Part-time and temporary employment in Japan

The need for less costly labor and protection against fluctuations in labor demand has helped push up part-time and temporary employment in Japan

Susan Houseman and Machiko Osawa

Part-time workers represent a large and growing share of employment in Japan. Part-time employment increased more than 80 percent between 1982 and 1992, accounting for slightly more than 16 percent of paid employment in 1992 (up from 11 percent a decade earlier), according to data from Japan's Bureau of Statistics.

Temporary workers also represent a large share of employment. Temporary workers hired directly by companies on short-term contract accounted for more than 11 percent of paid employment in recent years, according to Bureau of Statistics figures. Temporary help agencies, which are subject to considerable regulation, were prohibited prior to 1985. Although the number of temporary help, or dispatched, workers has grown rapidly since 1985, they still account for under 1 percent of paid employment.

This article discusses recent trends in part-time and temporary employment and the characteristics of these "nonregular" workers and their employers. It also looks at the role of the Japanese industrial relations system, public policies, and other factors in the development of part-time and temporary employment.

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Data definitions and sources

The terms part-time and temporary employment are defined somewhat differently in Japan and the United States. Moreover, the definitions often differ by survey in Japan. Therefore, a brief discussion of the concepts of part-time and temporary employment used in selected Japanese surveys is necessary.

A number of periodic and special surveys contain information about part-time, temporary, dispatched, and other types of nonregular workers in Japan. The definitions of part-time and temporary workers used in surveys cited in this article are summarized in exhibit 1.

Most of the data used in this article are from the Employment Status Survey conducted by the Bureau of Statistics. This periodic, household survey provides detailed information about part-time, temporary, and other forms of nonregular employment. The survey has been conducted at 5-year intervals in recent years; the latest survey was in 1992.

In the Bureau of Statistics Employment Status Survey and the Ministry of Labor Survey on the Status of Part-Time Workers, a part-time worker is defined as an employee whose position is classified as part time by the employer; a part-time employee does not necessarily work fewer hours than a full-time employee. In 1990, 20.6 percent of workers classified as part time by their employer worked as many hours as did regular, full-time workers.[1] The set of personnel practices that applies to these workers distinguishes them as part time. For example, in large- and medium-sized Japanese companies, regular full-time workers typically are given commitments of lifetime employment and the wages and promotions of these workers are determined to a large degree by seniority. Practices of lifetime employment and nenko (seniority-based)

Exhibit 1. Summary of data definitions in selected Japanese surveys

Survey	Part-time workers	Temporary and day workers	Dispatched workers	Comments
Bureau of Statistics, Employment Status Survey (household survey conducted every 5 years)	classified as part time in workplace; separate category for arubaito, defined as student or other person with a side job, reported	*temporary:* employed on a contract lasting more than 1 month but less than 1 year; *day:* employed on a contract of less than 1 month's duration	workers hired from a dispatching (temporary help) agency	data on part-time workers reported since 1982.
Bureau of Statistics, Labor Force Survey (monthly household survey)	separate category not reported; may construct category defined as work less than 35 hours per week	*temporary:* employed on a contract lasting more than 1 month but less than 1 year; *day:* employed on a contract of less than 1 month's duration	separate category not reported; counted as temporary worker if employment contract less than 1 year	.....
Ministry of Labor, Survey of Employment Trend (biannual establishment survey)	work fewer hours per day or days per week than regular workers	*temporary:* employed on a contract lasting at least 1 month but less than 1 year; *day:* not covered by survey	separate category not reported; counted as temporary worker if employment contract less than 1 year	survey excludes workers on contract for less than 1 month, establishments with fewer than five regular employees, the agricultural sector, and some components of the services sector. Data on part-time workers reported since 1978.
Ministry of Labor, Survey on the Diversification of Employment (one-time survey of establishments and workers)	work fewer hours per day or days per week than regular workers	*temporary/day:* hired on a temporary basis but whose hours are the same as regular workers	workers hired from dispactching (temporary help) agency	survey sampled establishments with 30 or more regular workers in seven major sectors.
Ministry of Labor, Monthly Labor Survey (monthly establishment survey)	work fewer hours per day or days per week than regular workers	not reported	not reported	data on part-time workers reported since 1990.
Ministry of Labor, Survey on the Status of Part-Time Workers (one-time survey of establishments and workers)	part time: (1) work fewer hours per day or days per week than regular workers, or (2) classified as part time in workplace; arbaito: student workers	not reported	not reported	survey sampled establishments with 5 or more regular workers in nine major sectors.

wages and promotions rarely apply to part-time workers.

The Employment Status Survey and the Survey on the Status of Part-Time Workers provide data on both part-time and arubaito jobs. An arubaito job is a "side" job taken by someone who is in school or who has regular employment elsewhere, while part-time jobs are held by those who do not have other employment and who are not classified by their employers as full time. Arubaito jobs typically are held by students; part-time jobs generally are held by married women. In practice, part-time and arubaito jobs are quite similar and the terms often are used interchangeably.

Several surveys conducted by the Ministry of Labor (the Survey of Employment Trend, the Survey on the Diversification of Employment, and the Monthly Labor Survey) classify workers as part time if they work fewer hours per day or days per week than do regular workers. These surveys do not

Table 1. Nonregular workers in Japan as a percent of total paid employment, 1982–92

Year	Part time and arubaito			Temporary and day			Other	
	Total	Part time	Arubaito	Total	Temporary	Day laborers	Total	Dispatched
1982	11.0	—	—	11.5	7.9	3.7	4.8	—
1987	14.2	10.1	4.1	12.0	8.9	3.1	4.2	.2
1992	16.1	11.3	4.8	11.2	8.4	2.8	3.9	.3

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time, arubaito, temporary, day, and dispatched workers, see exhibit 1. Dash indicates data are not available.

SOURCE: Sōmuchō Tōkeikyoku, Shūgyōkōzō Kihonchōsa hōkoku, various issues (Bureau of Statistics, Management and Coordination Agency, Employment Status Survey).

distinguish between part-time workers and arubaito. In the Bureau of Statistics Labor Force Survey, a monthly household survey, individuals are asked their actual weekly work hours. It is thus possible to tabulate the number of workers who work fewer than 35 hours per week. However, such a tabulation would miss many part-time workers who work long hours but are nonetheless classified as part time in their workplace, and it may include workers temporarily on short-time who are classified as regular workers in their place of employment.[2]

Japanese data on part-time employment are available since 1978 in the Ministry of Labor Survey of Employment Trend; since 1982 in the Bureau of Statistics Employment Status Survey; and since 1990 in the Ministry of Labor Monthly Labor Survey. One can construct a longer time series from the Bureau of Statistics Labor Force Survey by selecting an hours-per-week cutoff to define part-time employment.

Temporary workers in Japanese statistics refer to employees hired for a limited duration. The Bureau of Statistics Employment Status Survey distinguishes between temporary and day workers. A temporary worker is someone employed on a contract lasting more than 1 month, but less than 1 year; a day worker is someone employed on a contract of less than 1 month's duration. In the Employment Status Survey, temporary and day workers are hired directly by a company. Dispatched workers are those on temporary contract, hired from a temporary help agency. In other government statistics, a separate category for dispatched workers is not reported— workers are counted as temporary employees if the duration of their labor contracts is for less than 1 year with the company or the temporary agency.

In addition to data on part-time and temporary employment, some surveys provide information about other forms of nonregular employment: shukko workers (individuals who have been transferred to a subsidiary of the parent company); registered or on-call workers (individuals registered with a company as being available for work); and contract workers (individuals hired by special arrangement from another company). These nonregular employees represent a relatively small share of the work force and are not covered in this article.

Overview of nonregular employment

Despite differences in definitions, data from various sources depict similar trends in part-time and temporary employment. The percentage of Japanese employees who are part time has increased dramatically over the last decade, while the percentage of temporary workers has remained fairly constant. According to the Bureau of Statistics Employment Status Survey, the rate of part-time and arubaito employment increased from 11.0 percent of total paid employment in 1982 to 16.1 percent in 1992. This rise may be attributed to an increase both in part-time workers and in arubaito.

More than 11 percent of paid employees have been temporary workers since 1982. Temporary help agencies were prohibited in 1947 because Japanese officials believed that, before World War II, they had exploited workers. These agencies were legalized in 1985, but subjected to considerable regulation. As a result, the share of temporary help, or dispatched, workers in paid employment is fairly small—0.3 percent in 1992—although it is rapidly growing. (See table 1.)

Overall, nonregular workers in Japan are disproportionately female. According to the Bureau of Statistics Employment Status Survey, about half of arubaito are women, while more than 90 percent of part-time workers are women. (See table 2.) About two-thirds of temporary and day workers and 70 percent of dispatched workers are women. Male and female arubaito tend to be young and most are students. Male temporary workers tend to be either young and in school or in a first job, or old and presumably in semiretirement. Female part-time and temporary workers tend to be older; many are women who return to the labor force when their children reach school age.

According to the Employment Status Survey, in the decade from 1982 to 1992, the incidence of part-time employment rose dramatically as a percent of employment in virtually all sectors. (See table 3.) Apart from agriculture, where more than 30 percent of paid employment is part time,[3] the rate of part-time employment is particulary high in wholesale and retail trade (28.1 percent in 1992), services (16.5 percent in 1992), and manufacturing (14.3 percent in 1992). Although

the share of temporary employment has remained relatively stable over the last decade in the aggregate economy, the rate has increased modestly in some sectors, including transportation and communications and services. The highest rates of temporary employment are in agriculture, fisheries, and construction, which is not surprising given the seasonal nature of work in these industries. As with part-time employment, temporary employment is important in the trade, services, and manufacturing sectors.

Because employment data by firm size are not available from the Bureau of Statistics Employment Status Survey, we use data from the Ministry of Labor Survey of Employment Trend. Results from this survey of 15,000 randomly chosen establishments are published annually. Data on part-time workers have been collected since 1988 in this survey and refer to those working fewer hours per day or fewer days per week than regular workers. As with the surveys conducted by Japan's Bureau of Statistics, the Survey of Employment Trend defines temporary workers as those on a contract of employment for a specified duration of at least 1 month but less than 1 year. If the duration of their contracts is less than 1 year, dispatched workers are counted as temporary workers.

The scope of the survey is limited in several important respects. Workers with contracts lasting less than 1 month are not covered; as a result, the survey excludes day workers. The survey also excludes establishments with fewer than five regular employees. Finally, the survey excludes the agriculture sector and some components of the service sector (household services, education, and government operations in foreign countries). Because of differences in the definition of part-time and temporary employment and differences in the sectoral coverage of the two surveys, the share of part-time and temporary employment reported in the Ministry of Labor Survey of Employment Trend is considerably less than that reported in the Bureau of Statistics Employment Status Survey.[4]

The Survey of Employment Trend shows that the use of part-time and temporary employment is common, regardless of firm size, particularly in trade and services. (See table 4.) In the aggregate economy, the incidence of part-time employment is greater in small firms than in large ones, while the incidence of temporary employment is quite similar across firm size. The correlation between the rate of part-time or temporary employment and firm size varies considerably across industries, however. For example, the rate of part-time employment and the rate of temporary employment decline substantially with firm size in manufacturing, while the rates of part-time employment and temporary employment generally increase with firm size in the wholesale and retail trade sector.

Table 2. **Distribution of nonregular workers in Japan by age and gender, 1992**

[In percent]

Age and gender	Part time	Arubaito	Temporary and day	Dispatched
Both sexes				
All ages	100.0	100.0	100.0	100.0
15–19	.7	21.3	7.5	1.8
20–29	8.1	43.6	19.9	45.4
30–39	20.3	9.2	14.7	25.8
40–49	37.8	9.3	23.8	14.1
50–59	22.7	6.4	18.4	6.1
60 and older	10.5	10.2	15.7	6.1
Men				
All ages	5.5	51.0	33.7	30.1
15–19	.2	10.8	3.8	.6
20–29	.6	24.6	9.2	11.7
30–39	.3	3.1	2.8	5.5
40–49	.4	2.5	3.6	3.7
50–59	.8	2.4	4.9	3.1
60 and older	3.2	7.6	9.5	4.9
Women				
All ages	94.5	49.0	66.3	69.9
15–19	.5	10.4	3.7	1.2
20–29	7.5	19.0	10.8	33.7
30–39	20.0	6.1	11.9	20.2
40–49	37.4	6.8	20.2	10.4
50–59	21.8	4.1	13.6	3.1
60 and older	7.3	2.5	6.2	1.2

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time, arubaito, temporary, day, and dispatched workers, see exhibit 1.

SOURCE: Sōmuchō Tōkeikyoku, Shūgyōkōzō Kihonchōsa hōkoku (Bureau of Statistics, Employment Status Survey).

Determinants of nonregular employment

A combination of supply-side and demand-side factors and public policies explains the high incidence of part-time and temporary employment in Japan. As in the United States, part-time and temporary workers in Japan are disproportionately women. Because Japanese women typically have greater household and childcare responsibilities than men have, they often seek shorter hours or temporary assignments to balance demands on their time. The typical Japanese full-time, regular employee traditionally has worked substantially longer hours than his or her counterpart in other industrialized countries, although Japan's hours of work have recently begun to fall.[5] Even though a sizable minority of regular part-time employees work the same number of hours as do regular full-time employees, most work shorter hours.

In addition, regular, full-time employees in large companies often are expected to accept transfers involving geographic relocation. Thus, certain aspects of Japanese industrial relations likely provide strong incentives for women to seek flexible forms of employment.

Public policies in Japan provide further incentives in the form of tax breaks for married women to work in part-time or temporary jobs. Secondary household earners who make less than 1.3 million yen annually (about $13,000) do not have to

pay income tax. In addition, they retain their "dependent" status and are eligible for some health insurance coverage under their spouse's plan and are entitled to receive some pension from the government. Moreover, the household head receives a dependent deduction from his taxable income and typically receives a family allowance from his employer. In 1989, family allowance payments averaged 14,000 yen per month (about $140) in large firms and 6,300 yen per month (about $63) in small firms.

Thus, certain aspects of Japanese industrial relations and tax law provide incentives for many women to seek part-time and temporary rather than regular positions. Business surveys have provided some insights into the reasons Japanese companies hire nonregular workers. In the Survey on the Diversification of Employment, conducted by the Ministry of Labor in 1988, company officials were asked if they expected to increase the number of nonregular workers within 3 years of the survey and, if so, why.

Reduction in cost was the most frequent reason cited for hiring more part-time workers and the second most frequent reason cited for hiring more temporary and day workers and dispatched workers. (See table 5.) The need to hire workers temporarily also was an important factor in companies' decisions to increase hiring in each of these categories of employment, and, perhaps not surprisingly, was the most frequent reason given for increasing the hiring of temporary and day workers. Only for dispatched workers was the inability to find regular workers among the five most important reasons cited for increasing the hiring of nonregular workers. By law, dispatched workers must possess special skills that companies have difficulty finding among regular workers.

In sum, two principal reasons why Japanese companies say they hire nonregular workers is to lower labor costs and to hire workers on a temporary basis. With respect to the latter, a company may wish to hire part-time and temporary workers who can be dismissed more easily than regular workers to provide a buffer against fluctuations in demand.

Labor costs. Labor costs associated with part-time and temporary workers may be less than those of regular workers for several reasons. Under the nenko system, wages and promotions are determined to a large degree by individuals' tenure with the company. Although the wages of nonregular workers and regular workers may not differ substantially for those with little or no tenure, wages for nonregular workers, who are not covered by the nenko system, do not increase with tenure, or at least do not increase at the same rate, as they do for regular workers. As a result, over time, a company may reduce labor costs by hiring part-time and temporary workers if the wage savings from hiring nonregular workers more than compensate for any higher productivity that regular workers may achieve.[6] Part-time and temporary workers also generally receive fewer company-provided fringe benefits.

In addition, Japanese employers are not subject to unemployment insurance, pension, and health insurance payroll taxes on many part-time and temporary workers. The unemployment insurance premium in Japan is 1.15 percent of wages, excluding bonuses. Japanese employers pay 0.75 percent for unemployment insurance and employees pay 0.40 percent. Before 1989, employers were not required to pay unemployment insurance taxes on part-time workers. Under current law, employers must pay unemployment insurance taxes for part-time workers who work more than 20 but fewer than 30 hours per week, who are expected to work at least 1

Table 3. Incidence of part-time and arubaito and temporary and day employment in Japan, by sector, 1982–92

[In percent]

Sector	1992	1987	1992
Total:			
Part time and arubaito	11.0	14.2	16.1
Temporary and day	11.5	12.0	11.2
Agriculture:			
Part time and arubaito	16.3	23.7	30.3
Temporary and day	36.2	36.5	36.6
Fisheries:			
Part time and arubaito	6.9	9.7	12.1
Temporary and day	15.4	16.8	16.1
Construction:			
Part time and arubaito	5.8	6.9	7.5
Temporary and day	21.1	17.8	13.7
Manufacturing:			
Part time and arubaito	11.4	14.4	14.3
Temporary and day	9.9	9.9	8.3
Trade:			
Part time and arubaito	19.4	25.2	28.1
Temporary and day	13.9	15.6	14.6
Finance, insurance:			
Part time and arubaito	3.9	5.6	7.4
Temporary and day	3.7	4.7	4.7
Transportation, commuications:			
Part time and arubaito	3.4	5.4	8.2
Temporary and day	4.3	5.6	6.3
Utilities:			
Part time and arubaito	2.3	2.5	2.8
Temporary and day	4.3	4.5	3.8
Services:			
Part time and arubaito	11.1	13.7	16.5
Temporary and day	11.6	12.6	12.8
Public administration:			
Part time and arubaito	3.4	3.5	4.6
Temporary and day	6.7	6.6	7.3

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time, arubaito, temporary, and day workers, see exhibit 1.

SOURCE: Sōmuchō Tōkeikyoku, Shūgyōkōzō Kihonchōsa hōkoku (Bureau of Statistics, Employment Status Survey), various issues.

Table 4. Part-time and temporary employment in Japan, by sector and firm size, 1993

[In percent]

Industry	Total	Number of employees				
		1,000 and more	300–999	100–299	30–99	5–29
Part-time employment						
All industries	11.5	9.5	8.5	12.0	13.6	13.0
Manufacturing	10.4	2.9	7.2	10.5	14.9	17.3
Transportation, public utilities, and communications	5.0	2.3	5.3	3.0	6.2	4.2
Trade	20.0	30.7	14.0	20.0	22.1	15.9
Finance, insurance, and real estate	5.3	7.6	1.8	5.2	10.2	10.4
Services	12.6	12.2	6.7	13.9	13.8	15.2
Temporary employment						
All industries	5.7	5.4	5.8	4.4	5.6	5.7
Manufacturing	4.0	3.0	3.7	3.5	3.3	6.4
Transportation, public utilities, and communications	4.7	2.8	1.8	2.3	5.2	4.2
Trade	6.9	12.9	10.6	4.1	8.8	1.3
Finance, insurance, and real estate	4.1	2.8	2.6	5.3	5.9	9.0
Services	7.2	8.1	4.7	6.7	6.2	6.9

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time and temporary employment, see exhibit 1.

SOURCE: Rōdōshō, Koyō Dōkō Chōsa hōkoku (Ministry of Labor, Survey of Employment Trend).

year, and who earn more than 900,000 yen per year (about $9,000), although the rate is less than that assessed for full-time workers. For all part-time employees who work 30 or more hours per week, employers must pay the unemployment insurance tax rate applicable to full-time workers.

The payment for the public pension in Japan is 14.5 percent of wages, subject to a ceiling.[7] As in the United States, half of the tax is paid by the employer and half by the employee. However, employers are not obligated to make these payments on part-time workers whose weekly work hours are less than three-fourths of those of regular workers.

A similar exclusion occurs for health insurance. Since 1961, everyone in Japan has been enrolled in some form of health insurance, and paid employees generally are enrolled in company-provided health insurance plans. Employers and employees pay taxes on both wages and bonuses to finance health insurance. The tax on wages is 0.41 percent for employers and employees; the tax on bonuses is 0.3 percent for employers and 0.5 percent for employees.[8] However, employers are not required to cover part-time workers who work less than three-fourths of the weekly hours of regular workers.

Employers are required to pay social security and health insurance taxes for temporary workers except for those who are day workers; those who are engaged in seasonal work; and, those who are hired in an establishment operating temporarily (the labor contract must not exceed 6 months).

Employers also are required to pay unemployment insurance for all who work more than three-quarters of the weekly work hours of regular workers, regardless of employment status. If dispatched workers are covered by social insurance schemes, the applicable taxes are paid by the temporary help agency and not by the company contracting for their services.

Data on the coverage of nonregular workers under various social insurance schemes were collected in the Ministry of Labor 1988 Survey on the Diversification of Employment. Although data on nonregular workers were not collected in this survey, data on workers who had been transferred to a subsidiary company were collected. The coverage of these so-called shukko workers is likely to be similar to that of regular workers. According to survey figures, 90 percent of shukko workers were covered by unemployment insurance, while only 37 percent of part-time workers, 63 percent of temporary workers, and 62 percent of dispatched workers were covered. Similarly, 93 percent of shukko workers, but just 37 percent of part-time workers, 59 percent of temporary workers, and 56 percent of dispatched workers received health insurance through their employer. Coverage under the government's mandatory pension scheme also was relatively low for nonregular workers: 36 percent of part-time workers, 54 percent of temporary workers, and 55 percent of dispatched workers were covered by the pension scheme, compared with 92 percent of shukko workers.

Nonregular workers as a buffer. In addition to saving wage, fringe benefit, and payroll tax costs, companies may hire part-time and temporary workers to increase employment flexibility. Medium-sized and large Japanese companies typically offer implicit guarantees of lifetime employment to regular workers. Moreover, Japanese courts have given these core workers fairly strong protection against layoff.[9] Company personnel policies and court rulings have

not given part-time workers the same degree of protection that full-time, regular workers have received. Except in rare circumstances, companies may easily terminate temporary and dispatched workers by not renewing their contracts.

Although it is widely believed that part-time workers help buffer regular workers during recessions, the lack of time series data makes formal analysis of this issue difficult. Annual data on part-time employment from the Survey of Employment Trend have been published since 1978. These data show that, at the aggregate and sectoral levels, part-time employment was quite cyclically sensitive, falling relative to trend during the recessions of the early and mid-1980's and the early 1990's. This pattern supports the view that part-time workers have helped buffer regular workers during recessions.

Data from the Bureau of Statistics Labor Force Survey provide more direct evidence on the use of temporary workers as a buffer in Japanese manufacturing. The Labor Force Survey breaks down employment for regular and temporary workers; temporary workers are defined as those employed on a definite contract for at least 1 month but less than 1 year.

Temporary employment declined sharply in response to the large drop in output during the recession in the mid-1970's and increased sharply during the subsequent recovery. In response to the decline in output during the most recent recession, temporary employment again fell sharply. In contrast, regular employment displayed little fluctuation throughout the period. (See chart 1.) Econometric analysis presented in the appendix shows that the implied responsiveness of temporary employment to changes in production is significantly greater than that of regular employment.[10]

Table 5. Principal reasons for increasing nonregular employment among Japanese businesses expecting to hire more nonregular workers

Reasons	Percent reporting factor as important
Part-time workers:	
Reduction in cost	40.2
Increase in business	32.5
Simple task	32.4
Can respond to diversified work pattern	19.3
Need workers temporarily	17.4
Temporary and day laborers:	
Need workers temporarily	32.6
Reduction in cost	32.1
Increase in business	23.4
Simple task	23.3
Can respond to diversified work pattern	14.8
Dispatched workers:	
Workers with needed skills can work immediately	34.1
Reduction in cost	33.4
Need workers temporarily	24.8
Increase in business	21.0
Cannot hire regular workers	19.2

NOTE: Data are percent of businesses responding that the reason was important in decision to hire nonregular employees. For definitions of part time, temporary, day and dispatch workers, see exhibit 1.

SOURCE: Rōdōshō, *Shūgyō Keitai no Tayōka ni kansuru Jittai Chōsa hōkoku*, 1988 (Ministry of Labor, Survey Results on the Diversification of Employment).

Growth in part-time employment. As evident in table 3, the rate of part-time employment has increased significantly in recent years across a broad spectrum of industries. Somewhat surprisingly, because the vast majority of part-time workers are female, there has been little increase in the female labor force participation rate to fuel the growth in the rate of part-time employment. The Japanese female labor force participation rate has remained relatively constant since 1970, falling somewhat during the deep recession of the mid-1970's and rising slightly since 1976. The female labor force participation rate in Japan in 1991 (50.7 percent) was barely higher than the rate in 1970 (49.8 percent).[11]

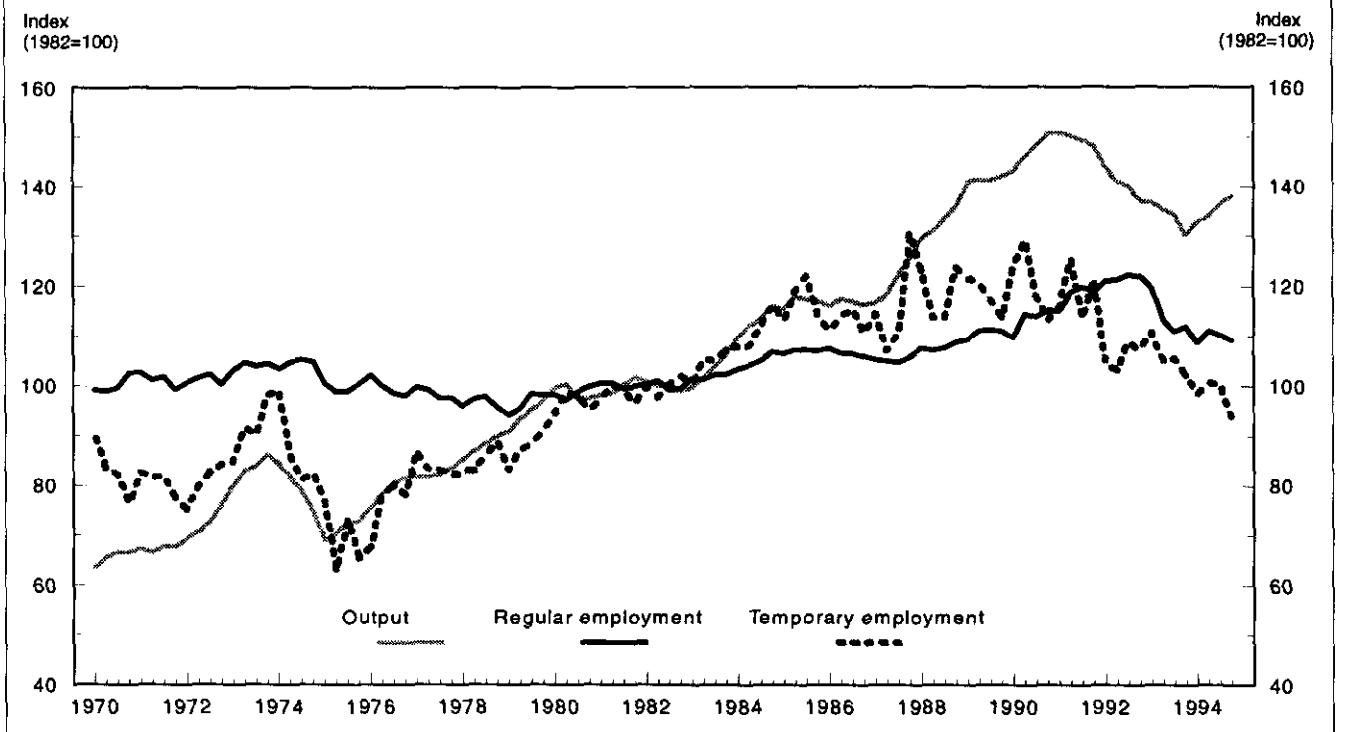
Although the supply of potential part-time workers has increased only modestly in recent years, several economic developments have provided incentives to Japanese companies to increase their use of part-time workers. Many Japanese companies were hurt by their inability to shed excess workers during the severe recession in the mid-1970's, and in subsequent years moved to increase their use of part-time workers, who could be more easily dismissed.

The sharp appreciation of the yen has provided Japanese employers with additional incentives to hire part-time workers. In 1970, the yen traded at 360 yen per dollar; in 1994, it traded at less than 100 yen per dollar. Between 1985 and 1986 alone, the yen appreciated by about one-third against the dollar, moving from 238.5 yen per dollar to 168.5 yen per dollar. This sharp appreciation sparked a recession in Japan, and placed considerable pressure on employers, particularly those in manufacturing, to lower labor costs.

The aging of the Japanese work force also has put pressure on Japanese employers to lower labor costs. Under the nenko system, workers' pay and promotion depend greatly on their tenure. As the Japanese population has aged and economic growth has slowed, Japanese companies have become saddled with large numbers of well-paid, middle-aged and older workers. The problem of an aging work force will not be alleviated soon. The number of people in their twenties is expected to decline dramatically after 1995.

Many Japanese analysts believe that recent cyclical volatility, the appreciation of the yen, and the aging of the Japanese work force have strained Japanese industrial relations practices of lifetime employment and of nenko wages and promotions. One way companies have sought to increase labor flexibility and reduce labor costs, short of dismantling these traditional industrial relations practices, has been to hire more part-time workers, who are more easily dismissed during downturns, whose pay is not tied to seniority, and who generally are not eligible for promotion.[12]

Chart 1. Output, regular employment, and temporary employment in Japanese manufacturing, 1970–94



IN SUM, part-time and temporary workers account for a large and integral component of the Japanese work force. Because part-time and temporary positions allow workers to avoid committing to long hours and company transfers, these forms of employment have been attractive, particularly to women. At the same time, because these types of workers are not covered by industrial relations practices of nenko wages and promotion and lifetime employment, Japanese firms have long had an incentive to hire some part-time and temporary workers to reduce labor costs and increase employment flexibility. Government policies providing tax exemptions for part-time and temporary workers also are responsible for the large share of nonregular employees in the Japanese economy. The spectacular growth in part-time employment may partly reflect the need for further labor flexibility in Japanese companies due to recent cyclical volatility, the appreciation of the yen, and the aging of the Japanese work force. □

Footnotes

[1] "Report on the Status of Part-Time Workers," Japanese Ministry of Labor, 1990.

[2] No information on usual hours worked is collected in the Bureau of Statistics Labor Force Survey. Therefore, this monthly survey cannot be used to tabulate the number of workers who usually work fewer than 35 hours per week—the definition of part-time employment used in U.S. Government statistics. Adjustment to the U.S. concept of usually working fewer than 35 hours can be made based on Japan's Bureau of Statistics Special Survey of the Labor Force taken each February. However, such adjusted data would still miss many Japanese workers who usually work 35 hours per week or more, but are classified as part time by their companies.

[3] Although a high percentage of paid employees in agriculture work part time, fewer than 10 percent of those working in agriculture are paid employees. The rest are counted as self-employed or family workers in official statistics.

[4] Although the rates of part-time and temporary employment differ across the two surveys, data from the surveys depict similar trends in part-time and temporary employment.

[5] Comparisons of working time in Japan, the United States, and Germany may be found in Takatoshi Ito, *The Japanese Economy* (Cambridge, MA, MIT Press, 1992), pp. 228–31. See *Japan Labor Bulletin*, Jan. 1, 1995, for a discussion of declining working time in Japan.

[6] We used microdata on married female workers to examine differences in the earnings of part-time, temporary, and full-time workers. This analysis showed that part-time and temporary workers earn significantly less than do full-time workers, even after controlling for differences in individual and job characteristics. Details are available from the authors.

[7] There are two types of pensions in Japan: the national pension (kokumin nenkin) and a company-based pension (kosei nenkin). The former provides a set amount of pension to everyone (about 50,000 yen, or $500, a month). The latter varies with an individual's contribution to the plan. All companies must pay taxes on qualified employees for the kokumin nenkin portion of the pension. For the kosei nenkin portion of the pension, Japan has a "pay or play" system of coverage in which companies contribute to a mandatory government program

or establish their own pension that must be at least as generous as the government pension. For a description of the Japanese pension system, see Noriyasu Watanabe, John Turner, and David Rajnes, "'Pay or Play' Pensions in Japan," *Contingencies*, November/December 1994, pp. 63–65.

[8] Taxable wages are limited to 980,000 yen, or about $9,800, a month.

[9] For discussions of legal restrictions on dismissal, see Yasuhiko Matsuda, "Job Security in Japan," in Kazutoshi Koshiro, ed., *Employment Security and Labor Market Flexibility: An International Perspective* (Detroit, MI, Wayne State University Press, 1992), pp. 183–95; and Johannes Schregle, "Dismissal Protection in Japan," *International Labour Review*, 1993, pp. 507–20.

[10] Using data from the Bureau of Statistics Labor Force Survey, we also examined the relationship between movements in the employment of those working fewer than 35 hours per week and movements in output. As in the United States, the movement of part-time employment defined in this way is strongly countercyclical, increasing during downturns and falling during upturns. This pattern is probably observed because many workers who have regular employment status are placed on short hours during recessions and are counted as part-time workers under this definition.

[11] The figures on female labor force participation rates in Japan are from the Japanese Bureau of Statistics, Labor Force Survey. In the United States, female labor force participation rose steadily, from 43.3 percent in 1970 to 57.4 percent in 1991.

[12] For a discussion of these issues, see Alice C. L. Lam, *Women and Japanese Management: Discrimination and Reform* (London, Routledge, 1992); Machiko Osawa, "Keizai Henka to Joshi Rodo," *[Economic Change and Women Workers: A U.S.-Japan Comparison]* (Tokyo, Nihon Keizai Hyoronsha, 1993); Atsushi Seike, "Recent Employment Situation and Long-Term Structural Change," *Japan Labor Bulletin*, Jan. 1, 1994, pp. 5–8; and Hiroki Sato, "Employment Adjustment of Middle-Aged and Older White-Collar Workers," *Japan Labor Bulletin*, Feb. 1, 1994, pp. 5–8. We include further discussion and presentation of evidence on the causes of the growth in part-time employment in Japan in our report, *Part-Time and Temporary Employment in Japan: A Comparison with the United States*, prepared for the U.S. Department of Labor, Bureau of International Labor Affairs, 1994.

APPENDIX: Estimates of elasticities

To more formally examine the adjustment of regular and temporary employment to fluctuations in manufacturing output, we estimated the following finite distributed lag model:

$$\ln E_t = \alpha + \sum_{i=0}^{4} \beta_i \ln P_{t-i} + \theta_1 t + \theta_2 t^2 + \epsilon_t$$

where E is employment of either regular or temporary workers, P is production, t and t^2 are time trend terms, and ϵ is the error term. Because the employment series were quite noisy, we aggregated the monthly data to quarterly. In the model, changes in production may affect employment with a lag of up to four quarters and because the model is estimated in logarithms, the β's represent estimates of the elasticity of employment with respect to changes in output. The sum of β_0 and β_1, for example, is the one-quarter employment-output elasticity estimate. The sum of β_0 to β_4 is the four-quarter elasticity estimate. All data were seasonally adjusted and equations were corrected for first-order autocorrelation.

Table A-1 presents current-quarter, one-quarter, and four-quarter employment elasticity estimates for regular and temporary workers. Elasticity estimates are also given for male regular and temporary workers and female regular and temporary workers. The point estimates show that the adjustment of temporary employment to demand changes is much greater than that of regular employment, even out to four quarters. For example, the estimated current-quarter employment elasticity for regular workers is 0.060, while that for temporary workers is 0.710. The estimated four-quarter employment elasticity for regular workers is only 0.349, while that for temporary workers is 1.396.

To determine the statistical significance of these differences, we estimated constrained and unconstrained versions of the model for regular and temporary workers using seemingly unrelated regression techniques. This approach enabled us to construct chi-squared statistics for hypothesis testing. Although the standard errors of the point estimates are often large, the differences between the employment elasticity estimates for regular and temporary workers are significant at the 5-percent level for all time horizons. Estimates of the adjustment of male regular and temporary employment and of female regular and temporary employment produce qualitatively similar results.

Table A-1. Employment adjustment of regular versus temporary workers in Japan: estimated employment-output elasticities, manufacturing, 1970–94

Type of worker	Current quarter		One quarter		Four quarters	
Regular	[1].060	(.095)	[1].145	(.102)	[1].349	(.095)
Temporary	.710	(.320)	1.837	(.332)	1.396	(.261)
Male, regular	.013	(.102)	[1].071	(.107)	[1].250	(.089)
Male, temporary	–.000	(.692)	2.648	(.700)	2.003	(.263)
Female, regular	[1].200	(.162)	[1].249	(.176)	[1].558	(.177)
Female, temporary	.949	(.273)	1.567	(.293)	1.223	(.278)

[1]Elasticity estimates for regular and temporary workers are significantly different at the .05 level.

NOTE: Standard errors are reported in parentheses.