

Good impression of Japan and tourism-purpose ratio of visitors from mainland China, South Korea, and Taiwan

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Abstract

Japan has the lowest growth rate of GDP out of the seven developed countries. The main reason is as follows, namely many kinds of resources are concentrated in the urban areas such as Tokyo and Osaka. On the other hand, rural resources are scarce and the consumption effect by foreign visitors to Japan is expected in the areas. The visitor numbers from mainland China, South Korea, and Taiwan to Japan account for more than half of the total number of foreign tourists. This paper describes the relationship between the percentage of a good impression of Japan (or percentage of people who like Japan the most) and the tourism-purpose ratio of the visitors from these three areas. The coefficient of determination (cd) is introduced in the relationship between those ratios. As a result, large coefficients are obtained in the cases of South Korea and Taiwan, and the tourism purpose ratio could be predictable with high reliability using a regression equation by examining the good impression ratio in those two areas. The cd for China is small and it is difficult to predict the ratio using a regression equation. It is effective to adopt other methods such as artificial intelligence (AI) to predict the tourism purpose ratio because there are many factors between Japan and China.

Keywords

tourism-purpose ratio, good impression, questionnaire, coefficient of determination, foreign tourists to Japan

1. Introduction

Some measures have been taken to increase the number of foreign visitors to Japan (inbound tourists) due to the lead of the Japanese government and the number had been increasing steadily until 2019. COVID-19 spread all over the world in 2020 and the number of inbound tourists dropped sharply in every country. Tourism to Japan has been also dropping since February 2020 [Shirabe et al., 2020]. International and domestic exchanges were lost for this reason and the tourism industry came to experience a strict management. Now, various kinds of measures for inbound tourists are a key point for regional revitalization in Japan. As an increasing measure, it is conceivable that tourists have a longing for Japan, interest in Japanese culture and history, etc. and finally have a good impression of Japan. This would contribute to international exchange and foreign policy by increasing the number of people who have a good impression of Japan, and the inbound tourists could increase naturally.

The Japanese government has been asking all foreign tourists about the purpose of entry into Japan and taking statistics. The purpose is classified into three categories and tourists have to choose one. They are ‘sightseeing’, ‘business’, and ‘others’ (which means visiting relatives or friends etc.). The percentage of entry for sightseeing will increase if many inbound tourists have a good impression of Japan. Of course, the visitors whose

purpose are business or others will increase with the percentage. The main three countries/region with many visitors to Japan are namely China, South Korea, and Taiwan [Japan Tourism Research, 2021]. It is considered that the percentage of the purpose of sightseeing for the visitors from these countries and region has something to do with the rate of a good impression of Japan.

This paper examines the relationship between the percentage of a good impression of Japan and the rate of the inbound visitors for the purpose of sightseeing from these three countries/region under such a hypothesis. As a result, it becomes obvious that there are strong correlations between these factors in South Korea and Taiwan and those coefficients of determination (R -squared) are 0.7 or above. On the other hand, there is not a correlation in the case of China. It is necessary to construct some measures based on the above results, that the people of South Korea and Taiwan have a good impression of Japan. Especially, it is thought that dissemination of Japanese culture and history are effective for these people to have an interest in Japan. Information dissemination giving a good impression and habits are effective, which are non-government power (private power). Inter-governmental relations sometimes affect various kinds of measures, the world situation, and the mutual exchange unlike private diplomacy. And, some measures may inhibit the sustaining exchange. Moreover, it is important to provide a system that can maintain a safe and secure environment and an advanced detection/recovery system because natural disasters occur frequently in Japan. A safe and secure system in addition to information dissemination make a good impression overseas

and the rate of sightseeing could increase because it accompanies a sense of security.

2. Inbound tourists in Japan

2.1 Change of number of inbound tourists

The Japanese government announced a campaign in January 2003 aiming to become a tourism-oriented country. The name is ‘Visit Japan Campaign’ (VJC). The number of inbound tourists were about 5.21 million in that year. The following goal was set by the government to increase the number of foreign tourists visiting Japan to 10 million by 2010 [Nagahashi, 2007]. As a result, the number showed an increasing trend for a while due to the campaign, although it was gradual. It was decreased by the following events, namely the Lehman Shock (2008), influenza pandemic (2009), and the Great East Japan Earthquake (2011). The transition of the number is shown in Figure 1. It is thought that the goal would have been achieved if there was not the event in 2009. Although the world exchange population had been indicating an increasing tendency, it decreased largely due to COVID-19 and some large-scale natural disasters in 2020. It decreased by 87 % from the previous year in Japan. As it secured the same number (about 2.66 million) as usual in January 2020, the depression of the year was alleviated a little. However, it further decreased by 0.25 million in 2021.

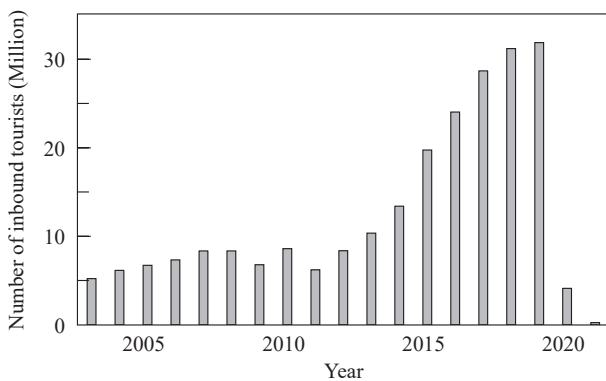


Figure 1: Change of number of foreign tourists visiting Japan

2.2 Country/region of origin

The number of inbound tourists to Japan increased sharply since around 2015 due to the continually increasing measures such as VJC. Especially the number of tourists from China accounts for 30 % of the total. China also accounts for first place out of Japan’s trade counterpart countries/regions, and the rate was 21 % (total export and import trade) in 2019, second place was the United States (15.4 %), third was South Korea (5.3 %), and forth was Taiwan (4.9 %). The cases in 2020 and 2021 were an unusual situation due to the infectious disease (COVID-19). Therefore the rate of tourists from each country in 2019 was paid attention. In 2019, the number of visitors from China was first place (30.1 %), South Korea was second (17.5 %) and Taiwan was third (15.3 %). The ranking is the same as the case in trade counterpart countries/regions except for the United States

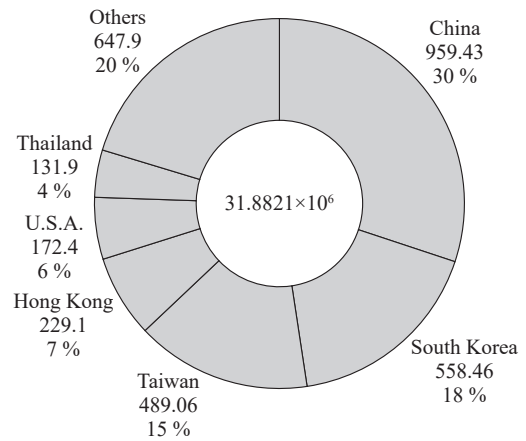


Figure 2: Number of inbound tourists from major countries/regions

(because the country is far from Japan). The rate of inbound tourists is indicated in Figure 2. The ones for China, South Korea and Taiwan account for 63 % as a total. The travel consumption of the total inbound tourists reached 4.8 trillion yen and it brought great economic effects to Japan (even in rural areas). It is obvious that these three countries/region are important for Japan from a tourist and a trade perspective. Therefore, it is significant to be conscious of the progress of exchange including tourism as a national policy. The progress will contribute to the Asian economy as well as the three regions. It is essential to contribute widely to the development of Asia as a whole while building a good relationship with these regions.

The progress of the exchange with the three regions will become more and more important for Japan. The change of real visitors from the countries/region is explained in Figure 3. Each characteristic increases significantly from 2015. The ones for China and Taiwan increased, but the one for South Korea decreased in 2019 unlike the other two areas (only the characteristic for South Korea decreases in 2019). Japan-South Korea relations were in a difficult situation from 2019. The main factors are the recruitment (drafted worker) problem and export control to South Korea. Japan tightened the control for some materials used in semi-conductor manufacturing. The boycotts

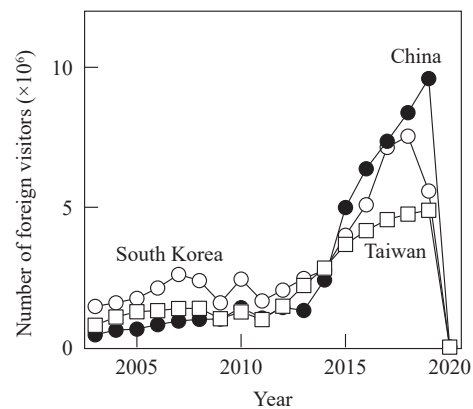


Figure 3: Change of visitor numbers from main three countries/region

to Japanese products became more intense in South Korea. Inter-state relations affected directly the number of visitors and also local economy largely. It is necessary to foster a soil for strengthening relationships based on private exchange in addition to inter-governmental relations. Deterioration of relationships is not good for both countries. It is necessary to construct a process to resolve concerns as soon as possible, especially it is required strongly to foster the social environment which could not affect the number of visitors.

3. Rate of tourists

The Japanese government asks foreign visitors to choose from three categories (sightseeing, business, others) when they enter Japan as the purpose of the visit. Although there are many persons for a business purpose, as total trade is increasing, most visitors are sightseeing. About 88.6 % of total visitors chose the sightseeing category in 2019. It is considered that there are many foreigners having a good impression of Japan when the percentage of sightseeing is large. It is necessary to construct various kinds of increasing measures for inbound tourists and these measures have to tailor to each country/region. First, the features of the countries/regions to which the visitors belong must be understood. Visitor’s feelings and impressions of Japan have to be improved. The visitors do not feel like visiting when they have a bad impression of Japan. The trends of the rate of sightseeing when the foreigners enter Japan are examined based on these assumptions. The three countries/region (China, South Korea, and Taiwan) are chosen as subjective regions.

3.1 China

Many tourists from China state that their impression is improved after they visited Japan. The number of foreign tourists dramatically decreased due to COVID-19 since 2020. It is thought that the impression of Japan has been formed only with information from the media. A lot of media contents give a bad impression to the viewers. Although there were about 10 million visitors from China in 2019, it significantly dropped to 1.07 million in 2020. The opportunities disseminating a good im-

pression of Japan due to the Chinese visitors were suppressed and the rate of a good impression is on a downward trend. It would further decrease if the investigation could be done again in 2021. The transition of a good impression of Japan is explained in Figure 4 [The Genron NPO, 2021]. This data was published from a private research institute. The characteristic decreases in 2013 and increases gradually after that. The cause is the Senkaku Islands issue. Japan nationalized the islands on September 2010 and anti-Japanese demonstrations became fierce. The terrible situation was continuing for a long time, therefore several relationship improvement measures were implemented and the rate of a good impression of Japan increased gradually.

The changes of the rate of sightseeing is shown in Figure 5. The characteristic trends (increase and decrease) of Figures 4 and 5 are similar. The cv indicated in the figure means the coefficient of variation. The standard deviation (σ) is 15.934. The rate of sightseeing before the occurrence of COVID-19 reaches a little less than 90 % and it can be said that the relationship between China and Japan and the impression of Japan was relatively stable. The correlation diagram of Figure 4 and Figure 5 is exhibited in Figure 6. The coefficient of determination (R^2)

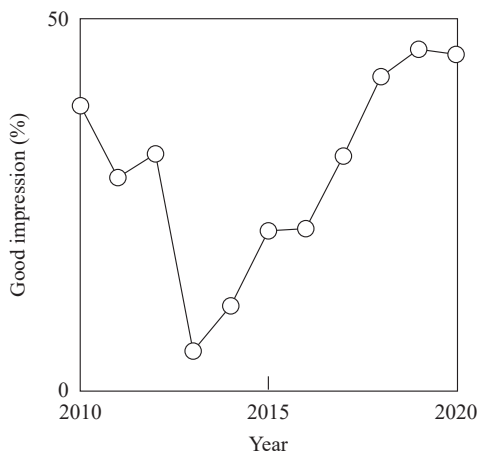


Figure 4: Transition of good impression of Japan for Chinese persons

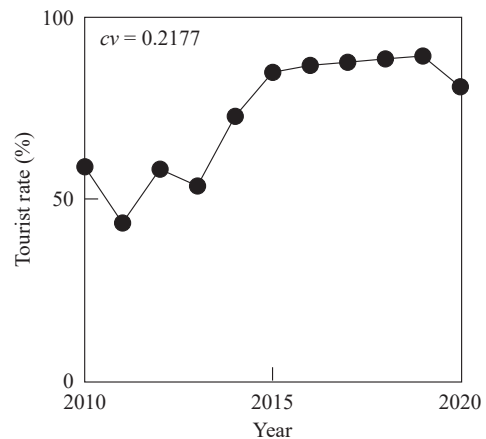


Figure 5: Transition of the rate of sightseeing of Chinese visitors

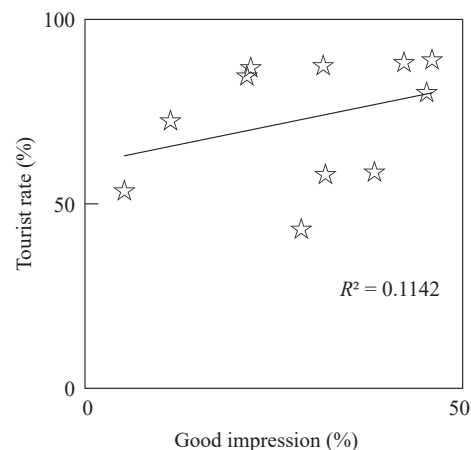


Figure 6: Correlation diagram between the rate of sightseeing and good impression of Japan for Chinese persons

is 0.1142, and there is no correlation. The coefficient becomes a little larger when the axis of a good impression advances by one year. There is a factor that a good impression affects the sightseeing rate one year later. It is thought that there are some factors reflecting sightseeing behavior. Media reports will have effects on the next year's sightseeing behaviors and many are group trips, which takes time to be implemented. The coefficient of determination becomes even smaller if limited to the last 5 years. It is difficult to introduce the sightseeing rate from the characteristic for a good impression using a regression equation.

3.2 South Korea

Japan and South Korea are neighboring countries near each other and have a deep historical connection. There are various historical issues, such as forced labor and comfort women during World War II, and the relationship between the countries gets better or worse. The transition of a good impression of Japan in South Korea is represented in Figure 7 [The Genron NPO, 2020]. It generally shows an increasing trend until 2019 although it temporally decreases in 2015. This year (2015) was the 50th anniversary of the normalization of diplomatic relations between Japan and South Korea, namely it was a milestone year for the countries. However, the relations were terrible due to a rekindling of problems and a high-level meeting had not been held for a long time. The meeting was held finally in November of that year.

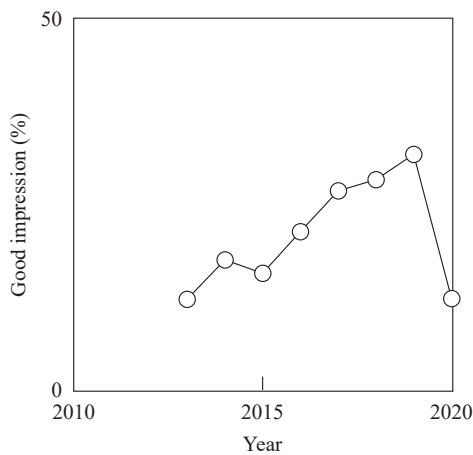


Figure 7: Transition of good impression of Japan for South Korean persons

The sightseeing-rate of South Korean people is shown in Figure 8. It generally shows similar trends to Figure 7. The coefficient of variation showing in the figure is 0.0772 ($\sigma = 6.501$) which is extremely small compared to the one for China. The rates are over 90 % in 2017 and 2018. The correlation diagram for Figures 7 and 8 is indicated in Figure 9. The coefficient of determination (R^2) is 0.7401 and there is a fairly strong correlation. The measures having a good impression reciprocally will directly lead to an increase in the rate of sightseeing.

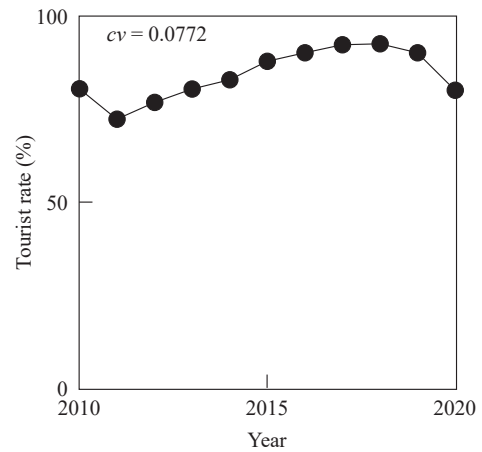


Figure 8: Transition of the rate of sightseeing of South Korean visitors

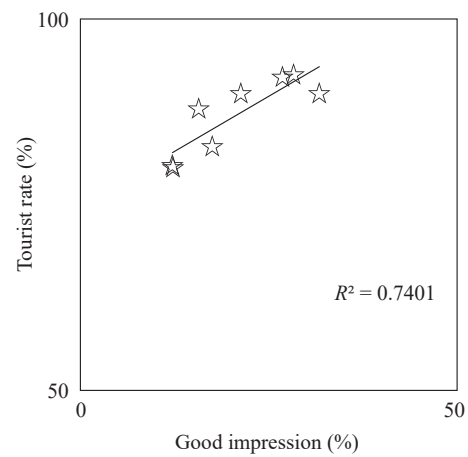


Figure 9: Correlation diagram between the rate of sightseeing and good impression of Japan for South Korean persons

3.3 Taiwan

Taiwan is said to be the most pro-Japanese. There is a territorial dispute (Senkaku Islands in Japanese, Diaoyu Islands in Chinese) as an issue for both countries. Taiwan is also taking a stance to establish territorial claims for the islands from around 1969, similar to China. Fishers especially insisted on territorial rights. On the other hand, both countries have been achieving a harmonious relationship and large donations have been being sent to disaster areas in each country by various private sectors every time a disaster occurred. People living in Taiwan chose Japan as a favorite country (59 % in 2018) according to a survey, second was China (8 %), and third was the United States (4 %). The transition of the rate of Taiwanese choosing Japan is shown in Figure 10 [Japan-Taiwan Exchange Association, 2019]. The rate is different from the previous factor which is a good impression of Japan and adopted in the cases of China and South Korea. It is thought that the proportions are worth comparing to each other. The questionnaire surveys may or may not be conducted differently from year to year, and the plots are indicated intermittently. The value in 2009 was 52

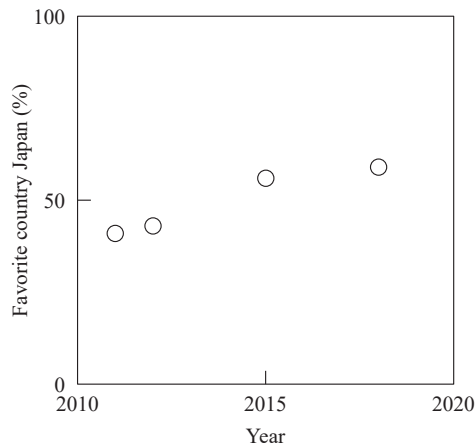


Figure 10: Transition of good impression of Japan for Taiwanese persons

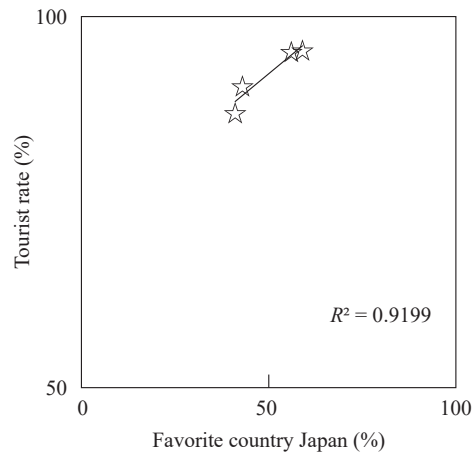


Figure 12: Correlation diagram between the rate of sightseeing and good impression of Japan for Taiwanese persons

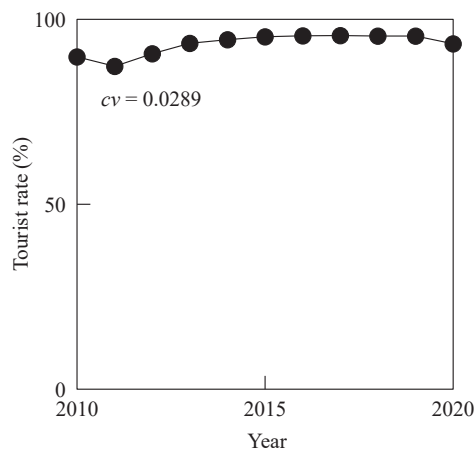


Figure 11: Transition of the rate of sightseeing of Taiwanese visitors

%. It is not plotted in the figure. Of course it is necessary to survey a good impression of Japan also in Taiwan. The rate of sightseeing tourists from Taiwan is indicated in Figure 11. The values are maintained at almost 95 % and the maximum value was 95.6 % in 2017. It decreased somewhat to 93.4 % in 2020 due to COVID-19. The characteristic was influenced by the infection status in Japan because the rate of infected persons was extremely low at that time in Taiwan. The cv is 0.0289 ($\sigma = 2.701$).

The correlation diagram between Figure 10 and Figure 11 is represented in Figure 12. Although the number of data is small (only four plots) compared to the cases of China and South Korea, the coefficient of determination is 0.92 and it is a very large value. It is thought that this value should be used as a reference. It is maximum compared to China and South Korea. Therefore, the rate of sightseeing can be predicted with high reliability by examining the proportion who chose Japan as a favorite country. And, the number of visitors can be forecasted as a result.

4. Rate of change for sightseeing

The transitions of sightseeing-rate of three countries/region

were described above and the number of tourists from those areas have made up the majority of inbound visitors. The rate of change is introduced in this section. When the rate of change is small, it is considered that Japan can secure tourists from those areas in a stable manner as usual. And, it is thought the bilateral (or region) relations are stable. As a whole, characteristics for the three countries/region showed the lowest value in 2011, the values were adopted respectively as a standard. The rate of change is calculated as follows. If the rate of sightseeing in 2011 is r_{2011} and the rate in each year is rx , the rate of change in each year is introduced using the following equation $(rx - r_{2011}) / r_{2011}$. The result is shown in Figure 13. The fluctuation of characteristic for China is large. As the actual rate of sightseeing for China in 2011 was fairly small (43.4 %) compared with the ones for South Korea and Taiwan, the fluctuation becomes larger. The whole fluctuation ranges are small limited to 2015 to 2019, and Taiwan has the least fluctuation. The Great East Japan Earthquake occurred on March 11, 2011 and a large amount of radioactive material was released from TEPCO Fukushima Daiichi Nuclear Power Plant. This nuclear accident shocked the world and the prestige for Japanese sci-

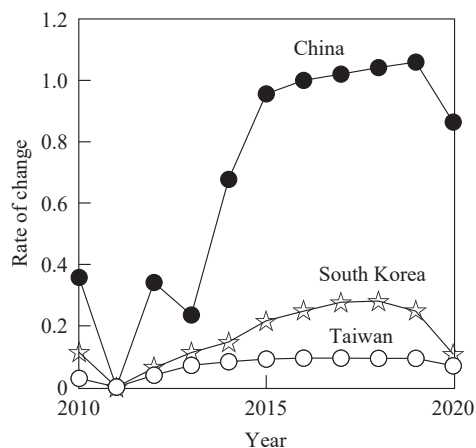


Figure 13: Characteristics of the rate of change of sightseeing percentage from three countries/region

ence and technology was greatly reduced [Ohno, 2013]. It was predicted that the number of foreign visitors could decrease as the whole of Japan was considered a dangerous area, and indeed the number of foreign tourists dramatically decreased as expected. However, the rate of sightseeing from Taiwan did not decrease so much. This rate was always stable but it decreased in 2011. Taiwan is the most pro-Japanese and has the highest sightseeing-rate with regards to Japan due to less diplomatic friction.

5. Conclusion

Visitors from China, South Korea and Taiwan to Japan occupy over 50 % of all foreign travelers, and this trend has been continuing for several years. Major visiting places are Tokyo, Osaka, Chiba, Kyoto and Nara when staying in Japan. Some tourists may visit other regions and contribute to the local economy. There is a possibility that these regions depend on foreign consumption. Japan has a declining birthrate and an aging population (especially in rural areas), and it is difficult to increase domestic travelers. Rural areas will have to rely on the consumption as a domestic situation. Various measures to increase visitors from the three regions (China, South Korea and Taiwan) will play a major role in the future. Some measures to improve the consumption are also required. It is reported that many inbound tourists have a sense of familiarity with Japan after their visits. Mutual visits also contribute to the bilateral diplomacy.

In this paper, some analyses were performed using the rate of a good impression of Japan (or the rate of Japan chosen as a favorite country) and sightseeing-rate. Survey regions are China, South Korea and Taiwan. The correlation between the rates was introduced. As for results, each coefficient of determination was large in the cases of South Korea and Taiwan and it is concluded that the sightseeing-rate can be predictable using the rate of a good impression of Japan in the case of South Korea or the rate of Japan chosen as a favorite country in the case of Taiwan. The coefficient is small in the case of China and it is difficult to judge the Chinese sightseeing-rate using the coefficient. The coefficient of determination in the case of China becomes smaller even if limited to the last few years. Taiwan maintains a stable relationship with Japan when it is judged using the results.

It is expected that the number of sightseeing visitors to Japan from South Korea and Taiwan can be estimated based on the above results, and the estimation becomes a beginning to build strategies in advance. Although the percentages in the cases of South Korea and Taiwan are comparatively predictable using regression equations, the case of China is difficult to predict. It is thought multiple factors are intricately intertwined in the case of China, for example media coverage, intergovernmental relations and national income. It will be essential to take advantage of AI (deep learning is effective) based on the factors. This is expected to improve productivity and allocate effectively human and facility resources using the rate-analysis.

And, an introduction of new analysis methods must always be considered for the purpose of improving accuracy. Informatization is extremely necessary in the tourism industry.

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(Received April 14, 2022; accepted May 6, 2022)