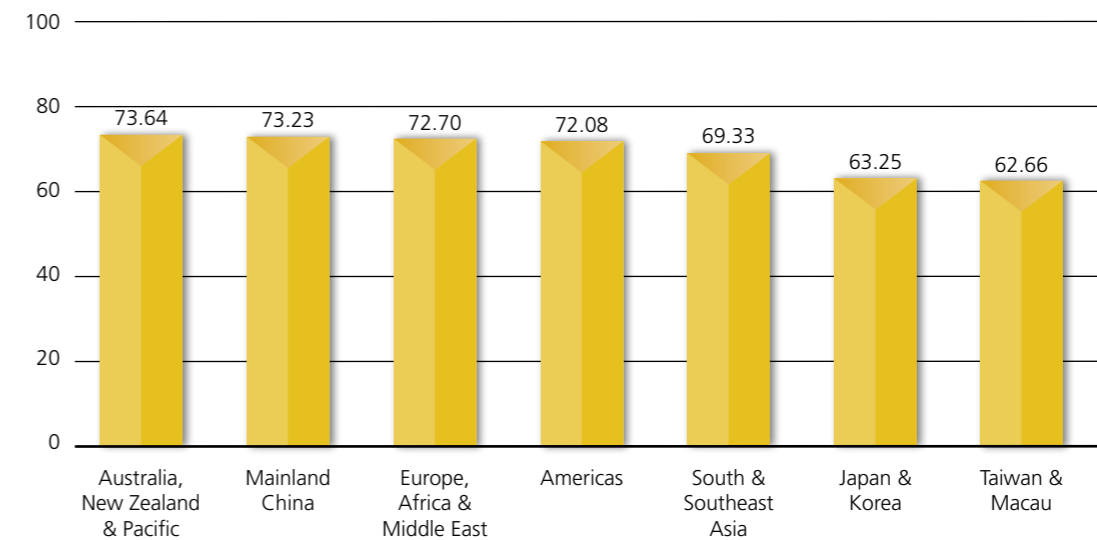
**Figure 21 Tourist Satisfaction Index – Restaurants**



### 5.5 Retail Shops

The breakdown of satisfaction with retail shops shows a different picture from the preceding sectors. Instead of being the top one, the index score of Americas (72.08) is ranked fourth among the seven major source markets, although the difference between the top three source markets is small. The respondents from Australia, New Zealand and Pacific were most satisfied with the retail shops with an index of 73.64, closely followed by mainland China (73.23) and Europe, Africa and Middle East region (72.70). The remaining source markets in Asia are ranked last with the index scores below 70 points. The indexes of South and Southeast Asia, Japan and Korea, and Taiwan and Macau are 69.33, 63.25, and 62.66, respectively. It seems the retail sector is doing relatively well in satisfying Chinese tourists, evidenced by their satisfaction score of 73.23, second highest among all source markets. However, other source markets should not be ignored.

**Figure 22 Tourist Satisfaction Index – Retail Shops**

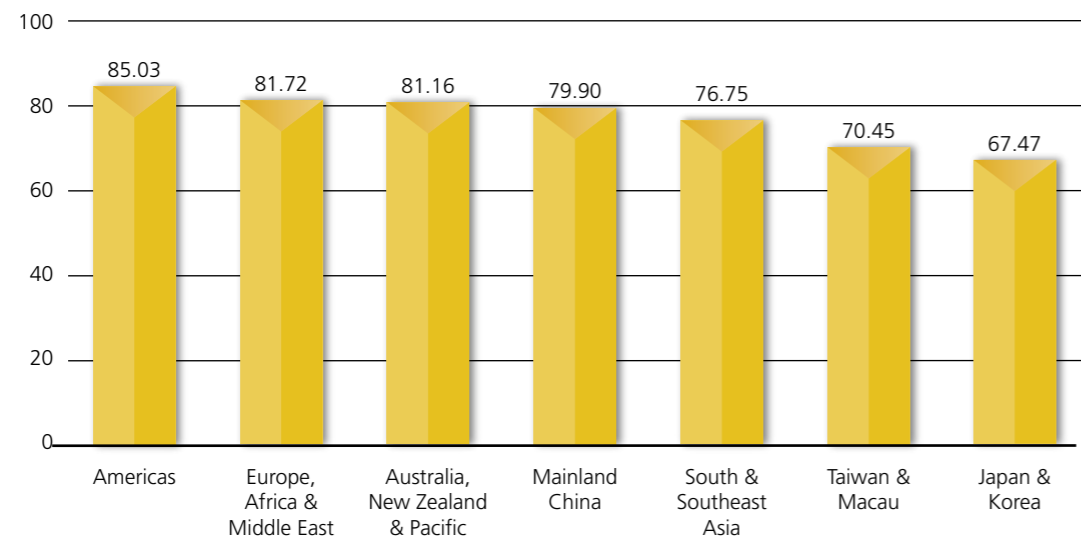




### 5.6 Transportation

In general, the satisfaction indexes for the transportation sector are higher than the above sectors, while the breakdown is similar. As with most cases, the transportation sector received the highest satisfaction score from the respondents from the Americas (85.03), followed by Europe, Africa and Middle East (81.72) and Australia, New Zealand and Pacific region (81.16). The last four regions are the source markets in Asia with the index figures below 80 points. The index score of mainland China is 79.90, followed by South and Southeast Asia (76.75), Taiwan and Macau (70.45), and Japan and Korea (67.47).

**Figure 23 Tourist Satisfaction Index – Transportation**

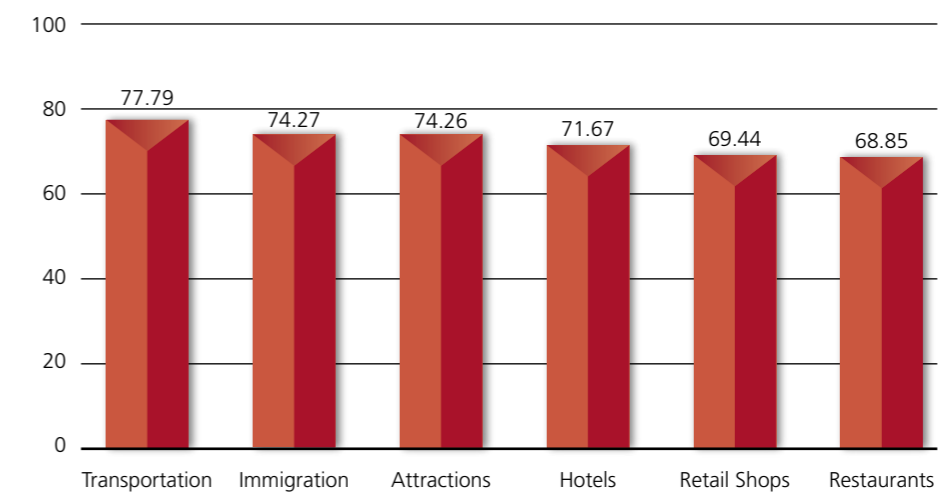


### 5.7 Overall Tourist Satisfaction Indexes by Service Sector

In terms of the tourist satisfaction indexes by sector, a pattern of the breakdown can be noticed. For most sectors, the source markets in western countries show a higher satisfaction index score than Asian source markets. Particularly, among the seven major source markets, tourists from the Americas were most satisfied with all sectors apart from the retail shops.

This section presents the overall tourist satisfaction indexes by sector. Among the six tourism-related sectors, the transportation sector received the highest index score (77.79), followed by the immigration sector (74.27) and attractions (74.26). The hotels are ranked fourth with an overall index score of 71.67. With the index scores below 70, the retail shops and restaurants are ranked at the lower end. The overall indexes for these two sectors are 69.44 and 68.85, respectively.

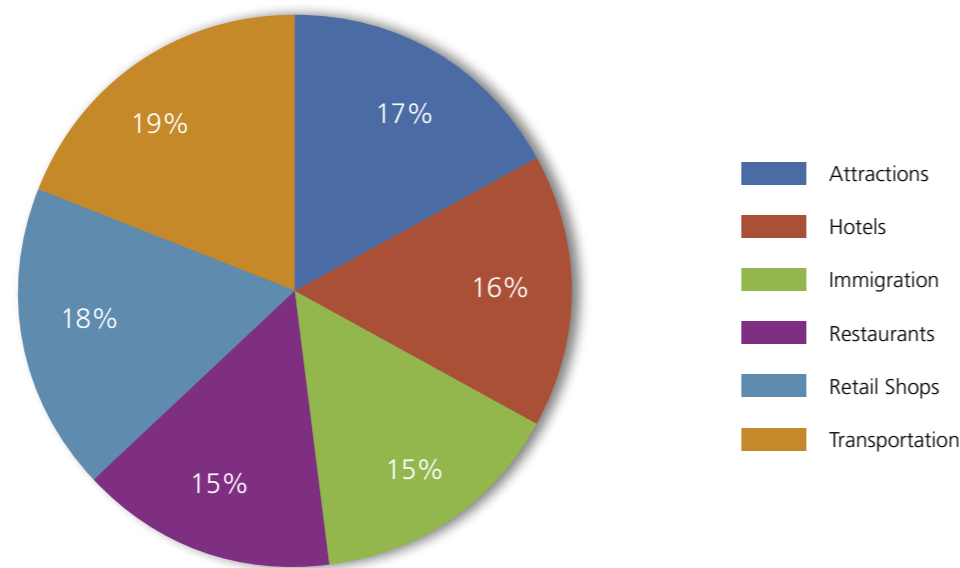
**Figure 24 Overall Tourist Satisfaction Indexes by Service Sector**



### 5.8 PolyU Tourist Satisfaction Index

Given the sectoral tourist satisfaction indexes presented previously, the calculated PolyU tourist satisfaction index (PolyU TSI) is **72.65**. The PolyU TSI represents the overall tourist satisfaction with Hong Kong as a destination based on tourists' satisfaction with the attractions, hotels, immigration, restaurants, retail shops, and transportation sectors. As shown in the pie diagram below, the weights of the six sectors are fairly close to each other ranging from 15% (immigration and restaurant) to 19% (transportation). This suggests that the transportation sector contributes the most to tourists' overall satisfaction, and the immigration and restaurants contribute the least. However, the differences between the contributions are small.

Figure 25 PolyU Tourist Satisfaction Index Weights



### 5.9 Key Dimensions

Table 2 presents the overall mean scores of the remaining dimensions in the model across source markets by sector. Comparatively, the restaurants and retail shops have the lowest mean values for the majority of the dimensions. The transportation sector has the highest mean values for most of the dimensions followed by the other sectors. This pattern can also be seen from the overall tourist satisfaction indexes by sector, where the transportation sector stands out from the rest and the restaurants and retail shops have the lowest ranking. Although, all the mean values are positive, there is still room for improvement, especially concerning the restaurants and retail shops for almost all the dimensions.

Table 2 Mean Values for Key Dimensions

	Expectations*	Perceived Performance*	Gap	Assessed Value*	Complaints**	Loyalty**
Attractions	7.18	7.52	0.34	7.42	3.16	7.47
Hotels	7.33	7.53	0.20	7.34	3.18	6.94
Immigration	7.23	7.50	0.27	7.37	3.70	7.33
Restaurants	6.95	7.20	0.25	7.10	3.33	6.45
Retail Shops	6.95	7.14	0.19	7.00	2.99	6.85
Transportation	7.29	7.84	0.55	7.70	3.40	8.31

\* 0-10 'extremely poor' to 'extremely good'  
 \*\* 0-10 'completely disagree' to 'completely agree'

In terms of expectations the respondents have the lowest expectations for the retail shops and restaurants. They have the highest expectations for the hotels, which are closely followed by the remaining sectors. The respondents evaluated the perceived performance of the transportation sector as the highest, then the hotels, attractions and immigration. They evaluated the perceived performance of the restaurants and retail shops as the lowest.

Interesting is the gap between the dimensions of perceived performance and expectations. All gaps are positive, suggesting that overall the Hong Kong tourism-related sectors all perform above tourists' expectations. The largest gap can be found in the transportation sector (.55); this figure indicates that the perceived performance of transportation sector exceeds the respondents' expectations the most. The attractions and immigration are in the second and third place, respectively. The restaurants come fourth and the perceived performance exceeds the respondents' expectations. The gap for the hotels is the second lowest which may indicate that the perceived performance of the hotels comparatively matches the respondents' expectations. Even though the gap for the retail shops is the smallest (.19), the perceived performance of this sector still exceeds the respondents' expectations.

In terms of assessed value the respondents rated it quite positively and the transportation sector received the highest score, followed by the attractions and hotels. The immigration sector was evaluated based on time waited and ranked number four. The assessed value for the restaurants and retail shops received the lowest scores. Overall, the respondents are not inclined to complain and the lowest score is noted for the retail shops followed by the attractions and hotels. Number four and five are the restaurants and transportation, leaving the highest score to the immigration sector.

The last dimension evaluates the respondents' loyalty towards the service sector and the transportation sector received the highest score followed by the attractions and immigration. The last three service intensive sectors received mean values below seven and the restaurants score the lowest.

## 6 Recommendations

The PolyU tourist satisfaction index provides an indication of the sectors' performance from the demand-side viewed from a tourist's perspective. Overall, the tourism-related sectors in Hong Kong have performed well and they are encouraged to keep up the good practice. One reason is that various organizations have adopted industry-wide and/or international recognized service standards. Some joined service accreditation proposals such as the Quality Tourism Services Scheme by the Hong Kong Tourism Board, the Skills Upgrading Scheme by the Education and Manpower Bureau, or embraced the 5S System ([www.hk5sa.com](http://www.hk5sa.com)). Other fitting initiatives such as proposed by the Hong Kong Association for Customer Service Excellence or publishing performance pledges for service delivery are also highly recommended to peruse. All of these are about setting and adhering to desired standards that have in fact well covered the best practice within each of the service sectors. It is believed that the industry should understand their customer's needs and wants in order to establish and maintain quality environment in their organization. Yet the priority for some of the organizations is to serve the local community, and resources may be allocated to cater for local customers' needs than addressing tourists' demand. Even though some service sectors' major objective is to serve the public needs, the local customers' needs are slightly different from the visitors' needs. While the majority of industry surveys are targeted at local consumers, they could examine specific service improvements for tourists' needs (e.g. language and provision of information).

It is acknowledged that many tourism-related organizations are small- and medium-sized enterprises. As such, they may have limited resources on staff training and some may have difficulties in releasing their staff to attend training courses. In addition, in some of the service-intensive industries such as retail shops, restaurants, and hotels, the frontline staff turnover rate is comparatively high, which makes it difficult to maintain consistent service standards. Therefore, industry organizations could take up an active role to address sector-specific service quality issues, to provide a platform to exchange experience among members, and to issue guidelines on service standards specifically addressing tourists' needs. The industry organizations are recommended to communicate with their members through newsletters, thematic seminars, or media. They may consider a Mystery Tourist Program to raise the overall standard of tourism services, and at the same time it could recognize outstanding organizations for providing quality service to tourists. It helps to monitor the service performance of participating organizations specifically directed at the needs of tourists. The results could act as reference for sector-wide members for their continuous self-improvement. Another suggestion would be to appoint a representative in their respective organization that is able to address specific tourists' needs. To obtain useful information on the change of performance of a service for tourists one could organize tourist focus groups. As such, the PolyU tourist satisfaction index offers objective feedback from external sources that could be compared to organizations' internal satisfaction assessments in order to examine their performance over time or benchmark with the industry standards.

Continuous staff training is important to drive service excellence and boost companies' performances. It is recommended that the respective industry organizations should take an active role in organizing sector-wide training schemes that cater for different levels of staff ranging from frontline officers to senior managers. This may be effective in sharing the training costs and maximizing resources within the sector. Experienced industry leaders could also be invited to these workshops to share their insights and experience. It is recommended that more attention should be paid to improvement of service quality in those sectors with more intensive and inter-personal service contacts. To improve the service quality, a systematic staff training program is necessary. In addition to the training provided at the beginning of the employment, a service quality assurance mechanism should be in place. Regular service monitoring and on-going training should be provided. Other recommendations include tri-lingual skills (i.e., Putonghua and English in addition to Cantonese), communication between management and frontline staff (i.e. an internal feedback mechanism). It is noted that (a) there is a scope for adjusting/improving specific performance pledges for particular service sectors that require further improvements and (b) there is a need to make reference to international practice and conduct survey studies more frequently in order to review its existing standards to address the tourists' needs.

# 7 Conclusion and Implications

This report presents the findings of a large scale study on developing a tourist satisfaction index system to assess Hong Kong's competitiveness as an international tourism destination. The innovative evaluation system proposed integrates alternative approaches and captures multiple dimensions of tourist satisfaction. The framework is able to produce tourist satisfaction indexes for individual tourism sectors which combined are used to estimate an overall satisfaction index. This framework has important practical implications on tourist destination management in the long run.

First of all, the PolyU tourist satisfaction index is expected to be a leading indicator of financial performance of tourism-related firms, sectors and that of the whole tourism industry. As such, the PolyU tourist satisfaction index has the potential to predict business profitability and the financial health of the tourism industry. Secondly, the index will provide detailed diagnostic information of the relationships among the dimensions. By examining the values and signs of model parameters, the important components and indicators, which dominate tourist satisfaction and other variables of interests, can be identified. This information will be very helpful for decision makers in both public and private sectors to enhance the competitiveness of the Hong Kong tourism industry through tourist satisfaction improvement, which will further benefit the economic development and the wellbeing of the local community of Hong Kong. Thirdly, with a uniform and comparable nature, the proposed model can be applied to other source markets, other tourism-related sectors, and at different levels. Individual organizations could apply the tourist satisfaction model for an internal assessment and compare their performance with the sector's overall performance. Moreover, the developed PolyU tourist satisfaction evaluation framework is readily adopted by other destinations. The uniform and comparable features of the PolyU tourist satisfaction index system enable the comparisons of tourist satisfaction across regions and over time.

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# Appendix 1 – Questionnaire

Questionnaire: Tourist Satisfaction Index	
Expectations	1. Overall Expectations
	2. Customization
	3. Reliability
Perceived Performance	4. Overall Performance
	5. Customization
	6. Reliability
Assessed Value	7. Price Given Quality
	8. Quality Given Price
Loyalty	9. Revisit Intention
	10. Recommendation to Others
Complaints	11. Intentions to Complain to Employee
	12. Intentions to Complain to Others
Satisfaction	13. Overall Satisfaction
	14. Comparison with Expectation
	15. Comparison with Ideal
Scale Format 0-10, 0 - Lowest, 5 - Neutral, 10 - Highest	

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Please tick the appropriate box

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- Very easy       Fairly easy       Just right  
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2. Do you find this report applicable to your business?

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 Not so applicable       Not applicable at all

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Other Comments/Suggestions

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Thank you very much!

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