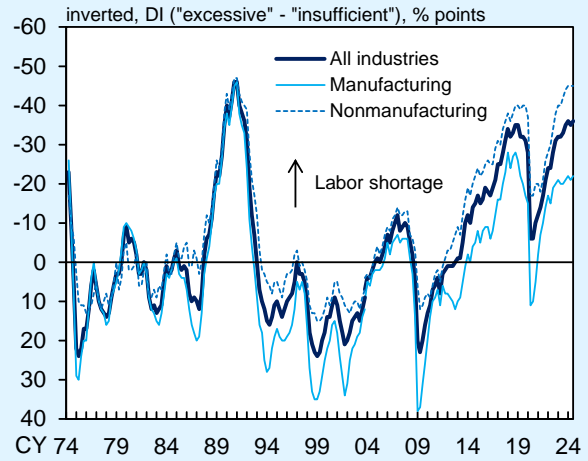


(Box 2) The Spread of Labor Shortages

The employment conditions DI (all enterprises) in the *Tankan* from a long-term perspective shows that the degree of labor market tightness has been at a historically high level recently (Chart B2-1). In order to examine the spread of this tightness in labor market conditions across industries and firm sizes, Chart B2-2 presents a heat map of the employment conditions DI. Areas shaded in red indicate a labor shortage (over 2 standard deviations below the historical average), those shaded in white show a labor surplus (over 2 standard deviations above the historical average), and those shaded in yellow indicate that the DI is near its historical average. The chart shows that (1) during the recovery period before the global financial crisis, labor market tightness was limited to large firms in a very small number of industries, whereas (2) during the period preceding the pandemic and most recently, labor shortages have been severe among both small-sized and large firms and across a wide range of industries.

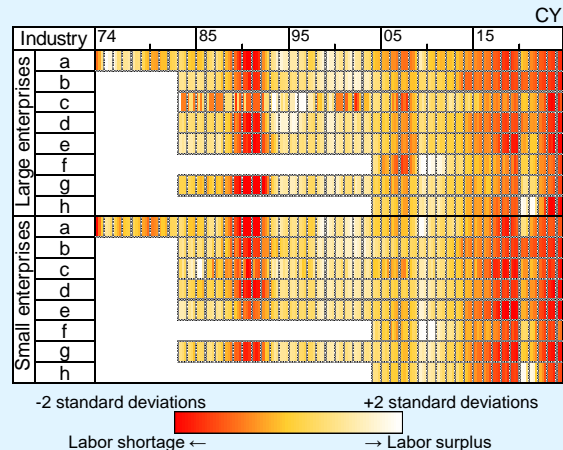
Next, labor market conditions for full-time and part-time employees are examined separately. Using the Ministry of Health, Labour and Welfare's *Survey on Labour Economy Trend*, from which it is possible to obtain DIs for the excess/shortage of employees separately for full-time and part-time employees, similar heat maps of labor market conditions by industry, firm size, and type of employment are constructed. Starting with labor market conditions for full-time and part-time employees by industry, the heat map shows that labor market conditions for

Chart B2-1: Employment Conditions DI



Source: Bank of Japan.
 Note: Based on the *Tankan*. All enterprises. There is a discontinuity in the data for December 2003 due to a change in the survey framework.

Chart B2-2: Heat Map for Labor Market Conditions, *Tankan*



Source: Bank of Japan.
 Notes: 1. In this heat map, figures for the employment conditions DI in the *Tankan* are normalized using the average and standard deviation for each industry and enterprise size over the period overall. Large enterprises are enterprises with a capitalization of 1 billion yen or more, while small enterprises are enterprises with a capitalization of 20 million yen or more but less than 100 million yen.
 2. Figures for (g) services from March 2010 onward are calculated as the weighted averages of figures for "services for businesses" and "services for individuals." The number of reporting enterprises is used as weights.
 3. The industries are as follows:
 (a) manufacturing; (b) construction; (c) real estate; (d) wholesaling and retailing; (e) transport and postal activities; (f) information and communications; (g) services; (h) accommodations, eating and drinking services.

full-time employees have recently become tighter than those for part-time employees (Chart B2-3). Labor shortages for full-time workers are growing as firms are increasingly eager to hire full-timers partly due to the expected retirement of the second-generation baby boomers.²² This pattern can be seen regardless of firm size, indicating that this change in labor conditions for full-time workers has been spreading to a considerable extent (Chart B2-4). Meanwhile, the results of a survey of corporate behavior conducted as part of the Review of Monetary Policy from a Broad Perspective suggest that, during the past 25 years, it has become increasingly difficult for firms to recruit and retain regular workers without raising wages.²³ Given this, there is a possibility that the growing labor shortage of full-time employees in Japan is causing firms to change their wage-setting stance.

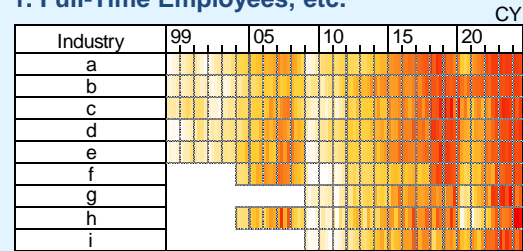
There are a number of indicators of labor market conditions, including (1) the active job-openings-to-applicants ratio in the *Employment Referral Statistics*, (2) the job vacancy rate in the *Survey on Labour Economy Trend*, and (3) the number of job postings for full-time jobs. Compared with other indicators, the active job-openings-to-applicants ratio has indicated somewhat less tight labor conditions since the pandemic (Chart B2-5). This may be due to a decrease in the use of the Public

²² For the relationship between demographics and the labor market, see "Effects of Demographic Changes on Labor Market and Wage Developments," *Bank of Japan Review Series*, forthcoming.

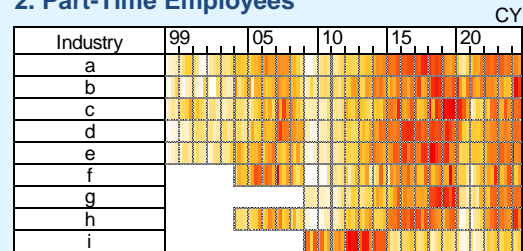
²³ See the annex paper to the *Regional Economic Report*, "Results of the Survey regarding Corporate Behavior since the Mid-1990s: Economic Activity, Prices, and Monetary Policy over the Past 25 Years from Firms' Perspective" (June 2024).

Chart B2-3: Heat Map for Labor Market Conditions, by Industry

1. Full-Time Employees, etc.



2. Part-Time Employees

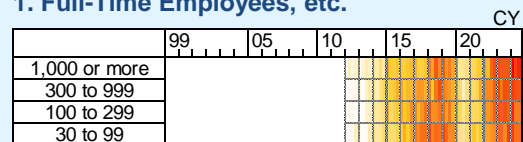


Source: Ministry of Health, Labour and Welfare.

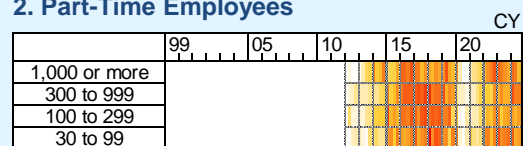
- Notes: 1. In these heat maps, figures for the DI for enterprises' employment conditions in the *Survey on Labour Economy Trend* are normalized using the average and standard deviation for each type of employment and industry over the period overall. In the upper chart, figures before 2008 are based on those for regular employees.
 2. Regarding the color coding, refer to the legend in Chart B2-2.
 3. The industries are as follows:
 (a) manufacturing; (b) construction; (c) real estate, goods rental and leasing; (d) wholesaling and retailing; (e) transport and postal activities; (f) information and communications; (g) living-related and personal services; (h) accommodations, eating and drinking services; (i) medical, health care, and welfare.

Chart B2-4: Heat Map for Labor Market Conditions, by Enterprise Size

1. Full-Time Employees, etc.



2. Part-Time Employees

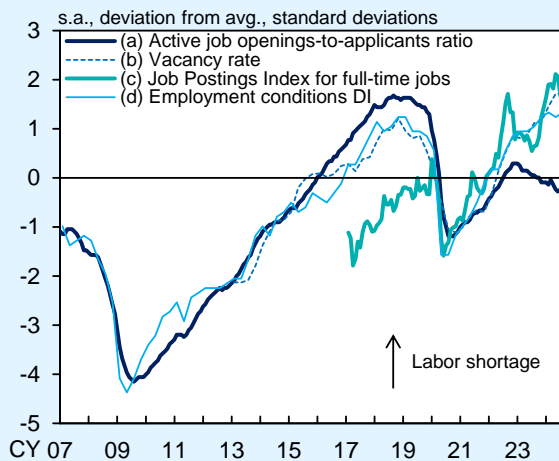


Source: Ministry of Health, Labour and Welfare.

- Notes: 1. In these heat maps, figures for the DI for enterprises' employment conditions in the *Survey on Labour Economy Trend* are normalized using the average and standard deviation for each type of employment and enterprise size over the period overall. The size classification is based on enterprises' number of regular employees.
 2. Regarding the color coding, refer to the legend in Chart B2-2.

Employment Security Office and an increase in the use of private employment agencies, resulting in the recent decline in the number of active job openings in the *Employment Referral Statistics*.²⁴ Against this background, it is appropriate to evaluate the extent of labor market tightness by taking these points into account and looking at a range of indicators, such as the heat map shown in this box.²⁵

Chart B2-5: Various Measures of Labor Market Conditions



Sources: Ministry of Health, Labour and Welfare; Bank of Japan; Nowcast Inc.
 Notes: 1. Figures for each measure of labor market conditions are normalized using the average and standard deviation for the period from 2013 onward (figures for the Job Postings Index for full-time jobs are normalized using the average and standard deviation for the period from 2017 onward). Figures for the vacancy rate are 2-quarter backward moving averages (figures from 2013 to 2014 are staff estimates). Figures for the employment conditions DI are for all industries and enterprises.
 2. The data sources for (a), (b), (c), and (d) are the *Employment Referral Statistics*, the *Survey on Labour Economy Trend*, *HRog Wage Now*, and the *Tankan*, respectively.

²⁴ The 2024 Annual Report on the Japanese Economy and Public Finance, published by the Cabinet Office, also indicates that it is no longer sufficient to examine the degree of tightness in labor market conditions based solely on the active job-openings-to-applicants ratio in the *Employment Referral Statistics*.

²⁵ The job vacancy rate in the *Survey on Labour Economy Trend* is calculated as the number of job vacancies divided by the number of full-time employees. The number of job vacancies is the number of positions that an establishment is seeking to fill in order to address vacancies where work is available but no one is currently performing those duties. The number of full-time workers is the sum of those employed for an unspecified employment period and those employed for a specified employment period of more than one month. The job postings index for regular workers is based on the number of full-time jobs advertised through (1) private online job boards and (2) the Public Employment Service Center (adjusted for duplicate postings).