Chapter 8
What Can Be Done Before a Municipality “Disappears”: Making the Best of Negative Municipal Resources

Abstract This chapter reiterates that the overall population of Japan continues to decline, although some municipalities have been successful in their community revitalization efforts. The reason some municipalities are successful may come from a realization of their municipal power. The Regional Revitalization Law of 2014 certainly facilitated municipalities in examining their demographic situations, and to realize their municipal power. However, it is questionable how much municipal power has been taken into consideration in community revitalization. Let us reiterate then, the very first step for regional revitalization is to realize its own municipal power, be it positive or negative. In the era of the so-called Society 5.0, this chapter explores some successful cases of community revitalization through the active use of Information and Communications Technology (ICT) programs. We pay close attention to successful application of community building, such as drones, the Internet of Things (IoT), open data, cloud service, crowdfunding, inbound tourism, and economies-sharing. We come to realize that modern ICT programs can help, but communities’ determination to assess their municipal power, both strengths and weaknesses, is of most importance. We must admit that there are some unresolved issues in the study. We are most willing to set them as essential themes for the future research of community revitalization in Japan. At this point we can point out two essential unresolved issues for future research. First, we emphasized municipal power such as marriage power, household type, and economic indicators for the population-sustaining power of municipalities. However, in our future research we need to explore other aspects of municipal power, to allow the pursuit of regional revitalization more effectively. Although it is difficult to measure, we need to tap on the subjective dimension of people who facilitate community revitalization. Second, we have made deliberate efforts in taking the Goki-Shichido, particularly its provinces, as our theoretical framework to examine regional differences in municipal power, especially within the same prefecture. We were successful in examining such prefectures as Tokyo and Aichi of the Tokaido region, Aomori and Yamagata of the Tosando region, Osaka of the Kinai region, Shimane of the Sannindo region, Kochi of the Nankaido region, and Fukuoka of the Saikaido region. Nevertheless, we need to test municipal power in other prefectures within the prefectural variations, such as Nagano of the Tosando, Shizuoka and Mie of the Tokaido, Hiroshima of the Sannyodo, and Fukui, Ishikawa, and Niigata of the Hokurikudo. Only if we know these prefectural, the
Goki-Shichido, and provincial variations can we say that taking the Goki-Shichido as our theoretical framework for regional variation is validated. We believe, however, our studies on Municipal Power and Population Decline in Japan: Goki-Shichido and Regional Variations are significant in shedding light on an unexplored field. One effective strategy in fighting the problem of Japan’s declining population would be to bring foreign workers into the municipality. An example is Izumo-shi in Shimane Prefecture. The city successfully implemented the Multicultural Symbiosis Promotion Plan to settle foreign workers with Family Stay status into the municipality. The implementation of such a plan seems simple, but is difficult to achieve. Izumo-shi, however, has proved that getting foreign workers settled in the municipality, with their families, would be one of the most effective strategies for population decline.

8.1 Needs for Regional Revitalization Programs by Analyses of Municipal Power

We started our project by saying, “In much of the world, country leaders worry that their population may be growing too fast. Not in Japan.” Today’s Japanese population of 127 million (2015 census) is projected to fall to 99 million by 2050 and 88 million by 2065, according to the National Institute of Population and Social Security Research (IPSSR 2017). Recently published World Population Prospects 2019 by the United Nations (2019) confirms what we have said. It reports that the world’s population continues to grow although at a slowing rate. The world population in 1950 was 7.7 billion, and is projected to exceed 100 billion by 2050, continuing to increase into the year 2100 (see Fig. 8.1a). We should note, however, regions where the population explosion continue to occur are mostly in African and West Asian nations (United Nations 2019).

The population of Japan, on the other hand, will continue to decline from 127 million in 2015 to a projected 75 million by the year 2100, a projection which had been reduced from 84.5 million by the previous UN report of 2017 (see Fig. 8.1b) The UN report also highlighted the rapid aging of the world’s population (see Fig. 8.2a). The aging speed of Japan, in particular, is truly unprecedented. The proportion of Japanese people 65 and over in 1950 was 5%, and when its proportion hit 7% in 1970 Japan launched into the aging society. Today its proportion is as high as 28%, and projected to be 38% by 2050 (see Fig. 8.2b). Throughout the current study we noticed many municipalities in Japan today already qualify as a marginal settlement in which more than half of the population is 65 and over. At the same time, we detected that each of the municipalities facing critical population extinction is attempting to identify its own municipal powers as outlined by the Regional Revitalization Law of 2014 (Cabinet Secretariat 2014). Thus, now is the time for us to evaluate the Regional Revitalization Law based on our current studies.
Fig. 8.1 Total population prospects: 1950–2100. (a) World. (b) Japan. Source United Nations (2019). Using the graphs function of the UN data, figures are compiled by the author. https://population.un.org/wpp/Graphs/. Accessed 5 Aug 2019
8.1.1 Comments on Regional Revitalization Law of 2014

In discussing municipal power and population decline in Japan we emphasized the need for analyses through the regional revitalization method based on the census and
projection data on a municipal level. The same is emphasized in the Machi-Hito-Shigoto Sousei Hou (Law for Revitalization of Local Regions, People, and Jobs: Regional Empowerment for Japan’s Growth) enacted on December 2, 2014. The law is commonly called Chihou Sousei Hou (Regional Revitalization Law). The first phase of the Regional Revitalization Law was set for the fiscal years of 2015–2019.

We pointed out four goals stipulated in the Regional Revitalization Law. They are namely, (1) create stable employment opportunities, particularly for young adults 15–34, especially empowering women; (2) attract people into local areas, emphasizing the best use of ICT as used in modern work places, such as telework and satellite offices; (3) provide communities where married couples can raise families, with help from the community; and (4) encourage cooperation, not competition, among neighboring municipalities.

We should remember, however, these four goals were based on the government’s regional revitalization initiative. In other words, it is aimed at reversing the population flow into the greater Tokyo area (including Saitama, Chiba, and Kanagawa prefectures) from other municipalities where depopulation is in progress. Regrettably, however, the governmental goal to balance the population flow into and out of the greater Tokyo area by the end of the first-phase of the law, i.e., by the end of fiscal year 2019 (Japanese fiscal year runs from the 1st of April to the 31st of March) as far from being met.

On the contrary, the net population inflow to the greater Tokyo area has accelerated over the recent few years. It reached nearly 140,000 in 2018 as opposed to some 100,000 in 2013. In 2018 about 490,000 people resettled in the greater Tokyo area from other parts of the Japan, as opposed to some 350,000 people who moved out of the capital area. Of the total new inflow to the greater Tokyo area, about half are young people entering universities or beginning work. Moreover, women outnumber men in the net population inflow to the greater Tokyo area (Statistics Bureau2019). In order to reverse the population flight to the greater Tokyo area, it is imperative to create work opportunities in local areas for the young people. When we think of the high level of centralization of various functions in the capital area in Japan, it will be a difficult task to accomplish.

Another measure that was hoped to disperse the population concentration and halt the inflow of people into the greater Tokyo area, as stated in the Regional Revitalization Law of 2014, was the relocation of national government functions out of Tokyo. Forty-two prefectures expressed a desire to welcome governmental functions to their prefectures. In reality, however, little has been achieved in this regard except for three cases: a plan to move the Cultural Affairs Agency to Kyoto by 20211; the ad hoc facility of the Consumer Affairs Agency to Tokushima, which moved in July 2017 and is planned to be upgraded to a permanent office in 20202; and the Data Utilization base of the Statistics Bureau of the Ministry of Internal Affairs and Communication (MIAC) , which was established in Wakayama Prefecture in April 2018 (Asahi Shinbun Digital 2019a).

Two major barriers which seem to prevent national government functions from relocating out of Tokyo could be pointed out. First, there exists a strong propensity among many Japanese people to be close to the center of the national government and
private organizations as well. That is a part of the culture ingrained into the mind of Japanese people, and extremely difficult to alleviate. In the era of highly developed ICT, Japanese people understand that people are connected to each other throughout Japan and across the world. The convenience of living in the greater Tokyo area amid presumed work opportunities, however, supersede relocating national government functions out of the greater Tokyo area.

Second, access to the local municipalities is another hindrance to national government functions relocating out of Tokyo. The number of local municipalities connected by airlines and Shinkansen bullet trains are limited. Without them, people feel it is too inconvenient to fulfill their functions and business. In fact, the Regional Hub Base Urban Area Plan (Chihou Chuusu Kyoten Toshi-ken Koso) was established in August 2014. The plan designated 61 cities with an average population of 450,000 throughout Japan, and expects these local cities to block population migration to the greater Tokyo area (MIAC 2014). However, it is essential to provide young people with jobs, so that they can stay in these regional hub base urban areas. During the past five years since the establishment of the Regional Hub Base Urban Area Plan in 2014, it is questionable to what extent this objective has materialized. More active measures for providing attractive work opportunities to young people wishing to relocate out of the Tokyo area must be established.

Then, what we can suggest for the revitalization of population-declining Japan is recognition of municipal power, both its positive and negative aspects, by the local people as we have done so throughout the current book. Fair and correct recognition of the municipal power by the local people is, in fact, the very first step for revitalization of the municipality.

8.1.2 Municipal Power, the Goki-Shichido, and Provinces

For the analyses of regional variations in the population decline in Japan, the current study stipulated the theoretical framework of the Goki-Shichido and provinces under Han dynasties. We found that the knowledge of the Goki-Shichido and provinces helped us understand the significance of a regional level of analysis in the tiny island nation of Japan, and the cultural heritage which remains in each municipality.

For analyses of the population in Metropolitan Tokyo today, which used to belong to the Tokaido of the Goki-Shichido, must be divided the provinces of Musashi and Izu, and the Okutama regions. Aichi Prefecture in the Tokaido should be divided into two, i.e., Owari versus Mikawa provinces. As for Okinawa Prefecture, it is important to pay due attention to the historical development of the Ryukyu Kingdom. Fukuoka Prefecture of the Saikaido needs to be divided into the four regions of Buzen, Chikuzaen, Chikugo, and Chikuho provinces. In analyzing the population of Osaka Prefecture of the Kinai, we need to pay attention to its division by the former provinces of Izumo, Kawachi, and Settsu. We learned that Aomori Prefecture of the Tosando is distinctively divided into two, i.e., Tsugaru and Nanbu provinces. Yamagata Prefecture, which also belonged to the Tosando, must be analyzed by
the regional differences of Shonai, Mogami, Murayama, and Okitama. Concerning Shimane Prefecture of the Sannindo, demographic characteristics are clearly divided into three, i.e., Izumo, Iwami, and Oki provinces. As for population decline in Kochi Prefecture, which used to belong to the Nankaido, no clear regional variation could be detected, perhaps due to its historical development as Tosa Province solely.

### 8.1.3 Revitalization by Independence and Awareness

In analyzing the population revitalization programs and/or services of municipalities which had been successful in increasing populations, the traditional model for community revitalization programs play key factors. They are:

- **Construction of a commuter town (“bed town” in Japanese terminology):** As found in Chuo-ku of Metropolitan Tokyo (Chap. 4), Nagakute-shi of Aichi Prefecture (Chap. 4), and the Naha Metropolitan Area of Okinawa Prefecture (Chap. 5).

- **Convenient transportation services:** As found in Ina-cho of Saitama Prefecture (Kumagai 2018), Inzai-shi of Chiba Prefecture (Kumagai 2018), Chuo-ku of Metropolitan Tokyo (Chap. 4), Kawasaki-shi (Kumagai 2018), Nagakute-shi of Aichi Prefecture (Chap. 4), Kusatsu-shi of Shiga Prefecture (Kumagai 2018), and Tajiri-cho of Osaka Prefecture (Chap. 5).

- **Construction of an academic city:** As found in Nagakute-shi of Aichi Prefecture (Chap. 4), and Kusatsu-shi of Shiga Prefecture (Kumagai 2018).

- **City planning, using residential or large commercial construction and new train stations:** As found in Ina-cho of Saitama Prefecture (Kumagai 2018), Inzai-shi of Chiba Prefecture (Kumagai 2018), Kaisei-machi of Kanagawa Prefecture (Kumagai 2018), Nagakute-shi of Aichi Prefecture (Chap. 4), Kusatsu-shi of Shiga Prefecture (Kumagai 2018), Tajiri-cho of Osaka Prefecture (Chap. 5), and Kasuya-cho of Fukuoka Prefecture (Chap. 5).

- **Abundant local resources:** As found in Chuo-ku of Metropolitan Tokyo (Chap. 4), Chuo-ku of Osaka Prefecture (Chap. 5), Kasuya-cho of Fukuoka Prefecture (Chap. 5), and Nakagusuku-son of Okinawa Prefecture (Chap. 5).

- **Tourist attractions:** As found in Mikurajima-mura of Metropolitan Tokyo (Chap. 4), the Naha Metropolitan Area of Okinawa Prefecture (Chap. 5), and many municipalities in Okinawa Prefecture (Chap. 5).

Furthermore, we noted municipalities throughout Japan suffering from population decline, yet attracting people from outside and developing an interconnectedness with each other, mostly via cyberspace and online. Owing to the rapid development of ICT, new types of human relationships have been emerging which may save municipalities from disappearing. We have identified some municipalities both in eastern and western Japan, which are developing innovative regional revitalization programs despite their declining populations.

The population decline in prefectures and municipalities in eastern Japan is at a critical level. Gojome-machi in Akita Prefecture has been revitalized with the
new concept of “sharing villages” where people are virtually connected online, but physically visit the village at times (Kumagai 2018).

Now is the time, therefore, to explore new methods of community revitalization, not of centralized orientation but with policies rooted in the local community. In the era of advanced information technology, people need not live close to large cities. When people are connected to each other via ICT, there are numerous modern methodologies to develop community revitalization. Various municipalities investigated in this book have suffered from population deterioration, but have successfully revitalized their municipalities, using different approaches. Upon analyzing these municipalities we learned that they identified negative municipal power and that resources, and turned them into strengths. The Internet has helped these communities, using numerous rapidly developing ICT-related innovations.

8.2 Community Revitalization in the Era of Society 5.0

It has been suggested that ICT is the best way to achieve regional revitalization today, as society has advanced to the so-called Society 5.0. Then, what is Society 5.0, and how does regional revitalization in Society 5.0 differ from those of previous societies?

The Cabinet Office, Government of Japan defined Society 5.0 as “a human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space.” The first human society was Society 1.0, a hunting and gathering society. It was followed by Society 2.0, an agricultural society; Society 3.0, an industrial society; Society 4.0 the information society, and Society 5.0 (see Fig. 8.3, Cabinet Office, Government of Japan 2016). With the use of advanced ICT, Society 5.0 will become as follow:

![Fig. 8.3 Society 5.0. Source Cabinet Office, Government of Japan (2016)]
8.2 Community Revitalization in the Era of Society 5.0

- Internet of Things (IoT) will connect most people and things. All kinds of knowledge and information will be shared, bringing out totally new values.
- Social issues will be overcome and humans will be liberated from various types of constraints. For example, drones will facilitate human contacts in depopulated local regions.
- Artificial Intelligence (AI) will free humans from the burdensome work of analyzing huge amounts of information.
- The quality of life of people will be enhanced, being freed from physical labor through the use of such advanced ICT as robots and automatic-driving cars.

Thus, let us pay close attention to some examples of their successful applications for community building, such as drones, ICT programs, cloud services, crowdfunding, inbound tourism, and sharing economies. Let us discuss some examples of each.

### 8.2.1 Using Drones

The use of drones has come to be one of the most integral means of regional revitalization, especially in local remote areas. In the past, drones were used widely in such fields as reporting (showing ground images from above), media, and tourism promotion. In recent years, however, drones have been in high demand in other fields such as agriculture, construction, civil engineering and land surveys, and delivery services to isolated islands and remote areas. Japan’s Safety Rules on Unmanned Aircraft (UA)/Drone was enacted on November 11, 2015, and revised on June 24, 2019 (MLIT, Civil Aviation Bureau 2019). Right after enactment of the rules the number of applications for flying drones in January 2016 was 812 cases, but in nearly three years, in December 2018 the number more than tripled (2,579 cases) (MLIT 2019).

With the expansion of areas in which drones can be utilized, some drone services have been in high demand. In the fiscal year 2017 the total market for drone use was as much as 15.5 billion yen (agriculture, especially pesticide spraying, 10.8 billion yen; civil engineering and architecture, especially surveying, 2.3 billion yen; and drone pictures, 1.5 billion yen) (Nikkei Business Daily 2019).

Naka-cho of Tokushima Prefecture is a small town (8,417 people, and 3,995 households as of December 31, 2018). The town has been suffering from acute fertility decline and population aging. The proportion of people 65 and over in 2015 was 46.9%, which is projected to exceed the marginal settlement level soon (its projection for 2020 is 52.1%) (Naka-cho Town Office 2019). This small rural town is widely known throughout Japan as the municipality where drones have been most actively in use for regional revitalization. In April 2016, a Drone Promotion Office was established in Naka-cho Town Office, the first such public office in a Japan municipality. Drones have been actively used in wildlife protection, a problem in mountainous areas; experimentally in forestry management and in entertainment, such as drone
races and production of a drone map that summarizes flight spots in Naka-cho so that people can enjoy aerial photography by drone, safely. These programs deliberated by Naka-cho Drone Promotion Office attract people not only among town residents, but also widely throughout Japan. Although the resident population does not increase, drone-related measures truly increase the inflow of non-resident population to Naka-cho, which contributes to the revitalization of the town (Kumagai 2018).

There is no doubt that drones will also be used in city areas in the very foreseeable future as has been done in experiments at the central Shinjuku area (DRONE PRESS 2017; Kumagai 2018) , and in Fukuoka-shi (J-CAST 2019). The technological development of drones is but one attempt for community development. Thus, it is expected that drones, together with such advanced technologies as AI (Artificial Intelligence) and IoT (Internet of Things) will become a leading force in community revitalization.

8.2.2 Using Various ICT Programs

Today municipalities in Japan are making efforts in community development utilizing ICT. Based on the experience of the Great East Japan Earthquake, the Ministry of Internal Affairs and Communication (MIAC) established a round-table conference on ICT-based city planning in December 2011. MIAC requested municipalities to apply for governmental support for community development plans utilizing ICT. MIAC has a portal website to publish award-winning community development programs each year (MIAC 2019a, b). One of its websites lists 100 case studies in ten different fields. These fields are education, medical/nursing/health, disaster prevention, agriculture/forestry/fishery industries, tourism, government and private sector cooperation on IoT platforms, work style, local/regional business, and “smart” city. Of the selected 100 case studies, we selected five cases to introduce their programs briefly. Let us find how each municipality utilized ICT for its community revitalization plans.

8.2.2.1 Prevention of “Kerosene Refugees” in Rural Areas Using IoT by Shinshinotsu-mura, Hokkaido

Shinshinotsu-mura is a small municipality (population: 3,068, households: 1,404 as of August 1, 2019) located in the southwestern part of Hokkaido with heavy snowfall in the winter (Shinshinotsu Village Office 2019). Due to the rapid progress of population decline and depopulation in Shinshinotsu-mura, one of the most important infrastructures for people living in cold regions is to secure kerosene delivery for their daily heating. Due to labor shortages, people were on the verge of becoming “kerosene refugees” recently. Then they considered a plan for the prevention of kerosene refugees in rural areas using IoT which received a Regional Revitalization Award in 2019 (MIAC 2019a, b).
The plan entails attaching a sensor to the kerosene tank of each household for five months, in order to determine when to fill it up precisely. This has reduced the cost of kerosene delivery by 36%, and the number of lubrications by 20%. The results show significant savings in labor and fuel for each household (Shinshinotsu Village Office 2019). This program truly is a good example of utilization of ICT for community revitalization rooted in daily living of a heavy snow region.

### Making Public Transportation Schedules Open Data

**by Nakatsugawa-shi, Gifu Prefecture**

The population of Nakatsugawa-shi as of August 1, 2019 was 78,457 with 31,037 households (Nakatsugawa City Office 2019a, b). A great majority of the people there use cars for daily transportation. As a consequence, the number of users of public transportation, especially local buses, is declining rapidly year by year, leading to a negative spiral, where a decline in revenue due to a decrease in users leads to a decline in services such as a lower frequency of buses, which leads to further decrease in users. The prepared GTFS-JP³ data is made public by the bus company and Nakatsugawa-shi on their websites. By using these data, real-time bus operation guidance uses digital signage, i.e., a signboard with a liquid crystal display, and bus location services can be easily implemented (Nakatsugawa City Office 2019a).

By the use of ICT the city office made the public transportation data open data so that anyone can access it and reformulate it. Such transportation data is convenient not only for city residents, but also encourages visitors and tourists to use them, hopefully revitalizing local bus transportation. The program was awarded a Regional Revitalization Award of 2019 (MIAC 2019a, b).

Using ICT, the convenience of public transportation is enhanced significantly, and a local public transportation network, which had been on the decline, will be maintained. Thus, the ICT-assisted public transportation data allow the residents and visitors to build a foundation for moving easily within the community.

### Agricultural Work Support Notification IoT “Teru-chan”

**by Itoman-shi, Okinawa Prefecture**

Teru-chan is a farm work support notification system that notifies workers of situations in the field, such as illuminance and humidity, using mobile phones. The system has been developed and is on a test run by Itoman-shi, Okinawa Prefecture in August 2018, and the official operation started in April 2019 (Itoman City Office 2018). The program received a Regional Revitalization Award of 2019 (MIAC 2019a, b).

Demonstration tests proved it was successful in monitoring the growth of Kogiku (small chrysanthemums), using electric cultivation. The number of patrol checks, that had taken about 400 min per month became zero, leading to a reduction in physical burden (sleeping time) and psychological burden (anxiety). In another test case, for mango cultivation, work efficiency was improved by eliminating the bother...
of checking thermometers at the site. In addition, introduction of the system led to changes in the awareness of experienced workers. Those who shy away from using smartphones and tablets felt the usefulness of agricultural IoT with Teru-chan. Furthermore, workers have learned that the use of more advanced functions would lead to further quality improvement and efficient production. Consequently, workers became willing to introduce smartphones and tablets in their agricultural work (MIAC 2019a, b).

8.2.2.4 Let’s Make Barrier-Free Map Together by WheelLog!

WheelLog! is an organization aiming at creating a world where people on wheelchairs can get around more easily. The organization is working to improve the quality of life of wheelchair users through barrier-free maps of Japan. Wheelchair users can use the world’s first probe information (travel routes in wheelchairs) to create a free barrier-free map application. WheeLog! users contribute in creating barrier-free maps nationwide. In other words, the WheeLog! shows where wheelchair users can go, reducing wheelchair users’ concerns about going out. The application program is based on the open data of each municipality. The program received a Regional Revitalization Award of 2019 (MIAC 2019a, b, WheeLog! 2019).

There is no doubt that barrier-free information provided by the WheeLog! program will enhance the quality of life for wheelchair users. At the same time, such barrier-free information can be effectively transmitted to tourists on wheelchairs not only from Japan but also from abroad.

8.2.2.5 Disseminating the Charm of Osaka City by Way of Open Source Regional Data of Osaka Municipal Library, Osaka Prefecture

Making the image data stored at Osaka Municipal Library into open data facilitated the people’s interests in and recognition of such data, and increased inquiries about the use of image data. It has been reported that open data image data have been used for such occasions as event publicity, bus wrapping design, event memorabilia, and framed pictures for overseas guests. Furthermore, the number of accesses to the Osaka City Library homepage increased from 7.14 million in 2015 to 8.66 million in 2017) and use of the Osaka City Library digital archive system from 28 thousand in 2015 to 78 thousand in 2017. On the other hand, the number of applications for secondary use of images, which was very complicated for users, has decreased from 129 cases in 2015 to 49 cases in 2017, leading to a significant reduction in administrative work for library employees (MIAC 2019a, b; Osaka Municipal Library 2019).

Thus, making regional data open benefits not only the users, but also the administration. In addition, the utilization of open data from local materials contributes to revitalization of the city by creating new local information, and business. As we have discussed, ICT in its various forms has been playing significant roles in the revitalization of municipalities and communities. With the rapid development of technology it
is certain that various ICT apparatus, IoT, and robotics will help community planning and building.

### 8.2.3 Using Cloud Service

In Japan, where the population is declining rapidly, efforts are being made to utilize “cloud" service.” It provides users with data and software stored on a computer network that users had previously kept on their computers (Kumagai 2018; MIAC 2018). In community development, local residents can use cloud services by taking the initiative to build an autonomous organization that will overcome the population decline. We will introduce briefly examples from Masuda-shi, Shimane Prefecture, and Marumori-cho, Miyagi Prefecture, discussed in the previous work of the author (Kumagai 2018).

#### 8.2.3.1 Community Building to Overcome Population Decline Using Kintone by Masuda-shi, Shimane Prefecture

Masuda-shi, Shimane Prefecture, is one of the “disappearing municipalities” designated by the Japan Creation Council (Masuda 2014). Ever since 1985 the city’s population has declined (1985, 60,080; as of May 31, 2019, 46,550; 2045 projected, 31,508) (IPSSR 2018; Masuda City Office 2019). Consequently, in recent years various problems emerged in the community such as increases in uncultivated land due to a shortage of farmers; in wildlife damage caused by deforestation of unmanaged mountain forests; devastation of satoyama (rural natural areas), and increased number of vacant houses (Masuda City Office 2017).

In order to establish a public-private partnership the city used the cloud database kintone, which is provided by Cybozu Corporation. In education, significant results have been obtained. For example, nursery school, elementary school, and junior high school teachers and school board staff share the contents of their hometown education on kintone. Based on the past implementation content, teachers and the staff of the school board create a “hometown education plan” in which educational institutions have collaborated, so Masuda-shi now has materialized in systematic learning activities (Masuda City Office 2017).

The cloud database kintone has been applied to not only the field of education but also in various fields of community building in Masuda-shi. Some examples for using the kintone database are municipal office management, traffic measures, vacant houses, crisis management, ledger management, settlement promotion, and disaster prevention (Masuda City Office 2017).

Masuda-shi of Shimane Prefecture seemed to be successful in creating a team that can solve regional problems, mainly with local residents. By using kintone, all participants in the group are able to share data. It is an essential tool for the
materialization of a cooperative independence model in the hilly and mountainous areas of Japan.

8.2.3.2 Marumori-machi, Miyagi Prefecture

The population of Marumori-machi, Miyagi Prefecture, has been declining ever since 1980 (1985, 20,849; as of September 2019, 13,431; 2045 projected, 6,231). Marumori-machi is located at the southernmost part of Miyagi Prefecture, and the southwestern part is adjacent to Fukushima Prefecture. The town is located in a circular basin within a mountainous area, and is surrounded by the Abukuma Highlands, where the Abukuma River flows through the northern part of the town. The population decline rate of the town is sixth from the bottom of all the 35 municipalities in Miyagi Prefecture (−9.79% in the 2015 national census) (IPSSR 2018; Marumori Town Office 2019). Thus, the town office of Marumori-machi frankly admits that they are in crisis, and calls for people to migrate here (Nikkei 2016).

In order to overcome population decline, the Marumori Town Office opened the Marumori Migration and Settlement Support Center in April 2016. The center works on a project to acquire information on possible migrants to the town. As part of the activity, the town focused on CMR (Customer Relationship Management)⁷, considering visitors and people interested in Marumori-machi as customers. A cloud service was used to collect demographic information of visitors to the town, list their demographic data, and conduct an ad hoc analysis,⁸ which led to improvements in measures and proposals for new promotions.

Utilizing advanced technologies such as IoT, and AI, the project aims at collecting and accumulating data about migrants, settlers, and tourists, to help solve the problem of population decline. The system started its operation in February 2017, by the settled residents of Marumori-machi (Marumamori Town Office 2019). In other words, Marumori-machi aims at making itself an advanced local government that uses ICT in solving regional problems.

8.2.4 Crowdfunding

Crowdfunding is a service originated in the United States, coined by “crowd” and “funding,” a project that raises a relatively small amount of funds from individuals via the Internet. Overseas, a large market has already been formed. In Japan, the first crowdfunding service was provided in 2001, but it was the Great East Japan Earthquake of 2011 which brought popular recognition to crowdfunding. It is a method of raising capital through the collective effort of friends, family, customers, and individual investors. This approach taps into the collective efforts of a large pool of individuals—primarily online via social media and crowdfunding platforms—and leverages their networks for greater reach and exposure (Yano Research Institute 2018).
In crowdfunding, information is transmitted using such Internet exchange sites as Facebook, Twitter, and Line, an app providing free communication. As a result, the person who has provided project funds can grasp the project operator and the progress of the project. With face-to-face project management, it is possible to use funds to support the project itself.

Some examples of utilizing crowdfunding for community building are found in “Shared villages using old private houses in Akita Prefecture” (Kumagai 2018) and the Kochi Prefecture Otoyo Peonies Association as discussed in Chap. 7. Utilization of crowdfunding, together with local resources, result in producing high value-added products and services.

A survey conducted by Nihon Keizai Shimbun in 47 prefectures and 813 municipalities in July 2016, revealed that the use of crowdfunding has spread to 34 prefectures (72%) and 133 communities (16%) (Nikkei Digital 2016). Crowdfunding is spreading throughout Japan as a means to secure new financial resources and revitalize the local economy.

Although it is not the same sense of community building as regional revitalization, in response to the painful arson that struck Kyoto Animation on July 18, 2019, Sentai Filmworks Inc. launched crowdfunding to raise donations under the hashtag #Help KyoAni Heal. Sentai Filmworks was established in 2008 and distributes Japanese anime overseas. It has also worked on Kyoto animation works such as the “Clannad” and “K-On!” Series (Sentai Filmworks 2019).

Rather than relying on conventional subsidies, the private sector has been used for regional revitalization projects, with cooperation from administrative and financial institutions. Crowdfunding plays a significant role in building such a sustainable system. Thus, crowdfunding today has become one of the integral means for community building, allowing individuals to contribute online to support projects. It is expected that community-based crowdfunding will become more active in the future.

Nevertheless, there is one thing that we must remember about the role of crowdfunding in community building. That is, crowdfunding is not only using the Internet as a tool, but also has the aspect that conventional financial and securities market common sense and wisdom is difficult to apply in terms of market participants’ needs. It is the same as the Social Networking Service (SNS) world is far from the conventional analog world. Therefore, it is important to recognize such qualitative differences when considering the way of crowdfunding in community revitalization.
8.2.5 Inbound Tourism as Regional Revitalization Using ICTs

8.2.5.1 Increase in Inbound Tourists

Recently we often hear the word “inbound,” which means “coming in from the outside,” and is a term in the tourism industry that refers to foreign tourists visiting Japan. A trip to a foreign country from one’s own country is called an outbound or overseas trip. The reason why the term “inbound” has come to be heard so often is that the number of foreign tourists visiting Japan has increased at an unprecedented rate. Speaking of Japanese tourism so far, the major focus has been on Japanese domestic and overseas travel. The number of foreign visitors to Japan in 1964 (the year of the Tokyo Olympics), when statistics were collected by the Japanese government for the first time, was 350,000. On the other hand, the number of Japanese leaving Japan in the same year was 221,000. The number of Japanese leaving Japan increased year by year, reaching a record high of 17.82 million in 2000. In comparison, the number of foreign tourists visiting Japan in the same year was about one fourth that, i.e., 4.76 million (JNTO 2019; Kumagai 2018).

In an attempt to increase foreign visitors to Japan, the Japanese Tourism Agency and private sectors started a “Visit Japan Campaign” in 2003. It is a campaign to promote foreign visits to Japan. In the campaign, 20 countries were selected as priority markets. These 20 markets are South Korea, China, Taiwan, Hong Kong, Thailand, Singapore, Malaysia, Indonesia, the Philippines, Vietnam, India, Australia, the USA, Canada, the UK, France, Germany, Italy, Russia and Spain. Various attempts have been made to encourage foreign tourists to visit Japan, e.g., organizing tourist spots for international competitions, developing travel products for foreigners, preparing multilingual guides, relaxing visa conditions for Asian countries, improving immigration procedures, constructing base airports, inviting LCCs (low-cost carriers), and promoting tourist spots and tour trips to Japan based on tourism demand in each country and/or region (Kumagai 2018; MLIT 2019).

Since 2013, the number of foreign tourists has increased at an unprecedented rate, reaching 19.74 million in 2015 (up 47.1% from the previous year). As a result, the number of foreign tourists exceeded the number of Japanese leaving Japan (16.21 million) for the first time in 44 years in 2015. In 2018, the number of visitors to Japan surged to 31.19 million (the number of Japanese overseas travelers was 18.95 million). Furthermore, the number of foreign tourists visiting Japan is expected to increase to 40 million in 2020 when the Olympics and Paralympics are held in Tokyo (JNTO 2019; MLIT 2019).

Unfortunately, however, due to the coronavirus pandemic the 2020 Olympics and Paralympics have been postponed to the summer of 2021. It is uncertain that they will be held as rescheduled or not. The negative impact of coronavirus is tremendous in various fields such as economy, manufacturing sectors, employment, and tourism industries to name a few.
8.2.5.2 Inbound Tourism and ICTs

These inbound tourists visit diverse places in Japan, and speak various languages. It is a good opportunity to practice regional revitalization in local areas. At the same time, there emerge problems that must be addressed and solved for successful regional revitalization through inbound tourism. Some of the problems raised by inbound tourists are as follows (MLIT 2019):

1. As a means of acquiring information, two-thirds of inbound tourists visiting Japan used smartphones. About 28% of foreign tourists mentioned that there was no free public wireless LAN available.
2. Stores without cashless payment or Wi-Fi risk losing sales opportunities.
3. Tourists visiting Japan speak various languages.

Thus, four major issues to be addressed with relation to the inbound tourism, which could be solved by the utilization of ICTs. First, each store is advised to organize a Wi-Fi environment. When a visitor “checks in” on the Facebook page of the store, the store name is displayed on the visitor’s “timeline” along with the name of the store, and the store can be promoted on SNS. The Wi-Fi environment is one of the features that foreign tourists want. Therefore, there is an urgent need for local governments to immediately develop an Internet environment and to promote inbound measures for foreign visitors to Japan.

Second, the installation of QR (Quick Response) payment codes is recommended. Multiple QR payment services can be automatically recognized and payments processed, increasing the number of payment methods for customers at stores.

Third, the utilization of multilingual automatic translation tools is highly recommended. By using an automatic translator, communication with foreign tourists visiting Japan can be facilitated.

Fourth, the use of big data is recommended. Recently, the use of big data has become an important theme, even inbound. Foreign tourists visiting Japan spend money on a wide variety of things such as shopping, lodging, food, transportation, entertainment and leisure. Various companies have big data for each item, and it is possible to obtain it. However, big data tends to be for analysis only. Instead, it is important to have a perspective on how to use the results of analysis to solve problems. Otherwise, even if we get valuable big data, we cannot take advantage of it. In order to make effective use of big data, it is important to connect to specific measures after analysis. Keeping this in mind, it is necessary to look at the use of big data for tourists (Kumagai 2018; MLIT 2019).
8.2.6 Sharing Economies and Community Revitalization

8.2.6.1 What Is Sharing Economy?

So far, we have introduced new types of community development mainly using ICT. As a final example, we will examine the “sharing economy.” Then, what does “sharing economy” mean? It is a new socioeconomic change brought about by the spread of social media developed in the information society. Typically, it is a service that mediates lending of idle assets held by individuals, including intangible assets such as skills. Advantages of the sharing economy rest upon the fact that the lender can still use the idle asset, while the borrower can use it temporarily, without owning it. In order for a loan to be established, a security of trust is necessary. A major feature is that such services are provided via the Internet. For this purpose, it is possible to utilize information exchange, which is an essential characteristic of social media (Kumagai 2018; MIAC 2018).

The sharing economy has grown globally, mainly in the West, starting with Silicon Valley. The origin is said to be US Airbnb, which started the so-called “private night accommodation” (minpaku in Japanese) brokerage service in 2008. After that, services such as cars, and pet sitters that mediate lending and borrowing goods between individuals have appeared (Airbnb 2019; Kumagai 2018; MIAC 2018).

The major reason for the popularization of the sharing economy is the development of technology such as the spread of the Internet, smartphones and tablet devices. The sharing economy has achieved rapid growth as the Internet has developed, and it can be easily used by terminals. Users can use the system anytime and anywhere with a single smartphone, making it easier to receive services. On the other hand, the supply side (lender) who provides the system has prepared an environment where it is easy to provide the service. Everything that was previously managed by a dedicated machine or special system can now be accessed with just one smartphone. This makes it easier for the supplier who provides the system to manage users and information. It can be said that this became a factor expanding the sharing economy (Sharing Economy Lab 2017).

Why is the sharing economy attractive in local communities? In order to respond to this question we must pay attention to the structural issues facing local municipal governments, such as declining fertility, population aging, and depopulation. These issues are difficult to solve through public services under their limited budget and personnel situations. Then, in lieu of the current public service, attention is being paid to the efficient use of idle assets already in the region, i.e. the idea of the “sharing economy” in a way to make the lives of local residents convenient and fulfilling. Therefore, each region has the advantages and benefits of a sharing economy (Kumagai 2018; Sharing Economy Lab 2017).

Thus, we can think of benefits of the sharing economy as three-fold. First, it reduces local government costs and budget. Second, many of the services provided by the sharing economy are directly linked to the daily life of local residents. Third,
idle assets in the region are considered as integral municipal power to improve convenience and attractiveness of the region (Kumagai 2018).

### 8.2.6.2 Sharing City

In November 2016, Sharing Economy Lab organized to announce the “Sharing City Declaration” with mayors of five cities. These five cities are Yuzawa-shi, Akita Prefecture; Chiba-shi, Chiba Prefecture; Hamamatsu-shi, Shizuoka Prefecture; Taku-shi, Saga Prefecture; and Shimabara-shi, Nagasaki Prefecture. Sharing Economy Lab, with approximately 120 companies, mainly IT related companies, aims to solve regional problems by utilizing multiple sharing services. More specifically, people in the city share such ideas as parenting, and the use of tourism facilities on the Internet. In doing so, it is possible to create a city sharing the vitality of ideas from the private sector (Kumagai 2018; Sharing Economy Lab 2017).

Then, let us discuss briefly the initiatives of each of these five cities that have declared the sharing city.

1. **Yuzawa-shi, Akita Prefecture:**
   The city established “child-rearing sharing” in cooperation with AsMama, Inc. It is a “child-rearing sharing business” that asks for help on child-rearing via the Internet through acquaintances and familiar people. Within a group made up of acquaintances a person registers oneself on the Internet site asking for daycare assistance. On the other hand, a registered friend or acquaintance provides daycare at home.

2. **Chiba-shi, Chiba Prefecture:**
   The Chiba-shi Family Support Center is working on matching childcare sharing programs using ICT. Its main purpose is not mutual support from the municipal government—public assistance—but mutual assistance activities among citizens. For example, mutual support activities organized by people who want to extend help with childcare (providing members), and people who want to receive assistance on childcare (requesting members) will support child-rearing among local members. Furthermore, through these activities, new interactions and human relations will be brought into the community which in turn will contribute to the regional community building (Chiba City Office 2018; Kumagai 2018).

3. **Hamamatsu-shi, Shizuoka Prefecture:**
   In 2005, the 12 municipalities of the Tenryu River valley and the Lake Hamanatsu region merged to form the largest city in Shizuoka Prefecture, with a population of 800,000. The city put forward three major themes, encouraging young people to challenge themselves, supporting couples with children, and providing a sustainable and creative city. As Hamamatsu-shi is the product of 12 municipalities, it faces various problems, and therefore, the sharing economy is actively used as its countermeasure. Experience-based trips such as private home accommodations contribute
greatly to the revitalization of mountainous areas. For an effective use of public facilities not currently in use, the city cooperates with SpaceMarket, Inc.\textsuperscript{14} to promote matching of space needs (Hamamatsu City Office \textsuperscript{2019}).

(4) Taku-shi, Saga Prefecture:

Making the best use of the Internet, Taku-shi targets those who want to work, but cannot travel to a job. The city has partnered with CloudWorks Inc.\textsuperscript{15} to provide work opportunities at home. The purpose is to train “cloud workers” who receive work orders from companies through the Internet. Cloud work would be for all ages from child-rearing housewives to people in their 70s, who can work any time and any place of their choice. The Working Support Center (opened in front of Taku Station in November 2016) not only extends support to local sharing businesses which support workers, but is also a challenge shop, where experts give management guidance to those who want to start a business. In order to enhance regional revitalization, it is also planned that local people will guide visitors to local attractions in cooperation with companies that provide services specialized in \textit{Chakuchigata Kanko} (community-based tourism, or landing-type tourism)\textsuperscript{16} (Kumagai \textsuperscript{2018}; Taku City Office \textsuperscript{2018}).

(5) Shimabara-shi, Nagasaki Prefecture:

Shimabara-shi faces serious problems such as declining fertility, population aging, depopulation (in particular, the younger generation), and an increase in vacant houses. Then, the city formed a partnership with the tourism service Tabica (http://tabica.jp/) in March 2017 hoping to create experience-based tours of the city. With the active utilization of such sharing economy features as the castle tower of Shimabara Castle, the city now provides tourists with experiences created by citizens (Kumagai \textsuperscript{2018}; Shimabara City Office \textsuperscript{2017}). It is hoped that new tourism services will be created by the active utilization of tourism resources and municipal power of Shimabara City.

The sharing economy solves efficiently a wide range of problems in the local region. We must remember, however, each local community has different problems, and it is not possible to propose a single uniform solution. It is important, therefore, for local municipalities to first clarify the issues they have, and then analyze whether these issues can be solved with assets not in use, and what kind of sharing service is suitable.

8.3 Immigration: A New Strategy for Municipal Revitalization

In recent years, foreign residents in Japan have been on the rise amounting to as many as slightly less than three million\textsuperscript{17} (Ministry of Justice \textsuperscript{2019}, and see Fig. 8.4), both “oldcomers”\textsuperscript{18} and “newcomers” inclusive. On the other hand, the Japanese population (about 127,444,000 in 2019) is about 430,000 less than in previous year, peaking in 2009 and falling for 10 consecutive years. The decline was the largest...
since the current survey started in 1968 (MIAC 2019b). Thus, foreign residents in Japan today are considered a vital force for population revitalization, especially in regional areas. In 1990 the number of resident aliens exceeded one million, rising above two million in 2005, and continues to rise to nearly three million today (see Fig. 8.4). However, we must pay close attention to the composition of these resident aliens.

Although the number of foreign residents in Japan has increased dramatically over the years, their distribution by prefecture has stayed mostly the same. In 1995, the top six prefectures with large numbers of resident aliens were, in order, Tokyo, Osaka, Aichi, Kanagawa, Hyogo, and Saitama. Then, in 2010, the ranking order stayed the same, except that Saitama passed Hyogo, into fifth place (see Figs. 8.5a, b). Similarly, over the years the proportion of foreign residents to the total prefectural population has increased, except for Osaka Prefecture where the number of foreign residents declined with the native population (see Fig. 8.5a, b). Foreign residents in Japan are likely to be concentrated in large urban areas, but somewhat different characteristics can be observed in recent years among foreign brides and/or foreign workers.

### 8.3.1 Foreign Brides to Maintain Rural Farm Households

Although intercultural marriage in Japan used to be a small portion of the total annual marriages, it has been on the rise recently. When the Japanese government
Fig. 8.5 Changes in the number of foreign residents by prefecture: 1995–2010. (a) 1995. (b) 2010. Source Using the G-Census geographic statistical tool the figure is compiled and constructed by the author. http://www.g-census.jp/. Accessed 1 Feb 2020
made such statistics available, the majority was comprised of Japanese wives and U.S.A. husbands. Since the 1980s, however, the pattern has changed, and the great majority now is that between Japanese husbands and foreign brides, primarily from China, the Philippines, and Korea (North and South). Initially, these foreign brides were brought to the rural farms of Yamagata Prefecture through municipal efforts in the mid-1980s. Studies of foreign brides in several rural farming municipalities in Yamagata Prefecture revealed a high relationship between the proportion of foreign residents and three-generation households. Stated differently, foreign brides in inter-cultural marriages contributed to the continuity of the stem family. These foreign brides were brought to rural farming communities to fill the lack of a marriageable female population. The resident women had left for urban regions, seeking better job opportunities. Consequently, Japanese men who wished to get married were left without marriage opportunities. Then each municipality in Yamagata Prefecture developed strategies to recruit foreign brides from Asian nations, mainly from the Philippines. It was regarded as an effective strategy to maintain rural farm households. At the same time, however, such strategy was criticized as violating the human rights of foreign brides (Kumagai 2008, 2015a, b).

8.3.2 Foreign Workers

The number of foreign workers in Japan today amounts to a record high of 1.66 million in 2019, an increase of 13.6% (198,000 workers) from the previous year, and trice as many as 2014 (MHLW 2020, see Fig. 8.6). As seen in Fig. 8.6, foreign workers have been increasing by 200,000 each year. In five years the number of foreign workers in Japan will double. It indicates that in recent years foreign workers have become an integral force, filling the shortage in the Japanese labor force.

Prior to 1980, the problem of labor shortage in Japan was solved within Japan, because Japan was able to secure a labor force within itself. In the 1980s, however, with the high growth of the Japanese economy, a great majority of Japanese young people received higher education, and changes in the demographic structure emerged. That is, the labor force shifted from the primary to the tertiary industries, and a large proportion moved into the service sector. Japanese people started to shun simple labor-work as “san Ks,” an acronym taken from three abhorred words: Kitsui (hard), Kitanai (dirty), and Kiken (dangerous) leading to a serious labor shortage. On the other hand, in Southeast and South Asia, migration to other countries was structured around the patterns of the 1970s, when jobs in the Middle East flourished, from the boom in oil money. But that came to an end, and migrant workers had nowhere else to go, until Japan’s economic boom was noticed (Ishikawa 2011; Kumagai 1996).

By the early 1980s, Asian women, mainly from Korea and the Philippines, began flowing into Japan, primarily for jobs in the food and beverage business, under the guise of an entertainment visa. During the bubble economy period, people from the Middle East, such as Pakistan, Bangladesh, and Iran also came to Japan to work. Although Japan did not allow foreign nationals to work at that time, many of them
came to Japan on a tourist visa, student visa, or training visa and engaged in construction and manufacturing in the form of illegal employment (Ishikawa 2011; Kumagai 1996).

Then, the Revisions to the Immigration Control and Refugee Recognition Act (Immigration Act) was enacted in 1990 and started to bring the phrase “newcomers” into Japan, as Nikkeijin (South Americans of Japanese descent, especially Brazilian), arrived in the country. In 1990, revisions were also made to the foreign training system, which had been established in 1981 to help the economies of developing countries, by introducing a group supervision system with the cooperation of a regional chamber of commerce. In 1993, the technical intern training visa system (gaikokujingino jisshuu-seido) was launched for foreign trainees in Japan. Consequently, foreign trainees who reached a certain skill level could receive up to one additional year of training (later extended to two years) (Ishikawa 2011). In fact, the total number of foreign workers under the technical intern trainee category in 2019 amounted to 384,000 foreign workers (23.21% of the total) (MHLW 2020).

At the end of the 1990s, with a scarcity in job opportunities, the labor shortage in the blue-collar sector was solved but a labor shortage due to population aging and globalization requiring highly developed ICT workers had emerged. Meanwhile, foreign workers, such as foreign nurses and care workers were gradually accepted by Japanese society (Ishikawa 2011).

Then, a historic immigration reform in Japan took place in April 2019. That is, Revisions to the Immigration Control and Refugee Recognition Act which was passed in December 2018 and enacted in April 2019, created a new visa category of “Specified Skills” (Immigration Services Agency of Japan 2020). The Japanese
government plans to bring in 345,000 foreign workers over the next five years under this system (Immigration Services Agency of Japan 2020), and it was expected to have a maximum of 47,000 in the fiscal year of 2019. However, foreign workers under the category of specified skills in 2019 were only 520 (MHLW 2020).

8.3.3 Revised Immigration and Refugee Recognition Act of 2019

The Revised Immigration and Refugee Recognition Act of 2019 officially enables lower-skilled and semi-skilled foreign workers to come to Japan to work. Over the next five years it plans to allow the admission of up to 345,000 workers under the new visa. In order to meet the acute labor shortage in Japan’s rapidly aging society it is highly likely that the number of these foreign workers under the newly revised law will increase in the future. In this regard, therefore, enforcement of this revised immigration act is very significant.

The revised Immigration and Refugee Recognition Act of 2019 highlights three major points. First, the revised act allows lower-skilled foreign workers who meet with industry-specific language and skills requirements will be eligible to live and work in Japan under a new five-year working visa, Specified Skills category 1 residence status, but it will not allow foreign workers to bring family members (Menju 2019).

Second, the category 2 residence status of the new system offers foreign workers with advanced skills a possible path to permanent immigration in Japan. Category 1 workers could upgrade their status to category 2 if they qualify by passing an examination or meeting other conditions. At the same time, Japanese industries and manufacturers are expected to invest in training these foreign workers to fill an acute shortage of skilled production workers (Menju 2019).

Third, in addition to the immigration reforms the Japanese government adopted support and integration policies by “Comprehensive Measures for the Acceptance and Inclusion of Foreign Human Resources” in December 2018. In the past, various social and language problems faced by foreign workers and their children have been ignored. Thus, it is hoped that the newly established measures will offer support for foreign workers and their families who will be an integral force for the revitalization of Japanese population and society in years to come (Menju 2019).

8.3.4 An Example of a Municipality Successful in Accepting Foreign Workers: Izumo-shi, Shimane Prefecture

In Chap. 7 we discussed Shimane Prefecture, one of the most severely population-declining prefectures in the western region of Japan. At that time, we briefly
mentioned that of the total 19 municipalities in Shimane Prefecture today, only one municipality, i.e., Izumo-shi, attained a population increase in the national census of 2015 from that of 2010. Also, we analyzed in depth reasons why Ama-cho, a small island municipality on Okino-shima, was successful in attracting people from outside. But we did not pay close attention to the foreign residents and workers in Izumo-shi, Shimane Prefecture. The population increase in Izumo-shi can likely be attributed to the influx of foreign residents in the city in recent years. Thus, let us analyze the changing trend of foreign residents in Izumo-shi, and reasons for it.

The Ministry of Internal Affairs and Communications announced on July 10, 2019, a population survey based on the Basic Resident Register. According to the report, the total number of foreigners living in Japan was 2,829,416 as of January 1, 2019, an increase of about 170,000, or 3.48% from the previous year (see Fig. 8.4). The population growth rate of foreign residents in Shimane Prefecture in the same year was 15.42%, the highest among all the 47 prefectures in (MIAC 2019b).

During the 1990s the total number of foreign residents in Shimane Prefecture was less than 5,000, exceeding 5,000 in the year 2000, and is about 9,000 today. Those who reside in Izumo-shi today amount to more than half the total. It is clear, however, that the increasing trend in the total number of foreign residents in Izumo-shi has accelerated only since the mid-2010s (see Fig. 8.7). Of the total 19 municipalities in Shimane Prefecture today, Izumo-shi has by far the most abundant (4,667 people, a 25.10% increase from the previous year, followed by Matsue-shi, the capitol city of Shimane Prefecture), with 1,482. Of these foreign residents in Izumo-shi, Brazilians comprise more than two-thirds of the total (MIAC 2019b; Shimane Prefectural Office 2019) (see Figs. 8.7 and 8.8). So why is Izumo-shi successful in bringing foreign residents into their communities?

![Fig. 8.7 Changes in the number of foreign residents in Izumo-shi by nationality: 2006–2019. Source Izumo City Municipal Office (2016, 2020), Shimane Prefectural Office (2019), MIAC (2019a, b). Data are compiled and the figure is drawn by the author](image)
Fig. 8.8  Number of foreign residents in Shimane Prefecture by municipality. (a) 1995. (b) 2010. Source Using the G-Census geographic statistical tool the figure is compiled and constructed by the author. http://www.g-census.jp/ Accessed 1 Feb 2020
8.3.5 Reasons Why Izumo-shi Attracts Foreign Residents

Four major reasons why Izumo-shi attracts foreign residents could be pointed out. First, there is a leading worldwide ceramics manufacturing company which hires foreign workers actively—Izumo Murata Manufacturing Co., Ltd., a subsidiary of Murata Manufacturing Group. At Izumo Murata Manufacturing, 1,000 Japanese-Brazilians work to support Murata’s “strongest plant.” Izumo Murata manufactures multilayer ceramic capacitors, which boast the number one share in the world. In response to increasing demand for smartphones and automobiles, a new production line has been launched. Consequently, Japanese-Brazilian employment has increased as well. With the solid work opportunities available foreign workers regard Izumo-shi as providing a good working environment (Kanda 2019; Izumo Murata Manufacturing 2020).

A second reason why Izumo-shi attracts foreign residents would be that many of them hold the “Family Stay” (Kazoku taizai) residence status. Foreign residents in Japan must obtain one of the 36 types of resident status, and Japanese Brazilians who lived in Izumo-shi used to be granted “resident” status. Recently, however, it has changed to “Family Stay” status. The number of foreigners who want to come to Japan with their family is increasing. Furthermore, foreigners who have a resident status can bring their families. Many of them have been employed in Japan in the past as international students or technical interns. For this reason, spouses and children with the status of residence called “family stay” are increasing rapidly in Izumo-shi, which in turn contributes to the increase in foreign residents in the area (NHK 2018).

Third, in 2016 Izumo-shi announced a Multicultural Symbiosis Promotion Plan, which states “We will accept foreign residents as good partners and good neighbors, and will promote to develop the city where both Japanese and foreign residents can live amicably.” More specifically, the city will work (1) to develop administrative sections for foreign residents to feel at ease when visiting, (2) to provide child care programs with the assistance of interpreters to alleviate communication problems of non-Japanese speaking residents, and (3) to implement disaster prevention drills that are easier for foreigners to take part in. It also includes a numerical target for the percentage of foreign residents in the city. That is, the ratio of foreign residents who will be settled in the city for more than five years will be raised from 24.6% in 2015 to more than 30% by March 2021. In other words, Izumo-shi wants to make the municipality comfortable for foreign residents to live in, one of the essential countermeasures for declining population (Izumo City Municipal Office 2016). It is remarkable that the numerical target to raise the long-term foreign residents to 30% by 2021 was reached by the end of fiscal year 2017, i.e., March 2018, well in advance of the target set forth by March 2021 (Mainichi Shimbun 2018).

Fourth, the well-thought-out language program for children of foreign residents in Izumo-shi would be another strong incentive for foreign residents who wish to settle in the city. As more foreigners live with their families, foreign children are increasing in Izumo-shi. During the five-year period between 2013 and 2018, the number of foreign children under the age of 15 increased by 185, especially elementary school
pupils who increased by 135, more than triple (3.2 times) the previous number. It is the highest growth rate in all the municipalities in Japan. One of the possible contributing factors for the increase in foreign residents and their children in Izumo-shi would be the Japanese language program called “toridashi jyugyou” (take-out class of Japanese language). The program literally “takes out” children who are behind in regular classes and teaches them according to the level of proficiency in Japanese language of each child. For each of the lower grades, middle grades, and higher grades, one class is composed of small groups of three to four children, or one-on-one basis. Subjects such as physical education and music not requiring a lot of language skills are taken together with Japanese children in regular classes to create an environment that is easy for foreign children to blend into. Therefore, individual timetables must be made suitable for each foreign child. It usually takes three to four months before each child understands an introductory level of Japanese language. An instructor of Japanese language also gives guidance on matters of everyday life to these foreign children so that they can adapt to the school environment (Izumo City Municipal Office 2019; Yahoo News 2019). These well-prepared Japanese learning programs for foreign children have been appreciated by their parents, one reason for the high rate of foreign residents settling in the municipality of Izumo-shi.

Multicultural and multinational symbiosis may seem easy, but is difficult to achieve. Nevertheless, the Multicultural Symbiosis Promotion Plan implemented by Izumo-shi seems to have proved that getting foreign workers with their families settled in the municipality would be one of the most effective strategies for the population decline in Japan.

Notes

1. In proposing the relocation of the Cultural Affairs Agency from Tokyo to Kyoto, local officials noted that about half of Japan’s designated national treasures are based in the Kansai region, as well as about 40% of its important cultural properties (Japan Times 2016).

2. In April 2020, the Japanese government will establish the Consumer Agency New Future Creation Strategy Headquarters (tentative name) in Tokushima City. However, the idea of the full relocation of the agency was deterred. That is, operations that require external coordination such as parliamentary response, crisis management, and system development will continue to be conducted in Tokyo (Asahi Shinbun Digital 2019b).

3. The GTFS-JP (General Transit Feed Specification Japan) is the Standard Bus Information Format data, and is prepared by the Ministry of Land, Infrastructure, Transport and Tourism in March 2017 (GTFS-JP 2019).

4. The word “cloud” is different between “cloud service” and “crowdfunding” which is discussed in the next section. In Japanese pronunciation there is no difference between the sound of “l” and “r”. To most Japanese, therefore, it is difficult to differentiate these two sounds, which would be difficult to understand to a native speaker of English. It is a well-known fact that Japanese people often make mistakes in pronouncing such words as “love vs. rub,” “free vs. flea,” “lane vs. rain,” etc.
5. Kintone is Cybozu’s cloud service that allows one to easily create a system tailored to one’s business without knowledge of computer language. Business apps can be created intuitively and shared within the team. It also has the function of an in-house SNS that activates connections between employees. Thus, team members can share information quickly (Cybozu 2019).

6. On the 12th of October 2019 Marumori-machi suffered tremendous damage due to the unprecedented heavy rains of Typhoon Hagibis (called as Typhoon No. 19 in Japan), and many of its functions were paralyzed. It is heartbreaking to know that it will take many years to recover from the disaster. The severity of the disaster was reported by news media such as “Both the plight and the resurgence … Voice from the disaster area delivered by SNS~~-, Miyagi Marumori-machi~~. https://www.tellerreport.com/news/2019-10-17—both-the-plight-and-the-resurgence—-voice-from-the-disaster-area-delivered-by-sns~~-miyagi-marumorimachi~~-%7C-nhk-news-.SJW0603rKB.html (NHK News 2019).

7. Customer relationship management (CRM) is the combination of practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the customer lifecycle, with the goal of improving customer service relationships and assisting in customer retention and driving sales growth. CRM systems compile customer data across different channels, or points of contact between the customer and the company, which could include the company’s website, telephone, live chat, direct mail, marketing materials and social media. CRM systems can also give customer-facing staff detailed information on customers’ personal information, purchase history, buying preferences and concerns (Whatis.com 2019). https://searchcustomerexperience.techtarget.com/definition/CRM-customer-relationship-management. Accessed 18 Aug 2019.

8. Ad hoc analysis is a business intelligence (BI) process designed to answer a single, specific business question. Users may create a report that does not already exist or drill deeper into a static report to get details about accounts, transactions or records (Whatis.com 2019). https://searchbusinessanalytics.techtarget.com/definition/adhoc-analysis. Accessed 18 Aug 2019.

9. The Kyoto Animation Arson Case (Kyoto Animation Hokajiken) is an arson case that occurred in Fushimi Ward, Kyoto City, Kyoto on July 18, 2019. It is often treated as an arson-murder case. A man invaded the first studio of Kyoto Animation, spread gasoline and ignited it, causing 74 persons involved in the company to suffer injuries, 35 of whom died (The Guardian 2019).

10. A social networking service (SNS) is an online vehicle for creating relationships with other people who share an interest, background, or real relationship. Social networking service users create a profile with personal information, photos, etc. and form connections with other profiles. These users then use their connection to grow relationships through sharing, emailing, instant messaging, and commenting. Social networking services may also be referred to as a “social networking site” or simply “social media.” For more in detail on SNS
refer to “Social Networking Service – SNS” at https://www.investopedia.com/terms/s/social-networking-service-sns.asp#targetText=A%20social%20networking%20service%20(SNS,form%20connections%20with%20other%20profiles. Accessed 21 Oct 2019.

11. The QR (Quick Response) code is something which small business owners and entrepreneurs need to be aware of since it is increasingly becoming an important tool. The QR code is basically a natural extension of the conventional barcode, which has been around since the mid-1970s on everything from supermarket groceries to large container shipments. It was designed in 1994 for Japanese auto-makers by Denso to track car parts. Now it is being used by big companies and small businesses (Small business Trends 2019).

12. AsMama, Inc. is an organization which supports establishment of a satisfactory child-rearing environment between neighbors and local people. http://asmama.jp/. Accessed 25 Aug 2019.

13. On July 1, 2005, the 12 municipalities of the Tenryu River and the Lake Hamana region were merged to form the new “Hamamatsu City,” the largest city in Shizuoka Prefecture with a population of 800,000. In 2007, the city became a government-designated city. The Hamamatsu city system, which began in the Meiji era, celebrated its 100th anniversary in 2011, and commemorative events were held throughout the year. Today the city is working to become creative, where new values for industries and cultures will emerge and be cultivated. (Hamamatsu City Office 2016) https://www.city.hamamatsu.shizuoka.jp/koho2/intro/ayumi01.html. Accessed 26 Aug 2019.

14. SPACEMARKET (Space Market, Inc.) offers an easy and one-stop service from booking to payment for about 6,000 unique spaces from rental conference rooms to private accommodations. https://www.spacemarket.com/about/service. Accessed 26 Aug 2019.

15. CloudWorks Inc. operates a comprehensive crowdsourcing site of the same name. It provides online services to match home workers and employers, perform business, and pay remuneration (CloudWorks Inc. https://crowdworks.co.jp/. Accessed 26 Aug 2019).

16. Chakuchigata Kanko (community-based tourism) is a new form of tourism in which tourist destinations organize programs unique to the local community, where the participants gather and tour the local area. It is expected to lead to regional promotion compared to the traditional “departure type tourism,” which is planned mainly by travel agencies in the city and taking participants to their destinations. (“Keywords” and “What is landing-type tourism” in the Kotobank Asahi Shimbun https://kotobank.jp/word/%E7%9D%80%E5%9C%B0%E5%9E%8B%E8%A6%B3%E5%85%89-892707. Accessed 26 Aug 2019.

17. There are two different kinds of statistics on foreign residents in Japan. One comes from the “Gaikokujin suu” (Number of Foreign Residents in Japan) of the national census administered once every five years. The other is on the “Zairyuu Gaikokujin Toukei” (Registered Aliens in Japan) compiled by the Ministry of Justice every year. Numbers registered to these statistics each year differs, and
those in the national census are about 75–80% of those compiled by the Ministry of Justice (Ishikawa 2011).

18. Newcomers are foreign residents in Japan from China, Brazil, and the Philippines whose number increased drastically since 1990. Of them Chinese resides mostly in rural depopulated farming regions, and they are foreign wives to Japanese husbands, trainees, and/or technical interns. Brazilian residents, on the other hand, are concentrated in the industrial areas of Tokai regions such as Shizuoka and Aichi Prefectures. Foreign residents from the Philippines reside widely throughout Japan; those who reside in remote islands or depopulated regions are most likely wives of Japanese husbands, rather than trainees or technical interns. Oldcomers, on the other hand, are descendants of Taiwanese and Koreans who migrated into Japanese main islands prior to World War II when they were under Japanese occupation. They are often called Zainichi (living in Japan) (Ishikawa 2011).

19. Izumo Murata Manufacturing was established in 1983 as part of the Murata Manufacturing Group, which supplies the world’s most advanced electronic components, and has grown as a core base for supplying ceramic capacitors supported by customers and many other stakeholders. (From the President messages, Izumo Murata Manufacturing, https://www.murata.com/ja-jp/group/izumomurata/corporate/message. Accessed 5 Feb 2020.)

References

Airbnb, Inc. (2019). Airbnb: About us. https://www.airbnb.jp/about/about-us. Accessed 24 Aug 2019.

Asahi Shinbun Digital. (2019a). Shocho no zenmen iten kabetakaku [High hurdles to be overcome for the relocation of the central governmental bodies]. @05:00, on February 11. https://digital.asahi.com/articles/DA3S13888752.html. Accessed 15 Aug 2019.

Asahi Shinbun Digital. (2019b). Tokushima no kyoten, kibo kakujyu Shohisha-cho [Tokushima base will be expanded, consumer affairs agency]. @16:30, on August 19. https://digital.asahi.com/articles/DA3S14145187.html. Accessed 20 Aug 2019.

Cabinet Office, Government of Japan. (2016). Society 5.0. https://www8.cao.go.jp/cstp/society5_0/index.html. Accessed 27 Aug 2019.

Cabinet Secretariat of Japan. (2014). Chihou Sousei Hou [Regional revitalization law] Law #136 in 2014. https://elaws.e-gov.go.jp/search/elawsSearch/elaws_search/lsg0500/detail?lawId=426AC0000000136. Accessed 6 Aug 2019.

Chiba City Office. (2018). Chiba-shi familie sapooto sentaa [Chiba city family support center]. Updated June 7. https://www.city.chiba.jp/kodomomirai/kodomomirai/shien/familysupport.html. Accessed 25 Aug 2019.

Cybozu. (2019). Kintone. https://kintone.cybozu.co.jp/jp/ad023/. Accessed 17 Aug 2019.

DRONE PRESS. (2017). Cho-koso birugai no Shinjuku de saigaiji no doroon katsyou yunen jissi [Conducted a drone utilization training exercise during a disaster in a skyscraper district of Shinjuku, Tokyo], 16th of February. https://www.drone-press.jp/drone-practicaluse/localgovernment/drone_shinjuku/. Accessed 14 Aug 2019.

GTFS.JP. (2019). JTFS-JP. https://www.gtfs.jp. Accessed 15 Aug 2019.
References

The Guardian. (2019). *Kyoto Animation studio fire victims mostly in their 20s and 30s*. Sat 20 Jul 2019 11.25 BST. https://www.theguardian.com/world/2019/jul/20/kyoto-animation-studio-fire-victims-mostly-in-their-20s-and-30s. Accessed 21 Aug 2019.

Hamamatsu City Office. (2016). *Hamamatsu no rekishi* [History of Hamamatsu], updated on January 26. https://www.city.hamamatsu.shizuoka.jp/koho2/intro/ayumi01.html. Accessed 26 Aug 2019.

Hamamatsu City Office. (2019). *Heisei 31-nendo shisei houshin* [Administration policy of Hamamatsu-shi], 2019, released on February 21. https://www.city.hamamatsu.shizuoka.jp/kikaku/shiseihoushin/index.html. Accessed 26 Aug 2019.

Immigration Services Agency of Japan. (2020). *Shutsunyuukoku kanri oyobi nanmin nintei kaiseihou* [Revisions to the immigration control and refugee recognition act]. http://www.immi-moj.go.jp/houreir/. Accessed 27 Jan 2020.

Institute of Population and Social Security Research [IPSSR]. (2017). *Nihon no Jinkou Shourai Suikei: Heisei 27-Heisei 77* [Population projection of Japan: 2015–2065]. Released on April 10, 2017. http://www.ipss.go.jp/pp-zenkoku/j/zenkoku2017/pp_zenkoku2017.asp. Accessed 22 Apr 2017.

Institute of Population and Social Security Research [IPSSR]. (2018). *Nihon no Chikibetsu Shourai Suikei Jinko: Heisei 27-Heisei 57* [Regional population projections for Japan: 2015–2045]. http://www.ipss.go.jp/pp-shicyoson/j/shicyoson18/t-page.asp. Accessed 31 Mar 2018.

Institute of Population and Social Security Research [IPSSR]. (2019). *Jinkou Toukei Shiryoushuu: 2019* [Latest demographic statistics of 2019]. http://www.ipss.go.jp/syoushika/2019/jinkou2019/jinkou2019_pop.htm. Accessed 29 Jan 2020.

Ishikawa, Y. (2011). *Chizu de Miru Nihon no Gaikoku-Jin* [Mapping foreign residents in Japan]. Kyoto: Nakanishiya Shuppan.

Itoman City Office. (2018). *IoT de nasayou wo benrini! Teru-chan jisshou jikken kaishi* [Convenient farming with IoT—“Teru-chan” demonstration test started]. http://www.city.itoman.lg.jp/docs/201808700022/2. Accessed 16 Aug 2019.

Izumo City Municipal Office. (2016). *Izumo-shi tabunka kyousei suishin puran: Heisei 28 nendo-Heisei 32 nendo* [Izumo city multicultural symbiosis plan: 2016–2020]. Released on June 27th. http://www.city.izumo.shimane.jp/www/contents/1466727403506/files/siryou2.pdf. Accessed 2 Feb 2020.

Izumo City Municipal Office. (2019). *Izumo-shi ni okeru Nihongo shidou nit suite* [Japanese language education in Izumo city]. School Education Division. http://www.city.izumo.shimane.jp/www/contents/1525744639164/index.html. Accessed 5 Feb 2020.

Izumo City Municipal Office. (2020). *Izumo-shi no jinkou: Chiku-betsu, Cho-betsu, Kokuseki-betsu* [Population of Izumo city by area, by community, and by nationality]. Shacho messeiji [Messages from the president]. https://www.murata.com/ja-jp/group/izumomurata/corporate/message. Accessed 4 Feb 2020.

J-CAST News. (2019). *Mitoosenai basho ni doroon de otodoke—Fukuoka-shi* [Delivering goods by drone to places that cannot be seen—For the experiment in Fukuoka-shi]. 29th of May issue. https://www.j-cast.com/2019/05/29358592.html?p=all. Accessed 14 Aug 2019.

Japan National Tourism Organization [JNTO]. (2019). *Nen-betsu, hounichi gaikyakusuu, shut-sugoku nihonjinjinsuu nosuii* [Visitor arrivals, Japanese overseas travelers: 1964–2018]. https://www.jnto.go.jp/jpn/statistics/marketingdata_outbound.pdf. Accessed 23 Aug 2019.

The Japan Times. (2016). *Tokyo bureaucrats trial working from Tokushima Prefecture*, March 14 issue. https://www.japantimes.co.jp/news/2016/03/14/national/tokyo-bureaucrats-trial-working-from-tokushima-prefecture/#XU7v5DaP6Um. Accessed 8 Aug 2019.

Kanda, Y. (2019). *Sudeni Imin-Taikoku, Nihonjin dake mou genkai* [Already a ‘migrant power’—only Japanese are already at their limits]. https://business.nikkei.com/atcl/NBD/19/special/00191/. Accessed 4 Feb 2020.

Kumagai, F. (1996). *Unmasking Japan today: The impact of traditional values on modern Japanese society*. Westport, Conn: Praeger.

Kumagai, F. (2008). *Families in Japan: Changes, continuities, and regional variations*. Lanham, MD: University Press of America Inc.
(UA)/Drone], July 24. https://www.mlit.go.jp/koku/koku_tk10_000003.html. Accessed 14 Aug 2019.
Naka-cho Town Office. (2019). http://www.town.tokushima-naka.lg.jp/gyosei/. Accessed 14 Aug 2019.
Nakatsugawa City Office. (2019a). Koukyou koutsu oopun deeta saisentan inaka heno chousen [Challenge to make the public transportation schedule open data]. Last updated on April 16. http://www.city.nakatsugawa.gifu.jp/page/083350.html. Accessed 15 Aug 2019.
Nakatsugawa City Office. (2019b). Nakatsugawa city homepage. http://www.city.nakatsugawa.gifu.jp. Accessed 15 Aug 2019.
NHK. (2018). Kizuite kudasai, watakushitachi ha kokoni imasu [Please notice, we are here]. Tuesday, December 25. https://www.nhk.or.jp/seikatsu-blog/cat-12321/311770.html. Accessed 5 Feb 2020.
NHK News. (2019). Both the plight and the resurgence … Voice from the disaster area delivered by SNS—Miyagi Marumori-machi,—, NHK News 2019-10-17T10:13:25.799Z. https://www.tellerreport.com/news/2019-10-17—both-the-plight-and-the-resurgence—voice-from-the-disaster-area-delivered-by-sns---miyagi-marumorimachi---%7C-nhk-news-.SJW0603rKB.html. Accessed 21 Oct 2019.
Nikkei, B. P. (2016). Chiho jichitai hatsu honkakuteki dejitaru marketing! Miyagi-ken Marumori-machi wa kuraudo katsuyou de jinko gensho ni tachimukau [Full-scale digital marketing from local government! Marumori-machi, Miyagi, Prefecture will fight against population decline by using cloud]. http://special.nikkeibp.co.jp/atcl/BPN/15/DTrans/000051/. November issue of Digital Transformation. Accessed 18 Aug 2019.
Nikkei Digital. (2016). Kuraudo fandingu 34 to-do-fu-ken ga katsuyo [34 prefectures are utilizing crowdfunding for community building]. July 30, @12:30. https://www.nikkei.com/article/DGXLASFB25H9R_Q6A730C1MM0000/. Accessed 21 Aug 2019.
Nikkei Business Daily. (2019). Doroon jitsuyouka, chihou ga senkou [Utilization of drones-local municipalities are more advanced than central cities] 10th of July issue, @18:00. https://www.nikkei.com/article/DGXMZO47189110Q9A710C1XY0000/. Accessed 14 Aug 2019.
Osaka Municipal Library. (2019). Osaka city library digital archive. http://image.oml.city.osaka.lg.jp/archive/. Accessed 16 Aug 2019.
Sentai Filmworks. (2019). HelpKyoAniHeal. Created July 18, 2019. https://www.gofundme.com/f/help-kyoani-heal. Accessed 22 Aug 2019.
Sharing Economy Lab. (2017). Shoyu kara kyouyuu he—Chihou kadai no kaiketsu ya chihousousei wo ninau shearing ekonomi no katachi [From “owned” to “shared”–the model of a sharing economy being effective for solving local issues and creating local communities] May 9th. http://sharing-economy-lab.jp/share-regional-revitalization. Accessed 25 Aug 2019.
Shimabara City Office. (2017). Sharing city Shimabara. https://www.city.shimabara.lg.jp/page4437.html?type=search&q=%ef%bc%b4%ef%bc%a1%ef%bc%a2%ef%bc%9f%ef%bc%a3%ef%be%a1&radiohbutton=4&now_p=1&show_num=20&sc_id=2. Accessed 26 Aug 2019. Updated on December 18.
Shimane Prefectural Office. (2019). Shimane-ken no gaikokujin jyuumin jinkou [The population of foreign residents in Shimane Prefecture]. https://www.pref.shimane.lg.jp/life/international/koryu/kokusai/data/touroku.html. Accessed 2 Feb 2020.
Shinshinotsu Village Office. (2019). https://www.vill.shinshinotsu.hokkaido.jp/. Accessed 15 Aug 2019.
Small Business Trends. (2019). What is a QR code and how does it work?. https://smallbiztrends.com/2015/05/what-is-a-qr-code.html. Accessed 23 Aug 2019.
Statistics Bureau, Ministry of Internal Affairs and Communication [MIAC]. (2019). Jumin kihon daicho jinko ido houkoku [Annual report on internal migration in Japan derived from the basic resident registration]. https://www.stat.go.jp/data/idou/sankouhyo.html. Accessed 7 Aug 2019.
Taku City Office. (2018). Shearingu shiti sengen—lokaru sharing jigyo [Sharing city declaration-local sharing business]. Commerce and Tourism Division, updated December 10. https://www.city.taku.lg.jp/main/9042.html. Accessed 2 Aug 2019.
United Nations. (2019). *World population prospects 2019*, 26th ed. UN, DESA, Population Division, released on the 17th of June. [https://population.un.org/wpp/](https://population.un.org/wpp/). Accessed 5 Aug 2019.

WheeLog!. (2019). *WheeLog! Home-Page*. [https://www.wheelog.com/hp/](https://www.wheelog.com/hp/). Accessed 16 Aug 2019.

Yahoo News. (2019). *Kazoku to teijyuu suru gaikokujin roudousha—Kodomo no nihongo kyouiku, jyuumin to ko kyousei ni dou torikumu* [Foreign workers who settle in Japanese communities with their families—how to work on “Japanese education for children” and “symbiosis with residents].” March 13th issue. [https://news.yahoo.co.jp/feature/1261](https://news.yahoo.co.jp/feature/1261). Accessed 5 Feb 2020.

Yano Research Institute. (2018). *Kokunai kuraudofandingu shijyo* [Crowdfunding market in Japan]. Yano Research Institute Market Research Report No. 2036, press release December 3rd. [https://www.yano.co.jp/press-release/show/press_id/2036](https://www.yano.co.jp/press-release/show/press_id/2036). Accessed 20 Aug 2019.