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# Mizuho Economic Outlook & Analysis

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## *Japan's population has started to shrink and polarize geographically*

*The census reveals the concentration of people in large cities and city centers*

### < Summary >

- ◆ The preliminary report on the 2015 population census of Japan was released on February 26, 2016. The report shows that Japan's population declined for the first time since World War II, marking the advent of a depopulating society.
- ◆ Regional populations are moving further in the direction of polarization. While the populations of urban areas other than Tokyo, Osaka and Nagoya continue to plunge, populations are rising in metropolitan areas functioning as local economic hubs.
- ◆ Population polarization is striking even among the three major metropolitan areas, with the tendency of people to return to city centers. The overall population of Osaka Prefecture dropped for the first time in 68 years, but the population surged in central Osaka City.

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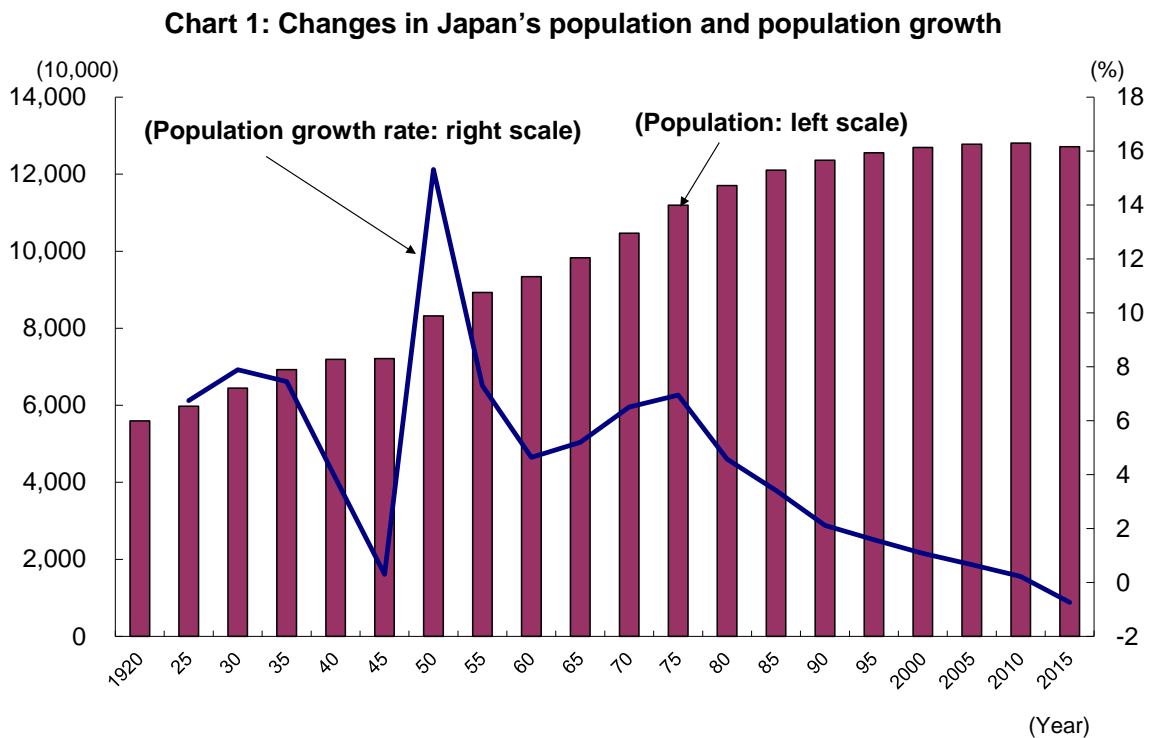
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## 1. The census recorded Japan's first population decline since World War II

The total population of Japan in 2015 was 127.11 million, representing the first decline since World War II (**Chart 1**). Depopulation in Japan became inevitable after 2010 with the growing number of foreign residents leaving the country following the 2011 Great East Japan Earthquake and the rising number of deaths exacerbated by the nation's falling birth rate and aging population.

According to United Nations' estimates, Japan's population in 2015 ranked tenth in the world, with 11th ranked Mexico fast catching up. Mexico with a population of 127.02 million in 2015 and a population growth rate of 7.1% in 2010-2015 is likely to overtake Japan in 2016. Moreover, among the world's top twenty most populated countries in 2015, only Japan registered a decline from 2010 to 2015, while populations are rising rapidly in emerging countries ranked 12th or lower. Japan's population in 1950 was the fifth largest in the world, but its ranking is expected to continue falling gradually in the future.



Source: Made by MHRl based on Statistics Bureau, Ministry of Internal Affairs and Communications, *The Preliminary Counts of the 2015 Population Census* (2016)

## **2. Further polarization of regional populations**

### **(1) Population growth registered in only eight prefectures**

Simply put, Japan's regional populations became increasingly polarized from 2010 to 2015. Of the country's 47 prefectures, only eight (Saitama, Chiba, Tokyo, Kanagawa, Aichi, Shiga, Fukuoka and Okinawa) experienced population growth during this period. On the other hand, the number of prefectures with a declining population reached 39, with most of their populations falling at an accelerating pace. Akita Prefecture, for example, recorded the lowest population growth rate (highest reduction rate) during the 2005-2010 and 2010-2015 periods, with its growth rate dropping further from -5.2% (2005-2010) to -5.8% (2010-2015).

Fukushima Prefecture followed Akita with the second lowest population growth rate (-5.7%) in 2010-2015 due to the devastating effects of the Great East Japan Earthquake. Compared with its growth rate of -3% in 2005-2010, the pace of Fukushima's population decline has accelerated. Meanwhile, Miyagi and Iwate Prefectures, which also suffered from the earthquake disaster, showed little change in their population growth rates from -0.5 to -0.6% and -4 to -3.8%, respectively, during the 2005-2010 and 2010-2015 periods. The population outflow from Fukushima was acute because of the attendant nuclear power plant accident, while most Miyagi and Iwate residents only moved inland from the affected coastal areas.

None of the prefectures with decreasing populations in 2005-2010 witnessed growth in 2010-2015. While many local authorities are aiming to reverse the declining population trend under the national government's major policy objective to revitalize local economies, this is no easy task.

In the meantime, among the nine prefectures with increasing populations in 2005-2010, only Osaka Prefecture took a downward turn in the current census. Osaka experienced its first decline in about 70 years, and the population decline is also accelerating in neighboring Kyoto and Hyogo Prefectures. These trends generally reflect the economic decline of the Osaka metropolitan area (Osaka, Kyoto and Hyogo Prefectures).

In contrast, the Tokyo metropolitan area (Tokyo, Kanagawa, Chiba and Saitama Prefectures) showed population growth this time again in all four prefectures, with the concentration of people remaining high in Tokyo and its surrounding regions. Even so, population growth in the four prefectures showed signs of slowing down. Despite the considerable population increase in the Tokyo area with a massive influx of young people, the rapidly aging population and the rising mortality are inhibiting the area's population growth. For its own future, and even the future of the entire country, the

Tokyo metropolitan area needs to fully implement countermeasures against the declining birth rate among young people who flock to Tokyo from all over the country, by addressing issues of public interest such as the shortage of nursery schools.

## (2) Fast-shrinking earthquake-stricken areas and mountain villages

The population growth ranking by municipality (20 municipalities with the highest decline rate) was significantly affected by the Great East Japan Earthquake, with eight disaster-hit municipalities ranked in the bottom twenty (**Chart 2**). Excluding the disaster-hit areas, one municipality noteworthy for its high decline rate (low growth rate) is Umaji (-18.9%), a mountain village in Kochi Prefecture famous for its successful business utilizing its local specialty, the Japanese citrus fruit yuzu. The population of the village, however, has continued to fall since the introduction of the popular yuzu fruit juice in 1988. Similarly, Kamikatsu in Tokushima Prefecture, a town also located in a mountainous area, is known for its successful business in processing wild leaves for garnishes. Even so, the town recorded a high population decline of -13.3% in 2010-2015, although it was not ranked in the bottom twenty in the latest census. The national government aims to revitalize local economies with a focus on creating jobs to attract young people and has been promoting the development of local specialty businesses as its main policy goal. In this respect, while Umaji and Kamikatsu can be viewed as successful cases, considering the rapidly shrinking populations of both municipalities, even success in local specialty businesses may prove difficult in halting the decline in the population.

**Chart 2: Ranking of population growth by municipality (2010-2015) #1  
(20 lowest municipalities)**

Rank	Municipality	Growth rate (%)	Rank	Municipality	Growth rate (%)
1	Naraha, Fukushima	-87.3	11	Kawakami, Nara	-19.7
2	Onagawa, Miyagi	-37.0	12	Shimoichi, Nara	-19.3
3	Minamisanriku, Miyagi	-29.0	13	Yubari, Hokkaido	-19.0
4	Kawauchi, Fukushima	-28.3	14	Umaji, Kochi	-18.9
5	Yamamoto, Miyagi	-26.3	15	Higashiyoshino, Nara	-18.6
6	Kamikitayama, Nara	-25.3	16	Minamisoma, Fukushima	-18.5
7	Otsuchi, Iwate	-23.2	17	Nanmoku, Gunma	-18.3
8	Kurotaki, Nara	-22.0	18	Soni, Nara	-18.3
9	Hirono, Fukushima	-20.2	19	Utashinai, Hokkaido	-18.2
10	Kazamaura, Aomori	-19.7	20	Tenryu, Nagano	-17.7

Note: Shaded parts refer to municipalities affected by the Great East Japan Earthquake. Municipalities with evacuation orders issued to the entire area due to the nuclear disaster are excluded.

Source: Made by MHRI based on Statistics Bureau, Ministry of Internal Affairs and Communications, *The Preliminary Counts of the 2015 Population Census* (2016)

Other noteworthy municipalities ranked among the twenty highest population decline rates are Yubari City (-19%), which is still remembered as the city that went bankrupt, and Utashinai City (-18.2%), Japan's smallest city with a population of approximately 4,000. Both cities once prospered as coal mining centers. Clearly it is difficult to prevent population shrinkage amid decline in core industries due to the changing industrial structure.

### **(3) Municipalities with significant population growth mostly located in the suburbs of large cities**

On the other hand, municipalities with markedly rising populations are those located in the suburbs of large cities, which are playing a central role in local economic development, such as Fukuoka, Sendai and Nagoya (Chart 3). For example, Shingu, located next to Fukuoka City, is a town with the highest population growth rate of all Japanese municipalities. Its growth rate soared over the past five years from 5.3% in 2005-2010 to 22.9% in 2010-2015 due to the opening of a new train station in 2010 and its accompanying residential housing development. Likewise, sixteen municipalities among the top twenty in population growth are situated in the suburbs of local economic centers with easy access to transportation and residential housing development to accommodate the increasing population. In this way, at the present stage, populations can be expected to grow in the suburban areas of metropolises providing convenient transportation and residential housing.

Moreover, the top twenty ranking includes three remote island municipalities. For example, Toshima in Kagoshima Prefecture, known as Japan's longest village consisting of numerous remote islands, ranked second because of its new settler benefits program which is the most generous in the country. Introduced in 2010, the program provides new settlers with up to 10,000 yen a day for the first three years and 5,000 yen for the next two years based on the number of working days in agriculture or fishery, with new settlers also entitled to any profits earned from farming or fishing. As a result, the population of Toshima, which had continued to fall until 2010, rose sharply during the 2010-2015 period. Ogasawara, another remote island village which is administratively a part of Tokyo, also experienced a spike in population growth. Following the listing of the Ogasawara Islands as a Natural World Heritage Site in 2011, an increasing number of people have settled in the village to engage in tourism and environmental conservation activities. Toshima and Ogasawara villages witnessed a dramatic increase in their populations from 2010 to 2015 as a consequence of unprecedented demographic changes.

**Chart 3: Ranking of population growth by municipality (2010-2015) #2  
(20 highest municipalities)**

Rank	Municipality	Growth rate (%)	Rank	Municipality	Growth rate (%)
1	Shingu, Fukuoka	22.9	11	Nakagusuku, Okinawa	10.0
2	Toshima, Kagoshima	15.4	12	Asahi, Mie	9.7
3	Taiwa, Miyagi	13.5	13	Tomiya, Miyagi	9.7
4	Yonabaru, Okinawa	12.9	14	Agui, Aichi	9.0
5	Yonaguni, Okinawa	11.2	15	Yaese, Okinawa	9.0
6	Nagakute, Aichi	10.7	16	Kikuyo, Kumamoto	8.6
7	Toda, Saitama	10.6	17	Ogasawara, Tokyo	8.5
8	Tsukubamirai, Ibaraki	10.5	18	Kasuya, Fukuoka	8.0
9	Showa, Yamanashi	10.5	19	Ozu, Kumamoto	7.2
10	Higashikagura, Hokkaido	10.1	20	Okinawa, Okinawa	7.0

Source: Made by MHRI based on Statistics Bureau, Ministry of Internal Affairs and Communications, *The Preliminary Counts of the 2015 Population Census* (2016)

#### **(4) Returning to city centers particularly in large cities**

Population polarization is deepening even in major cities designated by government ordinance. Among the current twenty ordinance-designated cities, the populations in 2010-2015 decreased in six cities – Kobe, Kitakyushu, Sakai, Niigata, Hamamatsu and Shizuoka – boasting relatively large manufacturing industries. Since ordinance-designated cities are also facing a declining birth rate, an aging population and a rising mortality, a massive influx of young people is essential to increase their populations. However, manufacturing industries are declining due to the nation’s changing industrial structure, and the popularity of factory manufacturing jobs among college graduates is fading, leading to the outflow of young people from manufacturing cities to other major cities for better job opportunities.

Kobe is especially worthy of attention. The population of Kobe marked its first decrease after the Great Hanshin-Awaji Earthquake in 1995, and was overtaken by Fukuoka for the first time since World War II. Kobe’s population decline is mostly due to the growing tendency of people to return to the city centers of the Osaka metropolitan area. In the population growth ranking by city in Hyogo Prefecture, Ashiya ranked first at 2.4% and Nishinomiya second at 1.1%. Both cities are located closer to Osaka City than Kobe is. This result suggests that the population of the Osaka area is rising in cities within an easy commuting distance to Osaka City.

The return to city centers is expanding the population of inner cities in economic zones. Fukuoka surpassed Kobe in population because Fukuoka City is a key driving force in the local economy, whereas, unlike Osaka, Kobe is far from being a center of the Osaka metropolitan area’s economy.

This demographic trend is particularly evident in the inner areas of local economic centers. The population growth ranking by ward in Osaka City shows a considerable increase in Kita, Chuo, Naniwa, Nishi and Tennoji wards, located either in the city center or its neighboring areas (**Chart 4**). Among the other ordinance-designated cities, wards in the city centers marked the highest growth rate in Fukuoka and Sapporo. The most striking example of the move to city centers is Tokyo. The population growth rate by ward reveals that Chiyoda, Minato and Chuo wards in central Tokyo, and Taito ward adjacent to Chiyoda ward, increased significantly, dominating the top positions in the population growth ranking for ordinance-designated cities.

On the other hand, suburban wards show a strong contrast in demographic trends. For example, Nerima ward, situated in the suburban area of Tokyo, used to have a high population growth rate, but its growth rate in 2010-2015 was a mere 0.8%, the lowest since 1970, and ranked twentieth of all 23 wards of Tokyo. Yokohama City marked only 1% population growth in 2010-2015, the lowest rate since 1950. However, the growth rate was high in the wards of Yokohama located close to Tokyo, such as Kohoku, Tsuzuki and Tsurumi. Since the Tokyo metropolitan area comprises a huge economic zone, the concentration of people is higher in areas with easy access to central Tokyo than in the city center of Yokohama.

**Chart 4: Ranking of population growth by ward in special cities and ordinance-designated cities (2010-2015)**

Rank	Ward	Growth rate (%)	Rank	Ward	Growth rate (%)
1	Chiyoda, Tokyo	23.8	11	Koto, Tokyo	8.1
2	Minato, Tokyo	18.7	12	Chuo, Sapporo	8.0
3	Chuo, Osaka	18.2	13	Chuo, Fukuoka	7.9
4	Chuo, Tokyo	14.9	14	Fukushima, Osaka	7.7
5	Naniwa, Osaka	12.8	15	Hakata, Fukuoka	7.4
6	Taito, Tokyo	12.8	16	Nishi, Fukuoka	7.1
7	Kita, Osaka	12.0	17	Chuo, Kobe	7.0
8	Nishi, Osaka	11.3	18	Urawa, Saitama	6.6
9	Shibuya, Tokyo	9.9	19	Higashi, Nagoya	6.6
10	Tennoji, Osaka	8.4	20	Aoba, Sendai	6.4

Source: Made by MHRI based on Statistics Bureau, Ministry of Internal Affairs and Communications, *The Preliminary Counts of the 2015 Population Census* (2016)

### 3. Conclusion

The 2015 census revealed Japan's first population decline since World War II and a further polarization of regional populations. While the populations of shrinking cities are falling more rapidly, the concentration of population is rising not only in the Tokyo metropolitan area but also in local economic centers and their inner city neighborhoods.



Meanwhile, most of the cities ranked high in the population growth ranking are the suburbs of local economic centers where residential housing development is underway. Promoting local industries has hardly affected population growth. Despite efforts to promote local industries and attract young people in a bid to increase local populations under the government's current major policy objective of regional revitalization, this is unlikely to produce the expected results. Furthermore, the tendency of a growing number of people to return to city centers in the Tokyo and Osaka metropolitan areas has had an adverse effect on suburban cities that achieved a high population growth in the past. If this tendency continues nationwide, the pace of increase is likely to slacken even in those cities currently ranked high in population growth.