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# Mizuho Economic Outlook & Analysis

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## *Inbound tourism props up Japan's employment growth*

*“Employment generation” of approximately  
270,000 jobs expected*

### < Summary >

- ◆ Japan's domestic demand remains sluggish, but the nation's labor shortage is deepening in the retailing sector, as well as for accommodations, eating & drinking services. One of the factors behind the labor shortage in these sectors is demand generated by inbound tourism.
- ◆ Inbound tourist spending in 2015 surged 1.5 trillion yen from the previous year and should create jobs for 270,000 people, especially in the sectors mentioned above. Given a time lag for employment generation to appear, inbound tourist spending is expected to continue supporting employment growth in 2016.
- ◆ However, a closer look reveals a shift in the contents of inbound tourist spending. In order to continue creating jobs, industries should take note of the diversifying demands of inbound tourism.

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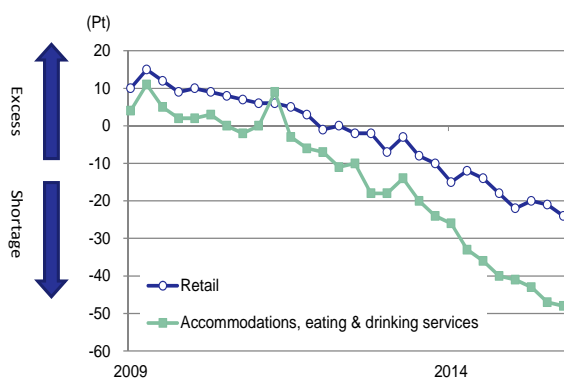
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## 1. Demand generated by inbound tourism is propping up employment growth

Japan's economy lacks momentum in both domestic and foreign demand. However, the environment surrounding employment has been improving and the unemployment rate has fallen to its lowest level in 20 years. The diffusion index of employment conditions in the Bank of Japan's *Short-term Economic Survey of Enterprises in Japan* (TANKAN), indicates the tight demand for workers in the personal service sector, including medical and welfare services, and in the construction sector. Japan's aging population, as well as increasing public investment in response to government policies and rebuilding from the Great East Japan Earthquake, is the main factor behind the labor shortage. The retailing and accommodations, eating & drinking services also face significant labor shortages (**Chart 1**).

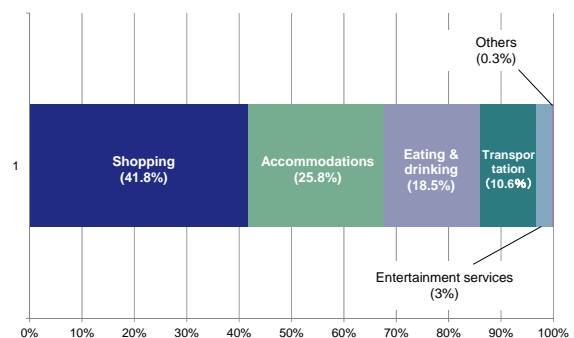
One of the factors responsible for the labor shortage in these sectors, despite weak domestic demand, is the dramatic increase in demand generated by inbound tourism. In 2015, 19.74 million foreign travelers visited Japan (13.41 million in 2014), coming close to the government target of attracting 20 million visitors per year by 2020. Furthermore, spending by foreign visitors in 2015 totaled approximately 3.5 trillion yen, which was a significant increase from 2 trillion yen in 2014. Inbound tourists have become an important element in the Japanese economy that continues to feel the negative impact of

**Chart 1: Shifts in the diffusion index of employment conditions**



Source: Made by MHRI based on the Bank of Japan, *Short-term Economic Survey of Enterprises in Japan*.

**Chart 2: Breakdown of spending by inbound tourists (2015)**



Note: Spending per item for each quarter was calculated by multiplying the spending per item (per person) for each quarter in 2015 by the number of foreign visitors to Japan. The share of each category was calculated from the total spending for the year calculated by adding together the quarterly spending.

Source: Made by MHRI based on the Japan National Tourism Organization, *Foreign Visitors & Japanese Departures*, and the Japan Tourism Agency, *Consumption Trend Survey for Foreigners Visiting Japan*.

the consumption tax hike in April 2014.<sup>1</sup> Accommodations, eating & drinking, and shopping account for a large portion of spending by foreign visitors (**Chart 2**). Tourism has particularly boosted the retailing sector as well as accommodations, eating & drinking services.

This paper examines the economic effects of inbound tourist spending (on output, value-added, and employment) from 2014 to 2015.

## **2. Demand growth from inbound tourism has a significant impact on employment generation**

### **(1) Creation of jobs for about 270,000 people (estimation based on interindustry analysis)**

First, we shall calculate the economic effects of inbound tourist spending. Demand growth in one industry generally leads to the consumption of component parts or the use of related services, and has a positive impact on other business sectors. An interindustry analysis was used to accommodate the ripple effects in grasping the effects of inbound tourist spending (refer to the Appendix for the concept and calculation method). **Chart 3** shows the estimated results. As the chart indicates, inbound tourist spending in 2015 generated production output of 6.8 trillion yen, value-added of 3.8 trillion yen, and created jobs for 630,000 people, adding 2.8 trillion yen to output, 1.6 trillion yen to GDP, and 267,000 more jobs compared with 2014.

Regarding employment generation, the retailing sector benefitted the most (new jobs for 129,000 people), followed by accommodations, eating & drinking services (39,000 people). These two industries account for more than half of total jobs generated. It would not be a wild guess to assume that robust inbound tourist spending has had some impact upon the labor shortage faced by retailing, accommodations, eating & drinking services.

### **(2) Effects on employment generation appear gradually with a time lag (estimation using a regression model)**

The interindustry analysis, in theory, indicates the maximum number of jobs created by inbound tourist spending, and does not take into account the timing or extent of the effects that appear. Generally, there is a time lag for sales growth to lead to employment growth. We therefore decided to examine how long it would take for the employment generation effects to appear. Specifically, we used a regression model where the number of employed persons is the dependent variable, and the self-lag and lag of travel revenues

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<sup>1</sup> The direct effects of inbound tourist spending, excluding the ripple effects, accounted for about 0.2 percentage points of the 0.4% real economic growth in 2015.

and expenditures (lag length is from Q1 to Q4) are the explanatory variables. Through simulations we tested how much time it would take for the employment generation effect to start expanding (refer to the Supplementary Discussion for the estimation method).

**Chart 4** shows the effects of inbound tourist spending on employment if it were to continue growing 1% throughout the year. The effects on employment would gradually increase, reach a peak five quarters later (a little over a year), and then decline. But the positive effects would continue for a while longer. Based on these results, the effects of inbound tourist spending growth in 2015 are likely to continue into 2016 and provide an added boost to employment growth.

### (3) While employment rates improve, nominal wages fall

While inbound tourist spending growth has a positive effect on employment growth, it should be noted that it also serves as a drag upon the average level of wages per person. This stems from the fact that a large proportion of workers in sectors such as retailing, accommodations and drinking & eating services are temporary workers and hence wages tend to be lower than in other sectors (**Chart 5**). The rise of inbound tourism demand may be one of the factors in the background of the oft-cited lackluster rise of wages in spite of the strong growth of employment.

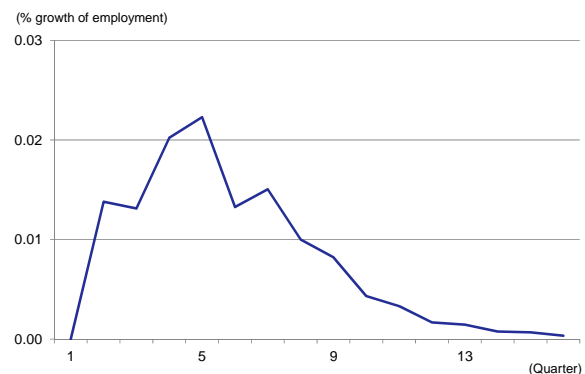
**Chart 3: Economic and employment generation effects of inbound tourist spending (Interindustry analysis)**

|  | Output generation<br>(trillion yen) | Value-added generation<br>(trillion yen) | Employment generation            |   |      |
|--|-------------------------------------|--|----------------------------------|---|------|
|  |                                     |  | Retailing<br>(ten thousand jobs) | Accommodations, eating & drinking services<br>(ten thousand jobs) |      |
|  |                                     |  |                                  |   |      |
| 2014<br>(Inbound tourist spending: 2.0 trillion yen) | 4.0                                 | 2.2                                      | 36.3                             | 12.9  | 9.6  |
| 2015<br>(Inbound tourist spending: 3.5 trillion yen) | 6.8                                 | 3.8                                      | 63.0                             | 25.9  | 13.5 |
| Growth   | 2.8                                 | 1.6                                      | 26.7                             | 12.9  | 3.9  |

Note: Estimates include primary effects (on businesses handling raw materials) and secondary effects (proceeds applied to spending)

Source: Made by MHRI based on Ministry of Internal Affairs and Communications, *Input-Output Table*, *Labour Force Survey*, Japan National Tourism Organization, *Foreign Visitors & Japanese Departures*, and Japan Tourism Agency, *Consumption Trend Survey for Foreigners Visiting Japan*.

**Chart 4: Effects of inbound tourist spending on employment (Regression model)**

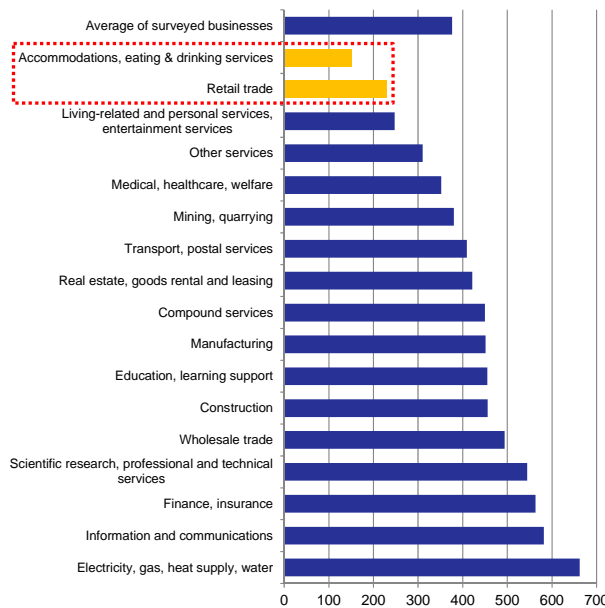


Source: Made by MHRI based on the Ministry of Internal Affairs and Communications, *Labour Force Survey*, and the Bank of Japan, *Balance of Payments*.

### 3. Going forward, industries should take advantage of the diversification of inbound tourism demand

Inbound tourist spending growth in 2015 is expected to support future employment. On the other hand, there are reports that department stores and other businesses, which have benefitted greatly from the increase in foreign visitors, are beginning to see a slowdown in sales growth. To continue creating jobs, not only is it important to sustain inbound tourism demand, businesses also need to focus on diversifying this demand. According to media reports, trends in inbound tourist spending are changing from conventional items like electric appliances and cosmetics, to cultural experiences and beauty services. The surge in the number of foreign visitors often gathers attention, but their potential lies in the broadness of tourism demand. In order to take advantage of the robust demand to revitalize Japan's economy, businesses must be innovative and exercise creativity in tapping hidden demands.

**Chart 5: Nominal wage by industry**



Note: Figures from 2015.  
Source: Made by MHRI based on the Ministry of Health, Labour and Welfare, *Monthly Labour Survey*.

## Supplementary Discussion: Method of estimating the economic effects and employment generation effects of inbound tourism demand

An interindustry analysis and regression model were used to calculate the economic effects and employment generation effects in the following manner.

### 1. Estimation based on interindustry analysis

- (1) Total amount of purchases by foreign visitors to Japan was derived by multiplying “average expenditure per person” times “purchase rate” times “number of foreign visitors” for each item in the Japan Tourism Agency’s *Consumption Trend Survey for Foreigners Visiting Japan*.
- (2) The total value of purchases by item (1) was posted for each category in **Chart 6** as new demand in order to estimate the primary effects (on businesses handling raw materials) and secondary effects (proceeds applied to spending).

Marginal propensity to spend was calculated as 0.4 (based on a consumption function consisting of real consumption expenditure, real disposable income, and real financial assets) to estimate the secondary effects.

**Chart 6: Categories**

| Categories in the survey                 | Categories in the Input-Output Table |
|--|--------------------------------------|
| Accommodation                            | Accommodation                        |
| Restaurants, fast food, cafés, etc.      | Food and beverage services           |
| Flights (transfers inside Japan only)    | Air transport                        |
| Railway, Shinkansen, monorail, ski lifts | Railway transport                    |
| Buses/taxis                              | Road passenger transport             |
| Other transport costs                    | Other personal services              |
| Entertainment services                   | Entertainment services               |
| Shopping                                 | Retail trade                         |
| Package tours (domestic revenue)         | Other transport-related services     |
| Other spending                           | Unknown                              |

Note: Survey categories were taken from the Japan Tourism Agency, *Consumption Trend Survey for Foreigners Visiting Japan*.

Source: Made by MHRI based on the Japan Tourism Agency, *Consumption Trend Survey for Foreigners Visiting Japan*, and the Ministry of Internal Affairs and Communications, *Input-Output Table*.

### 2. Estimation using the regression model

- (1) Number of employed persons is the dependent variable and self-lag and travel balance lag (real values calculated with the consumer price index) are the explanatory

variables (least squares method). Figures are from Q1 2006 to Q4 2015; all figures are logarithmic values seasonally adjusted. Both lags are for Q1 to Q4.

- (2) Based on the above model, the impulse response of employment (Chart 4) was calculated assuming that inbound tourist spending would continue increasing by 1% each quarter.

The interindustry analysis and the regression model both include periods when the labor shortage was not very serious. Continuous sales growth may boost the demand for labor, but the rising sense of a labor shortage could prevent businesses from immediately expanding employment. This raises the possibility that MHRI's figures are slightly overestimated.