

Regional revitalization measures using a connected population

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Abstract

In Japan, young people tend to move to urban areas in search of jobs as the declining birthrate and aging population progresses. As a result, the aging of the population in rural areas is progressing and it is difficult to maintain the communities. In order to break this situation, appropriate measures are needed. It is important that young people stay in a rural area. They are the next generation. It is very difficult to derive fundamental measures to stop the declining trend of Japan's total fertility rate. However, it would be possible to keep the rate of decline low. If some measures are not taken immediately to stop the outflow of young people to urban areas, many rural areas may rapidly disappear. This trend is an issue that is also consistent with other countries, and it is desirable to develop measures as a model for the world. The Population Strategy Council announced "744 municipalities having the risk of disappearing." Several local governments (rural areas) in Hokuriku are included in this category. The governments that are far from the prefectural capital tend to fall into this category and many social infrastructures tend to be concentrated near prefectural capitals. In this paper, an increase of a "connected population" (Kankei Jinkou in Japanese) is proposed as one of the measures to avoid becoming a disappearing local government. The possibility of regional revitalization is created due to the measure. It can be also expected to ease the population decline rate to some extent. This is consistent with Goal 11 of the SDGs (Sustainable Cities and Communities). Nanto City, Toyama Prefecture, which was listed as municipalities having the risk of disappearing, is selected as the research area.

Keywords

cities likely to disappear, declining birthrate and aging population, regional revitalization, birthrate, rural area

1. Introduction

Japan's national power is decreasing in various fields due to the declining birthrate and aging population. Japan's Gross Domestic Product (GDP) fell from 3rd to 4th place (4,286,187 million US\$) according to a report by the International Monetary Fund (IMF) in 2024 (1st place: U.S.A., 2nd place: China, 3rd place: Germany, 5th place: India). Japan's economic power is on a decline in the world. It is feared that this trend will cause a decline in the number of foreign visitors, who are an important exchanging population for Japan. The main causes of the decline in GDP are population decline and aging [Hsu and Yamada, 2017]. The consumption amount of the elderly is lower than that of the working generation. GDP will naturally decline when personal consumption declines.

More than 50 % of people in the world (approximately 8 billion) live in urban areas. Shanghai (China) and Delhi (India) are experiencing significant population growth, and there are some areas where infrastructure, such as electricity and water supply, is inadequate and sanitary conditions are poor.

The atmospheric environment deteriorates, and local ecosystems are also affected as the population increases and concentrates. Tokyo is the only prefecture in Japan whose population has increased in 2023 (population in June 2024: 14.1 million). The concentration of population in Tokyo also affects the operation of local public transportation systems and the number of

trains, buses, etc. declines. This is linked to the discontinuation of routes and elderly people becoming traffic refugees. Some people would have difficulty to evacuate during disasters. Furthermore, disasters in urban areas with large populations can cause severe damage. Measures to strengthen resilience against disasters will also be required and the cost increase will be enormous. Aging and population concentration will inevitably increase costs for the country as a whole.

Measures to slow down the declining birthrate and aging population in rural areas must be proposed. In rural areas that are far from the prefectural capital, it becomes difficult for the prefectural government to implement measures and the resident services decline. Naturally, whole regions are required to create an environment that is comfortable for young people of the core generation (20s to 30s) to live in. It is necessary for the local government to provide some kinds of attractive measures for young people. It is essential to create an environment where young people can continue to live and have work and housing as a basic factor. Japan is surrounded by the sea, and approximately 70 % of the country is forest. It is an attractive country rich in nature. Japan ranked first in the 'World's Most Attractive Countries' (Readers' Choice Awards 2023) which was announced by the American travel magazine 'Condé Nast Traveler' (2023). In general, the attractions of Japan from the perspective of foreigners include; (1) culture and customs, (2) rich nature, and (3) history. These are also common attractions among young people living in urban areas. When foreign people and Japanese young people are staying in a rural area, even temporarily, and are able to experience festivals and other local

culture and customs in the midst of rich nature, they can have a healing and stress-reducing effect. Although convenience cannot be expected in rural areas, it is possible to create and provide a calm environment.

This paper describes the necessity of the measures to increase the ‘connected population’ (or related population) due to various kinds of exchanges through sister/friendship city agreements with overseas and domestic local governments, especially the exchanges among young people of those areas. Nanto City, Toyama Prefecture, is selected as the target area, and some characteristics will be shown and measures will be proposed. Although the city has a world heritage site called Gokayama, there has been little increase in the number of visitors. Since the population is decreasing rapidly in the city, it is considered that there is a strong need to attract the connected population.

2. Current situation of Nanto City

Nanto City in Toyama Prefecture was selected as the target area. Nanto City is a mountainous city located on the border with Gifu Prefecture. The distance between Toyama City (the prefectural capital), and Nanto City (Fukumitsu District) is over 50 km, and about an hour by car. Many people commute to Toyama City for work or school. The area was divided into four towns and four villages (Johana Town, Inami Town, Fukuno Town, Fukumitsu Town, Inokuchi Village, Taira Village, Kamitaira Village, and Toga Village) before the Heisei merger. The Gokayama Gassho-zukuri Village (Ainokura and Suganuma) is a World Cultural Heritage Site that was registered along with Shirakawa-go in 1995. There are two representative folk songs (*Kokiriko-bushi* and *Mugiya-bushi*) in the Gokayama area. *Kokiriko-bushi* is one of Japan’s oldest folk songs and *Mugiya-bushi* is a folk song related to the *Heike* fugitives. The city is rich in cultural heritage. The population as of the end of March 2024 is approximately 46,500 people. It has been on the decline in recent years and has decreased by 12 % over the past eight years. The tendency is shown in Figure 1.

The city has a variety of natural, cultural, and historical

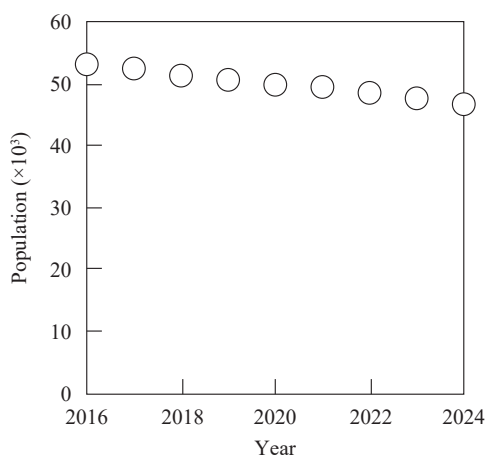


Figure 1: Change of population in Nanto City

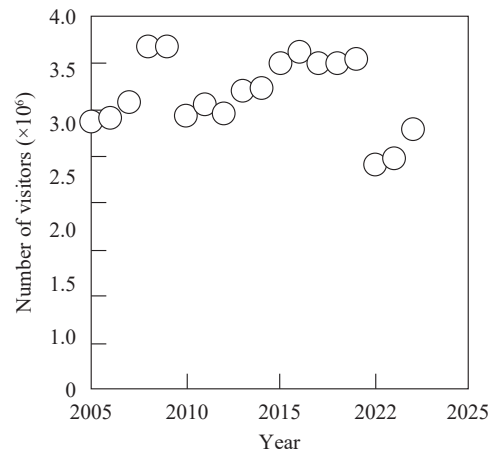


Figure 2: Change of number of visitors in Nanto City

resources. The number of tourists visiting the city fluctuates depending on the event and the tendency is announced by the City Tourism Association, and around 3.5 million people visit the city (overnight stays and day trips) per year. The entire Tokai-Hokuriku Expressway was opened and it recorded 3.712 million passengers in 2008. The Johana Hikiyama Festival was registered as a UNESCO Intangible Cultural Heritage in 2016, but the attendance was 3.63 million. It increased only about 90,000 from the previous year. The development of transportation infrastructure has a significant impact on the number of visitors. It decreased to 2.42 million in 2020 when the Covid-19 pandemic occurred. The number reached 2.5 million in 2021 and 2.82 million in 2022, which was about 80 % of the 2019 (before Covid-19 pandemic) level [Azuma, 2022; Oyabu et al., 2021]. This is shown in Figure 2.

Epidemic outbreaks have a major impact on the tourism industry even in rural areas. The following six items are listed as Nanto City’s main tourism resources at present. It is necessary to create an environment in which young people can easily live while these resources strengthen more resilience against epidemics and disasters. Furthermore, it is necessary to develop some measures to increase the number of young people who stay in Nanto City, and they have some kind of relationship with the city by making it easier to visit as a tourist. First, it is important to create an environment that tourists can visit easily.

- Festivals
- Alcohol production
- Woodworking (wooden bat)
- Cycling
- Shiko Munakata (printmaker)
- Theater etc.

3. Connected population

Japan is entering an era of population decline due to the declining birthrate and aging population [Umezaki, 2018]. Japan’s total fertility rate in 2023 was 1.20 and it is the lowest value

ever recorded. It is becoming difficult to maintain and manage communities in rural areas because the local activities cannot be carried out as before. Furthermore, the relationships between residents have become weaker and the mutual assistance system is no longer working [Uoji, 2004]. The local purchasing power and the economic activity become lower due to the decreasing population nationwide. In particular, the possibility of regional survival chances will also decrease when the number of young people decreases. The Population Strategy Council (a private organization) has published a list of 744 local governments in danger of disappearing municipalities (April 24, 2024). In Tokyo, Hinohara Village and Okutama Town are only included in the list. Hokkaido has the most applicable local municipalities. There are no applicable municipalities in Okinawa Prefecture. Okinawa is the most sustainable municipality prefecture in Japan and there are no local governments in the list that are at risk of disappearing by 2050. Local governments that are at risk of disappearing are determined based on the following consideration: ‘Women in their 20s to 30s (the core generation that gives birth to children) will be less than half of the population.’ The following five cities and towns are listed in Toyama Prefecture.

- Himi City
- Nanto City
- Kamiichi Town
- Nyuzen Town
- Asahi Town

These local governments are far from Toyama City (the prefectural capital). The following can be considered as countermeasures for these areas.

- Municipal merger
- Concentration in the central city area
- Employment of foreign personnel
- Strengthening disaster prevention capabilities

Local governments can reduce maintenance and management costs and provide more generous services to residents by encouraging people to live in central urban areas and reducing infrastructure costs such as electricity, water, gas, and transportation. It is also necessary to consider creating regions with lower management costs through downsizing in anticipation of population decline.

The local economy cannot be revived by these measures alone. After all, the number of people staying in Japan must be increased even temporarily, which includes the number of visitors such as tourists. It is also effective to increase the exchanging population (residents who come and go with each other) by planning mutual exchanges between local governments. And, it is necessary for diverse human resources to visit and interact with each other. The use of the three groups commonly referred to as ‘young people,’ ‘stupid people,’ and ‘outsiders’

sometimes becomes a heated topic. The people in the three groups (*san-mono* in Japanese) have the potential to innovate and revitalize local regions by applying some new thinking strategies that differ from conventional wisdom. First of all, it is necessary to create an area that attracts those three groups. It is not necessary to be attractive to the majority of people. It would be good if only a few people would be attracted to the area, like the area, and implement some ideas to create the area with new measures.

Human resources from outside the region, known as the ‘connected population,’ are expected to play a role in driving regional innovation. The connected population is defined as follows according to the Ministry of Internal Affairs and Communications:

The connected population refers to people who are involved in a variety of ways with the local area, neither the ‘settled population’ who have immigrated nor the ‘exchange population’ who have visited for sightseeing.

The utilization of foreigners as a connected population is expected to be effective. The connected population of foreign visitors to Japan and foreign residents create many opportunities for those people to understand Japan, and they also make significant contributions to diplomacy. This is partly due to Covid-19 restrictions, but also due to the significant depreciation of the Japanese yen. A strategy to encourage Japanese people to go abroad, through the exchange rates based on the appropriate value of the yen, must be immediately planned.

Exchanges between foreign municipalities and local governments in Japan through sisterhood/friendship agreements also contribute not only to diplomacy but also to regional revitalization. Local governments will need to be serious in order to maintain the agreement and maintain active exchanges. The mutual understanding between the residents across borders is essential. The agreement will also advance the globalization of residents. The number of sister/friendship agreements between Japanese local governments and overseas local governments in

Table 1: Number of sister/friendship city agreements in Japan

Country	Number
U.S.A. (G7)	468
China	383
Korea	169
Australia	108
Canada (G7)	72
Brazil	58
Germany (G7)	57
France (G7)	55
Taiwan	48
Russian Federation	48
New Zealand	44

2023 is shown in Table 1.

The top 11 countries are shown in the table. The total number of agreements reached 1,817. G7 (Group of seven) accounts for 39 %. The U.S.A. has the largest number of agreements at approximately 26 % and followed by China at 21 %. The percentage is 33 % even if the rates of China, South Korea, and Taiwan are combined. It is a small number despite being neighboring countries. China has the largest amount of trade with Japan, about 1.3 times that of the U.S.A. The amount exceeds 30 % of the total when the rates of Taiwan and South Korea are added. The rate of visitors from China was the largest (accounting for 30 %) before the Covid-19 pandemic (2019) [Oyabu *et al.*, 2023]. South Korea was at the top (accounting for 28 %) in 2023. Although 55 % of visitors come from these three countries/regions, the number of agreements with these countries/regions is small. Agreements with neighboring countries have many benefits. Neighboring countries are not only close and easy to visit, but also those countries have relatively similar habits, there are culturally common aspects, and it is possible to deepen mutual understanding. In other words, the mental barrier to interaction is low. The benefits of promoting exchanges with neighboring countries are wide-ranging. The agreements with foreign countries in Nanto City have been established with the following five local governments. The agreement with Shaoxing City is important, which was developed from the friendship between the late Kenzo Matsumura (a native of the former Fukumitsu Town and representative), and the late Chinese Prime Minister Zhou Enlai. It is necessary to promote the exchange with these regions in many ways.

- Tukche Village: Nepal
- Delphi City: Greece
- Marlboro Town: New Jersey, U.S.A.
- Shaoxing City: Zhejiang Province, China
- Yinzhou District: Ningbo City, Zhejiang Province, China

4. Fostering interregional relationships

The heads of each local government and the staff play important roles to promote the sister/friendship city agreements which are formed with not only domestic but also overseas

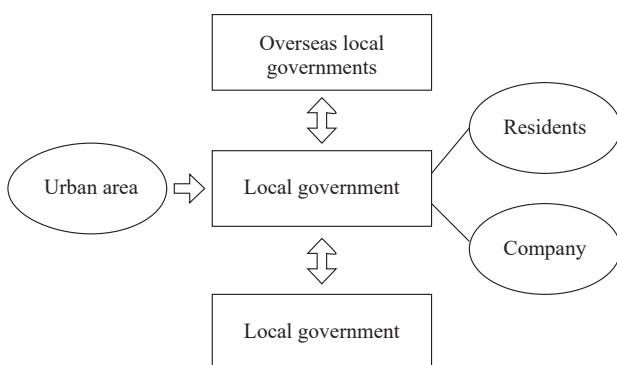


Figure 3: Sister/friendship agreements between local governments (including overseas local governments)

governments. However, the understanding and support of residents is essential for the operations. Furthermore, there is a high possibility that various exchanges will expand when there is active support from local businesses. Each local government in Japan should not only aim for the connected population from overseas, but also consider the domestic population in Japan. Agreements between domestic local governments can be easily promoted, but it must be kept in mind that agreements with overseas local governments can be costly. Figure 3 shows the alliances between overseas and domestic local governments, as well as the relationships with residents and companies. It will be of great benefit to the country as a whole if the connected people from urban areas can build various relationships [Owada and Kazami, 2020].

It is also effective to provide opportunities for fieldwork to students from nearby universities as a connected population, and the students have actually seen the area and they may give useful suggestions. If the community can incorporate the suggestions that are expected to be effective for young people, the operation also leads to the revitalization of the community. It is natural that overseas universities and universities in urban areas should be included. It is desirable to hold fieldwork and seminars for students regularly. Students are considered to be the ‘core generation,’ which is a main factor for determining the possibility of extinction of each municipality. The students may live in the area in the future.

Even if the number of concluded agreements increases, the number of the connected population will not increase. It is necessary for the region to collect ideas for revitalization and take action [Oyabu *et al.*, 2019]. At the time, it is necessary for young people in the area to gather together and have repeated discussions toward implementing their ideas. The area is a place for discussion between local young residents and young people from outside. It is also necessary to create a momentum to improve labor productivity by utilizing information communication technology (ICT) in regional revitalization. Japan’s labor productivity is extremely low, and the delays in the introduction of ICT will not only be unacceptable to young people, but will also put a brake on regional revitalization. This content is shown in Figure 4.

The seriousness of regional revitalization based on the collection of ideas, and the understanding and efforts of residents, is tested. Japan’s labor productivity was ranked 30th out of 38 countries according to the Organization for Economic Cooperation and Development (OECD) in 2022. The amount is

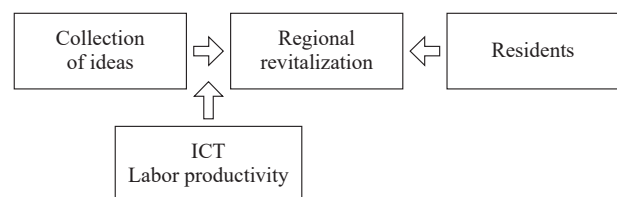


Figure 4: Achieving regional revitalization by taking initiative of residents and gathering information

approximately 1/3 of that of Ireland, which ranks first. Unless Japan quickly improves this ranking and increases the national power, it will be difficult to increase the number of the foreign connected population. Young people are accustomed to using ICT, and there is no progress from tourist to the connected population in the areas where it is difficult to use ICT.

Japan is a country with a low birthrate and an aging population, and is faced with various issues. The issues are such as not being able to hold festivals in rural areas, the heavy labor involved in agricultural work during the sowing and harvesting seasons, and the inability to clean irrigation canals. If these issues can be solved by a connected population (such as young people), the regional survival will be possible. The connected population also have areas where they live their lives. It is desirable for the connected population to maintain some kind of relationship with the other areas. It is also necessary to place a coordinator who can mediate between local community and the connected population in an area with issues. One of ideas is for the coordinator to be a local government official or a 'regional revitalization cooperation team' who are familiar with the area. The coordinator must share information between the local issues and the connected population. Information exchange via online is also effective. The overview is shown in Figure 5.

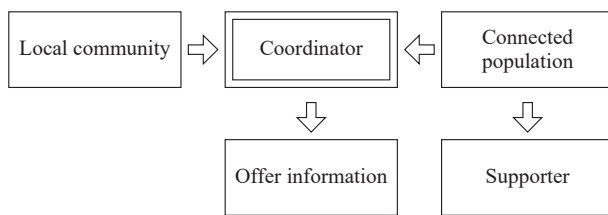


Figure 5: Relationship between local community and connected population

It is better not to overwork the connected population with excessive work or unreasonable work. It is fundamental to have fun interaction with each other. It would be a big step when a co-working space for the connected population is set up and accommodation free of charge is provided. New interactions between the residents and the connected population could emerge by holding dinner parties and new events. Giving points based on the number of visits and length of stay (integrated index) also attracts young people. If the capable connected population can coordinate with the local community, they can contribute to solving regional issues. They are serving as supporters at that time.

Utilizing people on workcation (work + vacation) as a connected population is also effective. There are two types of workcation, namely vacation-type and work-type. For vacation-type, it is thought to provide labor (short-time) in agriculture and forestry fields. For the work-type, ideas are provided to solve regional issues as a part of the main work. Both types are effective in rural areas.

5. Conclusion

Japan is a country with a low birthrate and an aging population and there are various issues in rural areas. A connected population has the potential to solve some of them. Although it is not possible to solve whole regional issues by utilizing a connected population, the local area can also expect some economic contribution if the number of people (including the connected population) staying in the area can increase. Furthermore, they may provide ideas and labor that can solve issues facing the community. Their ideas and labor will be the key to revitalization. A connected population generally has their base of life in other areas and do not visit the area multiple times, where they are not interested in and have no intention of interacting with. Their visit is just sightseeing. As for foreigners, even if a sister/friendship city agreement is in place, the relationship will become estranged when new measures are not constantly provided. A connected population is an important group of people who understand Japan and spread the good aspects of Japan overseas. It is essential to disseminate the attractiveness of the region to young people, who are an important target. The revitalization is difficult if local residents do not have the will to revitalize. It is also necessary for local residents to foster a spirit of acceptance of diversity. Residents' sense of urgency and consciousness are key to utilizing the connected population. Utilizing of people on workcation is effective in rural areas but it is necessary to establish a reasonable system in the receiving community.

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