

【Article】

Effects of Inbound Visitors on Domestic Prices:  
Comparison of Cosmetics Markets of Japan and Taiwan

外国人観光客の国内物価への影響：  
化粧品市場の日台比較

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(Abstract)

We examine the development of inbound tourism in Japan and Taiwan based on various data. We first introduce changes in the number of foreign visitors and the research questions to be considered. We then describe data sources for consumption by

foreign visitors and offer some observations on overall consumption and, specifically, the consumption of cosmetics. Finally, we state our findings on prices and consumption of cosmetics. As this work does not analyze the data using econometric tools, we finish by discussing how it might be extended.

Keywords: Japan, Taiwan, Inbound Consumption, Cosmetics, Domestic Price

JEL Codes: F14, F60, Z30

## 1. Introduction

Inbound tourism is now among the most important economic and social issues in Japan and Taiwan. This study explores various data relating to the consumption behavior of tourists inbound to these two countries, in particular, the consumption of cosmetics and whatever impact it has on the domestic price. Our analysis may shed light on the economic impact of inbounds, especially those from China, on the economies of Japan and Taiwan. Sections two and three below consider the inbound markets in Japan and Taiwan respectively. Section four compares the two countries.

## 2. Trend and Consumption for Inbound Tourism in Japan: Focus on Shopping for Cosmetics

### 2.1 Background

Inbound tourism in Japan has been growing, and this growth accelerated in the 2010s. Inbound tourism also has had various effects on Japanese society, both positive and negative. This section explores the evolution and consumption activities of inbound tourism in Japan. For consumption, we focus on the Japanese market of cosmetics, because of our interest in the impact of inbound tourism on domestic prices.

Theoretical studies, following the pioneering work of Copeland (1991), analyze the effects of inbound tourism on the domestic economy in general equilibrium settings. The focus of these works is on welfare and/or terms of trade, and the effect on domestic prices is not clear. Moreover, these works assume that inbound visitors increase demand for nontradables. Inbound visitors may increase demand for tradables as well, however, as we shall see.<sup>1</sup>

Few studies have explored empirically the effects of inbound tourism on domestic prices. Espinet et al. (2011) examined the prices of 149 products in Catalonia, Spain, including many are food items and beverages, and compared prices in tourism jurisdictions with those in non-tourism ones. They found that the differences are not significant. Tkalec and Vizek (2016) constructed panel data for new EU member countries and candidates in order to study the effects of tourism activity on price levels. They found that tourism activities increase the overall price level, especially prices of recreation and culture, and hotels and restaurants.

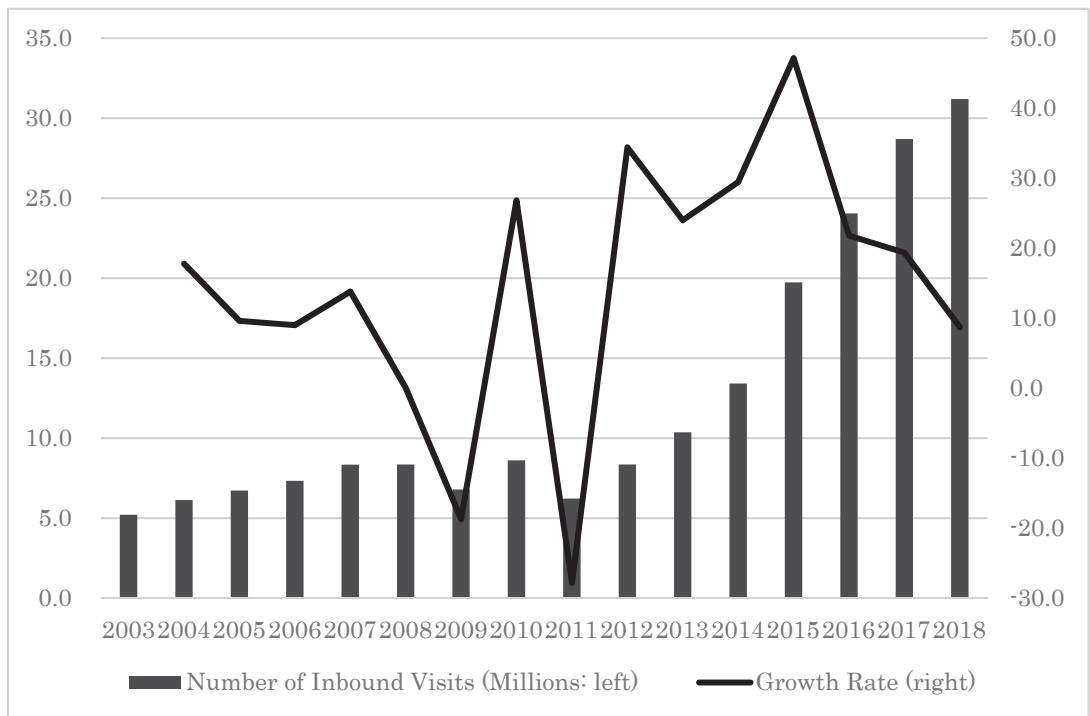
In this section, the development of inbound tourism in Japan is examined using

various datasets. In subsection 2.2, changes in the number of foreign visitors are shown and two key questions are raised. In subsection 2.3, two data sources concerning consumption by foreign visitors are described, and some observations made on the overall consumption and the consumption of cosmetics are shown. In subsection 2.4, price and inbound consumption of cosmetics are considered. This paper does not analyze the data using econometric tools, thus finally, some suggestions for how this work could be extended are made.

## 2.2 Inbound Visitors and Research Questions

Figure 2-1 shows the number of inbound visits in the years 2003 to 2018, and their rate of growth. The number of inbound visits in 2018 was more than thirty million, which was six times greater than in 2003. The number has increased steadily except for 2009, in the aftermath of the global financial crisis, and 2011, when the Great East-Japan earthquake and the resulting Fukushima Daiichi nuclear accident took place. From 2012 to 2016 the growth rate was more than 20%. A major factor underlying such a large increase in inbound visits may have been promotion policies by central and local governments, although this is not discussed below.

Figure 2-1: Inbound Visits and Growth Rate



Source: Japan National Tourism Organization, “Numbers of Inbound Visitors and Outbound Japanese.”

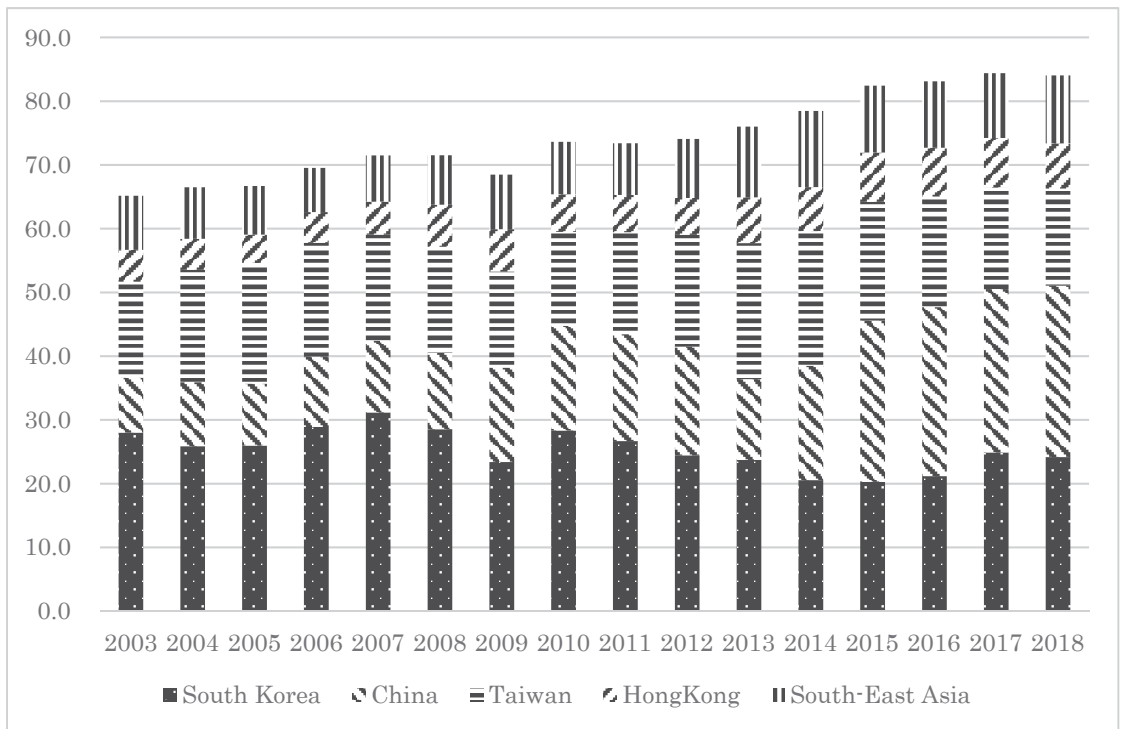
Figure 2-2 shows the proportions of five key inbound-source countries. The number of South-East Asia is the sum of the numbers from six ASEAN countries. The total proportion of East-Asian and South-East-Asian countries has been increasing. China has increased its proportion substantially, but other countries have not greatly reduced theirs; in fact, some countries have increased their shares, which may be a consequence of economic development in (South) East-Asia and appreciating exchange rates.

Based on these observations about inbound visits, the following questions are raised:

1. What is the consumption power of these inbound tourists? Has it changed over the years? If so, how has it developed?
2. On which items do inbound tourists spend most? Has any trend been observed, especially for cosmetics? If so, how does it affect domestic prices of cosmetics?

Concerning the second question, there are many casual observations about the shopping behavior of Chinese visitors; this paper will examine whether such observations are true using actual data.

Figure 2-2: Proportions of Key Inbound-Source Countries, 2003-2018



Notes.

1. Source: same as that for Figure 2-1.
2. The number coming from South-East Asia is the sum from the following six countries: Thailand, Singapore, Malaysia, Indonesia, Philippines, and Vietnam.

## 2.3 Consumption Data for Foreign Visitors in Japan

In Japan, at least two types of data on consumption by foreign visitors are available. One dataset is collected and released by the Japan Department Stores Association (JDS data hereafter) for monthly sales of duty-free items in their member companies' stores. The other type is compiled by the Japan Tourism Agency (JTA data hereafter), based on quarterly interviews of foreign visitors at seaports and airports in Japan. In this subsection, the two types of data are examined and commented upon. JDS data are described in 2.3.1, and JTA data are described in 2.3.2, with some comparison of the two.

### 2.3.1 JDS Data

The Japan Department Stores Association displays data on duty-free sales and related figures from its member department stores in its monthly press release. The Association shows approximate numbers of sales and paying clients. For instance, in its press release of July 23, 2019, total duty-free sales and number of paying clients in June 2019 were “about 28.33 billion yen” and “about 458 thousand clients.” Department stores are major places besides chain drug stores and discount stores where foreign visitors buy duty-free items, so the data is an important source of information on consumption by foreign visitors.

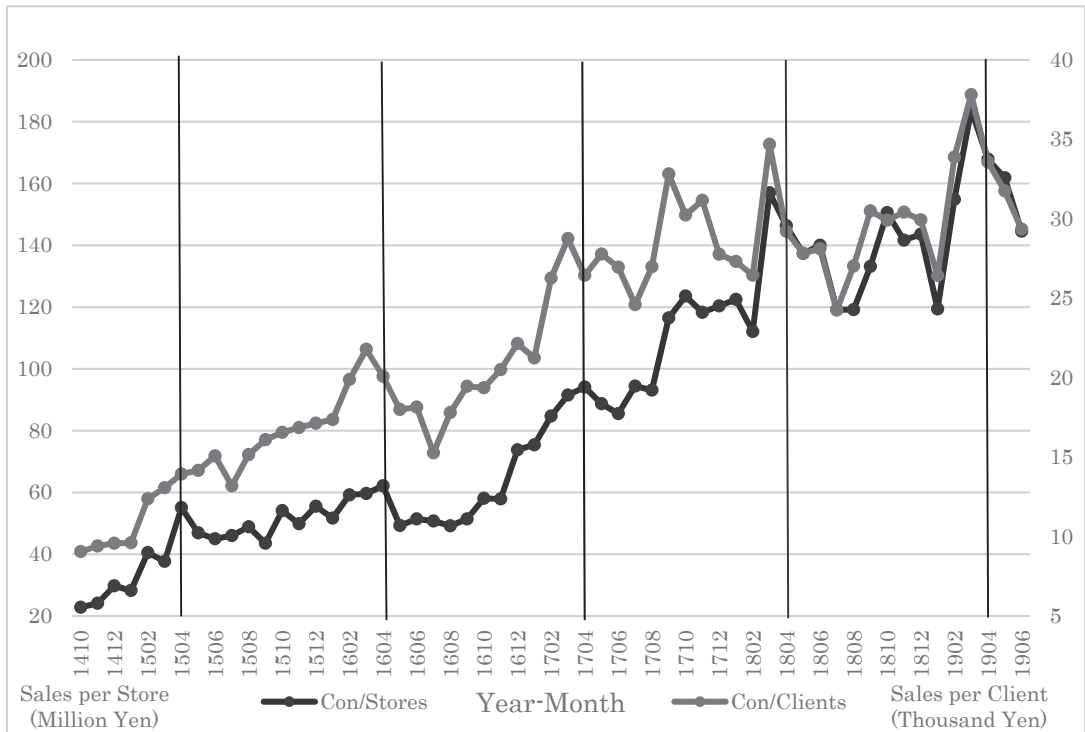
Figure 2-3: Duty-Free Sales per Store and Sales per Paying Client, October 2014-June 2019.



Source: Japan Department Stores Association, “Trends of Duty-Free Sales and Customer traffic of the Month” (issues of October 2014-June 2019).

Figure 2-3 shows two time series of monthly duty-free sales. One series is per store and the other is per paying client from October 2014 to June 2019 (left and right axes respectively). The reason why these standardized numbers, i.e. monthly duty-free sales divided by the number of department stores or by the number of paying clients, rather than the sales value per se are used is to exclude possible scale effects of increasing stores or inbounds.<sup>2</sup> The duty-free sales per store (dark-gray graph) first increased and then declined sharply, reaching a low in September 2016 and then increasing, with some cyclical movements peaking around April each year. The sales per paying client (light-gray graph) also increased at first and then declined sharply, with a bottom in July 2016, after which it increased to the end of 2016 and then moved up and down cyclically. In other words, these two sales numbers moved fairly similarly up to the end of 2017. After that, sales per store have risen while the sales per client have moved cyclically. This difference in behavior between the two sales numbers may be significant in Japan, although the sales per store also decreased from 2015 to 2016, suggesting that events in these years played special roles in the consumption by foreign tourists in Japan.<sup>3</sup>

Figure 2-4: Sales of Consumables per Store and per Paying Client, October 2014 - June 2019.



Source: same as that for Figure 2-3.

Figure 2-4 shows time series of monthly duty-free sales of consumables such as cosmetics and food per store (dark-gray graph), and per paying client (light-gray graph), from October 2014 to June 2019 (left and right axes respectively). For the sales per paying client, because the total number of foreign visitors who paid for consumables or other items is unknown, the total number of all paying clients is used for standardization instead.<sup>4</sup> Unlike Figure 2-3, i.e., the overall duty-free sales, the two numbers both have increasing trends during the sample period. Sales of consumables show the same cyclical movements, with peaks in or near to April each year, as the total duty-free sales in Figure 2-3.

The upward trend of consumables sales shown in Figure 2-4 may reflect changes in the items most preferred by foreign visitors. Table 2-1 shows how the favorite items for foreign visitors have changed. At the beginning of the sample period (October 2014), luxury items such as high-end brand-name goods and women's fashion accessories (shaded by light gray in the Table) were highly ranked (first and second respectively), while cosmetics were ranked fourth. Consumables such as cosmetics and food are shaded dark gray in the Table. In the middle of the sample period (December 2016), these luxury items fell several places, and consumables climbed the chart and caught up with or even surpassed these luxury items. This tendency was stronger by the end of the sample period (June 2019), when cosmetics and food were ranked first and third respectively.

Table 2-1: Changes of Most Favorite Items among Foreign Visitors and the Share of Consumables to Total Sales.

Rank/Month-Year	October 2014	December 2016	June 2019
1	high-end brand-name goods	cosmetics	cosmetics
2	women's fashion accessories	high-end brand-name goods	high-end brand-name goods
3	women's clothes	women's fashion accessories	food
4	cosmetics	food	women's fashion accessories
5	household products	women's clothes	children's clothing and toys
Share of Consumables (%)	12.1	32.2	47.4

Source: Japan Department Stores Association, "Trends of Duty-Free Sales and Customer traffic of the Month" (issues of October 2014, December 2016, and June 2019).

Among foreign visitors, consumables and other reasonable-price items have increased in importance while luxury items such as high-end brand-name goods and women's fashion accessories have decreased. Such changes may have led to stagnation in sales per paying foreign visitor and increased total sales per store in Figure 2-3.<sup>5</sup> Table 2-1 also shows the proportion of consumables to the total sales. The increasing share of consumables also shows the rising importance of these items for foreign visitors as well as department stores in Japan. During the sample period, i.e. about five years, the share of consumables grew almost fourfold, and is now almost half of the total sales.

The number of consumable sales in Figure 2-4 also stagnated in 2016 (as in 2015 for

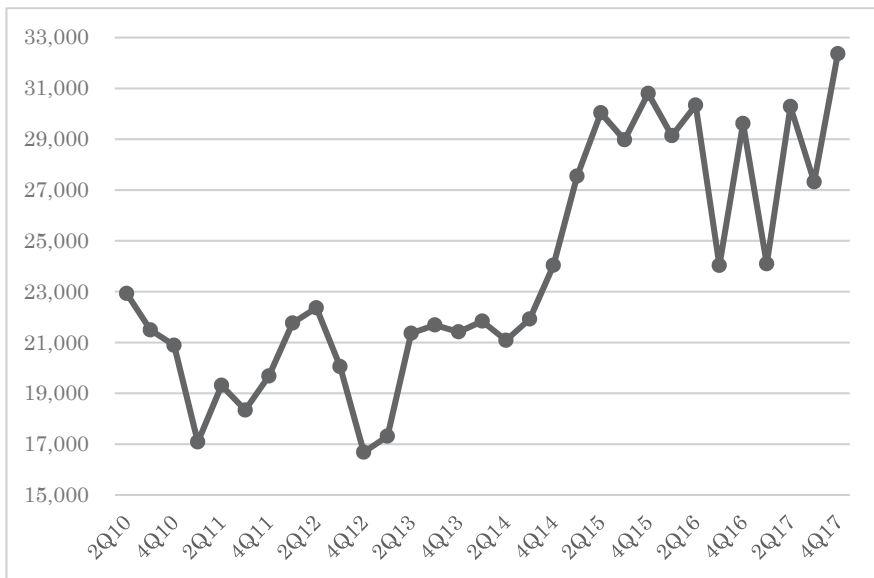
the consumable sales per store), as did the numbers of total duty-free sales in Figure 2-3. Figures 2-3 and 2-4 and Table 2-1, therefore, suggest that specific months and years might be important when analyzing the consumption behavior of foreign tourists visiting Japan.

### 2.3.2 JTA Data

Figure 2-5 shows the sales of cosmetics and perfumes per foreign buyer. The data sets are from a quarterly survey conducted by the Japan Tourism Agency (JTA data). These data sources are widely used by the Japanese government and others such as media when considering foreign tourism in Japan.

The numbers are averages weighted by the number of visitors by region/country, and are not per capita numbers such as those in Figures 2-3 and 2-4 in 2.3.1 (JDS data). It is therefore likely that they were influenced by a large number of visitors from specific countries such as China and South Korea. For instance, in its October-December 2017 survey, the five countries whose number of visitors buying cosmetics and perfumes were the greatest are: South Korea (1,134), China (999), Taiwan (434), Hong Kong (126), and Thailand (105) (numbers of purchasing visitors in parentheses). These five countries are also ranked in very similar order by the number of foreigners visiting duty-free counters of department stores in October and November 2017, according to press releases by the Japan Department Stores Association for these two months. In Figure 2-5, these five countries collectively had almost a 90 % share of the number of buyers in the survey for this period.

Figure 2-5: Sales of Cosmetics and Perfumes per Foreign Visitor (Yen), 2010 2<sup>nd</sup> - 2017 4<sup>th</sup>.



Notes.

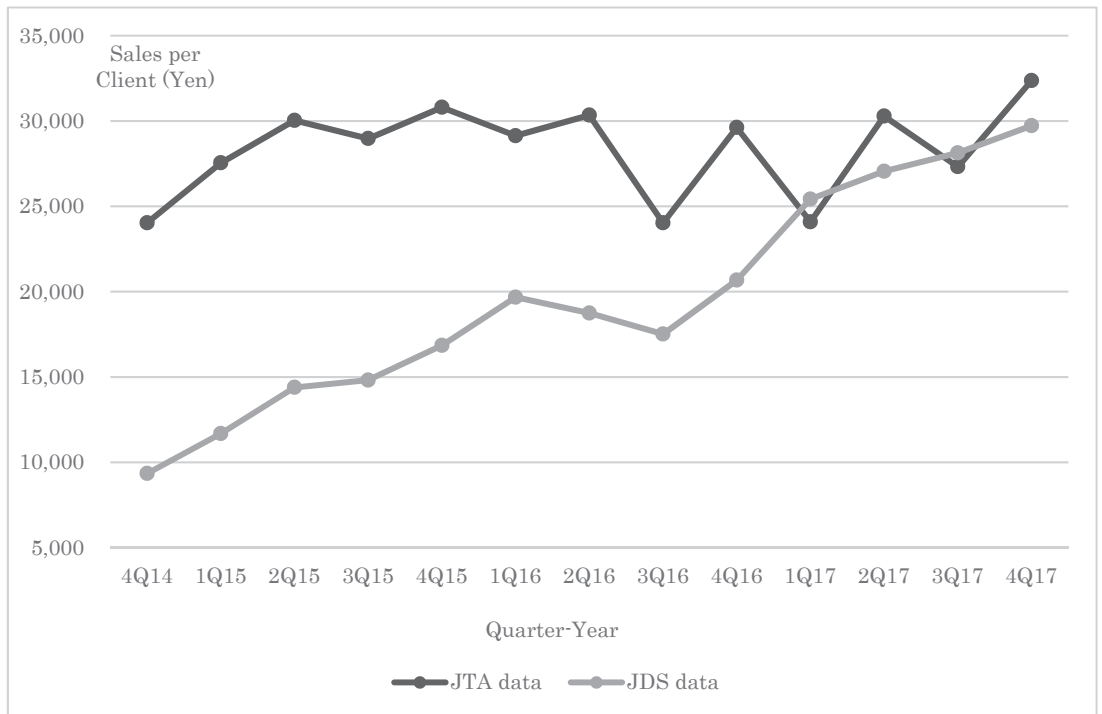
1. Source: Japan Tourism Agency, “Consumption Trend Survey for Foreigners Visiting Japan” (issues of April-June of 2014 to October-December of 2017).
2. The numbers are averages weighted by the number of visitors by region/country.



During the sample period, the classifications of regions and/or countries were changed twice, making continuity of the numbers problematic. Fortunately, JTA data is also an important source of information on the consumption of foreign visitors. JTA examines many kinds of expenditure by foreign visitors during their trips to Japan as well as shopping for cosmetics (transportation, accommodation, shopping of many other goods and services, etc.) and also by country of origin. With JTA data it is possible to observe and analyze the behavior of foreign visitors more deeply than with JDS data, as shown in Figure 2-7 below.<sup>6</sup>

In Figure 2-5, from the second quarter of 2010 to the second quarter of 2013, the number of sales moved up and down in half-a-year or year periods. During this period, two large events occurred: the Great East-Japan earthquake and the deterioration of the relationship between Japan and China. In Figure 2-5, two large plunges during this period may have been due to these events. From the second quarter of 2013 to the third quarter of 2014, the number of sales was fairly stable. It then increased rapidly until the second quarter of 2015, becoming stable again until the second quarter of 2016, following which it fluctuated.

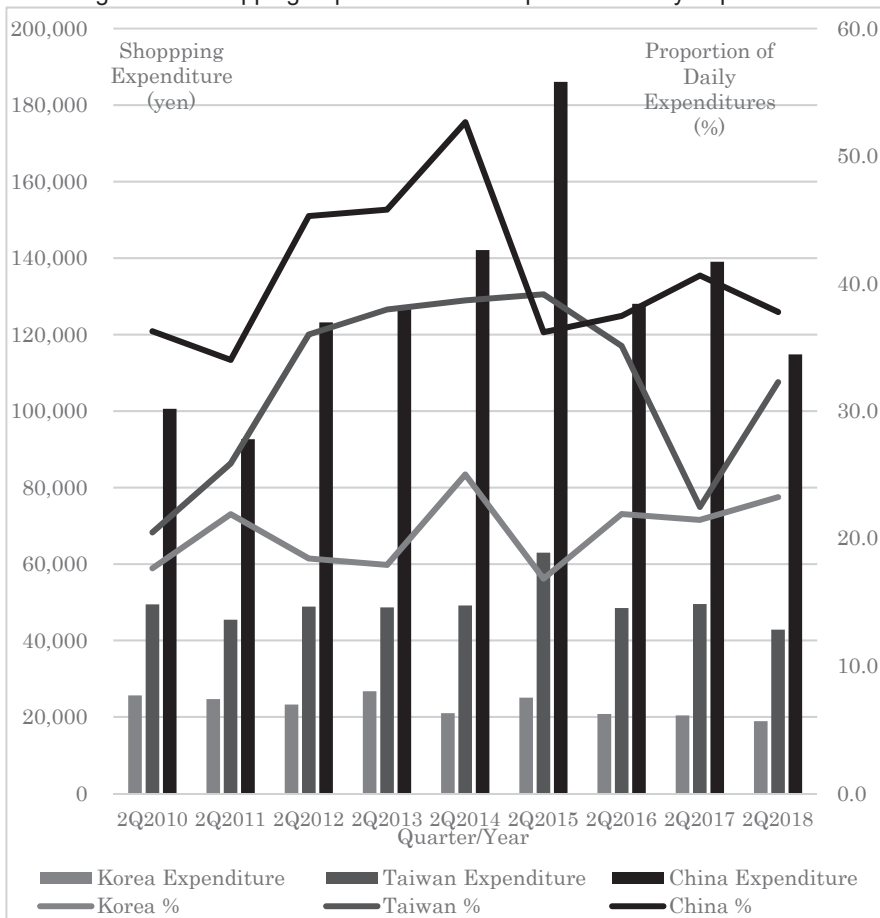
Figure 2-6: Comparison of Two Consumption Datasets, 2014 4<sup>th</sup> - 2017 4<sup>th</sup>.



Sources: same as those for Figures 2-4 and 2-5.

Figure 2-6 compares the consumption data from JDS (light-gray graph) and JTA (dark-gray graph) during the three years from the fourth quarter of 2014 to the fourth quarter of 2017. For the JDS data, the numbers are changed from monthly to quarterly values by taking a three-month aggregate for comparison with JTA data, which are based on quarterly surveys. Except for similar increasing trends in 2014 and 2017, the two consumption numbers moved quite differently. The JTA data did not change very much during the three years, especially from the second quarter of 2015 to the second quarter of 2016, whereas the JDS data show a clear increasing trend. Because of this difference, the JTA numbers are higher than the JDS numbers, apart from 2017. Factors such as different proportions of foreign visitors and classification of goods (JDS data includes food) may be responsible for these differences, but further analysis is needed.

Figure 2-7: Shopping Expenditure and Proportion of Daily Expenditure



Notes.

1. Source: Japan Tourism Agency, “Consumption Trend Survey for Foreigners Visiting Japan” (issues of April-June of 2014 to 2018).
2. The survey asked inbound tourists about their expenditures during their visit to Japan. The items examined were accommodation, food and drink, transportation, entertainment, shopping, and others.

Figure 2-7 reveals another perspective available from JTA data but not JDS data. This figure shows daily expenditures for shopping by persons inbound from three countries, South Korea, Taiwan, and China, and the ratios of shopping to total expenditure (bar graphs and line graphs respectively). All inbounds were from East-Asian countries, but their expenditure patterns were quite different. First, Chinese spent most on shopping, especially during the mid-2010s, followed by Taiwanese and Koreans. Second, for Chinese and Taiwanese, the proportions of shopping were relatively high. Finally, for inbounds from these two countries, either the expenditures or the proportions (or both) began to decrease from the year 2014 or 15. This observation supports the notion of a “Chinese shopping spree” (*Baku-Gai* in Japanese) of limited duration.<sup>7</sup>

### 2.4 Data for Cosmetics

The observations in the preceding subsection show the importance of cosmetics as a shopping item for visitors from China and other Asian countries, and show how this importance has increased, especially in the second half of the 2010s. In the present subsection, movements of the consumer price index of cosmetics in the 2010s are observed, and compared with changes in cosmetics consumption by foreign visitors.

Figure 2-8: Consumer Price Index of Cosmetics, January 2010 - February 2019.

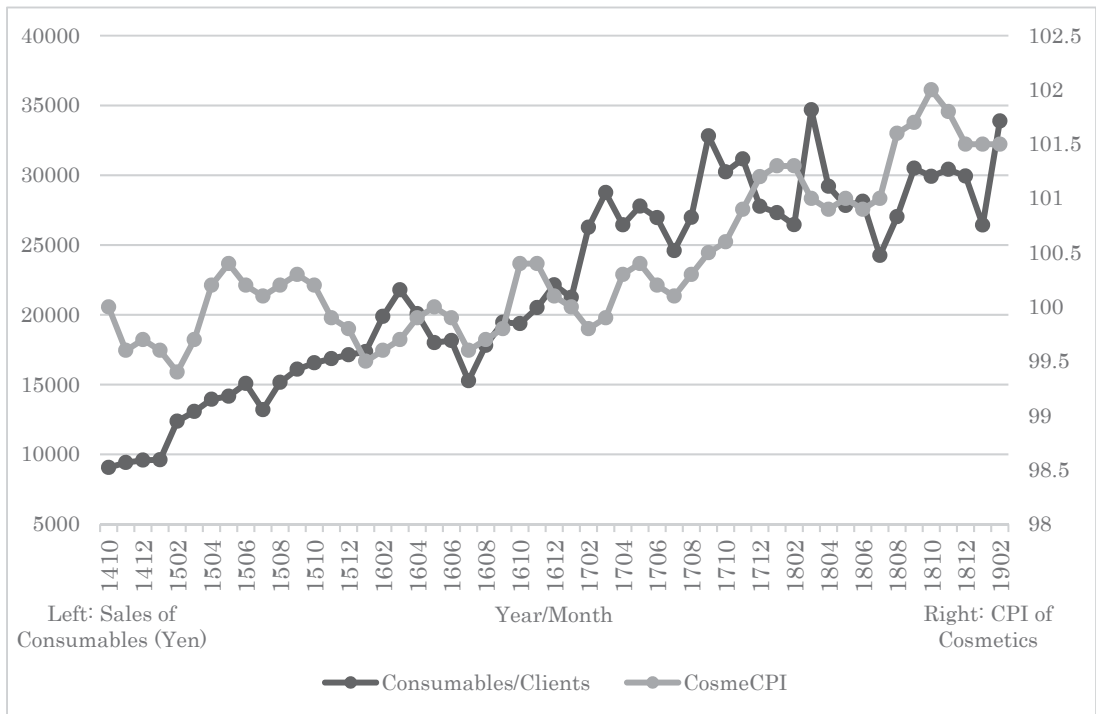


Source: e-Stat (the Portal Site of Official Statistics of Japan).

Figure 2-8 shows time series for the consumer price index (CPI) of cosmetics from January 2010 to February 2019 (2015 = 100). For the first three years (2010-12) it showed a negative trend, which may reflect the negative impact of the global financial crisis in 2008 and the slump in the Japanese economy after the crisis. From 2013 it began to increase, due possibly to depreciation of the Japanese yen, and in 2014 it made a sudden jump. This jump may have been due to an increase in consumption tax rate from 5 to 8 percent from April 1 of that year. After a three-year stable period (May 2014 to May 2017), it has since been increasing.

From 2014, except for the jump at the beginning, the time series for the consumer price index of cosmetics has a similar trend to that of duty-free sales of consumables (cosmetics and foods) per paying client, based on JDS data (Figures 2-4 and 2-6), especially for the last two years. Figure 2-9 shows time series of CPI and sales of consumables from October 2014 to February 2019. The sales of consumables (dark-gray graph) and CPI of cosmetics (light-gray graph) exhibit different trends for the first three years; whereas the sales of consumables increased steadily, CPI stagnated. From the beginning of 2017, however, both numbers show similar increasing trends.

Figure 2-9: Sales of Consumables per Paying Client and CPI of Cosmetics, October 2014 to February 2019.



Sources: same as those for Figures 2-4 and 2-8.

## 2.5 Final Words

This section has considered the evolution and consumption activities of inbound tourism in Japan, based on various sources of data. For the latter, it shows the importance of cosmetics and its possible impact on the domestic price of the item. The July 2019 press release of the Japan Department Stores Association says that owing to product adjustment by cosmetics manufacturer (s), missed profit opportunities were likely. This statement suggests that, in order to analyze the Japanese cosmetics market, its supply side, market structure, and other factors such as business practice must be taken into account. Moreover, time series analysis may show the extent to which (inbound) consumption and price of cosmetics are correlated. Comparison of Japanese data with Taiwanese data (in Section 4) is an interesting complement to the present analysis.

## 3. Trend and Consumption Power of Inbound Tourism in Taiwan - Focus on Shopping for Cosmetics

### 3.1 Background

Inbound tourism into Taiwan has been growing and making an impact on the domestic economy, given the spending power of the inbound markets of the various source countries. This section considers the evolution and consumption activities of inbound tourism in Taiwan, with a detailed analysis of the product category of cosmetics.

### 3.2 Research Questions

To learn about the consumption activities of foreign visitors to Taiwan across time, we explore changes from 2008 to 2018, observing the trend of inbound visits and related consumption power in Taiwan. We ask the following questions:

1. Where are the main sourcing countries of inbound tourists? How has this changed in the observation period of the recent decade?
2. What is the consumption power of these inbound tourists? Has it changed over the years? If so, how has it developed?
3. What is the daily expenditure of inbound tourists, now and previously? What proportion of their expenditure is given over to shopping? Has any trend been observed, especially in cosmetic sales?

### 3.3 Data and Method

To address these questions, we set up a dataset for empirical observations concerning inbound markets. We chose the time frame 2008 through 2018, to take into account the impact of the critical new inbound market, China. It was in 2008 that visits of mainland Chinese began their startling growth with the arrival of the first tour group by the first direct charter flight.<sup>8</sup> Furthermore, China has been the main sourcing country for the island of Taiwan, despite a decline in some years.

Our main data sources are the publications of Taiwan governmental offices, including

the Tourism Bureau, MOTC, and the Department of Statistics, MOEA. Specifically, we rely on the annual survey, “Consumption and Trends of Visitors to Taiwan,” to create our dataset.<sup>9</sup>

From this dataset, we derived an estimate of daily expenditure of inbound visitors on cosmetics, based on daily expenditure, the proportion of daily expenditure on cosmetics per visitor, and their length of stay in Taiwan.

For the total sales of cosmetics in Taiwan, we were unable to find statistics. We, therefore, used a substitute measure, the retail sales of the pharmaceutical and medical goods and cosmetics in specialized stores, published by the Ministry of Economic Affairs,<sup>10</sup> which also stated the cosmetic price index of items. Together, these measures facilitated an analysis of the effects of inbound visitors' shopping on the sales and price of cosmetics.

Using this extended dataset, we studied inbound markets in Taiwan and their expenditure, and were able to shed light on the following issues:

1. Inbound Visits, Growth and Key Markets
2. The trend of Overall Expenditure and Expenditure per Visit
3. Shopping Expenditure
4. Shopping Trend of Cosmetics
5. Price Trend of Cosmetics

### 3.4 Findings

In this subsection, we present our findings for each of the five headings above, using various data.

#### 3.4.1 Trend and Key Markets

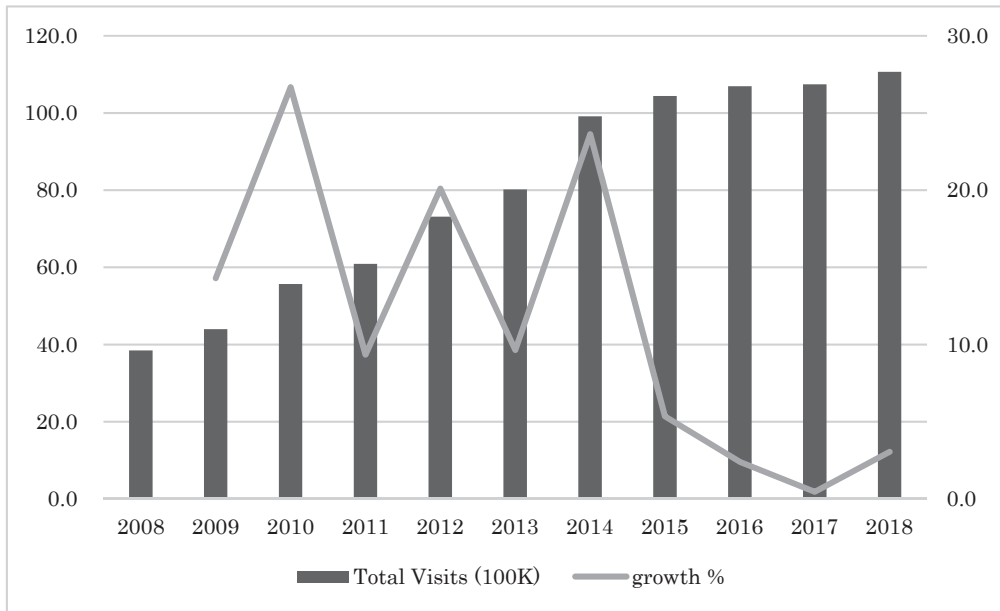
Inbound tourism in Taiwan has been growing and having a greater effect on the domestic economy. Figure 3-1 gives an overall picture of trends and growth in the inbound market. It began at a small size of nearly four million at the beginning of the observation period (2008) and reached almost ten million in 2014, a 1.6-fold increase in six years. The average annual growth during this time was a strong 17.3%, with an average annual increase of one million visitors to Taiwan.

Statistics for subsequent years show weakened growth, however, at around 5 % in 2015 and dwindling to a mere 0.5 % in 2017. There was a very weak rebound in 2018, which ended with a historic high of more than eleven million visits.

In short, the statistics reveal that inbound tourism underwent very strong growth in the last decade, but growth has slowed down sharply in recent years.

To discover more about the development of Taiwan's tourism, we considered the main source countries from which visitors inbound to Taiwan come. Figure 3-2 traces the evolution of the structure of the key inbound markets in Taiwan. Japan, Hong Kong/Macao, and South-East Asian Countries, plus Korea, were key players at the start, but a new player, China, quickly entered and soon dominated the market. China easily replaced Japan as the top market in 2010 and has advanced its strength since. It also occupied a dominant position of more than 40% of inbound visits to Taiwan in 2014 and 2015.

Figure 3-1: Inbound Visits & Growth



Notes.

1. Source: Tourism Bureau, Ministry of Transportation and Communications, R.O.C. (Taiwan), “Visitor Arrivals by Residence,” in *Annual Report on Tourism Statistics* (Years of 2008-2018).
2. We prepared the figure by calculating the data series found in the source.

However, the Chinese market then began to shrink, especially in 2016 and 2017, the early years when a pro-independence party came to power in Taiwan. This shrinkage was replaced by a mild and steady increase from Japan and other neighboring countries, such as Korea and various South-East Asian countries.

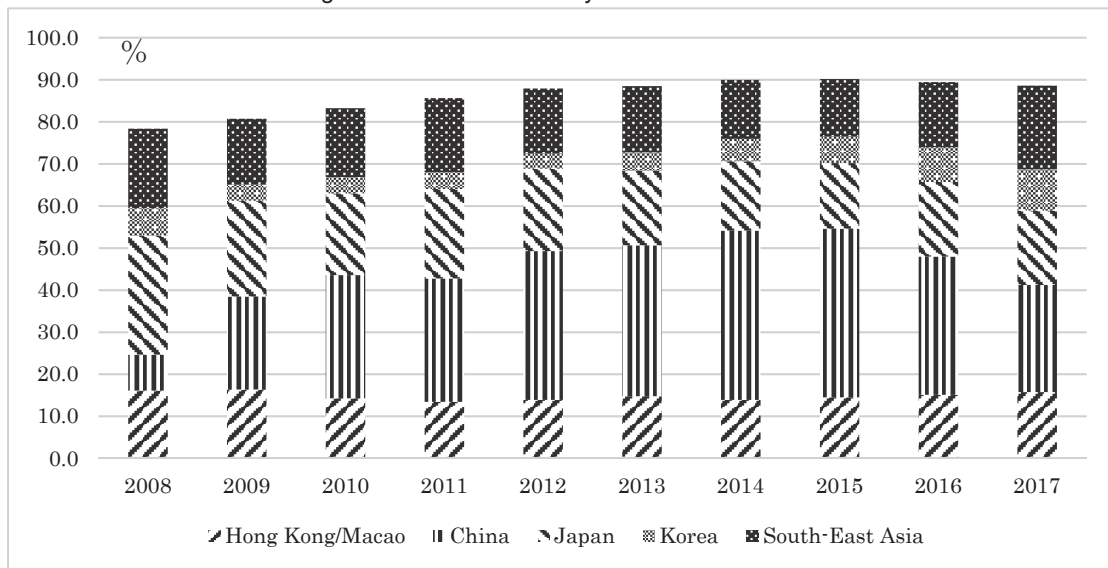
The structure of the key inbound markets of Taiwan is not fixed. Although its key markets remain unchanged, key market players rise and fall. China, as a new market, plays a critical role in the growth of inbound tourism on the island but also contributes to such volatile effects.

### 3.4.2 Overall Expenditure

With the high growth of inbound visits, there should be a corresponding growth in expenditure. Indeed, our data show that overall expenditure underwent high growth in the early years of the observation period (2008-2014) but slowed after that before rebounding in the final year studied (2018). Why is that?

To answer this question, we explored the average expenditure per visit. The finding shows that after the expenditure per visit reached a peak (US\$1,818) in 2011, it then fell and did not bottom out until 2018, at US\$1,238; this represents a sharp decrease of 26.4% (-\$480) (See Figure 3-3). More visitors do not imply greater expenditures when they each spend less.

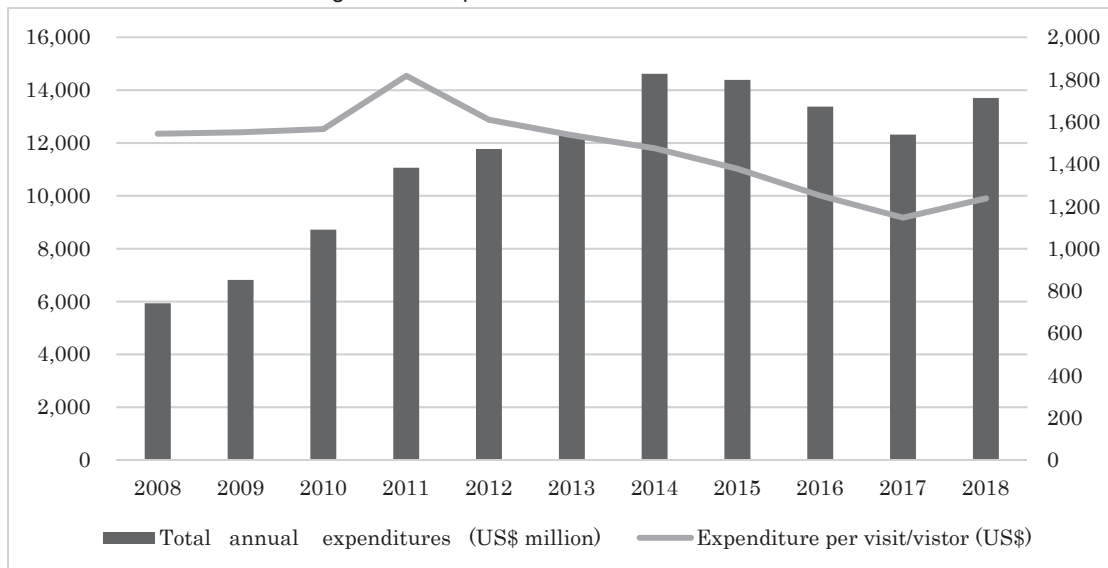
Figure 3-2: Structure of Key Inbound Markets



Notes.

1. Source: Tourism Bureau, Ministry of Transportation and Communications, R.O.C. (Taiwan), *Annual Survey Report on Consumption and Trends of Visitors to Taiwan* (Years of 2008-2018).
2. We prepared the figure by calculating the data series found in the source.

Figure 3-3: Expenditure for Inbound Market



Notes.

1. Source: same as that for Figures 3-1 and 3-2.
2. We prepared the figure by calculating the data series found in the source.



It is possible that the so-called “Baku-Gai” Chinese buying behavior is a factor in this situation. To investigate this hypothesis, we compared the average daily expenditures per visitor between all visitors, Japanese visitors, and Chinese visitors. Our analysis tells that although the expenditures of all visitors and Chinese-visitors show a similar wavy pattern, Chinese expenditure varies on a larger scale. Its total amount is also much larger, and this explains the spending power of Chinese inbound visitors (Figure 3-4).

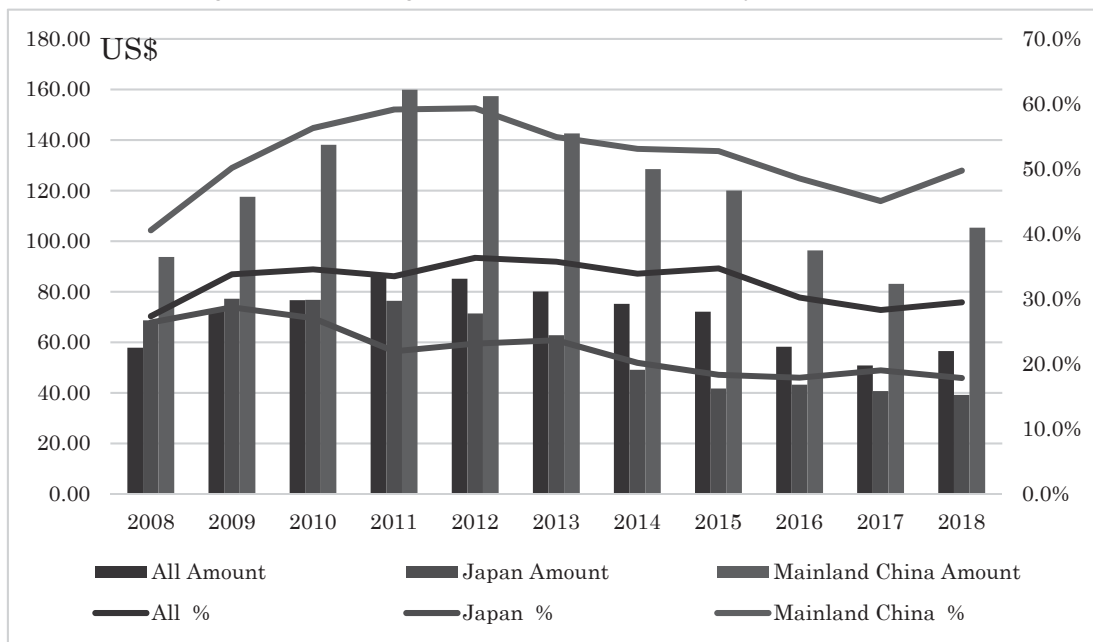
### 3.4.3 Shopping Expenditure and Proportion

Overall, the shopping amounts and proportion of all three groups decreased over the observation period, having increased in the early years (See Figure 3-4).

Chinese visitors had the highest aggregate spending, and Japanese were higher than the average visitor before 2010 but lower after that. Chinese shopping fits a bell-shaped curve, with an extended half on the right after the peak of \$160 in 2011 and 2012 and an end of low \$105, whereas for Japanese there was a dwindling curve, with a peak at \$77 in 2009 and an end at \$39.

To analyze the extent of preference for shopping other than the daily expenditure on items such as lodgings, meals, and transportation, we looked at shopping as a proportion of daily expenditure. As observed in other host countries, such as Japan, Chinese visitors were strongly attached to shopping (ranging between 40% and 60%), much more than any other visitor group. For Japanese, their preference for shopping was less than the average for visitors (with an early peak of 28.7% in 2009 and dwindling to 17.8% at the end).

Figure 3-4: Shopping Amount and Proportion of Daily Expenditure



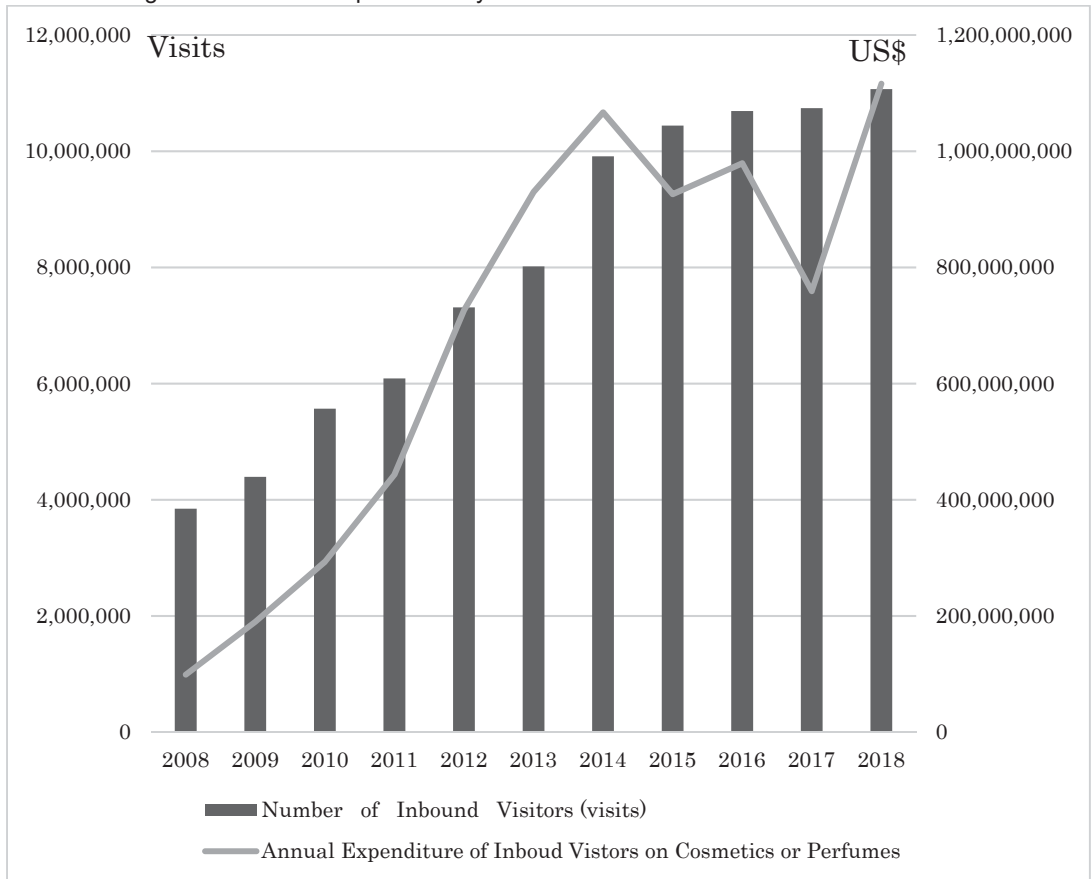
Source: same as that for Figure 3-3.

### 3.4.4 Shopping Trend of Cosmetics

For our comparative study with Japan, we focus on spending on cosmetics by inbound visitors. The aim is to elucidate the relation between inbound expenditure on cosmetics and the total sales of cosmetics in the retail industry (See Figure 3-5).

There was a rapid linear growth of inbound visits in the earlier years, and the annual expenditure due to these visitors grew elastically before reaching an extremum in 2015 and fluctuating since. Estimated figures for inbound visitors' spending on cosmetics started in the study period at just \$99 million, but soon skyrocketed to a billion-dollar market in 2014, a 10-fold growth in just six years. Although it dropped to just below \$760 million in 2017, it rebounded back to a historic high of \$1.12 billion in 2018. The attraction of cosmetics is enduring and strong.

Figure 3-5: Annual Expenditure by Inbound Visitors on Cosmetics or Perfumes



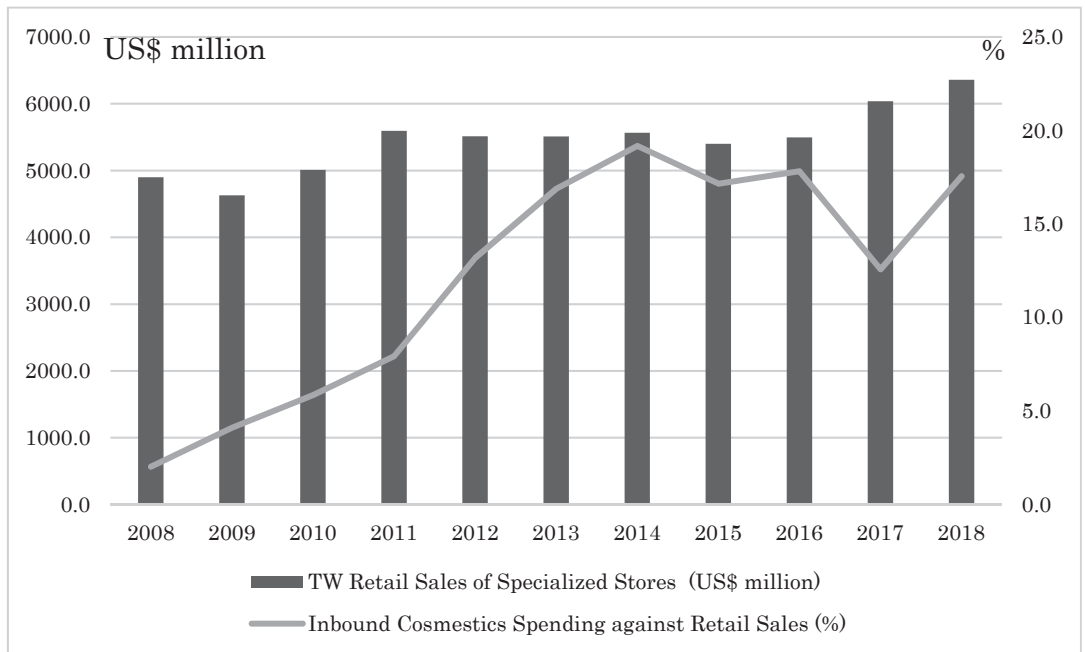
Source: same as that for Figure 3-3.

How resilient is inbound visitors' expenditure for cosmetics, as suggested above? We analyzed the proportion of their expenditure on cosmetics against retail sales of cosmetics in specialized stores, to estimate the development of the contribution to the retail industry by the inbound market (Figure 3-6).

The ratio of inbound visitors' expenditure on cosmetics to retail sales of cosmetics in Figure 3-6 traces matches the form of Figure 3-5, although with more moderation. There is still a great increase in the early years and then a fall and rebound, whereas there is a backdrop of a relatively stable total retail sales of pharmaceutical and medical goods taken together with cosmetics in specialized stores. Total retail sales, as a benchmark, suggest a very weak variation around or below \$5 billion in the first three years, followed by a higher plateau in the next six years within the range of \$5.4 to \$5.6 billion. In the last years of the study period, sales continued to tilt upward, in contrast to the sharp drop in the inbound visitors' spending contribution to the retail industry.

Overall, given the proportion of retail sales since 2012 (Figure 3-6) and the amount of expenditure reaching a billion dollars, the contribution of the inbound visitors' spending is significant. It might, however, undergo ups and downs in the future for economic, cultural, and political reasons.

Figure 3-6: Retail Sales of Specialized Stores and Cosmetics Spending by Inbound Persons (%)



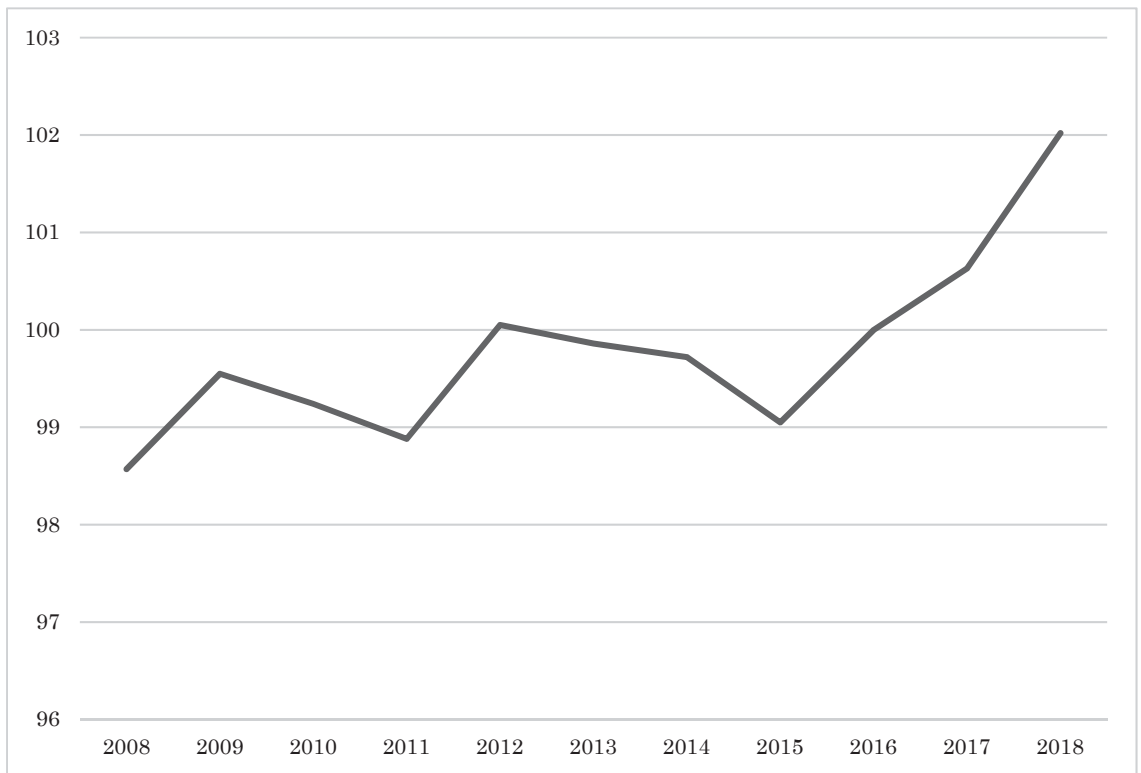
Notes.

1. Sources: Same as that for Figure 3-3, and Department of Statistics, the Ministry of Economic Affairs, R.O.C. (Taiwan), *Statistics Monthly of Sales of Wholesale, Retail, and Food Services* (issue of December 2018).
2. We prepared the figure by calculating the data series found in the sources.

### 3.4.5 Price Trend of Cosmetics

To examine the price trend of cosmetics, we analyzed the time-series data for the price index of cosmetics and medical goods, obtained from the Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Taiwan. This analysis shows a cyclical upward trend within the band between 98.5 and 100.05 until 2016, and a sharper increase after 2017 until the latest year of the study, reaching 102.02, a record high of the observation period (with 2016 as 100; see Figure 3-7).

Figure 3-7: Price Index of Cosmetics and Medical Goods



Notes.

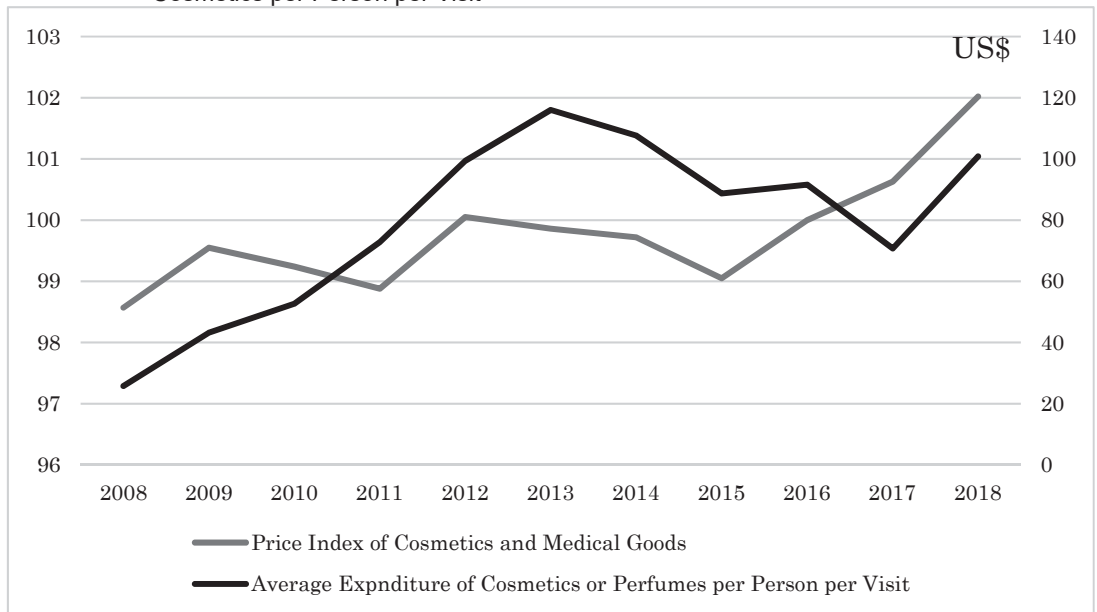
1. Sources: Directorate-General of Budget, Accounting and Statistics, Executive Yuan, R.O.C. (Taiwan), *Price Statistics Monthly* (issues of December 2008 and September 2019). The Executive Yuan is the executive branch of the ROC government, headed by the premier. The premier is directly appointed by the president, while other members of the Executive Yuan Council, or Cabinet—including the vice premier, ministers, chairpersons of commissions, and ministers without portfolio—are appointed by the president of the Republic upon the recommendation of the premier.
2. We prepared the figure by calculating the data series found in the sources.

To examine correlations between the price trend and expenditure by international visitors, we juxtaposed the price data series with the average shopping expenditure on cosmetics by international visitors per visitor (See Figure 3-8). In contrast to the price index, the expenditure did not share the cyclical-like feature of the price index; it underwent only a single cycle with an increasing slope before the peak in 2013, then decreased until 2017 before rebounding in 2018. Furthermore, the price index headed down and crossed the increasing upward trend of the expenditure between 2009-2011 and then crossed it again heading upwards while expenditure fell in the period 2015-2017, even though both shared increasing trends in other years. We find no correlation between these two data streams.

### 3.5 Final Words

The growth of inbound tourism in Taiwan motivated our study to gain a deeper understanding of the development of the inbound tourism market. Using reliable data sources, we created a time-series annual dataset from 2008 through 2018. Our study shows that inbound tourism in Taiwan grew strongly in the earlier years of the study, and continues to grow in recent years, but more slowly. The structure of the inbound market evolved with the coming of tourists from China, who quickly took the dominant position but then also decreased in recent years. Nevertheless, they have still replaced Japanese at the apex of inbound tourism on the island. There is a significant flow of tourists to Taiwan from other neighboring countries such as Japan, Korea, and South-East Asian countries.

Figure 3-8: Price Index of Cosmetics and Medical Goods and Average Inbound Expenditure of Cosmetics per Person per Visit



Sources: same as those for Figures 3-6 and 3-7.

As for consumption by inbound tourists, this reached a peak around 2014 and 2015 and decreased sharply after that. The decrease in Chinese tourists and their purchasing power is obvious.<sup>11</sup> A further reason is that the expenditure per person per visit has an almost linear decrease since 2011.

In our focus on shopping for cosmetics, in contrast to the decrease in total expenditure, inbound visitors show a strong and steady commitment to retail sales of cosmetics, making it an attractive and promising market that has now reached a billion dollars.

Our study offers a deeper understanding of the development of inbound tourism in Taiwan. Future research may extend to other countries and products. Furthermore, a causal analysis with rigorous empirical methodology will clarify the factors that cause the growth of inbound tourism and their impact on the domestic economy.

#### 4. Comparison of the Two Inbound-Host Countries and Remarks

In conclusion, we have compared the inbound markets in Japan and Taiwan. In both countries, numbers of inbounds have increased rapidly (Figures 2-1 and 3-1). In both countries, visitors from China, South Korea, and Southeast Asian countries make up large proportions of visitor numbers (Figures 2-2 and 3-2). Overall expenditures of inbounds have increased in both countries, but per capita expenditure has stagnated or even decreased (Figures 2-3 and 3-3). The data also suggest that, for both countries, inbounds from China are more committed to shopping than those from other countries (Figures 2-7 and 3-4). In particular, among expenditure items, cosmetics have gained in importance in both countries (Figures 2-4 and 2-5 and Table 2-1 for Japan; Figures 3-5 and 3-6 for Taiwan). Finally, the consumption of cosmetics by inbounds and the domestic price of cosmetics are correlated in both countries (Figures 2-9 and 3-8), although further analysis would assist in clarifying this correlation.

The present analysis reveals many similarities between the inbound markets of the two countries, especially in cosmetics. The cosmetics market in each country warrants further examination; for instance, the substitutability of cosmetics made in the two countries and South Korea for (Chinese) inbounds has not been explored in the present analysis.

Finally, as our analysis confirms, China has a large impact on inbound markets in both countries. Japan and Taiwan both have sensitive political relations with China; also, when one country has a problem with China, it may affect the other country either positively and negatively, i.e., one country may be a substitute or complement for the other, or the problem might be wider. Further analysis of such correlations would be beneficial.<sup>12</sup>

## Notes.

- <sup>1</sup> Yanase (2017) asserts that models should be extended to encompass differentiated goods in monopolistic competition. For the theoretical analysis in a dynamic setting, see Hazari and Sgro (2004).
- <sup>2</sup> The number of department stores included in the data has doubled, from 46 in October 2014 to 93 in June 2019. Only the total number of stores is available from the press release of the Association, and the distribution of the stores is not shown, although many department stores are located in large cities such as Tokyo and Osaka. According to the Association, the total number of department stores in 2019 is 204. By prefecture, Tokyo has 30 stores, and Osaka has 18 stores.
- <sup>3</sup> Miyajima (2016) points out the effects of exchange rates, deregulation of duty-free items, and the visa-waiver policy of the Japanese government.
- <sup>4</sup> It might be possible to estimate the total number of foreign buyers of consumables using the proportions of consumables in relation to the total duty-free sales, but such ad hoc estimates are not used in this paper.
- <sup>5</sup> Sales of some items, especially luxury ones, may nevertheless experience seasonality (cyclical movements in Figures 2-3 and 2-4 support this hypothesis). For instance, the ranking of December 2014 was as follows:
  1. high-end brand-name goods
  2. women's fashion accessories
  3. women's clothes
  4. men's clothes & fashion accessories
  5. cosmeticsComparing the ranking of October (in Table 2-1) and December 2014 may suggest that Christmas sales apparently increased the importance of luxury items in this year.
- <sup>6</sup> The survey also asked foreign visitors about their expenditures before coming to Japan.
- <sup>7</sup> Baku-gai or the so called explosive shopping is a special word popularly used in the Japanese media since 2014 to describe the impressive spending power of Chinese tourists in Japan. See Chiezo of the Asahi Shinbun (online database of the newspaper) for details.
- <sup>8</sup> Cross-strait direct transportation was banned prior to 2001 for political reasons. In 2005, officials of China and Taiwan approved direct charter flights to certain cities. The first tour group of Chinese tourists by the first cross-straits direct charter flight finally arrived in Taiwan in 2008.
- <sup>9</sup> Our main source is a survey ("Consumption and Trends of Visitors to Taiwan") conducted annually by the Tourism Bureau, Ministry of Transportation and Communications of Taiwan. We collected statistics from annual editions between 2008 and 2018.
- <sup>10</sup> This measure also includes sales of pharmaceutical, medical goods, food and other items, even though cosmetics sales is said to comprise more than half of the total sales. In addition, inbound visitors might make their purchase in other retail channels, such as department stores, duty-free stores and others, which are not included in this measure.
- <sup>11</sup> A cause often suggested is the hand of the Chinese government behind their outbound tourism. In the case of Taiwan, the phenomenon of ubiquitous Chinese tourism weakened after the pro-independence party came to power in Taiwan, as observed earlier above. According to various sources, the decrease occurred for group tours in the early years, then

at the individual level; beginning this summer (2019), the latter was prohibited.

<sup>12</sup> For possible extensions of the analysis for each country, see subsections 2.5 and 3.5.

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#### (要旨)

本稿では日本と台湾それぞれの様々なデータを用いて、両国における外国人観光の発展および、外国人観光の拡大が両国の国内物価、特に化粧品価格に与えた影響を論じる。最初に外国人観光客数の変化を示し、本稿におけるリサーチ・クエスチョンを提示する。さらに外国人観光客による消費に関するデータを説明し、外国人観光客による消費全体、そして外国人観光客による化粧品の消費に関する観察結果を提示する。続いて化粧品の価格と消費に関する我々の発見を説明する。最後に本稿では計量分析を行っていないため、本稿における研究の拡張について議論する。以上の構成で日本、台湾それぞれについて論じた後、最後に両国の比較を行い、東アジア全体の観光市場の視点から、さらに今後の研究方向を議論する。

キーワード：日本、台湾、外国人観光客による消費、化粧品、国内価格

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