Research Letter

# Japanese tourism strategy and factors focused on SDGs

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**Abstract**
*Japan is experiencing the highest aging rate in the world and cannot be expected to manage the sharp increase in GDP due to the population decline. Innovation is necessary to increase GDP in the age of population decline and allocate not only human resources but also physical resources from the centralized Tokyo area to local areas, which is called 'regional revitalization'. Development of the tourism industry, agriculture and fishery is necessary for regional revitalization. Japan's hospitality in the tourism industry is said to be the best in the world, however the cost is low and an improvement of labor productivity is expected. It is essential to be able to attract innovation which utilizes artificial intelligence and IoT (Internet of Things). It is also important to fit the thoughts of SDGs and Society 5.0.*

**Keywords**
*Japanese tourism strategy, regional revitalization, SDGs, Society 5.0, disaster countermeasures*

## 1. Introduction

The number of foreign tourists visiting Japan (inbound tourists) temporarily decreased dramatically due to the Great East Japan Earthquake (occurred on March 11, 2011). After that, it has been increasing due to the active promotion of government and tourism industry. The total number of inbound tourists was about 31.88 million (2.2 % increase from the previous year) in 2019 according to the data (preliminary value) published by the Japan National Tourism Organization (JNTO). Many in the country and region of origin are China (30.1 %), Korea (17.5 %), Taiwan (15.3 %) and Hong Kong (7.2 %). The two countries and two regions account for 70 %, namely there are many visitors from Asia. The travel consumption was 4,811.3 billion yen (6.5 % increase from the previous year) and 158,000 yen per person (3.5 % increase from the previous year). Travel balance is surplus of 2,635 billion yen (the highest ever) and the contribution to the Japanese economy is increasing. There were typhoons and heavy rains in 2019. In addition, the relationship between Japan and South Korea deteriorated due to a recruitment problem, and the total number of inbound tourists has increased slightly. The main reason for this is that it was significantly reduced from the predicted value for South Korea. The Rugby World Cup held in Japan in 2019 attracted many inbounds such as supporters who stayed for a long time. There were twenty participating teams (three teams from the UK) and the cup brought a great economic effect to Japan. Direct economic effect is said to exceed 100 billion yen. However there was a large drop in the number of visitors from Korea, and the economic effect did not fully compensate for the decrease. As a result, it was limited to a slight increase from the previous year. It is necessary to disperse the origins of the country/region and promote private exchanges that surpass political problems as a future strategy.

In the dispersion of the country/region of origin of inbounds, improvements of domestic acceptance systems including globalization and the convenience of transportation access to rural areas are necessary. Achieving the goal (40 million inbounds in 2020) is difficult because the convergence of new coronavirus infections could not be predicted. It is important to consider how Japanese tourism strategy should be after COVID-19. Above all, a decentralization of the country/region of origin, understanding the visiting purpose of inbound tourists to Japan, and increasing their satisfaction level are essential due to a reliable data analysis. It is basic to increase repeating visitors. Only improving hospitality ('omotenashi' in Japanese) in each region is not enough. It is also required to develop a communication tool including simple translating devices, and prepare the Wi-Fi environment as Japanese infrastructure development. Japan must strive to improve the acceptance environment (in terms of hard and soft) while considering the culture and customs of local residents. At that time, Japan is a technology-based country and must utilize the strengths. Decentralization of the visiting spots of inbound visitors is strongly required to achieve the goal. Human resource development has been becoming necessary with the globalization of local areas. Promotion of regular flights connecting regional airports in neighboring countries and Japanese airports is also important. However, it is not necessary for all regions of Japan to build a system of attracting tourists from countries around the world. Preparation should be for promotion which targets a specific country/region of origin depending on the needs and resources in each Japanese region. It is impossible for all Japanese regions to match the purpose of all inbound tourists and to improve the satisfaction level.

All Japanese regions have to build a new tourism policy taking into account the Japanese government policy and the world situation including the trend of the United Nations. The sustainable development goals (SDGs) by the United Nations

and Japan is advocating Society 5.0 as a future society concept. The measures that are consistent with this goal and concept are required. The main considerations for constructing policies specific to each region are described in this paper while taking a bird's eye view of the current situation surrounding Japan

## 2. Current Japanese status

### *2.1 Changes in population*

Japan is facing an era of population decline, and the declining birth rate and aging population are progressing. The peak Japanese population was about 128 million (2008) according to the statistics of the Ministry of Internal Affairs and Communications. The population in 2018 fell by 1.64 million from its 2008 peak and the decreasing rate has been continuing year by year. The number of births was 0.864 million and the death toll 1.376 million in 2019. The tendency is remarkable and the depopulation is progressing further in rural areas. In particular, the decline in the working-age (15-64 years) population is remarkable and the labor shortage is expanding. The population pyramid on July 2019 is remarkable, it is data published by the Statistics Bureau of the Ministry of Internal Affairs and Communications [Statistical Bureau, Ministry of Internal Affairs and Communications, 2020]. The working-age population peaked in 1995 and the value was 87.16 million, and it has dropped to 59.5 %. People 65 years old and over occupy 28.4 %, and the ratio is increasing [Statistical Bureau, Ministry of Internal Affairs and Communications, 2019].

When future tourism industry strategies are discussed, the population decline must be considered with the declining birth rate and aging population. When a customer attraction strategy is constructed, the occurrence of infectious diseases and natural disasters have to be taken into account [Editorial Production Department of Santhosya, 2017]. Consumption falls as the population decreases and an increase in GDP (Gross Domestic Product) cannot be expected. It is important to maintain economic activity [United Nations, 2020].

### *2.2 Labor productivity*

Japan's GDP is third in the world and the growth rate is very low, namely the significant increase of personal income could not be expected. GDP in 2019 was about 558 trillion yen and the growth rate is less than 1 % compared to the previous year. Its value is predicted to drop by less than 5 % because of COVID-19 in 2020.

GDP per capita in Japan was about US$ 39,304 in 2018 according to the International Monetary Fund (IMF) announcement and its ranking was 26th in the world (1st place Luxembourg; US$ 115,536, 2nd Switzerland; US$ 83,162, USA 9th; US$ 62,869, Germany 18th; US$ 47,662). The tourism industry is thriving in Luxembourg and Switzerland. Improvement of labor productivity is required in order to increase the personal income. The labor productivity of 2018 in Japan was the lowest in the advanced seven countries according to the announcement of the Japan Productivity Headquarters, and ranked 21st (US$ 46.8 ≈ 4,744 yen/hour) among the member states of the Organization for Economic Co-operation and Development (OECD, 36 member countries) [Japan Productivity Center, 2019]. European countries are dominating, and Japan is top in Asia but it is on the decline, that is to say, it is necessary to reduce the wage gap and improve labor productivity. Among tertiary industries, which account for more than 70 % of GDP in Japan, it is said that the labor productivity of service industries (hotel, retail, wholesale, restaurant, etc.) is particularly low. Service industry productivity is about 50 % of the USA (the compared percentage for the accommodation and restaurant is 38.8 %, wholesale and retail is 31.5 %), and for European countries is about 70 % [Takizawa, 2018]. Japanese labor productivity could be improved due to various future strategies. In order to improve it, it is necessary to focus on the following items.

- Proactive utilization of ICT
  Improving work efficiency including backyard by introducing ICT, automation by IoT and AI etc. from the tangible and intangible sides, easy data retrieval, introduction of self-accounting system, enrichment of services by face recognition and comfortable stay
- Improvement of low wages and long working hours
  Internationally low minimum wage, improvement of service overtime and long working hours
- Low price for service
  Though Japanese hospitality ('omotenashi' in Japanese) is recognized worldwide, the price is almost free, high quality of service in Japan but low price, improve the one while maintaining high service quality

Automation is required by actively utilizing information and communication technology, and an innovation is expected to create new value utilizing new ideas and technological innovation. At the same time, the strategies that produce high productivity are required while aligning with SDGs (Sustainable Development Goals) which are set by the United Nations and Society 5.0 which is a concept of future society advocated by Japan.

### *2.3 Tourism and SDGs*

SDGs were adopted as a sustainable development goal set to comprehensively solve economic, social, and environmental issues by the United Nations General Assembly in September 2015. The outline is shown below.

- Adopted unanimously as the philosophy of 'no one is left behind'
- Action plan for the 193 member countries of the UN in 15 years from 2016 to 2030
- The plan consists of seventeen goals, 169 specific targets and 244 indicators that measure the achievement level towards 2030

United Nations World Tourism Organization (UNWTO) proposes to work on the following three goals as the main goals.

- Goal 8 (Create decent work and economic growth)
- Goal 12 (Influence responsible consumption and production)
- Goal 14 (Develop life below water)

It is necessary to build a strategy while focusing on all goals, especially Goal 13 (Organize climate action). Japan has the following major goals.

- Goal 5 (Enforce gender equality)
- Goal 12 (Influence responsible consumption and production)
- Goal 13 (Organize climate action)
- Goal 15 (Advance life on land)
- Goal 17 (Guarantee peace, justice, and strong institutions)

The goals are clearly defined and the method of advancing the items is left to each institution (country, municipality, company and individual). It is necessary to set the indicators and constantly monitor, furthermore, to proceed while understanding the degree of achievement by PDCA (Plan-Do-Check-Act). Ultimately, it is necessary to balance each goal with considering the economic growth (solving the trade-off) and to establish a mechanism for citizens (individuals) to participate in the activity. And, the activity also has to be carried out while considering how to achieve the solution backwards from the goal (back cast). The SDGs do not have targets for 'nuclear' or 'LGBT (Lesbian, Gay, Bisexual and Transgender)'. Those areas are important and of consideration. If all goals and targets are focused on, the goals will blur because they cover a wide range. In citizen participation, it is necessary to focus on the following and incorporate the indicators into easy-to-understand descriptions.

- Focus on two or three fields
- Make them easy to understand and work

In the case of Japan, the flow example is shown in Figure 1. The case of Goal 14 (Develop life below water: Conserve and sustainably use the oceans, seas and marine resources for sustainable development) is indicated by the Japan Agency for Marine-Earth Science and Technology. The agency is constructing a data system on biogeographic information (especially marine biodiversity information) and aiming for marine conservation based on scientific knowledge. The number of data (the ratio) is adopted as the target value.

### 2.4 Society 5.0

The Japanese government has formulated the '5th Science and Technology Basic Plan' in January 2016, in which 'Society 5.0' is specified. The Cabinet Office defines it as follows [Ministry of Internal Affairs and Communications, 2019]:

> Human-centered society which can solve both economic development and social issues due to the highly integrated system fusing cyber space (virtual space) and physical space (real space)

In the society, the following information technologies are utilized positively and a super smart society will be formed, namely artificial intelligence (AI), IoT and big data technologies are utilized and the society explores the possibility of new business. Keidanren (the Federation of Economic Organizations) is proposing the following compatible concept to achieve economic development and solving social issues by utilizing innovative technology.

Society 5.0 for SDGs

It could solve various social issues and create new value based on digital innovation, human imagination and creativity [Hasegawa, 2019].

### *2.5 Disaster countermeasures*

The number of inbound tourists depends on the outbreak of infections, political issues (including terrorism) and disaster situations. The target inbound number of Japan in 2020 was 40 million. It is decreasing sharply and difficult to achieve the target due to the outbreak of the infectious disease (COVID-19), which occurred in Wuhan, China from the end of 2019. The increase of the inbound number was a little (2.2 % increase from the previous year) due to the occurrence of natural disasters and the comfort women issue with South Korea despite the Rugby World Cup held in the year. Therefore, it is essential to consider the measures to avoid the following three risks.

- Outbreak of infectious disease
- Political issue
- Natural disasters

As it is expected to cause enormous damage due to large-scale disasters (typhoons, earthquakes and heavy rains), the countermeasures including prediction must be decided. It is required to collect various kinds of data for the measures after the outbreak not only disaster prediction. The details of the damage could be understood by fusing information from satel-

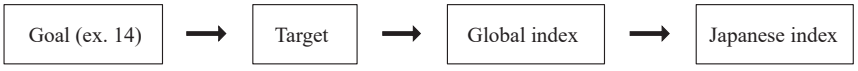


Figure 1: The process for Goal 14

lites and local information from live cameras. Satellites can give a bird's-eye view of disaster areas and useful instructions can be issued using fusion information. Technology has been developed that can identify a one meter object on the ground from satellite images even at night or covered by clouds. It is also necessary to fuse information from other sensors (water level, tide level and flow rate etc.) as well as weather sensors and lead to quick evacuation behavior. It is essential to secure a lifeline (electricity, gas, water, transportation, and information equipment). It is also necessary to secure medical equipment for dialysis patients and private power generators. Figure 2 explains the required infrastructure in the event of a disaster.

Information and communication technology (ICT) is the core infrastructure in an evacuation center, in which artificial intelligence (AI), IoT and robots will be utilized. The introduction of digital transformation (DX) technology must be considered from now on. In the event of a disaster, ICT will be the main technology responsible for input/output and processing of information. The location information of a person must be understood more than anything. It is an important issue whether to allow face recognition or to protect people's privacy to some extent. Human life must be prioritized over privacy in an emergency.

## 3. Tourism policy for regional revitalization

Although Japan's population is declining, the population of the Tokyo area (Tokyo, Saitama, Chiba and Kanagawa Pref.) is on the rise. The population in Japanese rural areas is declining and these areas are losing their vitality. It is necessary to have a policy to revise the overconcentration of people, goods, money, etc. in the Tokyo area and disperse the resources to rural areas for improving the vitality of Japan as a whole and stopping the population decline in rural areas. It is effective to increase the 'related population' which is not the migrant population or exchange population. The related population means the involving population in the region. The comprehensive policy becomes regional revitalization and there is the strategy to revitalize 'Town/People/Work', which is called 'Regional Revitalization' and the key points are tourism and agriculture promotion. A significant increase in domestic tourists cannot be expected and it is necessary to increase inbound tourists. The main destinations for inbounds were Tokyo, Osaka, Chiba, Kyoto and Fukuoka Prefectures in 2019, which are urban areas. It is expected to disperse the tourists in rural areas such as Hokkaido, Shikoku, Hokuriku, Tohoku and San-in. It is necessary to take some measures after COVID-19. In order to achieve the goal after COVID-19, it is necessary to urgently improve the acceptance environment for inbound tourists while utilizing the international tourist tax (departure tax). The following countermeasures are important; namely a multilingual environment when using public transportation devices, Wi-Fi maintenance, and information dissemination to overseas.

A new tourism strategy must be developed as a pillar of regional revitalization. The measures for the following four items can be mentioned.

- Declining birth rate and aging population
- Decrease in GDP
- Low labor productivity
- Disaster countermeasures

In addition, human resource development in each region is important. It is necessary to solve these four items to contribute to regional revitalization through innovation. It is desired for

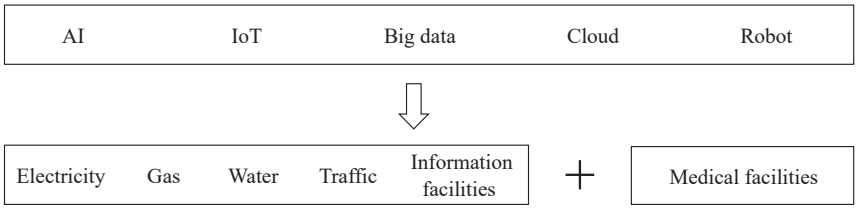


Figure 2: Securing lifeline and medical facilities in times of disasters

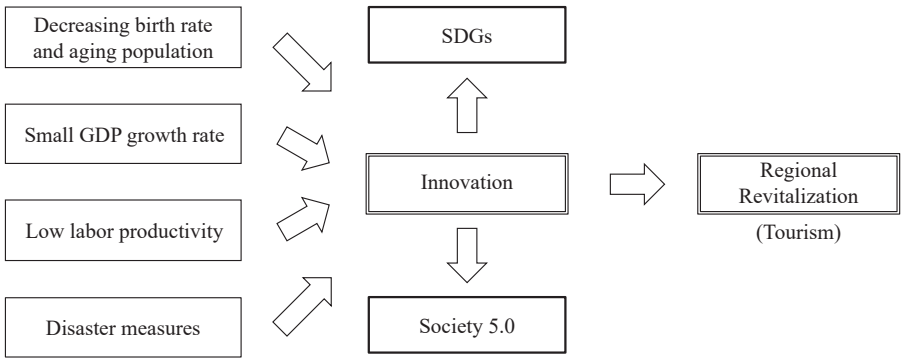


Figure 3: Problems for regional revitalization

the measures to link with SDGs and Society 5.0. The relationship is shown in Figure 3.

As mentioned above, the introduction of ICT is a matter of course and innovation utilizing ICT is required strongly. And, there are some issues, namely the development of the railway network to attract tourists to rural areas and the privatization of regional airports with deficits. Each local government and company should also actively introduce 'subscriptions' to improve the convenience (not only transportation, but also eating, drinking and accommodation) of tourists as a soft infrastructure [Amemiya, 2019]. Introducing MaaS (Mobility as a Service) improves the satisfaction levels of residents and tourists [Moriguchi, 2019]. MaaS has to be considered thoroughly as a well-thought-out system to ensure traffic access in rural areas. Although there are some difficult aspects at this stage, it is required to develop a new regional system that contributes to productivity improvement by introducing autonomous driving as a new technology.

## 4. Conclusions

This paper describes the factors for building tourism strategies while looking at the current situations in Japan. Although it is necessary to be supported by academic analysis, the urgent items are described. Each strategy has to be built while recognizing that Japan is in an era of a declining birth rate and an aging population. Declining GDP and declining labor productivity are inevitable due to the declining birth rate and aging population. As it is common to all industries, some clues can be found, which solve many problems including the economic issues, if the birth rate could be improved. However, it is a very difficult task, and innovation is expected to complement the clues. One of them is the policy 'Society 5.0 for SDGs' and it is an important slogan for the tourism industry. Basically, sightseeing is a way to get out of the daily lifestyle and experience extraordinary life, namely tourism generally involves movement. Autonomous driving will be indispensable as a future technology. Subscriptions and MaaS will be necessary as new policies, which create new economic benefits.

There are many issues, but those will be supported utilizing Japanese technological capabilities. It is necessary to construct an environment that encourages innovation.

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