The Macao Tourist Satisfaction Index (MTSI)

4th Quarter Report 2016

Conducted by
The IFT Tourism Research Centre (ITRC)
Institute for Tourism Studies, Macao

8 May 2017

The MTSI is a year-round survey that monitors the satisfaction of visitors to Macao in respect of several key tourism service sectors. Results of the MTSI are published quarterly and annually. Special focus reports are also issued occasionally. For inquiries, please contact:

Ms. Wendy Tang
IFT Tourism Research Centre (ITRC)
Colina de Mong-Há
Macao
(E) itrc@ift.edu.mo
(T) (853) 2856 1252
(F) (853) 2851 9058
(W) http://itrc.ift.edu.mo/

ITRC | IFT Tourism Research Centre
INSTITUTE FOR TOURISM STUDIES, MACAO

The Macao Tourist Satisfaction Index (MTSI)

Research team: Leonardo (Don) A.N. Dioko, Phd.
Wendy Tang
Patrick Lo
Virginia Hong

Published by: IFT Tourism Research Centre (ITRC)
Institute for Tourism Studies, Macao
Colina de Mong-Há, Macao, China

© Copyright   IFT Tourism Research Centre (ITRC), Institute for Tourism Studies, Macao, 2017

I. About the MTSI

Objectives of the MTSI

1. To provide a service that regularly monitors and informs the general public in Macao about the state of visitors' satisfaction with the different sectors comprising the tourism and hospitality industry in Macao.
2. To provide satisfaction level information that will be useful for management of various operating organizations in the hospitality and tourism industry in Macao as well as for tourism policy planners and decision makers.
3. To provide a means for determining factors relevant to influencing the level of visitors' satisfaction among the different sectors of the tourism industry, with the long term goal of making the industry more competitive, and to establish a regular assessment mechanism or "barometer" to gauge the influence of these factors.

Methodology

The Macao Tourist Satisfaction Index (MTSI) is designed to represent Macao visitors' satisfaction based on their experience with 10 tourism-related sectors or services that includes (a) casinos, (b) events, (c) heritage attractions, (d) hotels, (e) immigration services, (f) non-heritage attractions, (g) restaurants, (h) retail shops, (i) tour guides/operators, and (j) transportation services. Data are collected at each quarter of the year beginning from the third quarter of 2009. In 2016, approximately 100 interviews are conducted per quarter for each sector which is equivalent to about 400 interviews per year per sector. Respondents are selected and interviewed based on a systematic sampling technique. Interviews are conducted at major sites and terminals including the Border Gate, ferry terminals, the A-Ma Temple, Ruins of St. Paul's, Senado Square and Rua do Cunha at Taipa.

The instrument used in the MTSI study is adopted from the American Customer Satisfaction Index (ACSI) model based on Fornell et al. (1996). Tourist satisfaction (TS) for each sector is assessed as a latent variable with three indicators, namely: (1) confirmation of expectations, (2) comparison with the ideal and (3) overall satisfaction. Each indicator is measured by an 11-point scale ranging from 0 to 10. The weight of each of the sector TS indicator is estimated based on structural equation modeling with maximum likelihood estimator. The estimated weights are used to construct the sector TSI value which is transformed to a 0- to 100-point scale: The higher the index, the more satisfied the tourists for the corresponding sector. The Overall MTSI is an average of the ten sector TSIs.

Figure I-1: General Model for Macao overall TSI
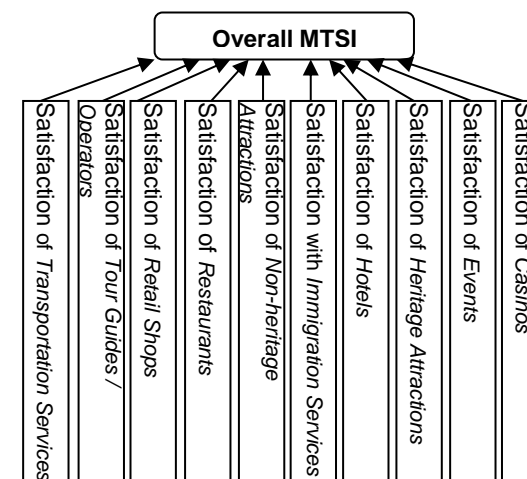
Theoretical underpinning

The theoretical framework, methodological foundation and validity of the MTSI is grounded on the American Customer Satisfaction Index (ACSI) by Fornell (1996), and the work of Prof. Haiyan Song and his team at the Hong Kong Polytechnic University, adapting it for use in the tourism sector . A substantial body of work has followed since the first publication of the ACSI with many industries, business publications and a number of growing countries adopting and accepting the framework. Companies use ACSI-based estimates of their own customers' satisfaction and benchmark this with national, intra-industry, and competitor indices, as a competitive and service differentiation tool. The Hong Kong Polytechnic School of Hotel and Tourism, led by Prof. Haiyan Song, modeled a similar index for Hong Kong's tourism industry, which they term the PolyU TSI. The Macao TSI project was conceived as a collaboration between the PolyU TSI and ITRC with the view that regional comparisons can be made between Hong Kong and Macao in terms of tourist satisfaction, and, hopefully, with other regional destinations in the future.

Reference

Fornell, C., M. D. Johnson, et al. (1996). "The American Customer Satisfaction Index: Nature, purpose, and findings." Journal of Marketing 60(4): 7.

II. Overall Macao Tourist Satisfaction Index

The overall Macao Tourist Satisfaction Index is the composite score taking into account tourist satisfaction across all the 10 tourism service sectors covered. For Q4 2016 (October to December 2016) the overall MTSI stands at **72.5**, with individual sector TSIs ranging from 69.2 (tour guides/ operators) to 77.1 (events). See Figure II-1 below for the overall MTSI since Q3 2009 and Figure II-2 for Q4 2016 sector TSIs.

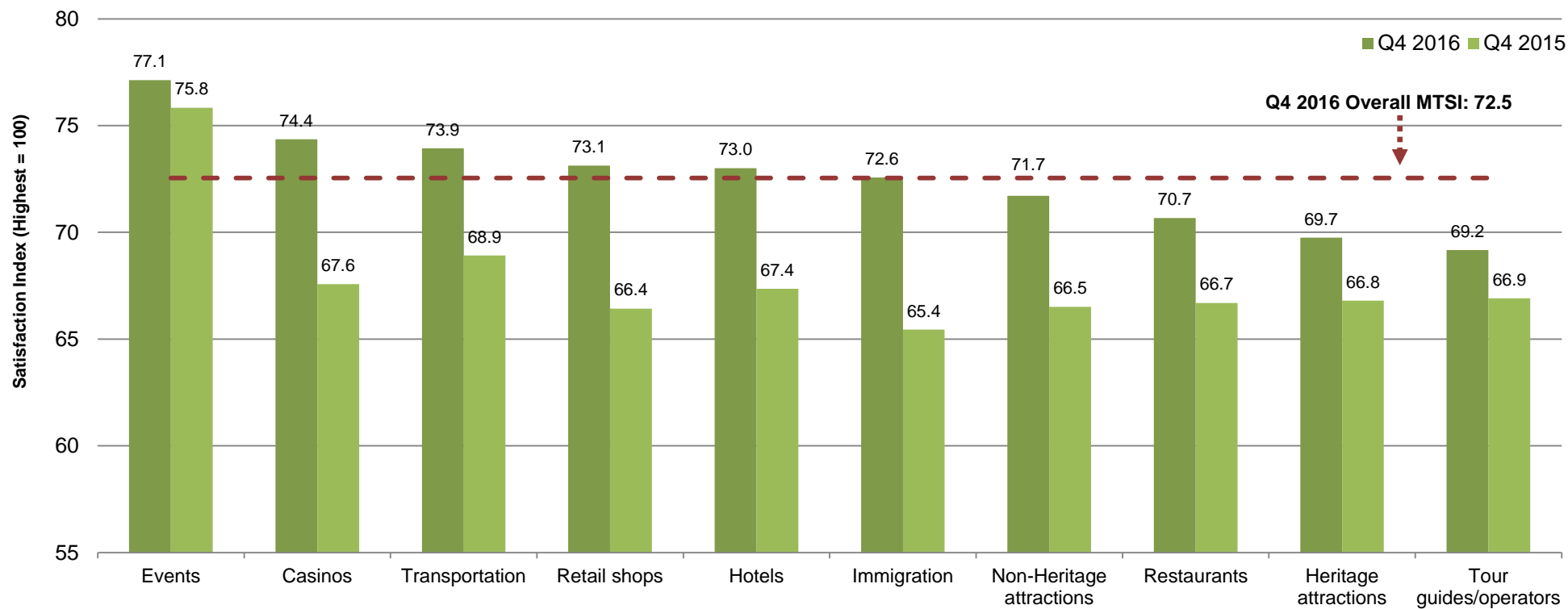**Figure II-1:** Overall MTSI, quarterly score, Q3 2009 – Q4 2016
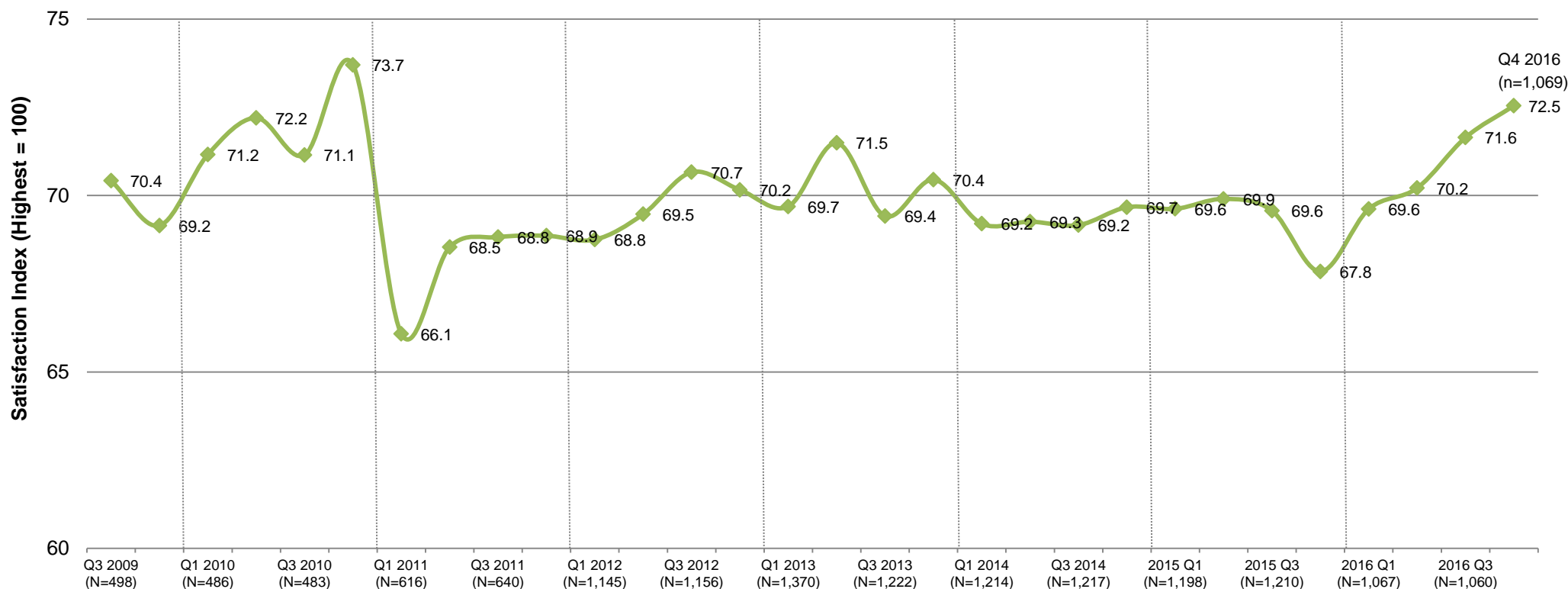
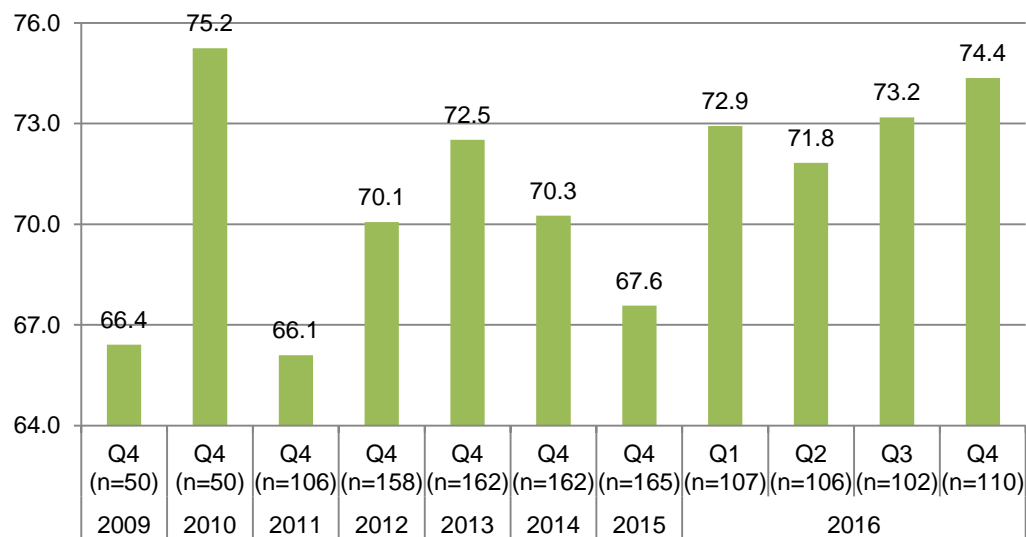**Figure II-2:** Overall MTSI and Individual Sector TSIs, Q4 2015 vs Q4 2016

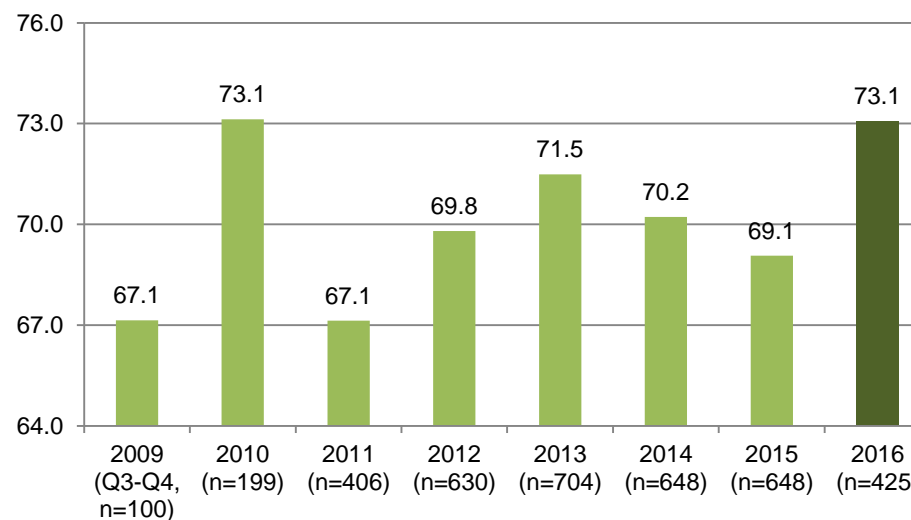# III. Sector Tourist Satisfaction

1.Casinos

Figure 1-1:

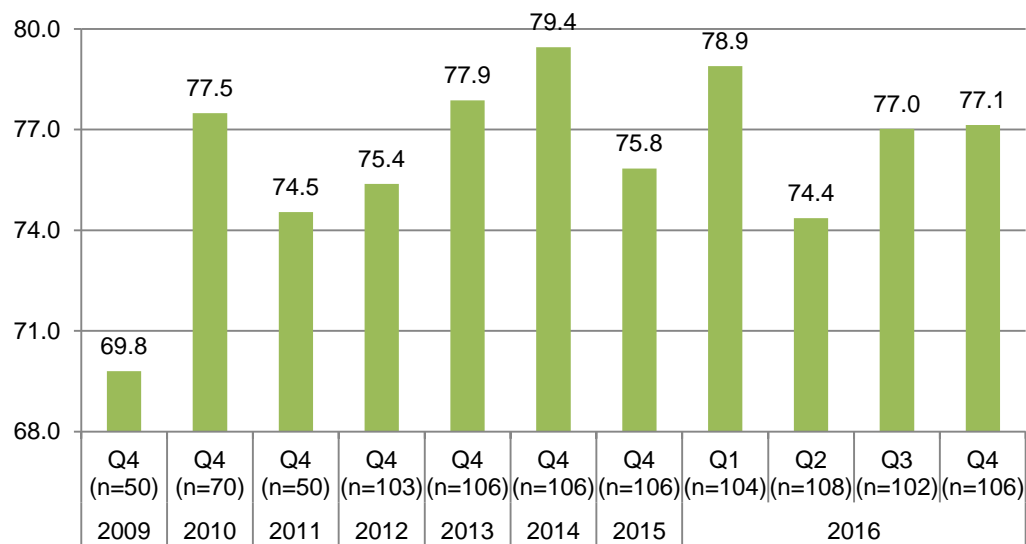Quarterly comparison of TSI score

Figure 1-2:
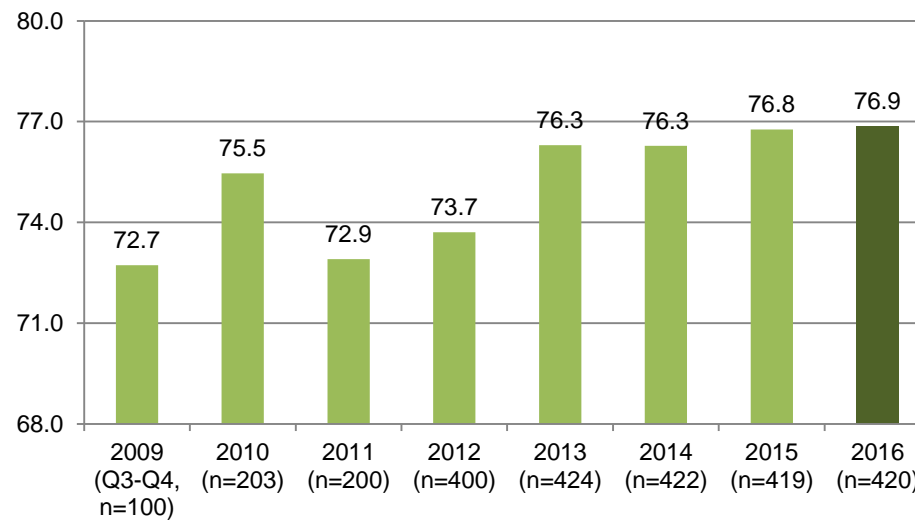
Annual comparison of TSI score

2. Events

Figure 2-1:

Quarterly comparison of TSI score
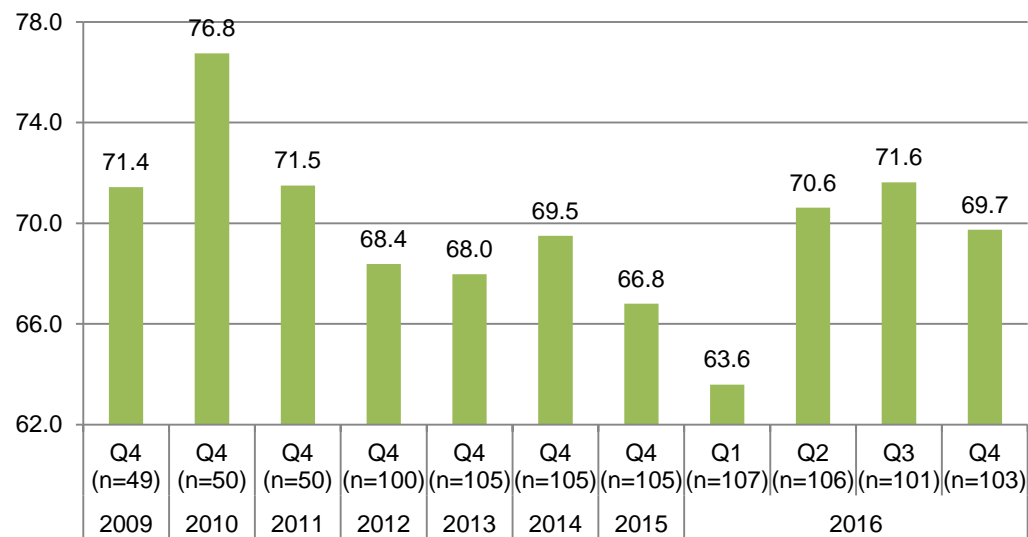

Figure 2-2:

Annual comparison of TSI score

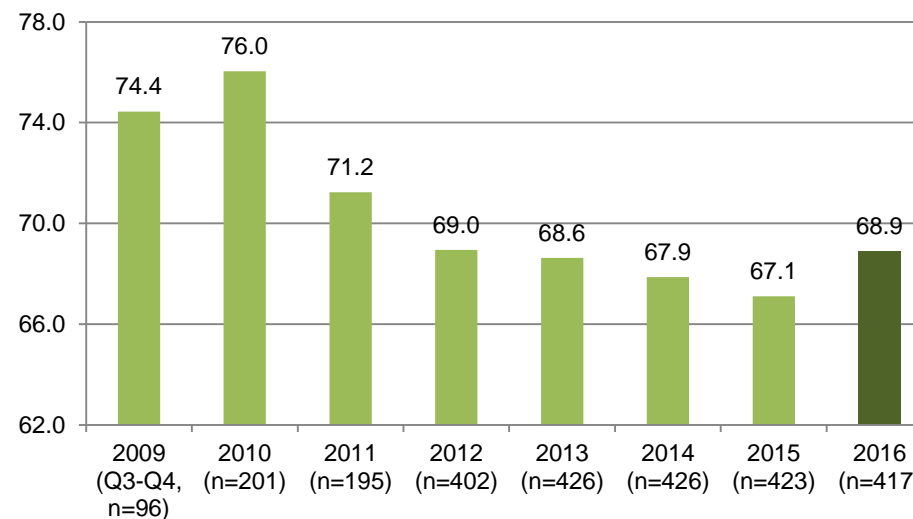## 3. Heritage attractions

Figure 3-1:

Quarterly comparison of TSI score

Figure 3-2:

Annual comparison of TSI score

4. Hotels

Figure 4-1:

Quarterly comparison of TSI score

Figure 4-2:

Annual comparison of TSI score

5. Immigration services

Figure 5-1:

Quarterly comparison of TSI score

Figure 5-2:

Annual comparison of TSI score

6. Non-heritage attractions

Figure 6-1:

Quarterly comparison of TSI score
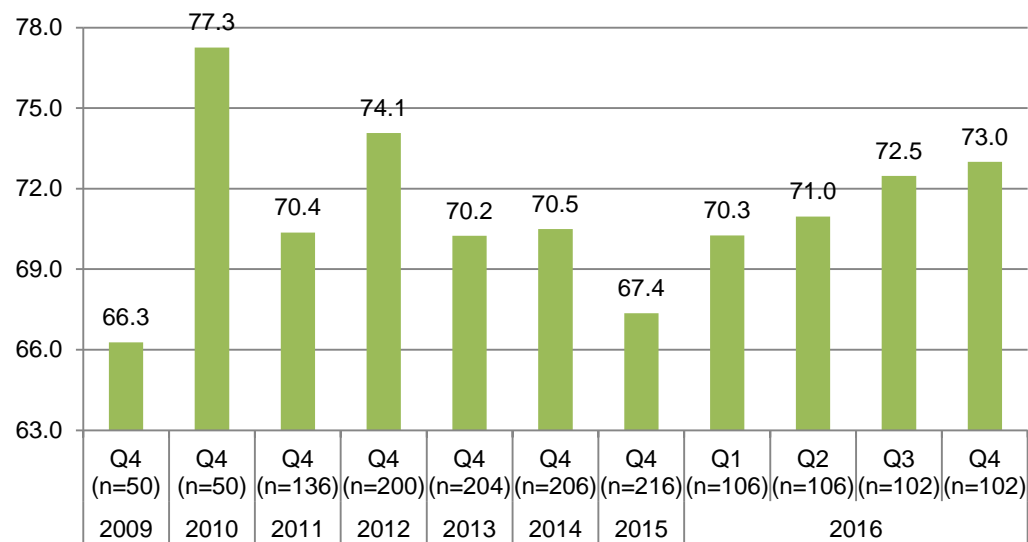

Figure 6-2:

Annual comparison of TSI score

7.Restaurants

Figure 7-1:

Quarterly comparison of TSI score

Figure 7-2:

Annual comparison of TSI score

8. Retail shops

Figure 8-1:

Quarterly comparison of TSI score

Figure 8-2:

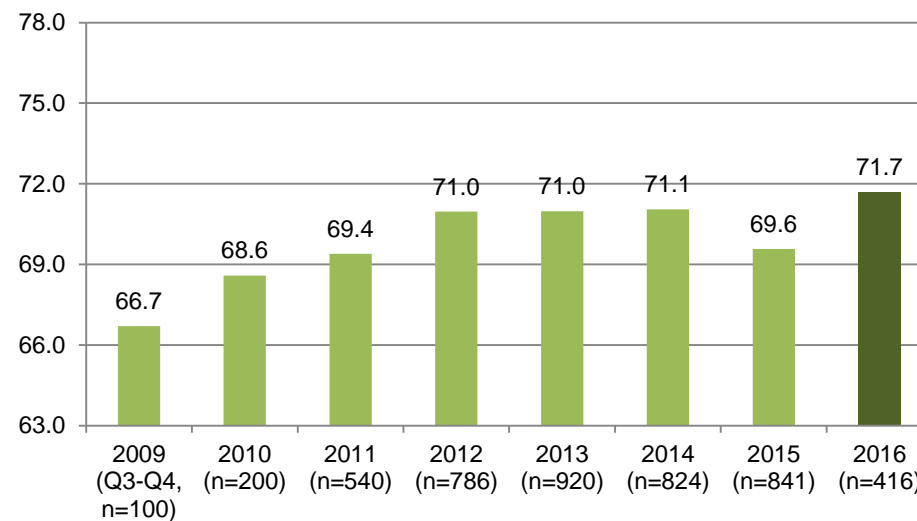Annual comparison of TSI score

9. Tour guides/operators

Figure 9-1:
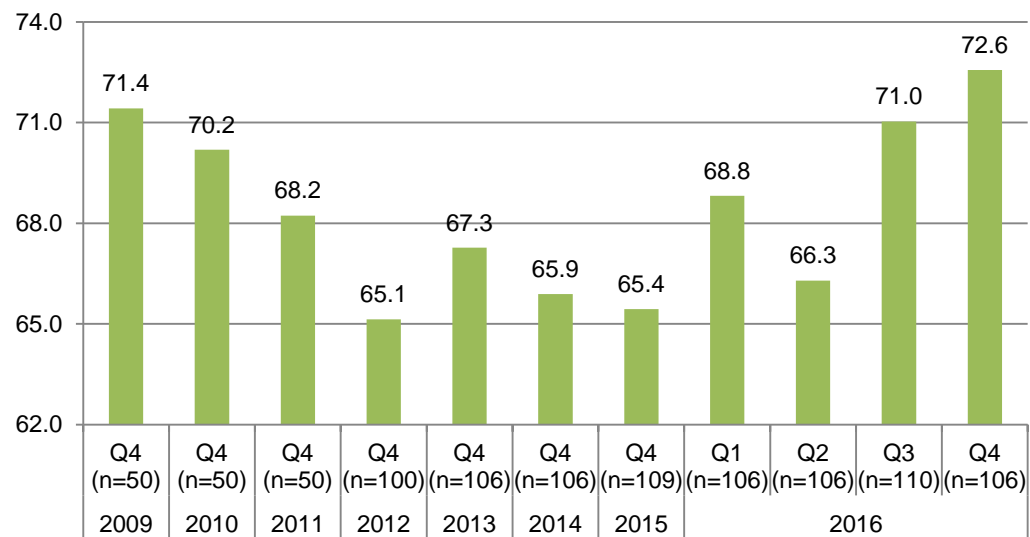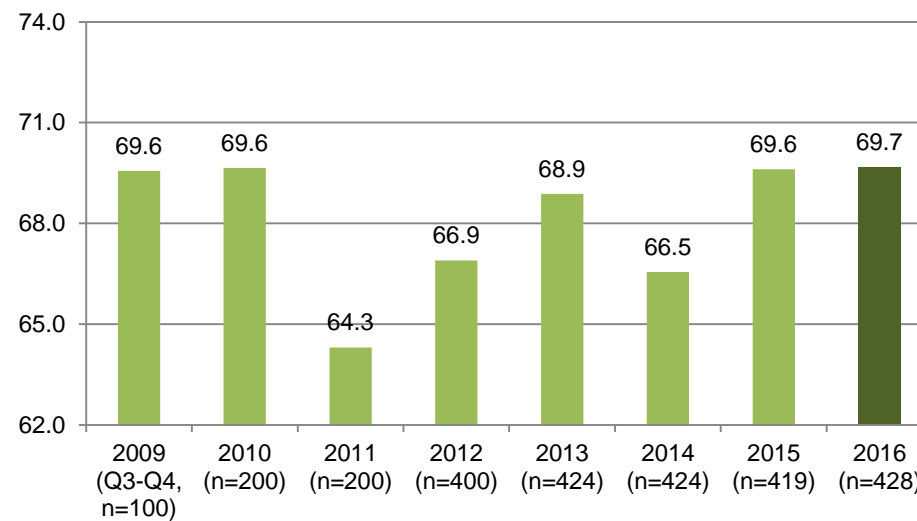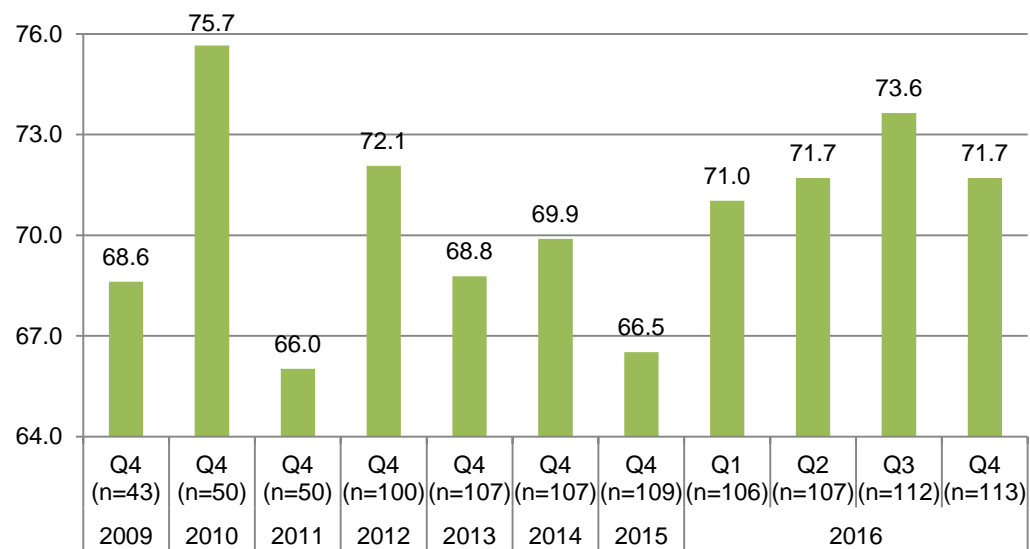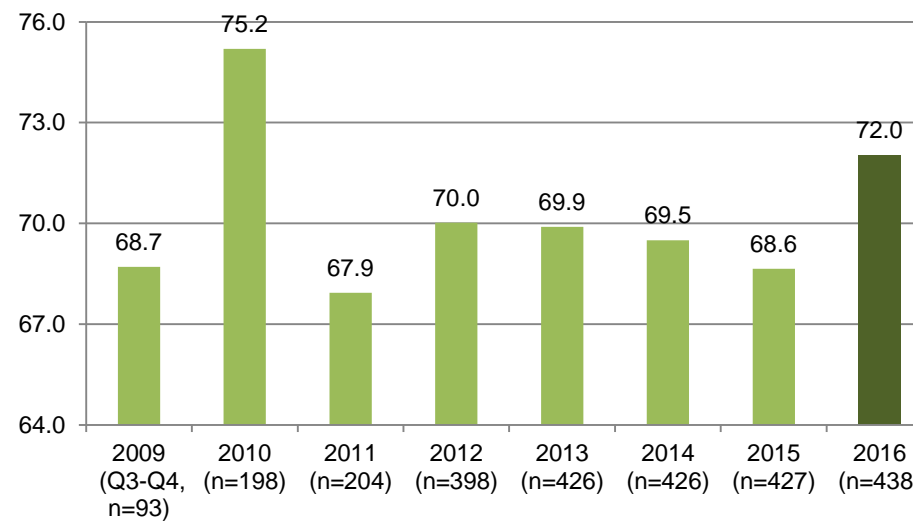
Quarterly comparison of TSI score
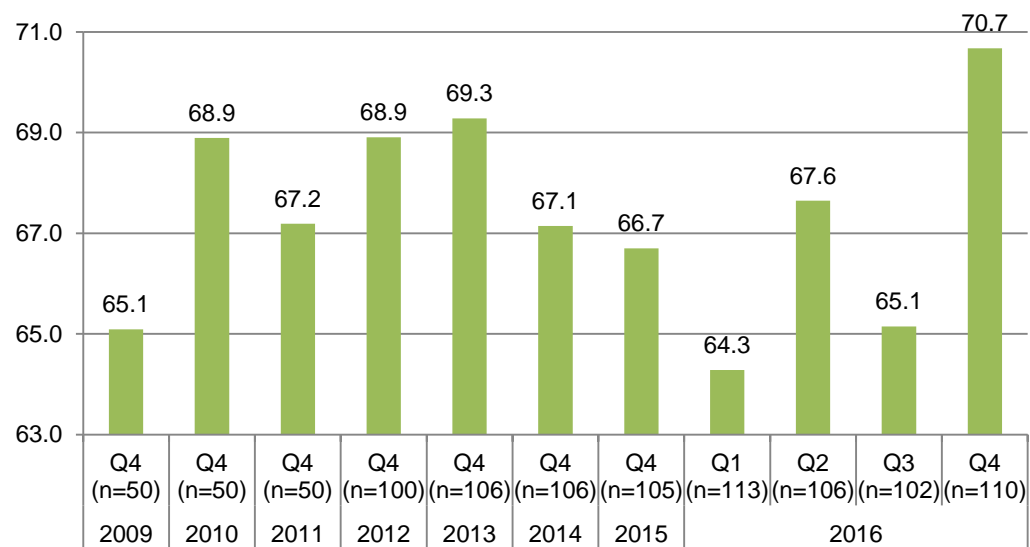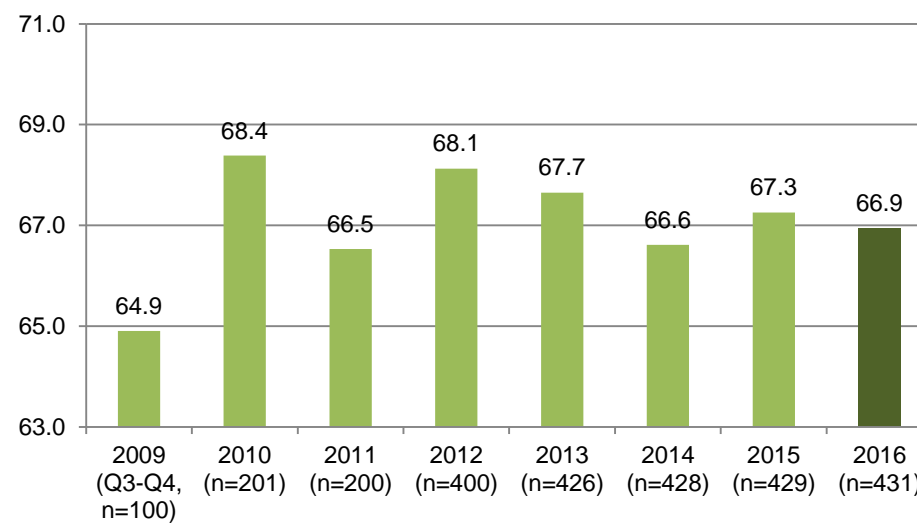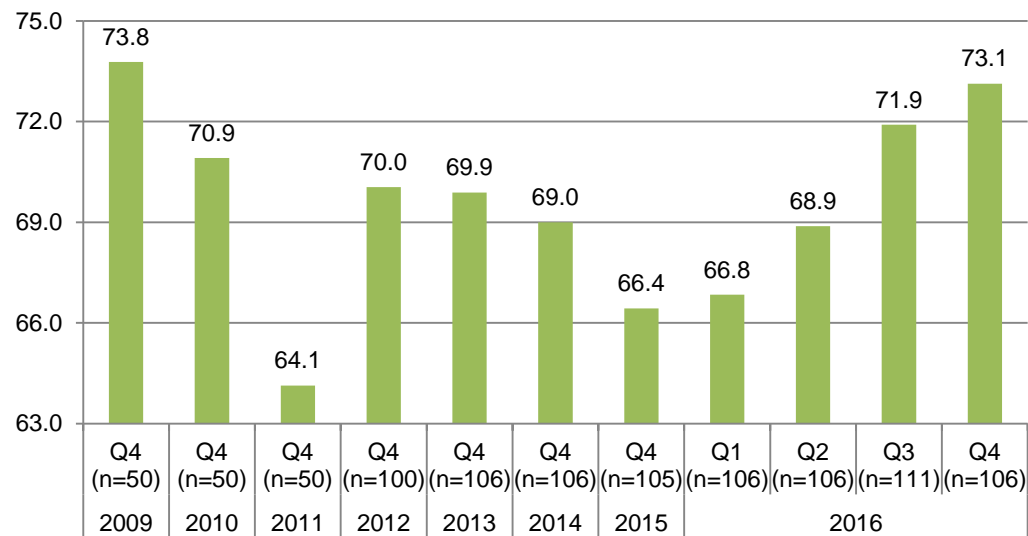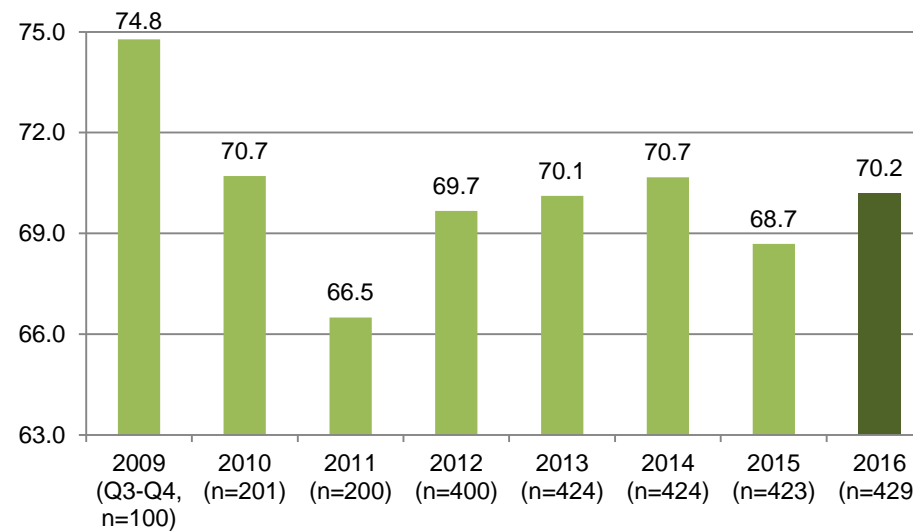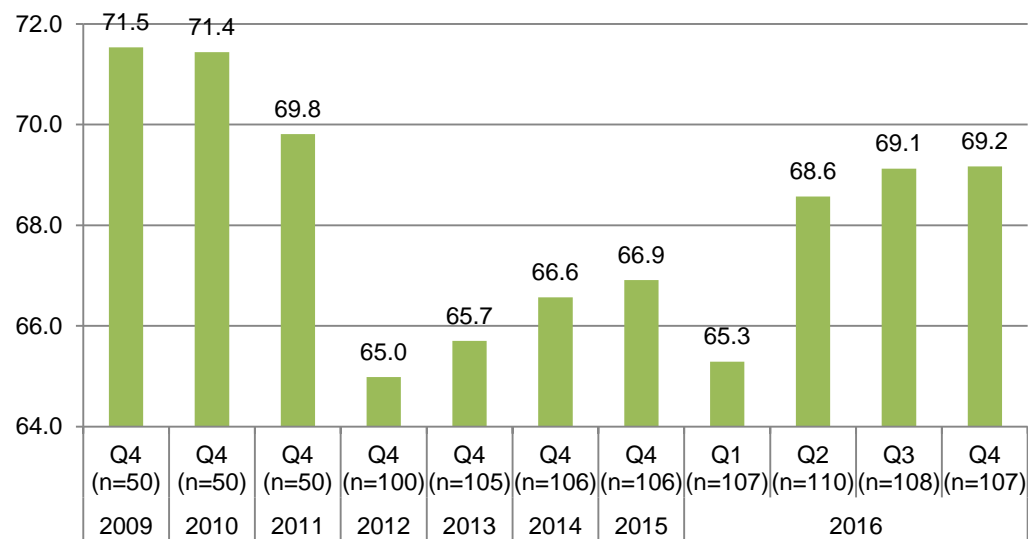

Figure 9-2:

Annual comparison of TSI score
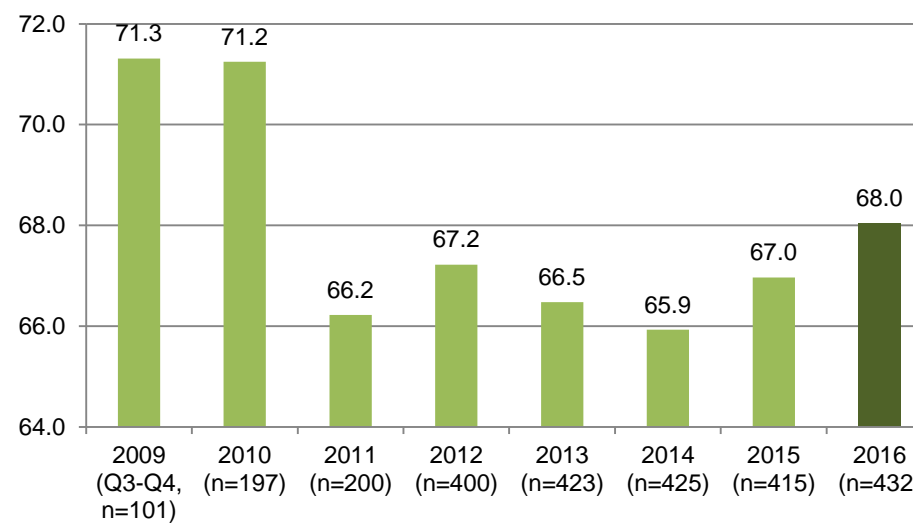
10. Transportation

Figure 10-1:

Quarterly comparison of TSI score
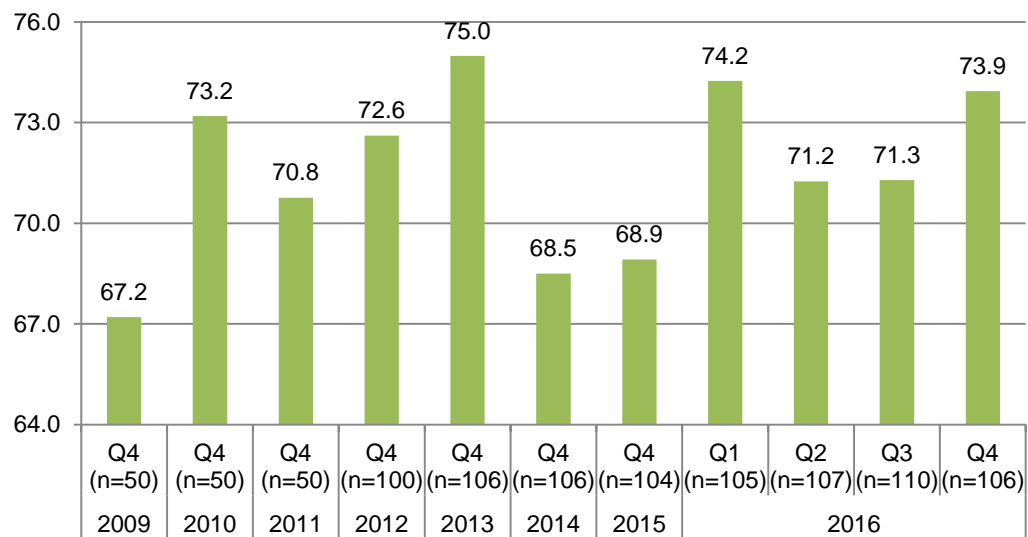
Figure 10-2:

Annual comparison of TSI score
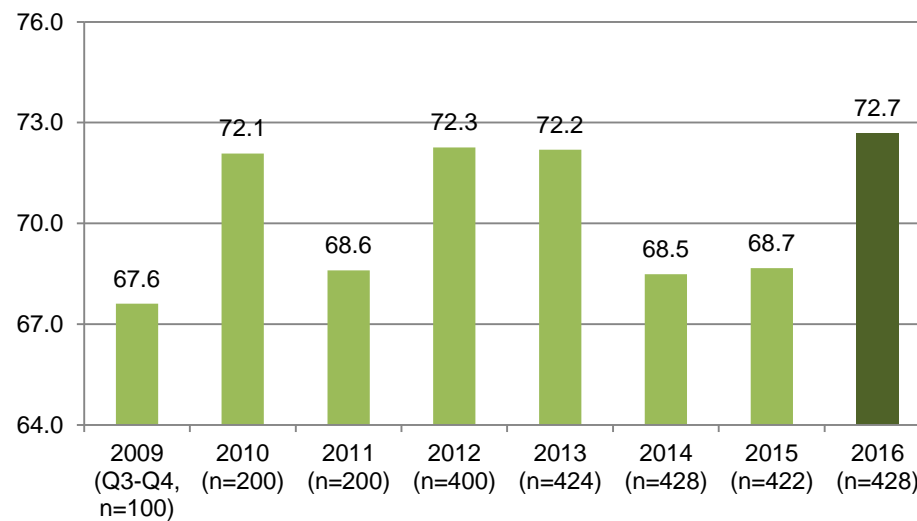
IV. Profile of Survey Respondents

In Q4 2016, the majority of respondents visited Macao primarily for leisure and vacation (91.1%), followed by VFR (4.8%) and business (3.6%). The primary draw that attracted respondents to visit Macao for leisure and vacation include shopping (25.1%), enjoying cuisine (21.3%) and visiting World Heritage attractions (16.2%), followed by travelling around branded hotels/ casinos (13.7%), gambling (8.1%), participating events (5.8%), visiting cultural, arts or historical attractions (5.7%) as well as staying in branded hotels (3.7%) Among the respondents, more than 2/3 of them have been to Macao before (68.5%) while the rest of them indicated that it was their first visit to Macao. FIT (Free Individual Traveler) is the most population visiting way to Macao among the respondents. 92.6% of respondents travelled as a FIT and 7.4% of them came to Macao through tour group. Q4 2015 data are shown for comparison.

Note: For all percentage figures in Part IV onwards, the sampling error based on the total sample size (for Q4 2016=1,069 and for Q4 2015=1,230) is ±3.00% and ±2.79% at 95% confidence level.

Figure IV-1.1: Primary purpose of visit   (%)

Leisure and vacation Visiting Friends/ Relatives Business Others
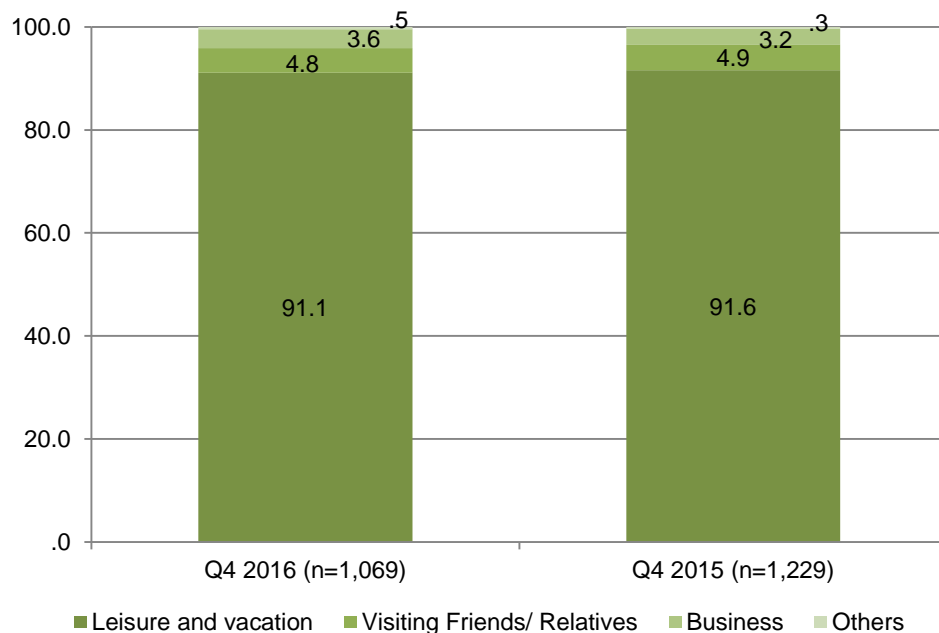
Figure IV-1.2: Primary draw or attraction for leisure and vacation   (%)

Q4 2016 (n=972)   Q4 2015 (n=1,122)
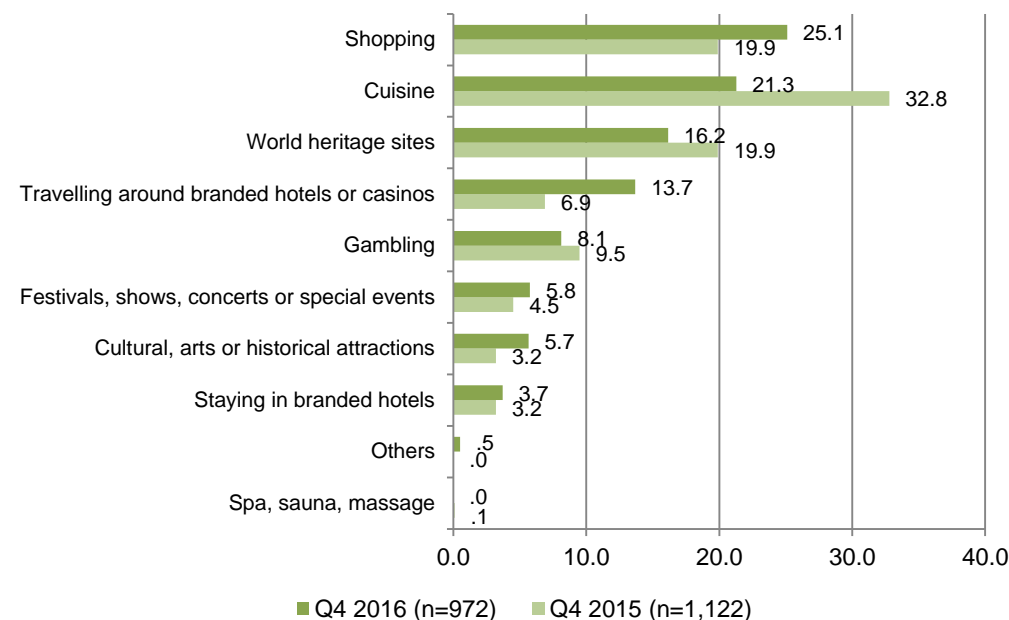
Figure IV-2: Repeat visit VS first visit (%)

Q4 2016 (n=1,069)   Q4 2015 (n=1,230)
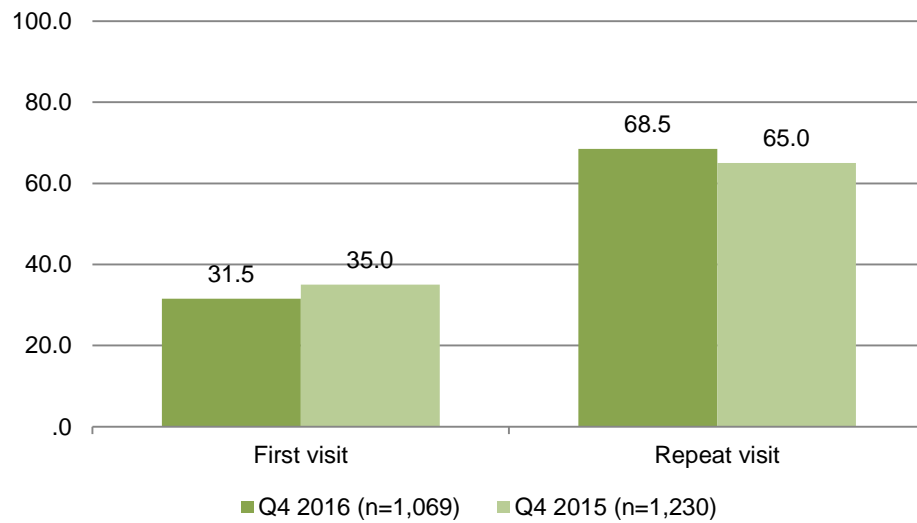
Figure IV-3: Travel arrangement (%)

Q4 2016 (n=1,069)   Q4 2015 (n=1,230)
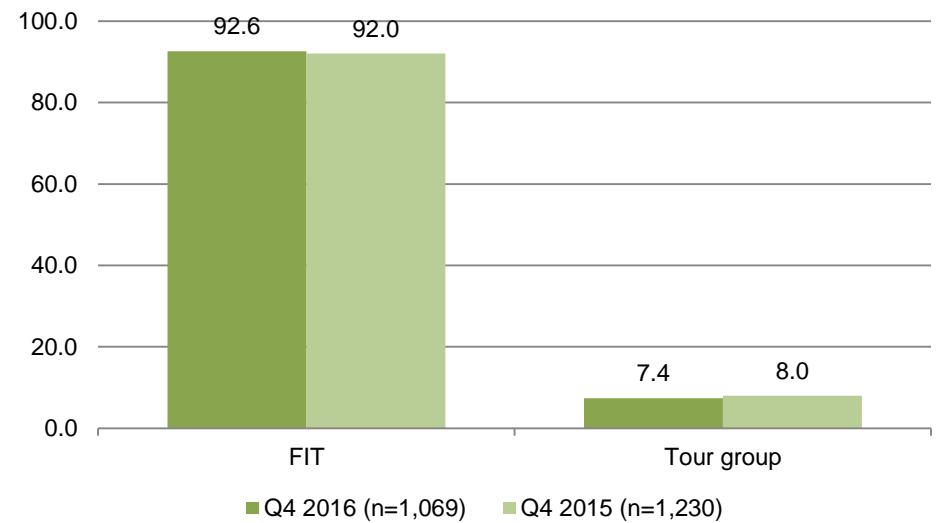
In Q4 2016, the top three source markets were Mainland China (61.3%), Hong Kong SAR (25.6%) and Chinese Taiwan (4.8%). Respondents came from other Asian countries accounted for about 6.6% and the remaining were foreigners. Among all respondents, 51.7% were male and 48.3% of them were female. 87.1% of the respondents aged 16-45.

Figure IV-4: Place of residence   (%)

Q4 2016 (n=1,069)   Q4 2015 (n=1,230)
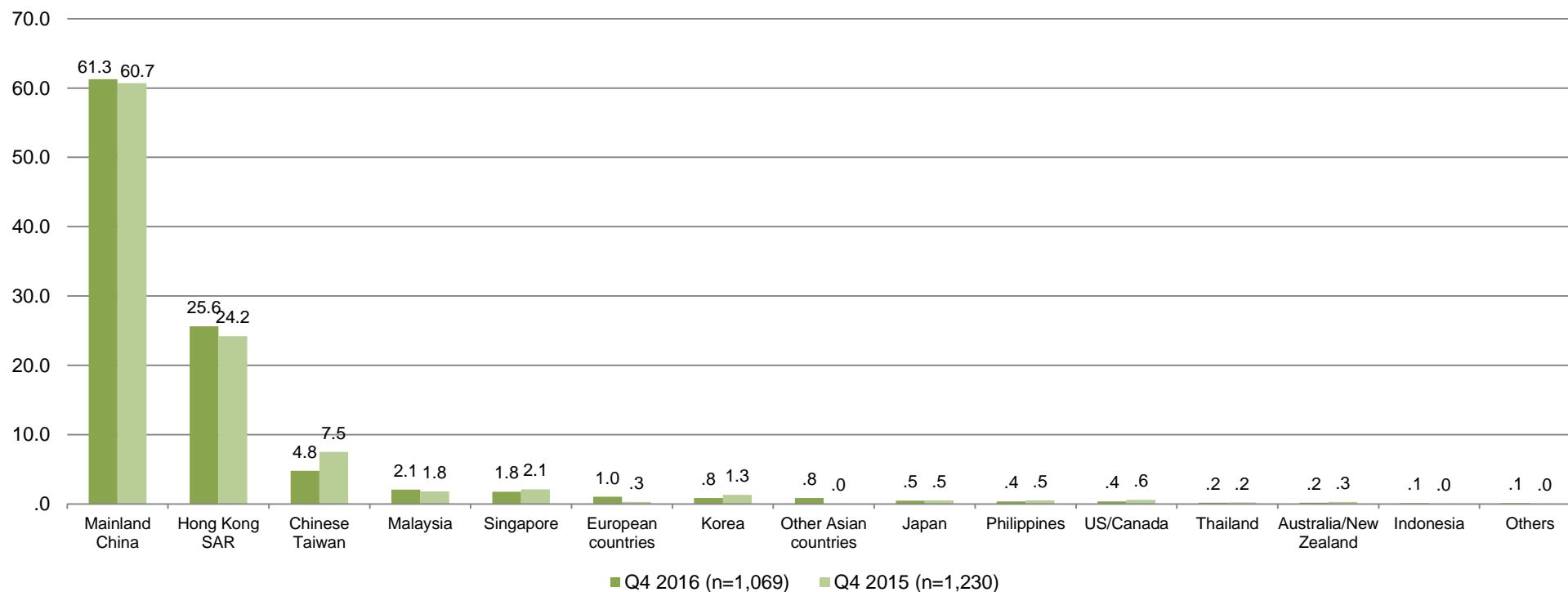
In Q4 2016, most of the respondents from Hong Kong SAR (94.5%), majority of the respondents from Mainland China (65.0%) and all from US/ Canada were repeat visitors. Approximately 2/3 of respondents from Chinese Taiwan (62.7%), European countries (63.6%), other Asian countries (71.8%) as well as all respondents from Australia/ New Zealand indicated that this was their first visit to Macao (Figure IV-5). FIT is a popular travel arrangement in general though certain proportion of respondents from other Asian countries (15.5%) and Mainland China (9.8%) visited Macao by tour group (Figure IV-6). Q4 2015 data are presented for comparison.

Figure IV-5: Visiting type across place of residence (major market areas) (%)
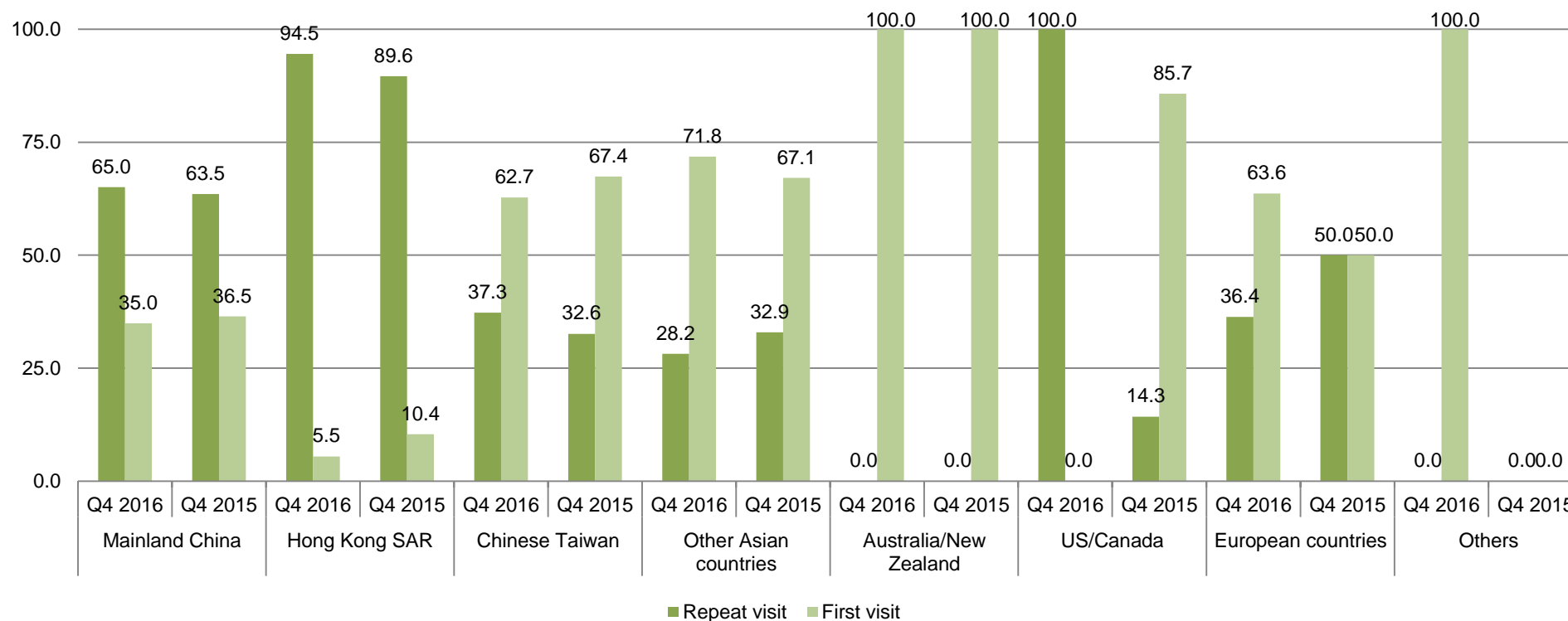
Figure IV-6: Travel arrangement across place of residence (major market areas)

(%)

■ FIT ■ Tour group
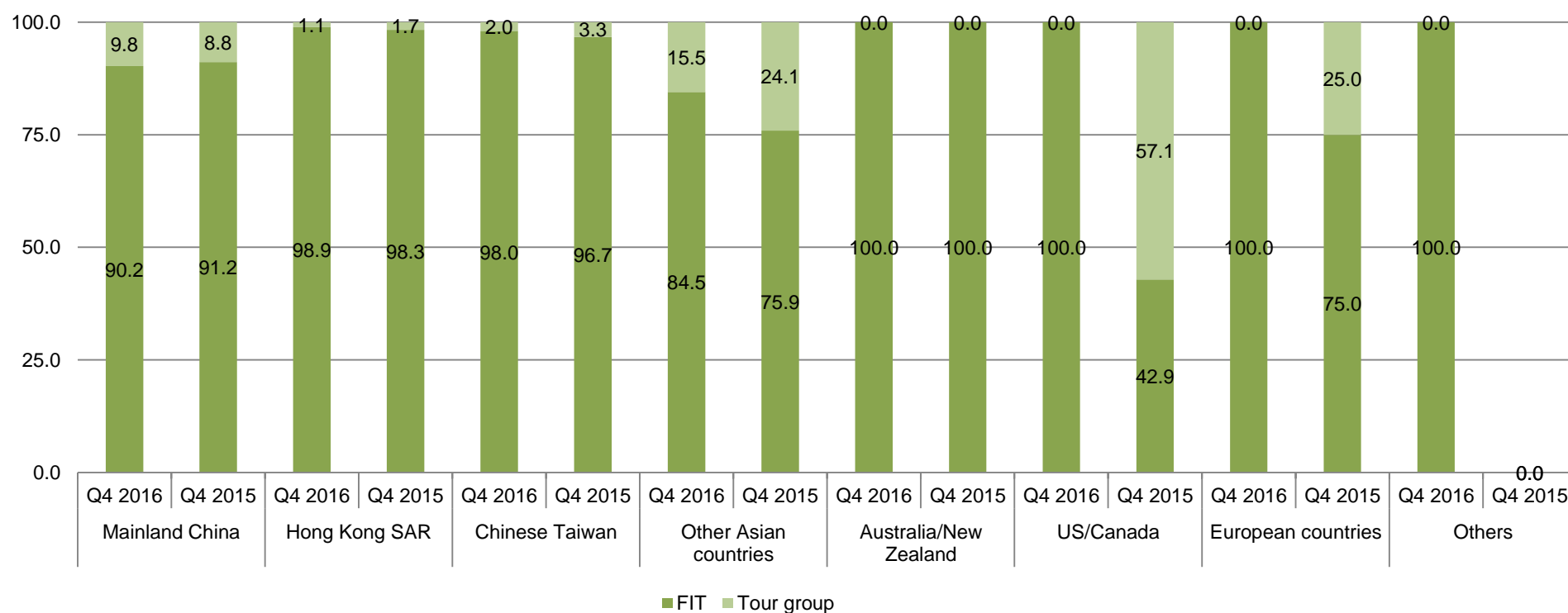
Figure VI-7: Gender (%)

Figure VI-8: Age (%)

V. Supplementary Analysis

A sector's satisfaction score is a combined measure (or index) of respondents' answers to three questions related to their satisfaction for that particular sector. The scale has a maximum value of 100. (For a description, see Part I "About the MTSI".) The satisfaction index of each sector can change over time or season, depending on performance and how visitors perceive such performance.

Table V-1: Satisfaction indices by sector

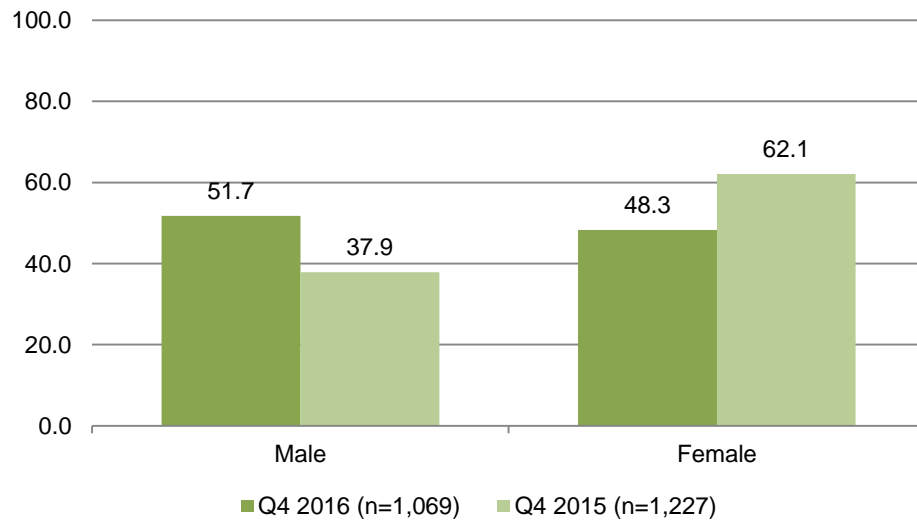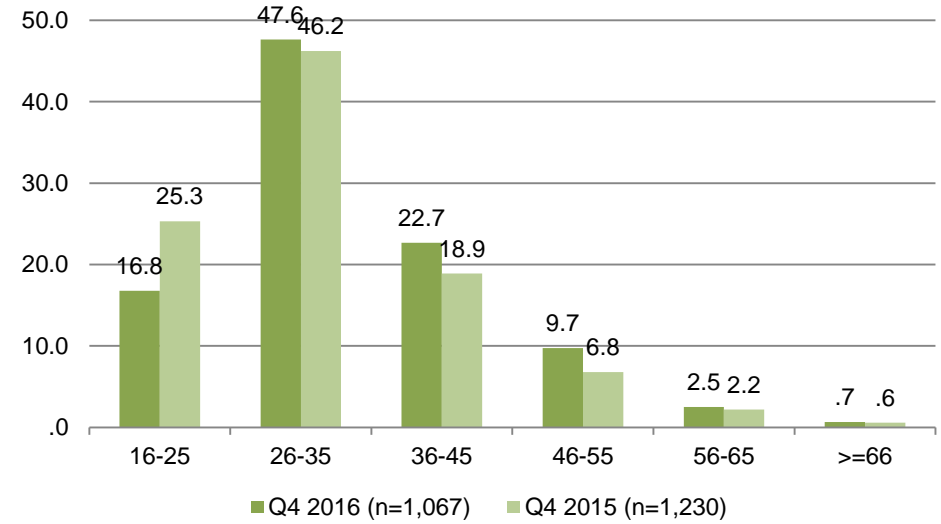| Sectors	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1
Casinos	67.9	66.4	73.0	73.9	70.3	75.2	67.0	66.4	69.1	66.1	68.0	70.4	70.8	70.1	70.4
Events	75.6	69.8	72.0	75.1	77.2	77.5	69.5	75.4	72.1	74.5	69.6	74.9	75.0	75.4	77.5
Heritage Attractions	77.5	71.4	73.0	76.2	78.3	76.8	73.3	71.3	68.9	71.5	70.6	65.8	71.1	68.4	68.5
Hotels	67.1	66.3	63.8	65.3	68.0	77.3	67.7	68.1	71.5	70.4	68.5	71.1	70.2	74.1	71.3
Immigration Services	67.7	71.4	68.9	72.5	67.0	70.2	58.9	69.4	60.6	68.2	68.9	69.7	63.9	65.1	65.3
Non-heritage Attractions	68.8	68.6	78.7	72.8	73.6	75.7	69.9	64.8	71.0	66.0	68.9	67.6	71.5	72.1	69.3
Restaurants	64.7	65.1	68.6	69.7	66.3	68.9	65.0	65.1	68.9	67.2	64.9	65.4	73.3	68.9	65.1
Retail Shops	75.8	73.8	68.2	72.8	70.9	70.9	61.9	69.5	70.4	64.1	68.8	68.7	71.1	70.0	71.3
Tour Guides/Operators	71.1	71.5	69.2	73.0	71.3	71.4	63.8	63.4	67.9	69.8	65.4	68.8	69.7	65.0	69.6
Transportation Services	68.0	67.2	76.2	70.5	68.5	73.2	63.9	72.0	67.8	70.8	73.9	72.4	70.1	72.6	68.6
Overall MTSI	**70.4**	**69.2**	**71.2**	**72.2**	**71.1**	**73.7**	**66.1**	**68.5**	**68.8**	**68.9**	**68.8**	**69.5**	**70.7**	**70.2**	**69.7**

Sectors	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4
Casinos	73.0	70.0	72.5	67.9	70.1	72.7	70.3	68.8	69.9	70.0	67.6	72.9	71.8	73.2	74.4
Events	75.7	74.2	77.9	74.2	78.1	73.4	79.4	76.5	75.5	79.3	75.8	78.9	74.4	77.0	77.1
Heritage Attractions	68.3	69.8	68.0	68.4	68.4	65.2	69.5	67.4	69.5	64.7	66.8	63.6	70.6	71.6	69.7
Hotels	73.9	68.5	70.2	71.1	69.7	72.9	70.5	69.5	69.8	71.6	67.4	70.3	71.0	72.5	73.0
Immigration Services	70.2	72.7	67.3	65.8	68.2	66.3	65.9	72.3	71.4	69.2	65.4	68.8	66.3	71.0	72.6
Non-heritage Attractions	72.3	69.3	68.8	69.6	68.4	70.1	69.9	67.7	70.3	70.0	66.5	71.0	71.7	73.6	71.7
Restaurants	69.5	66.7	69.3	65.4	66.3	67.6	67.1	67.3	67.7	67.2	66.7	64.3	67.6	65.1	70.7
Retail Shops	71.5	67.8	69.9	72.8	70.8	70.1	69.0	70.7	70.3	67.3	66.4	66.8	68.9	71.9	73.1
Tour Guides/Operators	68.8	61.9	65.7	66.2	64.6	66.4	66.6	65.7	67.3	67.9	66.9	65.3	68.6	69.1	69.2
Transportation Services	71.8	73.3	75.0	70.5	68.0	66.9	68.5	70.2	67.2	68.3	68.9	74.2	71.2	71.3	73.9
Overall MTSI	**71.5**	**69.4**	**70.4**	**69.2**	**69.3**	**69.2**	**69.7**	**69.6**	**69.9**	**69.6**	**67.8**	**69.6**	**70.2**	**71.6**	**72.5**

Relative contribution is a measure or indicator of a sector's importance toward determining overall visitors' satisfaction with Macao as a destination. Relative contribution scores are estimated from the MTSI model described in Part 1 of this report (see "About the MTSI"). Scores of all sectors add up to 100; the greater the score of a sector indicates a greater relative contribution to satisfying visitors to Macao. Relative contribution of each sector can change over time or season.

Table V-2: Relative contribution of each sector to MTSI (%)

Sectors	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1
Casinos	10.6	6.6	8.8	9.3	8.0	10.8	10.7	6.2	11.5	7.2	6.4	10.8	8.1	7.3	9.4
Events	15.7	14.1	9.8	9.5	10.0	9.5	11.8	9.1	4.9	12.9	10.8	9.8	7.2	11.5	7.5
Heritage Attractions	9.5	11.3	11.5	13.0	9.0	11.5	10.8	13.9	2.0	9.6	13.3	12.9	14.0	7.8	13.0
Hotels	8.4	6.7	6.6	10.9	12.0	6.9	11.5	8.0	12.0	9.5	5.5	8.7	8.8	11.2	7.6
Immigration Services	9.1	2.7	9.4	7.5	9.8	9.2	4.0	8.7	10.4	9.3	9.1	12.2	8.5	7.0	10.1
Non-heritage Attractions	3.9	12.5	12.4	13.3	11.3	8.4	10.2	7.6	12.5	11.8	14.1	7.4	6.9	11.3	12.0
Restaurants	8.6	9.1	8.8	7.1	8.4	11.1	11.6	12.1	11.7	8.1	8.6	9.6	10.8	11.3	10.3
Retail Shops	6.7	13.5	11.5	6.9	8.4	10.7	10.5	8.6	12.5	11.8	12.2	12.3	9.0	13.8	11.5
Tour Guides/Operators	14.7	12.2	10.1	11.9	10.6	11.2	10.4	11.1	10.7	9.7	9.9	9.5	13.2	9.3	7.2
Transportation Services	12.9	11.3	11.0	10.6	12.4	10.7	8.4	14.7	11.8	10.3	10.0	6.9	13.5	9.5	11.4
Overall MTSI	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Sectors	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3*	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4
Casinos	8.6	11.0	9.0	5.6	8.4	9.0	10.6	8.8	9.4	8.3	9.6	7.5	9.1	10.7	7.1
Events	6.2	8.7	7.9	8.6	6.1	8.3	10.7	4.5	9.1	10.0	8.1	9.7	9.3	9.7	8.6
Heritage Attractions	13.7	5.5	12.4	14.3	16.5	15.0	11.2	9.8	11.6	11.5	11.1	10.3	13.7	9.3	12.5
Hotels	7.5	9.4	7.2	6.0	2.9	7.1	8.5	7.5	6.4	8.1	9.2	11.3	9.5	9.5	6.4
Immigration Services	8.6	7.2	10.4	12.6	8.5	10.3	3.9	14.4	6.1	10.7	12.1	12.2	12.6	11.7	10.7
Non-heritage Attractions	10.8	11.9	9.0	13.5	10.9	10.3	11.3	14.2	10.8	11.2	11.1	10.6	9.6	9.7	11.7
Restaurants	13.9	11.0	5.7	9.5	10.2	6.6	9.1	12.5	12.0	11.0	9.9	7.6	7.3	9.2	12.2
Retail Shops	8.9	11.5	11.6	5.7	12.2	11.8	14.3	6.7	12.0	10.0	10.5	10.9	10.9	10.2	9.9
Tour Guides/Operators	10.5	11.8	15.3	11.7	11.3	14.0	9.8	8.9	10.4	8.1	9.9	11.9	10.7	9.6	11.6
Transportation Services	11.3	12.1	11.5	12.4	13.0	7.6	10.5	12.6	12.3	11.1	8.6	8.0	7.3	10.6	9.2
Overall MTSI	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

* revised figures

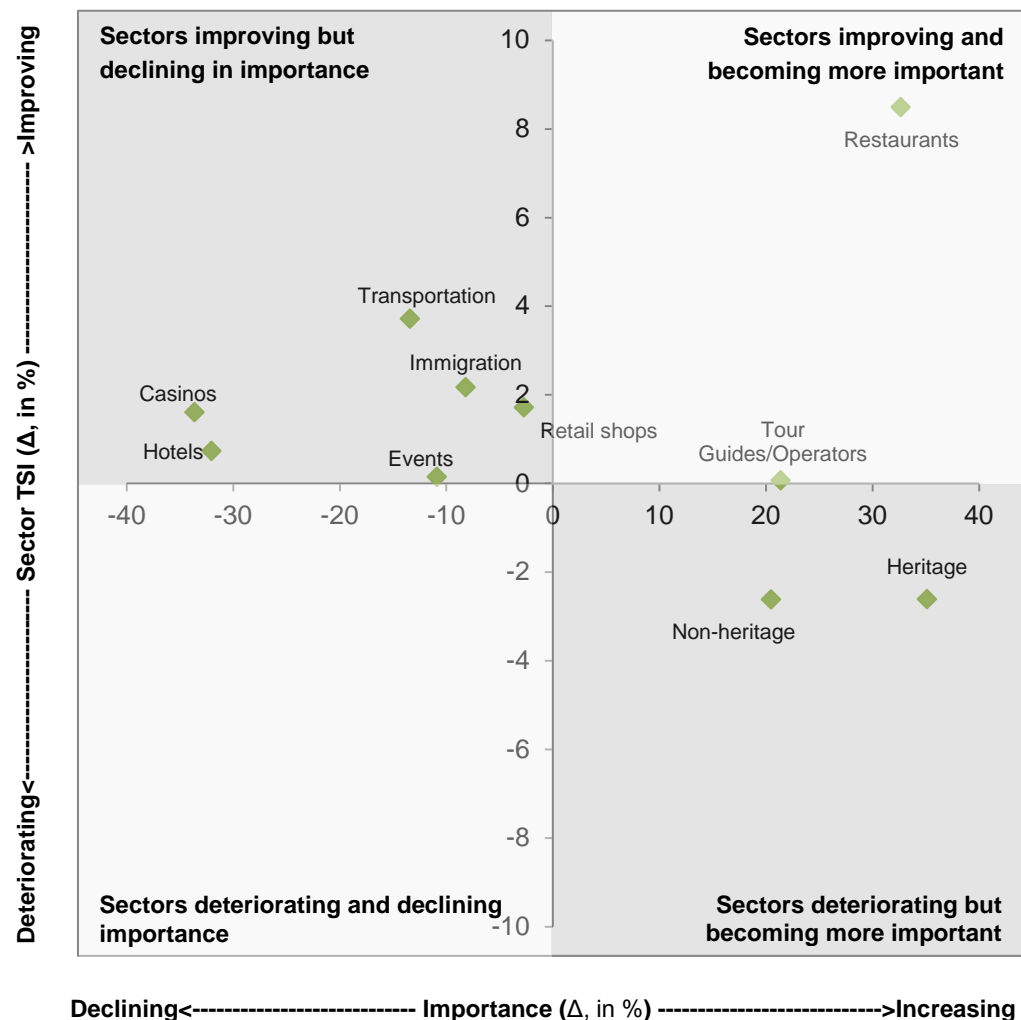**Figure V-1:** Sector TSIs and their relative contribution to overall MTSI (Δ in % Q4 2016 over Q3 2016)

Figure V-1 combines data from Table V-1 and Table V-2 and plots the previous period rate of change (Δ) in sector TSI and relative contribution of the ten sectors in a joint matrix. The relative contribution measure how important is a sector in determining overall visitor satisfaction with Macao as a tourist destination. A higher contribution implies that a sector plays a more significant role in satisfying visitors to Macao. The horizontal line (or x-axis) of the chart plots the change of importance of each sector while the vertical line (or y-axis) of the chart plots that of the satisfaction score (or TSI). Because both a sector's contribution and performance may change over time, the chart plots the Δby comparing the current values with the previous period in a quarterly basis. Changes in both the importance and performance of a sector to visitors' experience can therefore be monitored. For example, the Δof TSI between current and previous quarter is calculated as below:

$$\text{ROC or } \Delta \text{ in TSI} = \left(\frac{TSI_t}{TSI_{t-1}} - 1\right) \times 100\%$$

How to read:
Service performance of most sectors improved in Q4 when compared to Q3. Visitors were more satisfied with service performance in hotels, casinos, retail shops, immigration, and transportation though they were considered less important in contributing to overall satisfaction. Performance of events and tour guides/ operators remained stable but their change in terms of relative contribution was mixed. Findings also showed remarkable increase in both metrics for restaurants. On the other hand, both heritage and non-heritage attractions were rated less satisfied but they played a more important role in terms of overall satisfaction as previous quarter.

Published by:

Disclaimer: All information provided in this report are accurate at the time of publication. While ITRC endeavors to ensure its reports comply with the highest standards of research reliability and validity, no representation or warranty of any kind is made, express or implied. ITRC is not liable for any outcome arising from the use of material contained in this report.