Journal of Business and Economics, ISSN 2155-7950, USA
October 2025, Volume 16, No. 9-10, pp. 173-186
DOI: 10.15341/jbe(2155-7950)/9-10.16.2025/001

http://www.academicstar.us

Comparison of the Impacts of Decreasing Inbound Demands by Foreign Visitors to Japan Due to the COVID-19 Pandemic*

Fujikawa Kiyoshi, Watanabe Takatoshi
(Faculty of Economics, Aichi Gakuin University, Japan)

Abstract: The Japanese government enacted the Tourism Nation Promotion Basic Act in December 2006 to increase the number of foreign visitors to Japan, which reached 32 million in 2019, and inbound consumption reached 6 trillion yen in that year. However, the number of foreign visitors to Japan "evaporated" in 2020 because the entry of foreigners into Japan was restricted due to the coronavirus 2019 disease (COVID-19) pandemic. We used the "Survey on Consumption Trends of Foreign Visitors to Japan'' and the "Statistics on the Number of Foreign Visitors to Japan by Nationality and Purpose'' to estimate the expenditure of foreign visitors to Japan. We estimated the impact that the "evaporation" of the number of foreign tourists visiting Japan had on the Japanese economy at that time by the nationality of the foreign tourists. First, the highest economic effect by country/region was China (4.6 trillion yen), followed by Taiwan (1.3 trillion yen) and South Korea (1.1 trillion yen). Next, the impact on Japan's GDP was approximately 5.8 trillion yen, which was equivalent to 1.0% of the nominal GDP in 2019. The "evaporation" of inbound consumption due to the COVID-19 pandemic was a big blow to the Japanese economy as the 1.0% decrease was equivalent to about one-third of the nominal gross domestic product's negative growth rate of -3.2% from 2019 to 2020.

Key words: COVID-19, ripple effect, foreign visitors, tourism consumption
JEL codes: C1, C3, C4, C5

1. Introduction

The purpose of overseas travel includes sightseeing, business, and visiting family (overseas travelers are collectively referred to as "foreign visitors" in this paper). Due to the outbreak of the coronavirus disease 2019 (COVID-19), since 2020, the movement of people across borders has been severely restricted, resulting in the number of foreign visitors to Japan dropping to almost zero — a phenomenon that the Ministry of Economy, Trade and Industry (METI) (2020) use the term "evaporated" to describe it. The purpose of this study is to estimate the impact that the "evaporation" of foreign visitors to Japan had on its economy.

---

* This paper is the English version of "Comparison of the impacts of decreasing inbound demands by foreign visitors to Japan due to the COVID-19 pandemic", published in the Japanese journal "Innovation and I-O Analysis" (Vol. 31, No. 3, March 2024) of the Pan Pacific Association of Input Output Studies. We would like to thank the PAPAIOS Japanese Journal Editorial Board for allowing us to reprint the English version of the original paper.

Kiyoshi Fujikawa, Ph.D. in Economics, Faculty of Economics, Aichi Gakuin University; research areas: economic statistics. E-mail: fujikawa@dpc.agu.ac.jp.

Takatoshi Watanabe, MA in Economics and MS in Engineering, Faculty of Economics, Aichi Gakuin University; research areas: economic statistics. E-mail: twata@dpc.agu.ac.jp.

Inbound demand (a type of export demand) from foreign visitors to Japan has started to attract attention as the Japanese economy is sluggish due to shrinking domestic demand caused by population decline. However, it was not until the 2000s that promoting foreign visits to Japan became a policy issue in the country — much later than in other developed countries. Until the 1990s, Japan's tourism policy was to encourage Japanese people to travel abroad to resolve trade imbalances (surplus). It was Junichiro Koizumi's cabinet that made a major change in the direction of promoting the number of foreign visitors to Japan. In his 2003 administrative policy speech, Prime Minister Koizumi stated that his goal was to double the number of foreign visitors to Japan from 5 to 10 million by 2010. As we will describe later, this speech triggered the launch of the Visit Japan Campaign (VJC), which led to the enactment of the Tourism Nation Promotion Basic Act in January 2007 and the foundation of the Japan Tourism Agency (JTA) in October 2008. In the economic policy package promoted by the Shinzo Abe cabinet in the subsequent *Abenomics*, one of the growth strategies was to promote the number of foreign visits to Japan. The new goal was to increase the number of foreign visitors to Japan to 40 million per year by 2020 when the Tokyo Olympic Games were to be held.[1]

Incidentally, before the COVID-19 pandemic, foreign travel by Chinese was attracting attention worldwide. For instance, in 2015, the phrase *Bakugai* — bulk shopping by Chinese tourists — received so much attention in Japan that it won the Buzzword Award in 2015. When discussing the influence of foreign tourists visiting Japan, it is impossible to ignore Chinese foreign tourists. In this study, we also focus on Chinese foreign tourists and discuss the differences between them and other foreign tourists visiting Japan from Europe and America.

The composition of this paper is as follows. Section 2 introduces the transition of Japan's tourism strategy in more detail, although it has already been briefly explained in the Introduction. Section 3 describes the pre-COVID-19 situation of the number of foreign visitors to Japan. Section 4 introduces previous research on Chinese foreign tourists visiting Japan, and Section 5 presents the results of an empirical analysis of the impact of foreign visitor consumption on the Japanese economy. Section 6 summarizes this study and discusses its limitations.

2. Transition of Japan's Tourism Strategy

While policies for tourism promotion in other countries have resulted in an increase in the number of tourists from abroad, the case of Japan is different. Until the 1990s, the domestic travel market in Japan was relatively large, so the tourism industry was well-off. Further, the need to resolve the trade imbalance (Japan's trade surplus) with Europe and the United States (US) led to the promotion of Japanese traveling abroad (Yagasaki, 2015). However, foreign travel to Japan was not price competitive as the yen continued to appreciate after the 1970s.

It was Junichiro Koizumi's cabinet of the Liberal Democratic Party (LDP) that significantly changed this situation. The Basic Policy on Economic and Fiscal Management and Structural Reform 2002 approved by the Koizumi Cabinet in 2002 set out the priority policies of the Koizumi administration. This policy comprises six items: (1) human resources strategy, (2) technology strategy, (3) management strategy, (4) industry discovery strategy, (5) regional strategy, and (6) global strategy. The industry discovery strategy aimed to stimulate new demand for industries that are expected to increase in demand in the future, and the target industries included the tourism, environmental, and health industries.

In accordance with this policy, the Ministry of Land, Infrastructure, Transport, and Tourism announced a

[1] This goal was not realized due to the COVID-19 pandemic.

strategy called the Global Tourism Strategy.[2] This strategy comprises the following four items: (1) strategy to encourage foreign tourists to visit Japan, (2) strategy to accept foreign tourists, (3) strategy to advance the tourism industry, and (4) promotion strategy.[3]

In response to this trend, as mentioned above, Prime Minister Koizumi announced in his administrative policy speech in January 2003 that Japan would double the number of foreign tourists from 5 to 10 million by 2010. Grabbing this opportunity, the VJC was launched in April 2003. In addition to the Japan National Tourism Organization (JNTO), the VJC Implementation Headquarters Secretariat, which handles the actual operations of this campaign, includes private firms such as the Japan Travel Bureau, Kinki Nippon Tourist, Japan Airlines, and All Nippon Airways.

The first Abe cabinet, which followed the Koizumi Cabinet, enacted the Tourism Nation Promotion Basic Act in December 2006. This law was a complete revision of the Tourism Basic Law enacted in 1964, and by adding "Nation Promotion" to the name of the law, the first Abe cabinet positioned "tourism" as a pillar of the Japanese economy in the 21st century — when the birthrate was declining and the population was aging.[4] In response to this, the JTA was established as an external bureau of the MLIT in October 2008.[5]

On the contrary, the promotion of foreign visits to Japan, which had been active under the LDP administration, faded under the Democratic Party of Japan (DPJ) administration from September 2009 to December 2012. The DPJ administration downsized the JTA and cut the budget for VJC projects significantly[6]. Reducing waste was the administration's most important issue, and at that time, tourism promotion was like a waste for the DPJ administration.

The "Cool Japan Strategy" is well-known as a policy related to tourism promotion, although the term *Cool Japan* did not originate in Japan; it was first used by McGray (2002)[7]. The term "Cool Japan" began to attract attention in Japan much later — after METI announced the Cool Japan Strategy in June 2010. Ironically, the budget for VJC was reduced under the Democratic Party administration at that time. METI's plan was to create jobs in Cool Japan-related industries to respond to the decline in domestic demand due to aging and population decline. Since then, the Cool Japan Strategy has become one of the pillars of Japan's economic policy. Although the Cool Japan Strategy is not necessarily aimed at tourism, it has a great deal to help attract foreign tourists to Japan as it aims to sell what is seen as cool by the world. Various types of traditional or modern "cool" culture were regarded as the purpose of their trip by so many foreign visitors to Japan. Currently, the Cool Japan Strategy is under the management of the Overseas Demand Development Support Organization (whose nickname is "Cool Japan Organization") established in November 2013 after the DPJ administration ended.

At the time of the start of the second Abe administration (at the end of 2012), VJC's goal of 10 million foreign visitors to Japan remained unachieved due to the recession that occurred after the Lehman Shock and the

---

[2] The Ministry of Land, Infrastructure, Transport, and Tourism (MLIT) (2002)

[3] The MLIT highlighted the following three points as the significance of this strategy. The first is the promotion of international understanding; the second is the revitalization of the Japanese economy through the tourism industry; and the third is the restoration of confidence in local areas as foreign tourists visit them.

[4] The law was passed with unanimous approval in both the House of Representatives and the House of Councilors, demonstrating that there are no partisan differences in tourism promotion.

[5] With the establishment of the JTA to strengthen the system for attracting foreign visitors to Japan, the VJC secretariat operations were transferred to JNTO, and the secretariat was disbanded.

[6] Kanko-Keizai News (December 5, 2009 and November 20, 2010).

[7] McGray (2002) stated that since 2000, Japan has been trying to advance into the world market with software technologies, such as music, fashion, and anime, instead of traditional hardware technologies, such as automobiles and home appliances.

effects of the Great East Japan Earthquake. In his administrative policy speech in December 2012, Prime Minister Abe declared Abenomics, which has the "three arrows" of fiscal spending, monetary easing, and growth strategies, and the promotion of a "tourism-oriented nation" was announced as one of the growth strategies, which are similar to policies under the Koizumi Cabinet. Furthermore, in the following year's administrative policy speech in 2013, it was announced that Cool Japan can become a business that Japan can be proud of on the world stage. In March 2013, the Ministerial Council for Promoting Tourism Nation was established, and in June of the same year, the Action Program for Realizing Japan as a Tourism Nation was formulated. The number of foreign visitors to Japan exceeded 10 million in 2013 due to the relaxation of visa requirements and other policies. Then, in January 2014, in an administrative policy speech, Prime Minister Abe announced the goal of doubling the number of foreign visitors to Japan to 20 million. Surprisingly, this goal was almost achieved in the following year (see Table 2).

In March 2016, the Abe administration announced the Tourism Vision to Support Tomorrow's Japan, which sets medium- and long-term goals for tourism. In this vision, tourism was defined as the pillar of the growth strategy and a goal was set to increase the number of foreign visitors to Japan to 40 million by 2020. As one of the growth strategies, the promotion of foreign visits to Japan was successful to some extent, although this goal has not been achieved due to the COVID-19 pandemic (Tourism Economy Newspaper, 2020).

The International Tourist Tax was introduced in January 2019 to secure financial resources for tourism promotion projects, and the number of tourists was expected to increase in the future. However, tourism demand fell sharply for about three years until the middle of 2023 due to the COVID-19 pandemic[8].

Foreign visits to Japan have been promoted since the 2000s with the aim of economic growth for Japan as a whole. This study focuses on examining the extent to which inbound demand from foreign tourists has supported the Japanese economy (i.e., how much damage has been caused to the Japanese economy by its "evaporation" due to the COVID-19 pandemic) by using 2019 data.

3. The Number and Spending of Foreign Visitors to Japan

Table 1 presents an international comparison of tourism consumption in major countries based on the Tourism Satellite Account (TSA).

Table 1 Consumption by Tourists in Major Countries

Country(year)	Internal tourism consumption (Trillion yen)	Tourism GDP to GDP ratio (%)	Inbound tourism consumption to total tourism consumption ratio (%)
The US (2013)	90.6	2.9%	16.3%
Japan (2019)	29.2	2.0%	18.4%
Germany (2015)	35.0	3.9%	13.8%
The UK (2018)	24.5	3.8%	17.7%
France (2017)	20.5	7.2%	38.2%

Source: Compiled by the authors based on JTA (2021)

Internal tourism consumption is the sum of domestic tourism expenditures (spending on transportation, accommodation, food and drink, entertainment, and souvenirs) by Japanese and foreign tourists. Japan's internal

[8] The international tourist tax is a national tax that is added to the ticket price by airlines or shipping companies and is collected from passengers departing from Japan, which is 1,000 yen per ticket.

tourism consumption in 2019 was 29.2 trillion yen, which is comparable with those in European countries. Its tourism GDP is estimated as the total value added earned by each industrial sector via internal tourism consumption. Japan's tourism GDP accounts for 2.0% of its total GDP, which is quite low compared with France's 7.2%, Germany's 3.9%, and the UK's 3.8%. Incidentally, Japan's inbound tourism consumption ratio is relatively high, except for France, indicating that expenditures by foreign tourists in Japan have a relatively large significance.

Table 2 presents the trends in the number of foreign visitors to Japan by nationality since the start of VJC in 2003. The Japanese government has relaxed visa requirements for Asian countries, including China, to attract foreign tourists. The number of foreign tourists has increased rapidly, especially since 2010, indicating that the policy to attract foreign tourists is achieving results[9].

South Korea used to have the highest number of foreign visitors to Japan, but since 2015, China has ranked first. The number of foreign tourists from China might be high due to geographical conditions. The growth rate from 2003 to 2019 reveals that the number of foreign tourists from China increased by as much as 21 times, while the total number of foreign tourists increased by only six times. During that period, the number of foreign tourists from Europe (the UK, France, and Germany) and the US increased by about 2 to 3 times, and the increase in the number of foreign tourists from South Korea was about four times slightly higher than those from Europe and the US.

Table 2 Number of Foreign Visitors to Japan by Nationality

(thousands)

Nationality	2003	2005	2010	2015	2019
Total	5,212	6,728	8,611	19,737	31,882
Korea	1,459	1,747	2,440	4,002	5,585
China	449	653	1,413	4,994	9,594
Taiwan	785	1,275	1,268	3,677	4,891
The US	656	822	727	1,033	1,724
UK	201	222	184	258	424
France	85	111	151	214	336
Germany	94	118	124	163	237

Source: JNTO Statistics, Visitors to Japan since the start of the Visit Japan project
https://www.jnto.go.jp/statistics/data/marketingdata_tourists_after_vj_2022.pdf

4. Literature Review on the Economic Impact of Tourism Consumption

Zeli et al. (2023) reviewed studies on the evaluation of the economic impact of tourism, targeting articles in the Scopus database. They found that the main analysis methods were four types — input–output analysis, computable general equilibrium analysis, social accounting matrix analysis, and TSA-based analysis. Most studies employed input-output tables, which are prepared not only on a national but also regional and city bases. Therefore, we proceed with the analysis using Japan's 2015 input-output table.

Previous studies on tourism consumption in Japan include METI (2020) and JTA (2021) (see Table 3). The

[9] Group travel visas for Chinese tourists were lifted for Beijing, Shanghai, and Guangdong province in 2000, and this measure was extended to all provinces of China in 2005. There was so much enthusiasm that a ceremony was held on July 26, 2005 to welcome the first group of tourists visiting Japan, sponsored by the MLIT and the VJC Headquarters, to commemorate the occasion. Then, the issuance of individual visas for Chinese was relaxed in 2015, and the number of tourists from China increased further.

target year of both estimates is 2019; METI's (2020) target of tourists was only foreign visitors of 1.88 million, while JTA's (2021) target of tourists was all tourists including Japanese.

METI (2020) estimated that inbound tourism consumption was 4.8 trillion yen, with an economic ripple effect of 9.4 trillion yen, while JTA (2021) estimated that the total tourism consumption was 29.2 trillion yen, with an economic ripple effect of 55.8 trillion yen. As the amount spent in Japan by foreign tourists was 5.4 trillion yen (18.4% of the total), the authors estimated the economic effect of inbound consumption by foreign tourists using the same ripple multiplier for tourism as a whole.

Table 3 Estimates by the METI and JTA

(for 2019, trillion yen)

	METI	JTA
Tourism consumption in Japan	4.8	5.4
Ripple effect	9.4	10.3
Ripple multiplier	2.0	1.9

Source: Compiled by authors based on METI (2020) and JTA (2021)

In addition to the abovementioned studies, the following are studies on the economic effects of inbound consumption by foreign visitors to Japan. Makita (2018) estimated the consumption expenditures of foreign visitors to three Tokai prefectures of Aichi, Gifu, and Mie from 2013 to 2016 and calculated their economic effects based on the Chubu region interregional input-output table (2010 table). It was confirmed that the ripple effect of consumption by foreigners visiting Japan has expanded in each region after 2015. The author predicted that overtourism in the Kansai region may be one of the factors behind the expansion of hotel demand in the Tokai region, although the main reason for this is the increase in the number of foreign tourists from China. Hiramatsu (2017) analyzed the economic effects of tourism consumption by foreign visitors to Japan in each prefecture using regional input-output tables. Although direct consumption by foreign visitors to Japan is concentrated in cities such as Tokyo, Kyoto, and Osaka, it was demonstrated that the economic effects of tourism can be enjoyed over a wide geographical area as the gaps among prefectures in terms of economic ripple effects are much smaller than those in direct consumption. Conversely, Arai (2017) studied the effect of foreign visitors to Japan on regional development. The study focused on the Kyushu region, where the Destination Management Organization, which was established ahead of other regions, is playing a central role in developing experiential and interaction-based programs to meet the needs of foreign tourists. The study revealed that the success was due to the efforts to promote tourism and the relaxation of regulations for guides using the special economic zone, which improved the system for accepting Chinese foreign tourists. These initiatives in the Kyushu region offer suggestions for local areas as the uneven distribution of tourists becomes a challenge.

Next, we introduce literature that conducted input-output analysis of the economic impact of the decline in travel demand due to the COVID-19 pandemic. An early publication by MacDonald et al. (2020), one of a series of studies of the International Monetary Fund, was conducted using world input-output database, a worldwide muti-regional input-output (MRIO) developed in Eurostat. The study predicted that the total GDP of the G20 countries will reduce by approximately 2.5%, assuming a 75% decline in hotels, a 90% decline in restaurants, and a 40% decline in transportation.

Zhou (2023) created China's SAM for 2020 and estimated the impact of a decline in tourism demand on production, GDP, and employment. The impact on domestic travel is large compared with inbound travel, and

various industries will be greatly impacted. The transportation industry is greatly affected in the case of inbound travel, while for domestic travel, the food and beverage industry will also be greatly affected, as well as the transportation industry. Piboonrungroj (2024) estimated the economic impact of the decline in gastronomic tourism on the Thai economy using a dynamic input–output analysis with investment endogenized based on input-output tables of 2017 and found that it reduced GDP by approximately 2%.

Some studies have analyzed the impact of a decline in travel demand on domestic and regional economic cycles. Lee et al. (2024) analyzed the economic and environmental impact of the COVID-19 pandemic using China's 2017 MRIO table. The impact of the decline in tourism on China's CGP reached as much as 7% nationwide and was greatest in Guangdong, Jiangsu, Zhejiang, and Hunan provinces. Although environmental loads, such as energy and water consumption, have reduced, the magnitude of the reduction is not necessarily proportional to the economic impact. Tokui et al. (2021) analyzed the interregional spillover of tourism demand using Japan's prefecture-level input-output table. They found that tourism demand tended to be completed within a region, so the impact on neighboring prefectures was not that large.

Finally, we introduce some analyses of the purpose of Chinese foreign tourists visiting Japan as there are many Chinese foreign tourists in Japan. Huang (2017) analyzed the per capita consumption of Chinese tourists visiting Japan and found that individual tourists spent more than group tourists, and repeat visitors spent more than first-time visitors. Fluctuations in consumption amounts are largely due to the exchange rate between the Chinese yuan and Japanese yen. Chinese tourists went on "bulk shopping" in Japan in 2015 when the yen was weak, but shopping demand subsided in 2016 when the yen was strong[10]. Morita (2020) found that while the price elasticity of shopping by Chinese tourists was large, the income elasticity of shopping was not that large. Nevertheless, it is expected that tourism spending by Chinese foreign tourists will continue to increase as the income elasticity of travel to Japan itself is high. In addition, Tang and Sakata (2019) conducted a questionnaire survey on visits to Japan to clarify the characteristics of Chinese tourists. They confirmed that there has been a shift in recent years to "in-depth travel" or experiential travel that visits places of personal interest emphasizing individuality, although the tour focus is still standard famous spots.

5. Economic effects of inbound consumption by foreign visitors to Japan

5.1 Model

We estimated the amount of inbound consumption in Japan by foreign visitors from various countries in 2019 and its economic effect. It is an estimate of the extent to which the inbound consumption of overseas visitors to Japan, which "evaporated" in the following year, reduced Japan's GDP. We calculated the primary and secondary ripple effects in this study. The primary effect refers to an increase in domestic production due to the initial change in final demands, and the secondary effect denotes the effect that an increase in private consumption caused by an increase in employee income in the primary effect induces domestic production.

The primary effect is calculated using Equation (1), where $\mathbf{x_1}$ denotes increase in domestic production (the primary effect); $\mathbf{I}$ and $\mathbf{A^d}$ denote the identity matrix and the domestic goods input coefficient matrix, respectively; $\mathbf{f^d}$ denote increase in inbound tourism consumption (or increase in domestic demand); and $[\mathbf{I}-\mathbf{A^d}]^{-1}$ is the Leontief inverse matrix.

[10] The Bank of Japan Governor Kuroda launched "Extradimensional monetary easing policy" in 2013, during which a large amount of buying operation on government bonds was implemented. As a result, the yen depreciated in the foreign exchange market.

$$\mathbf{x_1} = \left[\mathbf{I} - \mathbf{A^d}\right]^{-1}\mathbf{f^d} \quad (1)$$

The secondary effect is calculated using Equation (1). Let us assume that the demand for labor increases in each industry by the increase in domestic production due to the primary effect and that employee income increases by w accordingly. Income increment can be defined by an inner product of employee income ratio **r** and the primary effect $\mathbf{x_1}$ as follows:

$$w = \mathbf{r}\mathbf{x_1} \quad (2)$$

Assuming that the increase in private consumption is the increase in employee income multiplied by the average propensity to consume *t*, the increase in private consumption **c** is expressed by Equation (3)[11], where s_i denotes the share of the *i*-th industrial sector in private consumption (the share structure remains the same in the secondary effect), and **s** is a column vector of those shares.

$$\mathbf{c} = tw\mathbf{s} \quad (3)$$

When $\mathbf{c^d}$ is the domestic goods portion of the increase in private consumption, excluding imported goods, the secondary effect $\mathbf{x_2}$ can be calculated using Equation (4).

$$\mathbf{x_2} = \left[\mathbf{I} - \mathbf{A^d}\right]^{-1}\mathbf{c^d} \quad (4)$$

5.2 Data

The most important data for this study are an input-output table to estimate the ripple effects of inbound consumption by foreign visitors to Japan. The input-output table used in this study is the 107 sector table (noncompetitive import table) of the 2015 benchmark table. Although the economic effects are estimated for 2019, we assume that the input coefficients did not change significantly from 2015 to 2019.

We used the "Survey on Consumption Trends of Foreign Visitors to Japan'' (JTA) and the "Statistics on the Number of Foreign Visitors to Japan by Nationality and Purpose'' (JINTO) to estimate the expenditure of foreign visitors to Japan. We can obtain the per person consumption amount by item and nationality from the "Survey on Consumption Trends of Foreigners Visiting Japan." Moreover, we can obtain the number of foreigners visiting Japan by nationality from the "Statistics on the Number of Foreigners Visiting Japan by Nationality and Purpose." The total consumption amount of foreign visitors to Japan is estimated by multiplying the two figures.

The "Survey on Consumption Trends of Foreigners Visiting Japan'' is a questionnaire survey of travelers on their amount of purchases by item during their stay in Japan. Table 4 presents the expenses per person by expense item in 2019 in the survey. The total expense per person is the sum of the expense of accommodation, food and beverage, transportation, entertainment and other service, shopping, and others. In addition, the shaded cells for share mean that the share is higher than that in the total for each expense item.

The countries with the highest per capita consumption in 2019 were the UK (263,000 yen), France (243,000 yen), Vietnam (238,000 yen), China (235,000 yen), and Australia (235,000 yen). Although China's per capita consumption did not reach those of the UK or France, it exceeded that of Germany (225,000 yen) and the US (221,000 yen). However, there are major differences in the composition of each expense item between Chinese

[11] The average propensity to consume in this study is calculated using the numerator as the total private consumption expenditure and the denominator as employee income in the input-output table. The employee income in the input-output table only includes the income of employees, but it does not include the income of sole proprietors. Therefore, we added the income of sole proprietors to employees' income, assuming that the per capita income of a sole proprietor is the same as that of an employer.

and Western tourists. The consumption patterns of Western tourists are quite similar, with the main expenditure items being accommodation expenses (approximately 40%) and food and beverage expenses (approximately 20%). For Chinese tourists, 50% of their spending is on shopping, 20% on lodging, and 10% on food and drink. The top shopping expenses for Chinese tourists are as follows: the first is jewelry and precious metals (approximately 10%), followed by watches and film cameras (approximately 8%); cosmetics and perfumes (approximately 6%); and shoes, bags, and leather goods (approximately 5%). In China, in addition to value-added tax (basic value-added tax rate of 13%), individual excise taxes are imposed on luxury consumer goods, including 10% on jewelry, 15% on luxury cosmetics, and 20% on luxury watches. If you purchase these things in Japan and bring them back to China, you will be exempted from these value-added taxes and excise taxes. This is one of the reasons why Chinese tourists shop in bulk.

Regarding East Asian countries and regions other than China, the per capita consumption of Vietnam, Hong Kong, and Thailand tourists in Japan was high, while that of the Philippines, Indonesia, and Singapore was below average. However, the consumption patterns of tourists from Southeast Asian countries were more similar to those of European and the US tourists, having a higher share of accommodation and food expenses. As it is difficult to save on accommodation and food expenses, the share of these items may have increased as a result, although this is mere speculation.

Table 4 Per Capita Consumption Expense of Foreign Visitors to Japan in 2019

(yen, %)

	China		South Korea		Taiwan		Hongkong		The US		The UK		Germany		France	
	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share
Accommodation	52,849	22.5	28,247	26.3	34,579	25.9	47,987	21.1	92,760	42.1	101,966	38.7	96,354	42.9	106,380	43.7
Food and drink	32,275	13.7	20,547	19.2	22,060	16.5	32,796	14.4	46,346	21.0	53,628	20.4	48,570	21.6	55,060	22.6
Transportation	15,108	6.4	8,154	7.6	12,195	9.1	15,065	6.6	25,940	11.8	29,039	11.0	30,720	13.7	33,337	13.7
Entertainment	13,617	5.8	8,958	8.4	7,392	5.5	8,413	3.7	15,585	7.1	31,400	11.9	13,598	6.1	16,099	6.6
Shopping	109,414	46.5	18,842	17.6	41,961	31.5	52,883	23.3	26,371	12.0	23,622	9.0	27,812	12.4	32,615	13.4
Confectionery	9,639	4.1	5,495	5.1	8,470	6.3	8,813	3.9	6,518	3.0	4,695	1.8	6,210	2.8	6,707	2.8
Alcoholic beverages	11,777	5.0	4,781	4.5	5,538	4.2	8,891	3.9	9,726	4.4	12,581	4.8	7,458	3.3	8,946	3.7
Fresh agri. products	5,381	2.3	6,022	5.6	3,286	2.5	4,484	2.0	8,177	3.7	4,263	1.6	9,329	4.2	8,635	3.5
Other foods	10,440	4.4	4,283	4.0	6,533	4.9	7,640	3.4	10,045	4.6	8,652	3.3	8,719	3.9	9,720	4.0
Cosmetics/Perfume	52,142	22.2	7,004	6.5	16,576	12.4	17,332	7.6	11,845	5.4	13,293	5.0	20,232	9.0	15,254	6.3
Pharmaceuticals	21,760	9.2	6,089	5.7	12,890	9.7	9,831	4.3	6,052	2.7	7,072	2.7	6,866	3.1	4,563	1.9
Health goods	20,203	8.6	11,116	10.4	10,640	8.0	10,794	4.7	6,944	3.1	5,866	2.2	10,120	4.5	3,444	1.4
Clothing	28,512	12.1	12,538	11.7	13,352	10.0	21,911	9.6	16,255	7.4	13,620	5.2	17,204	7.7	17,168	7.1
Leather products	49,810	21.2	12,963	12.1	16,159	12.1	26,293	11.6	15,286	6.9	14,599	5.5	14,252	6.3	16,875	6.9
Electric appliances	33,110	14.1	22,690	21.2	14,915	11.2	17,541	7.7	20,887	9.5	17,164	6.5	23,859	10.6	26,611	10.9
Watches/cameras	73,076	31.1	11,434	10.7	77,151	57.8	129,224	56.8	30,785	14.0	29,419	11.2	60,507	26.9	16,492	6.8
Jewelry	95,328	40.5	7,510	7.0	24,947	18.7	35,811	15.8	14,499	6.6	11,076	4.2	29,130	13.0	7,171	2.9
Traditional crafts	9,243	3.9	4,405	4.1	6,260	4.7	8,483	3.7	10,931	5.0	7,779	3.0	10,962	4.9	12,568	5.2
Book	5,749	2.4	4,219	3.9	6,228	4.7	4,975	2.2	6,311	2.9	5,399	2.0	8,637	3.8	5,424	2.2
Software	14,432	6.1	10,182	9.5	13,270	9.9	12,888	5.7	13,611	6.2	10,864	4.1	9,720	4.3	13,263	5.4
Others	21,214	9.0	8,352	7.8	20,488	15.4	19,339	8.5	14,946	6.8	17,023	6.5	20,272	9.0	20,296	8.3
Others	11,982	5.1	22,487	21.0	15,227	11.4	70,166	30.9	13,543	6.1	23,807	9.0	7,605	3.4	0	0.0
Per capita consumption	235,245	100.0	107,234	100.0	133,414	100.0	227,311	100.0	220,545	100.0	263,461	100.0	224,659	100.0	243,491	100.0

Note: Shaded cells in the column of share denote that the corresponding item's share in the country/region is higher than the world average.

Table 4 Per Capita Consumption Expense of Foreign Visitors to Japan in 2019

(yen, %) (Continued)

	Australia		Philippines		Thailand		Indonesia		Vietnam		Malaysia		Singapore		World average	
	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share	Cons.	Share
Accommodation	95,454	40.6	42,234	31.4	45,492	21.1	50,298	34.5	76,480	32.1	48,408	27.0	65,716	34.6	53,420	28.0
Food and drink	52,856	22.5	28,523	21.2	31,065	14.4	26,334	18.0	55,042	23.1	30,087	16.8	42,259	22.2	32,136	16.9
Transportation	31,153	13.3	13,472	10.0	16,484	7.6	19,753	13.5	20,392	8.6	17,325	9.7	19,395	10.2	16,509	8.7
Entertainment	21,469	9.1	9,678	7.2	9,629	4.5	9,159	6.3	18,187	7.6	10,530	5.9	12,616	6.6	12,355	6.5
Shopping	34,001	14.5	34,857	25.9	43,437	20.1	35,290	24.2	61,007	25.6	34,627	19.3	44,048	23.2	55,277	29.0
Confectionery	6,647	2.8	7,275	5.4	11,795	5.5	8,222	5.6	10,823	4.5	9,205	5.1	10,696	5.6	8,222	4.3
Alcoholic beverages	14,813	6.3	5,971	4.4	6,848	3.2	7,385	5.1	10,757	4.5	8,137	4.5	8,040	4.2	8,676	4.6
Fresh agri. products	10,634	4.5	7,767	5.8	7,255	3.4	4,668	3.2	29,720	12.5	6,080	3.4	8,898	4.7	5,819	3.1
Other foods	11,109	4.7	8,420	6.3	11,217	5.2	9,410	6.4	18,633	7.8	9,756	5.4	10,194	5.4	8,345	4.4
Cosmetics/Perfume	12,738	5.4	11,056	8.2	21,449	9.9	11,168	7.7	23,344	9.8	14,041	7.8	21,251	11.2	34,176	17.9
Pharmaceuticals	8,535	3.6	6,791	5.0	9,572	4.4	9,252	6.3	17,375	7.3	9,123	5.1	16,121	8.5	14,637	7.7
Health goods	10,031	4.3	8,053	6.0	11,902	5.5	9,649	6.6	17,201	7.2	9,337	5.2	11,951	6.3	14,361	7.5
Clothing	16,770	7.1	13,818	10.3	15,481	7.2	14,031	9.6	18,831	7.9	15,562	8.7	23,336	12.3	19,585	10.3
Leather products	13,101	5.6	21,910	16.3	17,899	8.3	17,827	12.2	26,299	11.0	17,692	9.9	32,746	17.2	28,986	15.2
Electric appliances	21,035	9.0	39,855	29.6	23,190	10.7	54,991	37.7	46,311	19.4	27,411	15.3	31,172	16.4	27,425	14.4
Watches/cameras	19,230	8.2	26,112	19.4	33,880	15.7	25,498	17.5	27,573	11.6	24,533	13.7	14,840	7.8	56,718	29.8
Jewelry	18,572	7.9	20,270	15.1	5,308	2.5	30,951	21.2	22,586	9.5	15,989	8.9	14,318	7.5	43,541	22.9
Traditional crafts	10,321	4.4	5,334	4.0	7,362	3.4	6,798	4.7	9,941	4.2	7,925	4.4	9,370	4.9	8,713	4.6
Book	4,822	2.1	3,888	2.9	9,315	4.3	4,635	3.2	11,647	4.9	4,234	2.4	5,302	2.8	5,894	3.1
Software	24,633	10.5	14,196	10.5	16,145	7.5	7,144	4.9	13,346	5.6	17,262	9.6	18,165	9.6	13,736	7.2
Others	11,982	5.1	16,470	12.2	15,450	7.2	12,423	8.5	13,768	5.8	19,099	10.6	15,035	7.9	16,443	8.6
Others	0	0.0	5,840	4.3	69,858	32.3	5,128	3.5	7,250	3.0	38,550	21.5	5,980	3.1	20,807	10.9
Per capita consumption	234,933	100.0	134,605	100.0	215,964	100.0	145,962	100.0	238,357	100.0	179,526	100.0	190,015	100.0	190,504	100.0

Note: Shaded cells in the column of share denote that the corresponding item's share in the country/region is higher than the world average.

Table 5 presents the total amount of inbound consumption by foreign visitors to Japan by expense item. This was calculated by multiplying the per capita expense for each expense item in Table 4 by the number of overseas visitors to Japan[12]. As presented in the table, the per capita consumption value of Chinese tourists is not much different from that of foreign tourists from Europe and America, but their total consumption value is significantly higher than that of other countries as the number of Chinese foreign tourists is extremely high. The total consumption value of Chinese tourists is approximately four times that of Korean tourists and approximately six times that of the US tourists.

The total consumption by item and country/region in Table 5 should be mapped to the industrial sector in the input-output table[13]. However, to be used in the input–output analysis, they must be split into producer price-based consumption, commercial margin, and transportation margin as the consumption amounts in Table 5 are purchaser price-based consumption. We calculated the share of the producer price, commercial margin, and

[12] The total consumption is calculated by multiplying the consumption per person and the number of visitors to Japan for the expenses that do not have a breakdown, such as accommodation, food and beverage, and other expenses. However, the sum of the breakdown items is not same as the figure for the parent item for the expenses that have a breakdown (e.g., transportation, entertainment and other services, and shopping), so an adjustment is required. In this study, the total consumption amount was distributed using the per capita consumption times the number of people of each break down as the corresponding weight.

[13] This Sector classification mapping between tourism statistics and input-output is listed in the appendix (Table 7).

transportation margin for each industrial sector based on the private consumption expenditure in the input-output table of the purchaser price and multiplied them and the consumption amount in Table 5 to calculate their respective amounts. Then, because $\mathbf{f}^{d}$ in Equation (1) is the consumption amount for domestic goods, we subtract the import portion from the consumption amount by using the calculated import ratio by sector from the input-output table.

Table 5 Estimated Total Amount of Inbound Consumption by Foreign Tourists Visiting Japan

(2019, billion yen)

Item \ Country	China	South Korea	Taiwan	Hongkong	The US	The UK	Germany	France
Accommodation	507.1	157.7	169.1	109.9	159.9	43.3	22.8	35.8
Food and drink	309.7	114.7	107.9	75.1	79.9	22.8	11.5	18.5
Transportation	145.0	45.5	59.6	34.5	44.7	12.3	7.3	11.2
Entertainment	130.6	50.0	36.2	19.3	26.9	13.3	3.2	5.4
Shopping	1,049.8	105.2	205.2	121.1	45.5	10.0	6.6	11.0
Others	115.0	125.6	74.5	160.7	23.3	10.1	1.8	0.0
Cons Total	2,257.0	598.9	652.5	520.7	380.2	111.8	53.1	81.9
Item \ Country	Australia	Philippines	Thailand	Indonesia	Vietnam	Malaysia	Singapore	World total
Accommodation	59.4	25.9	60.0	20.8	37.9	24.3	32.3	1,703.1
Food and drink	32.9	17.5	41.0	10.9	27.2	15.1	20.8	1,024.6
Transportation	19.4	8.3	21.7	8.2	10.1	8.7	9.5	526.3
Entertainment	13.3	5.9	12.7	3.8	9.0	5.3	6.2	393.9
Shopping	21.1	21.4	57.3	14.6	30.2	17.4	21.7	1,762.4
Others	0.0	3.6	92.1	2.1	3.6	19.3	2.9	663.4
Cons Total	146.1	82.5	284.9	60.3	118.0	90.0	93.5	6,073.7

5.3 Results

Table 6 summarizes the economic effects of inbound consumption by foreign visitors to Japan by country and region. In 2019, the economic effect of inbound consumption by foreign visitors to Japan was estimated to be approximately 12 trillion yen. The economic effects estimated in this study were slightly higher than those estimated by the METI (2020) and JTA (2021) presented in Table 3. This is because we estimated the inbound consumption of foreign tourists in detail by nationality, resulting in the initial consumption amount being higher than those estimated by METI (2020) or JTA (2021). In addition, one of the reasons why the estimated value was large is that the consumption of sole proprietors (also a part of household consumption) was considered when calculating the secondary effect.

First, the total economic effect by country/region was largest in China, at approximately 4.6 trillion yen, accounting for approximately 38% of the total, followed by Taiwan with approximately 1.3 trillion yen and South Korea with approximately 1.1 trillion yen. Among Western countries, the effect of the US was the largest, at approximately 0.8 trillion yen, and that of Thailand was the largest (approximately 0.4 trillion yen) among Southeast Asian countries. The effect of Vietnam remained at approximately 0.3 trillion yen although its per capita consumption was high, which is because the number of foreign tourists visiting Japan was small at about 500,000.

Table 6 Economic Effects of Inbound Consumption by Country/Region

(10,000 people, 1 billion yen, %)

Country/ Region	Number of foreign visitors	Consumption expenditure	Primary ripple effect	Secondary ripple effect	Total ripple effect		GDP in the primary ripple effect		GDP in the total ripple effect	
						Share (%)		Share (%)		Share (%)
China	959	2,257	3,323	1,246	4,568	38.2	1,790	42.0	2,461	42.1
South Korea	558	599	798	294	1,092	9.1	430	10.1	588	10.1
Taiwan	489	652	967	348	1,315	11.0	521	12.2	708	12.1
Hongkong	229	521	584	218	802	6.7	314	7.4	432	7.4
The US	172	380	605	223	828	6.9	326	7.6	446	7.6
The UK	42	112	173	63	236	2.0	93	2.2	127	2.2
Germany	24	53	87	32	119	1.0	47	1.1	64	1.1
France	34	82	138	51	189	1.6	74	1.7	102	1.7
Australia	62	146	245	89	334	2.8	132	3.1	180	3.1
Philippines	61	83	127	47	174	1.5	68	1.6	94	1.6
Thailand	132	285	320	119	438	3.7	172	4.0	236	4.0
Indonesia	41	60	94	35	128	1.1	50	1.2	69	1.2
Vietnam	50	118	189	70	259	2.2	102	2.4	140	2.4
Malaysia	50	90	116	43	159	1.3	63	1.5	86	1.5
Singapore	49	94	149	55	204	1.7	80	1.9	110	1.9
World total	3,188	6,074	8,707	3,246	11,953	100.0	4,262	100.0	5,842	100.0

Next, the effect on GDP was estimated to be approximately 5.8 trillion yen, where the highest effect was from China (2.5 trillion yen), followed by Taiwan (0.7 trillion yen). The effect of foreign visits to Japan on GDP was equivalent to 1.05% of the nominal GDP in 2019 (approximately 558 trillion yen). The “evaporation” of inbound consumption due to the COVID-19 pandemic was quite a blow to the Japanese economy as this 1.05% decrease is equivalent to about one-third of the nominal GDP negative growth rate of -3.24% in 2020 — the GDP was approximately 540 trillion yen.

From the perspective of the economic impacts by country that of Chinese tourists was of a different magnitude. This was not only due to the high number of foreign tourists visiting Japan from China but also because the per capita consumption of Chinese tourists was comparable to that of other developed countries, although China’s per capita GDP has just exceeded US$ 10,000, which is below those of developed countries. The increase in the number of foreign tourists from China is assumed to be a reflection of the increase in the number of wealthy people in China, although Japanese government policy changes, such as relaxing the issuance of tourist visas, had a great deal to do with this phenomenon.

6. Conclusion

We estimated the impact of inbound consumption by foreign tourists on the Japanese economy in 2019, which was before the spread of COVID-19. The economic effect of inbound consumption by foreign visitors to Japan in 2019 was estimated to be approximately 12 trillion yen in terms of total production and approximately 5.8 trillion yen in terms of GDP. The decline was equivalent to about one-third of the nominal GDP decline from 2019 to 2020 — the nominal GDP in 2019 was 558 yen and the growth rate was -3.4% from 2019 to 2020. This implies that the

"evaporation of foreign tourists" from Japan had a considerable negative effect on the Japanese economy.

It was confirmed that the influence of Chinese tourists on inbound consumption was significantly high. This was caused by the high number of Chinese tourists and the considerably high per capita consumption of Chinese tourists, which was comparable to those of Western developed countries.

Next, we predict the future trends of Chinese tourists. The major determining factor may be the increase in the income of Chinese people, although the increase in the number of Chinese tourists is partly due to Japan's efforts to promote international tourism, such as VJC and the relaxation of visa requirements (Morita, 2020). When the dollar-denominated income of Japanese people rapidly rose due to the appreciation of the yen since the 1970s, there was a boom in overseas travel by Japanese people to Europe and the US. In those days, foreign travel by Japanese was called a "shopping tour" and is clearly different from the current foreign travel by Japanese[14].

If the "bulk shopping" by Chinese foreign tourists is similar to overseas shopping tours that Japanese people used to do, then if the income of Chinese rises further, such "bulk shopping" will decrease. In recent years, "experiential consumption" has become more popular among foreign visitors to Japan, especially young people (Tang & Sakata, 2019). Specifically, there is the influence of Japanese dramas and anime, including the pilgrimage to sacred places where people visit filming sites and locations where the dramas were set. This type of "experiential consumption" itself does not lead to large tourism income, and the consumption of these foreign tourists is centered on lodging and food and beverages. However, Chinese foreign tourists' expenditure on lodging and food and beverages is low at present. The number of foreign tourists visiting Japan will increase even more as the income of Chinese increases (Morita, 2020), but it is important to expand tourism services, such as lodging and food for Chinese.

Conversely, overtourism, where foreign tourists concentrate on famous tourist spots, is also a problem. The basic policy of the "Tourism Nation Promotion Basic Plan," which was approved by the Cabinet in March 2023, is "creating sustainable tourism areas." There is a need for measures to diversify the number of foreign tourists, such as motivating repeat visitors, responding to long-term and business stays (JTA, 2023), and deregulation of the tourism industry (Arai, 2017).

Finally, we discuss future directions of this study. Airfares account for a large portion of international travel; however, in this study, transportation expenses are limited to domestic travel. If foreign visitors to Japan were to use Japanese airlines, there would be a considerable impact on the Japanese economy, but this study does not consider this aspect. We would like to take airfare expenses into account to estimate the impact on the Japanese economy more precisely in the future. Next, we would like to estimate the side effects of the increase in foreign visitors to Japan. Although an increase in tourism demand from foreign visitors to Japan has favorable effects on the economy, such as an increase in consumption or investment, it may have a negative impact on the economy. For example, waste generated by foreign tourists may increase waste disposal costs for neighboring municipalities or demand from Japanese residents may be crowded out if demand from foreign travelers increases too much. Finally, this type of research should continue. This study estimated the economic impacts of consumption by foreign visitors to Japan in 2019, but tracking changes in the economic effects of the tourism industry over time will also be important as a policy evaluation of the "Basic Plan for Promoting a Tourism Nation".

[14] According to a survey on the purpose of foreign trip for Japanese conducted by the Japan Travel Bureau in 2019, the first is "eating delicious food (18.2%)", followed by "seeing cultural attractions (17.7%)" and "seeing natural scenery (13.3%)" (Japan Travel Breau (2020)). Shopping is not more than 8.3%, which is now a minor purpose of travel. This survey result indicates that the purpose of foreign trip for Japanese is shifting from goods to experiential consumption.

References

Arai Naoki (2017). "Inbound tourism and regional development", *Studies of Regional Policy* (Takasaki University of Economics) *19* (3): 19-37, available online at: https://tcue.repo.nii.ac.jp/record/827/files/07arai.pdf. (in Japanese)

Cabinet Office (2002). "Basic policies for economic fiscal operations and structural reform 2002", available online at: https://www.esri.cao.go.jp/jp/esri/prj/sbubble/data_history/7/housin05_1.pdf. (in Japanese)

Hiramatsu Tomoru (2017). "The economic impact of inbound international tourism to Japan: The interregional input-output analysis", *Journal of International Studies* (Kwansei Gakuin University) *6* (3): 51-62, available online at: https://core.ac.uk/download/pdf/143641186.pdf. (in Japanese)

Hu Zeli, Kumar Jeetesh, & Kannam Suresh (2023). "Tourism economic impact assessment: Literature review using bibliometric tools", *International Review for Spatial Planning and Sustainable Development, D: Planning Assessment 11* (4): 205-223.

Huang Aizhen (2017). "Trends in travel and inbound consumption by Chinese tourists visiting Japan", *Asian Studies* (Shizuoka University) *12*: 25-40. (in Japanese)

Japan Tourism Agency (JTA) (2021). *Research Study on Economic Impacts of Tourism in Japan*, 2019 edition. (in Japanese)

Japan Tourism Agency (JTA) (2023). "Tourism nation promotion basic plan", available online at: https://www.mlit.go.jp/kankocho/content/810001005.pdf. (in Japanese)

Japan Travel Bureau (2020). "Annual report on the tourism trends survey 2020", available online at: https://www.jtb.or.jp/book/annual-report/annual-report-2020. (in Japanese)

Lee Lien-Chieh, Wang Yuan, Zhang Lanxin, Ping Liying, Zuo Jian, & Zhang Hongyu (2024), "Impact of COVID-19 on the economic loss and resource conservation of China's tourism industry from the supply chain perspective", *Cities 144*: 1-12.

MacDonald Margaux, Piazza Roberto, & Sher1Galen (2020). "A simple guide to estimating the impact of COVID-19 on travel and hospitality activity", *Research, Special Series on COVID-19*, IMF, available online at: https://www.imf.org/-/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-a-simple-guide-to-estimating-the-impact-of-covid-19.ashx.

McGray Douglas (2002). "Japan's gross national cool", *Foreign Policy 130*: 44-54.

Makita Mariko (2018). "Economic effects of inbound consumption in three Tokai prefectures", *Innovation & I-O Technique 25* (1): 25-45. (in Japanese)

Ministry of Economy, Trade and Industry (METI) (2020). "Estimation of the impact of evaporation of travel consumption by foreign visitors to Japan", available online at: https://www.meti.go.jp/statistics/toppage/report/minikaisetsu/hitokoto_kako/20200804hitokoto.html. (in Japanese)

Ministry of Land, Infrastructure, Transport and Tourism (MILT) (2002). "Global tourism strategy", available online at: https://www.mlit.go.jp/kisha/kisha02/01/011224_3/011224_3.pdf. (in Japanese)

Morita Kanekiyo (2020). "Economic Factors about sighting demand of Chinese tourist visiting Japan: Focus on income elasticity", *The Tourism Studies 31* (2): 37-46. (in Japanese)

Piboonrungroj Pairach, Wannapan,Satawat, & Chaiboonsri Chukiat (2023). "The impact of gastronomic tourism on Thailand economy: Under the situation of COVID-19 pandemic", *SAGE Open* (January-March): 1-12.

Tangcheng, & Sakata Yukishige (2019). "Investigation of the Chinese people's visit to Japan", *The Journal of Economics* (Chuo University) *60* (1): 179-193, available online at: https://chuo-u.repo.nii.ac.jp/record/12525/files/0453-4778_60_1_11.pdf.

Tourism Economic Newspaper (Kanko Keizai Shinbun) (2020). "Tourism-oriented country during eight years of Abenomics", September 18, 2020, available online at: https://www.kankokeizai.com. (in Japanese)

Yagasaki Noriko (2015). "Tourism policy challenges: Towards the internationally competitive tourism industry," *Serviceology* (Society for Serviceology) *1* (4): 28-35. (in Japanese)

Zhou Wen (2023). "COVID-19 impacts of tourism on Chinese economy", *Economic Research-Ekonomska Istraživanja 36* (2): 1-29.

Cabinet Office Economic and Social Research Institute. "National Accounts",
available online at: https://www.esri.cao.go.jp/jp/sna/menu.html.

Japan Tourism Agency (JTA). "Consumption trends of foreign visitors to Japan",
available online at: https://www.mlit.go.jp/kankocho/siryou/toukei/syouhityousa.html. (in Japanese)

Japan National Tourism Organization (JNTO). "Statistics on the number of foreign visitors to Japan by nationality and purpose",
available online at: https://www.jnto.go.jp/statistics/data/visitors-statistics/pdf/tourists_2021df.pdf.

Japan National Tourism Organization (JNTO). "Trends in the number of visitors to Japan since the start of the visit Japan project",
available online at: https://www.jnto.go.jp/statistics/data/marketingdata_tourists_after_vj_2022.pdf.

Table 7. Sector classification mapping between tourism statistics and input–output table

Expense items in tourism statistics		Sector number & name in I-O table	
Accommodation	Accommodation	101	Accommodation
Eating/drinking	Eating/drinking	102	Eating/drinking
Transportation	Air transport (domestic only)	79	Air transport
	Japan rail pass	75	Railway transport
	Railway/subway	75	Railway transport
	Bus	76	Road transport (except self-transport)
	Taxi	76	Road transport (except self-transport)
	Rental car	97	Goods rental and leasing
	Water transport (domestic only)	78	Water transport
	Other transport	82	Services relating to transport
Entertainment	Local tour/sightseeing guide	105	Other personal services
	Golf	104	Entertainment
	Themepark	104	Entertainment
	Theater/music viewing	104	Entertainment
	Watching sports	104	Entertainment
	Art museums, zoos, aquariums.	90	Education
	Ski	104	Entertainment
	Hot springs, beauty salons, etc.	103	Laundry/barber/beauty/bath
	Massage / medical expenses	92	Medical care
	Exhibition/conference participation fee	104	Entertainment
	Rental fee (excluding rental car)	97	Goods rental and leasing
	Other entertainment service	104	Entertainment
Shopping	Confectionery	8	Groceries
	Alcoholic beverages	9	Beverage
	Fresh agricultural products	1	Cultivated agriculture
	Other foods/drinks/tobacco	11	Tobacco
	Cosmetics / Perfume	26	Chemical final product
	Pharmaceuticals	25	Pharmaceuticals
	Health goods/toiletries	60	Other manufacturing
	Clothing	13	Clothes and other textile products
	Shoes, bags, leather products	31	Leather products/ fur
	Digital cameras, PCs, home appliances	50	Consumer electrical equipment
	Watches/film cameras	60	Other manufacturing
	Jewelry/precious metals	60	Other manufacturing
	Traditional crafts	60	Other manufacturing
	Books, magazines, guidebooks, etc.	18	Printing/bookbinding
	Music, videos, games, etc.	86	Information service
	Other items	60	Other manufacturing
Others	Others	107	Activities not classified elsewhere