Why is Japan's Unemployment Rate So Low and So Stable?

By Stuart E. Weiner

With the average European unemployment rate currently about 11 percent and the U.S. unemployment rate well over 6 percent, the Japanese unemployment rate stands at a very low 3 percent. Moreover, the Japanese unemployment rate has been exceptionally stable. It has remained within a narrow 1 to 3 percent range over the post-World War II period despite numerous disruptive shocks. The U.S. unemployment rate, in contrast, has experienced far greater variability, ranging from 3 percent to 10 percent over the period.

Why the disparity? What is it about Japan that allows it to record such extraordinarily low and stable unemployment rates? Could the United States improve its unemployment performance by adopting some features of Japanese labor markets? Or is the favorable Japanese performance in some sense artificial, concealing some negative aspects of Japanese labor markets?

Stuart E. Weiner is a senior economist with the Federal Reserve Bank of Kansas City. Richard Roberts, a research associate at the Bank, assisted in the preparation of the article.

This article argues that the U.S. unemployment rate could be lowered and made more stable by adopting some features of Japanese labor markets. However, other features of Japanese labor markets, though they have contributed to the lower, more stable Japanese unemployment rate, should not be emulated.

The first section of the article compares U.S. and Japanese unemployment rates and other macroeconomic indicators over the past 20 years. The second section examines possible reasons for the lower Japanese unemployment rate. The third section examines possible reasons for the more stable Japanese unemployment rate. The last section discusses the desirability of adopting various features of Japanese labor markets.

U.S. and Japanese economic performance

Japan has been one of the principal success stories in the industrialized world over the past 20 years. In terms of real growth, inflation, employment, and unemployment, Japan has been among the top performers, if not the top performer.

Japan has excelled in terms of real economic growth. Chart 1 shows real GNP growth in Japan and the United States over the 1966-85 period. Over this period, the Japanese economy grew more than twice as fast as the U.S. economy, with real GNP growth averaging 6.2 percent compared with 2.7 percent for the United States. However, while Japan grew three times as fast over the 1965-75 period, it grew just 1.5 times as fast over the 1976-85 period. So the growth gap has narrowed.

Inflation in the two countries has been comparable over the past 20 years. Japan's inflation—as measured by the implicit price deflator—averaged 5.6 percent over the 1966-85 period, while the U.S. rate averaged 6.2 percent. But as indicated in Chart 2, more of Japan's inflation came between 1966 and 1975, particularly in 1974 following the first oil shock. Both countries have made progress against inflation in the last five years, with the United States registering a 5.4 percent average inflation rate and Japan a mere 1.7 percent average inflation rate.

Japan has fallen short of the United States in terms of employment growth. As shown in Chart 3, the United States saw twice the employment growth of Japan over the 1966-85 period.[1] However, the United States has also seen much stronger labor force growth, so the pool of unemployed (represented by the height of the shaded area) has not diminished.[2] As a result, the U.S. unemployment rate has remained far above the Japanese unemployment rate.

Chart 4 compares the unemployment rates in the two countries over the past 20 years. As indicated, the U.S. rate has been higher than the Japanese rate every year. The U.S. rate has averaged 6.2 percent. The Japanese rate has averaged 1.9 percent. In 1986, the U.S. rate was 6.9 percent, while the Japanese rate was only 2.8 percent.

The Japanese unemployment rate has also been more stable than the U.S. rate, as Chart 4 suggests and calculation of standard deviations for the respective series confirms. A measure of the extent to which individual values vary about their mean, the standard deviation for the U.S. unemployment rate series is 1.8 compared with 0.6 for the Japanese series.[3] So the Japanese unemployment rate has been both lower and more stable than the U.S. unemployment rate.

Other industrialized countries fare even worse in unemployment rate comparisons with Japan. Whereas the Japanese unemployment rate stood at 2.8 percent in 1986 and the U.S. rate stood at 6.9 percent, the German rate stood at 9.0 per-

[1] The U.S. employment/population ratio—total employment as a percentage of total working age population—was some seven percentage points below the Japanese ratio in 1966 (57.6 percent versus 64.9 percent) but had pulled nearly even by 1985 (60.5 percent versus 61.4 percent). Figures are derived from unpublished U.S. Department of Labor data, furnished by Joyanna Moy. Unless otherwise noted, all employment, unemployment, and labor force data cited throughout the text and notes refer to total labor force (civilian plus armed forces), for both Japan and the United States.

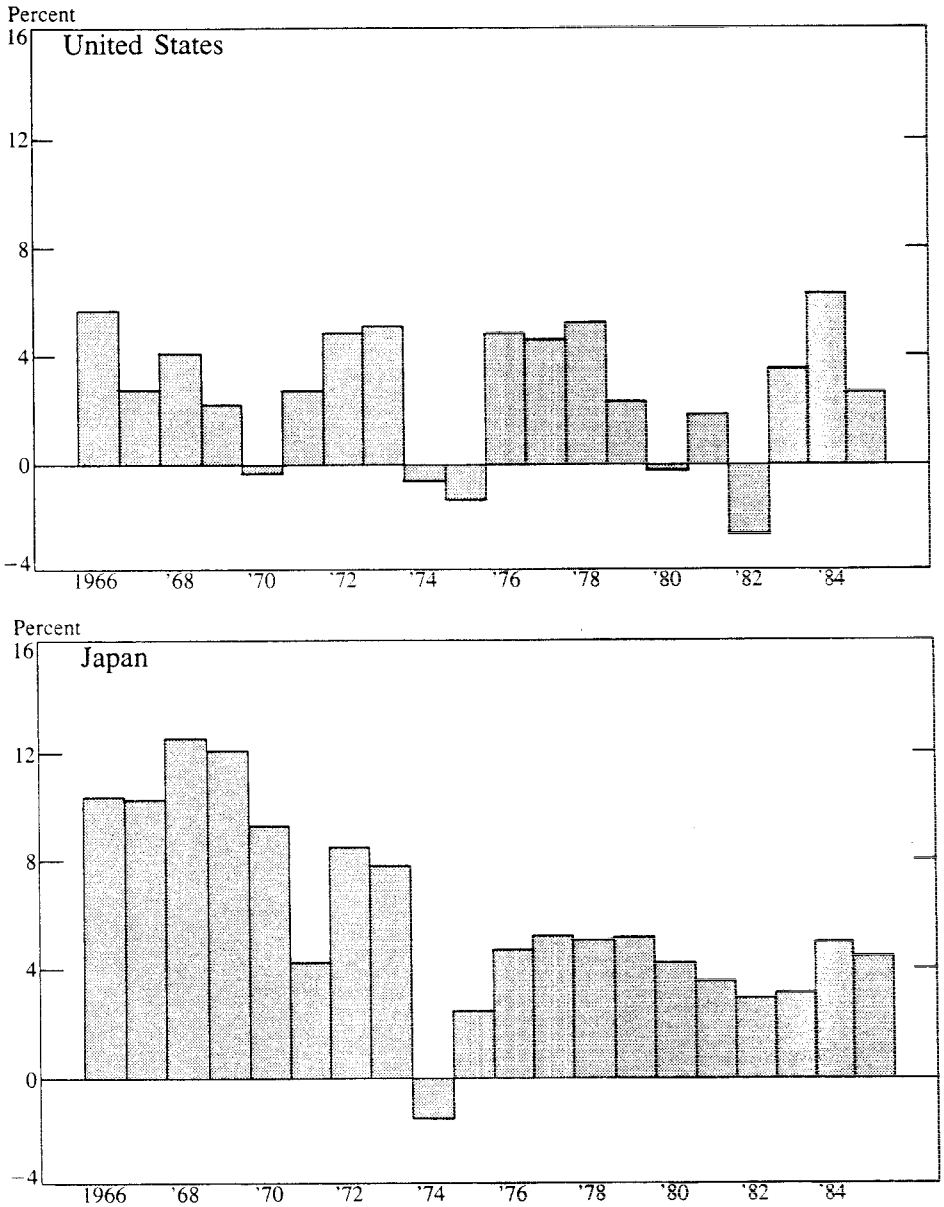
[2] In Japan, men and women showed the same labor force growth over the 1966-85 period, while in the United States, labor force growth for women was more than twice the growth for men. Overall, the Japanese labor force participation rate was essentially the same in 1985 as in 1966 (rising from 72.0 percent to 72.4 percent), with men showing a slight decline (88.6 percent to 87.8 percent) and women showing a slight rise (56.2 percent to 57.2 percent). The overall U.S. participation rate was seven percentage points higher in 1985 than in 1966 (rising from 68.7 percent to 75.2 percent), with a sharp decline for men (91.2 percent to 84.9 percent) and a sharp rise for women (46.8 percent to 65.5 percent). Data are taken from *Labour Force Statistics, 1964-1984*, Organization for Economic Co-operation and Development (OECD), 1986, pp. 470-473, and OECD data files.

[3] The standard deviation of a data series $x_t (t=1, \ldots, N)$ is defined as standard deviation $= \{[(1/(N-1)] \times \sum_{t=1}^{N} (x_t - \bar{x})^2\}^{1/2}$, where $\bar{x}$ is the mean of the series, $\bar{x} = (1/N) \times \sum_{t=1}^{N} x_t$.

CHART 1

Real GNP growth, United States and Japan, 1966-85

(Annual percentage changes)

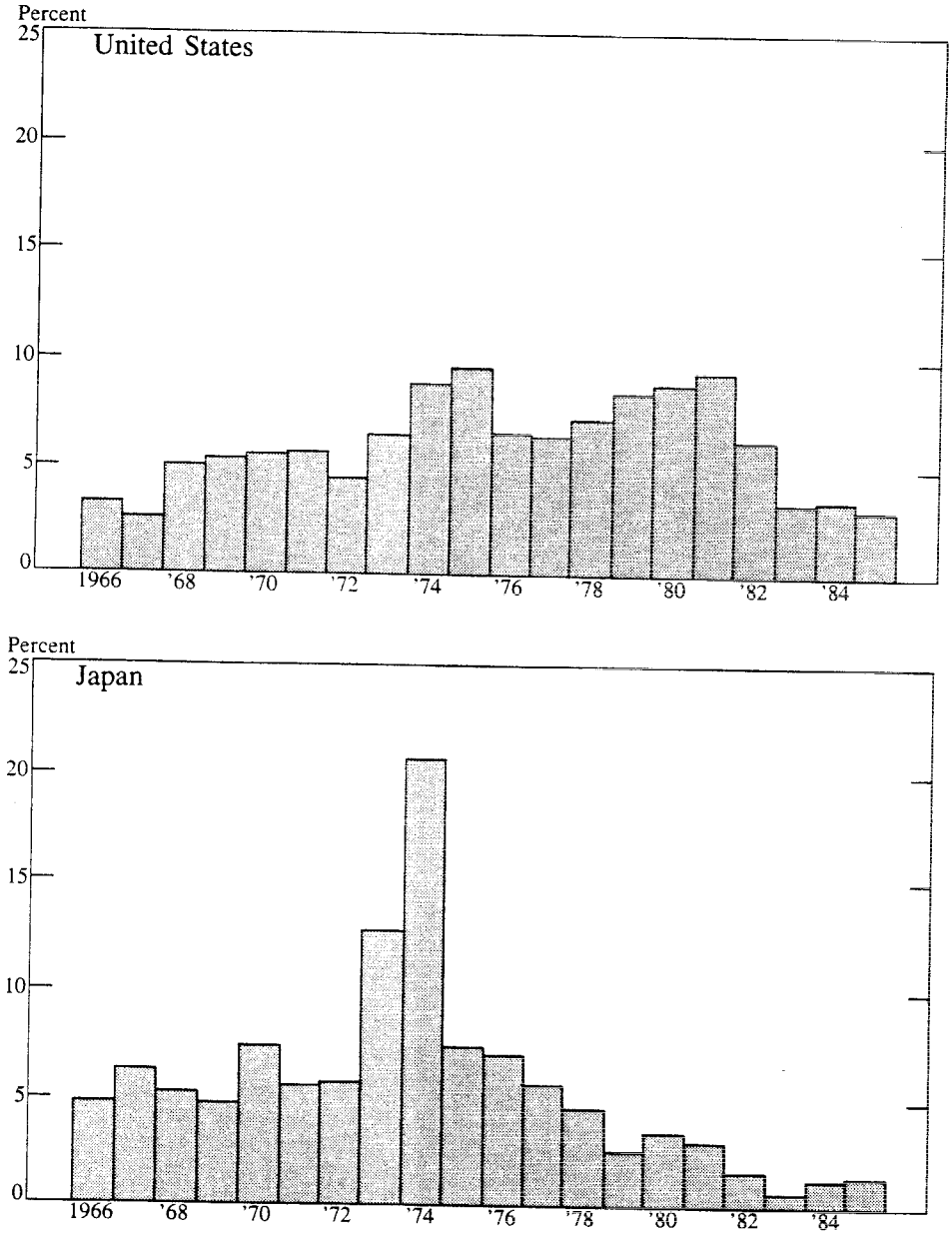


SOURCE: Organization for Economic Co-operation and Development

CHART 2

Inflation rates, United States and Japan, 1966-85

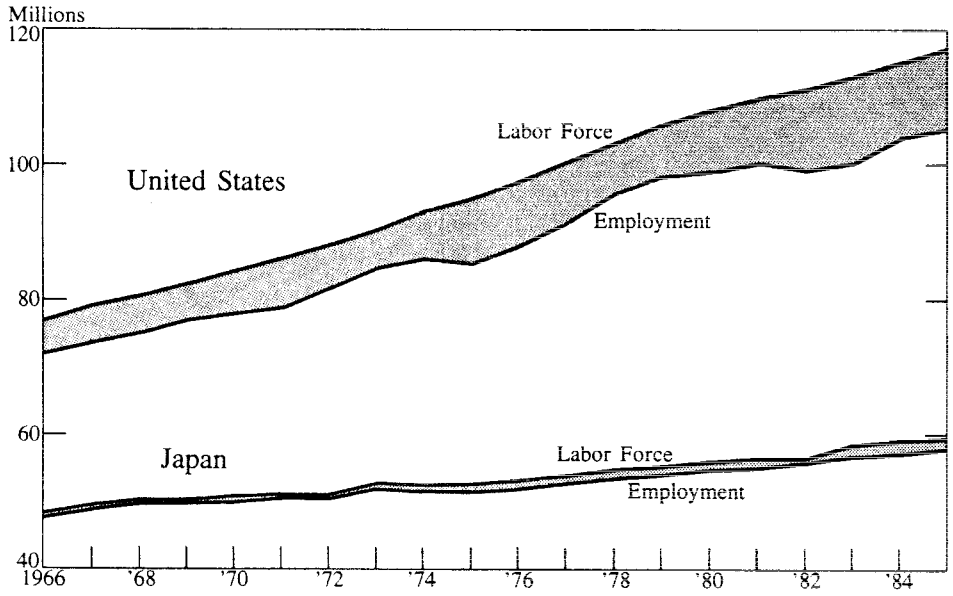
(Annual percentage changes)



Source: Organization for Economic Co-operation and Development

CHART 3

Employment and labor force levels, United States and Japan, 1966-85



Source: Organization for Economic Co-operation and Development

cent, the British rate at 11.9 percent, and the Dutch rate at 14.6 percent. Double-digit, or nearly double-digit, unemployment is not uncommon in much of the western world today.[4] In Japan, it is nowhere in sight.

Unemployment rate standardization

Given the wide divergence between U.S. and Japanese unemployment rates, a natural place to begin looking for an explanation is with survey and measurement techniques. Are the U.S. and Japanese unemployment rates constructed differently, with different survey and measurement techniques? And if so, do the differences in methodology account for the disparity?

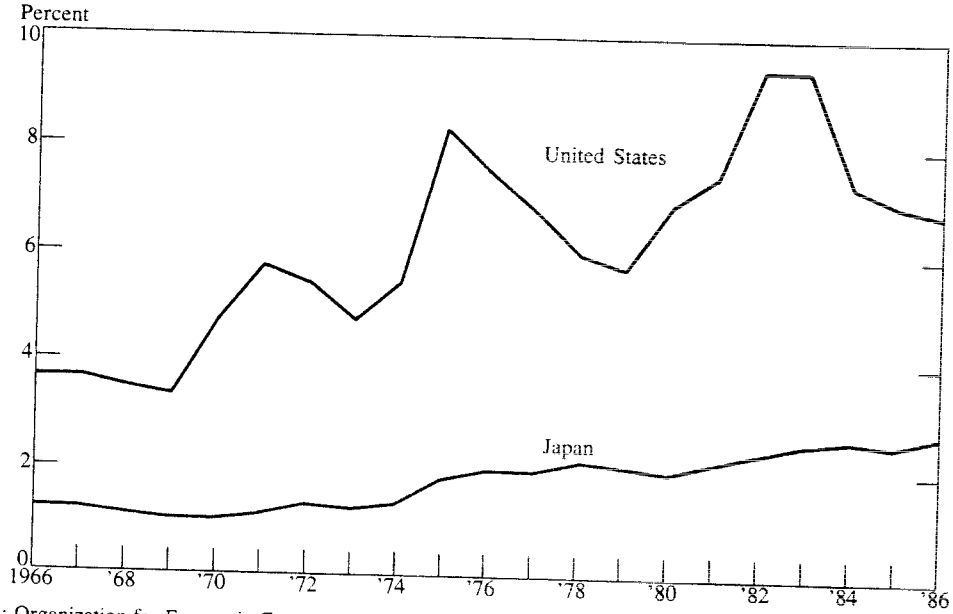
The answer to the first question is yes, the U.S. and Japanese methodologies do differ somewhat. But the answer to the second question is no, the differences in methodology do not account for the disparity. In examining this issue, the U.S. Department of Labor has adjusted the Japanese unemployment rate to U.S. standards.[5] The adjustment makes virtually no difference, adding

[4] Japan did not exhibit such marked superiority earlier in the post-World War II period. Annual unemployment rates from 1959 to 1969, for example, averaged 1.4 percent in Japan, 4.7 percent in the United States, 1.2 percent in Germany, 1.9 percent in Great Britain, and 1.1 percent in the Netherlands. Data are taken from unpublished U.S. Department of Labor data.

[5] The adjustment procedure is described in Constance Sorrentino, "Japan's Low Unemployment: An In-Depth Analysis," *Monthly Labor Review*, U.S. Department of Labor, Bureau of Labor Statistics, March 1984, pp. 18-27. The OECD has also constructed standardized series, adjusting Japanese and U.S. unemployment rates to international standards. Again, it makes little or no difference, for either country. See *Quarterly Labour Force Statistics*, OECD, November 3, 1986, p. 78.

CHART 4

Unemployment rates, United States and Japan, 1966-86



Sources: Organization for Economic Co-operation and Development; U.S. Department of Labor, Bureau of Labor Statistics.

only a tenth of a percentage point to the Japanese rate in a few years. Thus, even after standardization, the Japanese rate remains substantially lower and substantially more stable than the U.S. rate.

Japan's lower unemployment rate

If the lower, more stable Japanese unemployment rate is not due to differences in survey and measurement techniques, more fundamental factors must be at work. In this section, the factors contributing to the lower Japanese rate are examined. In the next section, the factors contributing to the more stable Japanese rate are discussed.

Demographic mix and the U.S. teen problem

Japan's lower overall unemployment rate relative to the U.S. rate extends to various age and sex categories. Columns 1 and 2 of Table 1 present Japanese and U.S. unemployment rates by age and sex for 1985. For all but one category (males 55 to 64), the unemployment rate was lower in Japan than in the United States. The unemployment rate for prime-age males (25 to 54), for example, was 5.4 percent in the United States but only 1.9 percent in Japan. Similarly, the unemployment rate for prime-age females was 6.5 percent in the United States but only 2.4 percent in Japan. Thus, it cannot be said that the poorer aggregate unemployment rate performance in the United States stems from poorer performance in a few isolated demographic categories. In fact, the poorer performance emanates from virtually all categories.

It is true, however, that Japan has much less of a teen unemployment problem than the United States, and this difference has contributed to Japan's lower overall unemployment rate. As

TABLE 1

Labor market indicators in the United States and Japan, 1985

(Unemployment rates, labor force participation rates, and unemployment shares, by age and sex)

	Unemployment Rate		Labor Force Participation Rate		Unemployment Share	
	U.S.	Japan	U.S.	Japan	U.S.	Japan
	(1)	(2)	(3)	(4)	(5)	(6)
Males and Females						
1. 16(15)-24*	13.0	4.8	69.5	42.9	38.6	22.4
2. 25+	5.6	2.3	76.8	80.2	61.4	78.2
3. Total	7.1	2.6	75.2	72.4	100.0	100.0
4. 16(15)-19*	n.a.	n.a.	n.a.	n.a.	17.6	7.1
Males						
5. 16(15)-19*	18.6	8.9	59.4	17.3	9.7	4.5
6. 20-24	10.4	3.8	86.4	70.1	11.4	7.1
7. 25-54	5.4	1.9	90.8	96.7	29.0	30.1
8. 55-64	4.3	5.0	59.7	83.0	4.4	17.9
9. 65+	3.1	2.1	10.3	37.0		
10. Total	6.8	2.6	84.9	87.8	54.4	59.6
11. 16(15)-24*	13.1	4.8	75.3	42.6	21.1	11.5
12. 20+	n.a.	n.a.	n.a.	n.a.	44.7	55.1
Females						
13. 16(15)-19*	17.5	5.6	52.0	16.6	8.0	2.6
14. 20-24	10.6	4.5	71.9	71.9	9.6	8.3
15. 25-54	6.5	2.4	69.5	60.3	25.1	25.6
16. 55-64	4.3	2.0	41.7	45.3	3.0	4.5
17. 65+	4.2	0.9	6.8	15.5		
18. Total	7.6	2.7	65.5	57.2	45.6	40.4
19. 16(15)-24*	12.9	4.7	63.7	43.2	17.5	10.9
20. 20+	n.a.	n.a.	n.a.	n.a.	37.7	38.5

*Age 16 in the United States, age 15 in Japan.

Sources: Columns 1-4: *Labour Force Statistics 1964-84*, Organization for Economic Co-operation and Development, 1986, pp. 470-473; columns 5-6: Derived from *Quarterly Labour Force Statistics*, Organization for Economic Co-operation and Development, No. 3, 1986, pp. 12, 16. All data are as published by domestic sources. Sums of components in columns 5 and 6 may not equal totals due to rounding.

shown in row 4, columns 5 and 6, teens—defined in the United States as ages 16 to 19 and in Japan as ages 15 to 19—accounted for 17.6 percent of the unemployment in the United States in 1985 but only 7.1 percent in Japan. This difference is not surprising given the unemployment rates and participation rates shown in rows 5 and 13. In the United States, 59.4 percent of male teenagers were in the labor force, facing an unemployment rate of 18.6 percent. In Japan, only 17.3 percent of male teenagers were in the labor force, facing an unemployment rate of only 8.9 percent. Likewise, U.S. female teenagers had a 52.0 percent participation rate and a 17.5 percent unemployment rate, while Japanese female teenagers had only a 16.6 percent participation rate and a 5.6 percent unemployment rate.

A rough calculation indicates that the aggregate U.S. unemployment rate would have been 6.3 percent instead of 7.1 percent in 1985 had U.S. teens had Japanese teens' unemployment rates and labor force participation rates.[6] So the teen problem in the United States is one reason for the higher aggregate U.S. unemployment rate. But, of course, it does not nearly explain it all.

Japanese teens have much lower participation rates than U.S. teens for at least two reasons. First, Japanese minimum wage laws vary by locality and are rarely enforced anyway, so the financial incentive to enter the labor market appears weak. But a second, more important explanation is the greater emphasis on education in Japan. High school students in Japan spend long hours at school and at home studying in the hope of getting into prestigious universities. Few are interested in part-time work. As a result, participation rates are low.

Answers to why Japanese teens have lower unemployment rates than U.S. teens are not as clearcut. The smaller size of the participating cohort might be a factor. So might differences in search intensity, skill mismatch, or locational mismatch. Whatever the reasons, the labor market experience of Japanese teens is markedly different from that of U.S. teens.[7]

Sectoral differences

Sectoral differences are another factor contributing to the lower Japanese unemployment rate. Japan has a larger agricultural sector than the United States and also has a larger self-employed sector. Both serve to reduce the Japanese unemployment rate relative to the U.S. unemployment rate.

Agriculture's share of employment in Japan in 1984 was 8.9 percent. Its share in the United States was 3.2 percent. Since agricultural workers almost always meet the requirement of "employed" in employment surveys—even though many may only be working a few hours a week—Japan's larger agricultural sector has tended to lower Japan's unemployment rate relative to the U.S. rate.[8]

[6] The hypothetical U.S. unemployment rate is calculated in three steps: (1) Japanese teen labor force participation rates are applied to U.S. teen populations to derive revised U.S. teen labor force, (2) Japanese teen unemployment rates are applied to revised U.S. teen labor force to derive revised U.S. teen pool of unemployed, and (3) revised U.S. teen labor force and revised U.S. teen pool of unemployed are combined with non-teen U.S. labor force and pool of unemployed to calculate revised U.S. aggregate unemployment rate. Takatoshi Ito calculates a similar teen-adjusted U.S. unemployment rate for 1982 in "Why is the Unemployment Rate So Much Lower in Japan Than in the U.S.?" Center for Economic Research, University of Minnesota, Discussion Paper No. 198, January 1984, pp. 12-13.

[7] For further discussion of the Japanese teen labor market experience, see Ito, "Why is the ...," pp. 10-13; and Toshiaki Tachibanaki, "Labour Market Flexibility in Japan in Comparison with Europe and the U.S.," Kyoto Institute of Economic Research, Kyoto University, p. 18.

[8] Data are derived from *Labour Force Statistics*, 1964-84,

Japan's larger self-employed sector has likely had a similar impact. The non-agricultural self-employed share of employment in Japan in 1984 was 13.0 percent. Its share in the United States was 7.6 percent. It is difficult for self-employed workers to be classified as unemployed. For this reason, Japan's larger self-employed sector has presumably further lowered Japan's unemployment rate relative to the U.S. rate.[9]

Other factors

A host of other factors could also contribute to the lower Japanese unemployment rate. It could be that there is less skill mismatch in Japan, reflecting in part a better educational system.[10] It could also be that the high degree of internal (intra-firm) mobility in Japan—a feature of Japan's lifetime employment system, discussed in the next section—is more effective in matching jobs to jobseekers than the high degree of external (between-firm) mobility in the United States. Perhaps there are fewer disincentives associated with the Japanese unemployment insurance program. Perhaps, as a more racially homogeneous nation, Japan enjoys a smaller incidence of racial discrimination. Perhaps locational mismatch is less of a problem. In all likelihood, some or all of these factors are at work. But definitive assessments are difficult.[11]

Japan's more stable unemployment rate

This section examines factors that have contributed to Japan's more stable unemployment rate. These factors may collectively be called shock-adjustment factors because they reflect differences in the way the U.S. and Japanese economies respond to adverse demand and supply shocks.

Demand and supply shocks

Japan's unemployment rate has been more stable than the U.S. unemployment rate in part because the Japanese economy has been more flexible in the face of adverse demand and supply shocks.[12] Before examining this greater flexibility, however, it is useful to review what is meant by adverse demand and supply shocks.

Consider first an adverse demand shock. Suppose an economy is initially in equilibrium, with labor demand equal to labor supply and workers

OECD, 1986, pp. 88-91, 104-107. For further discussion of the agricultural sector's role in lowering Japan's unemployment rate, see Sorrentino, "Japan's Low Unemployment ...," p. 26, and Ito, "Why is the ...," pp. 9-10.

[9] Data are taken from *OECD Employment Outlook*, September 1986, Table 13, p. 44. The data measure the proportion of self-employment to civilian employment in the non-agricultural sector, excluding unpaid family workers. For further discussion of the self-employed sector's role in lowering Japan's unemployment rate, see Sorrentino, "Japan's Low Unemployment ...," p. 26; and Tachibanaki, "Labour Market Flexibility ...," p. 2.

[10] The U.S. Department of Education recently evaluated the Japanese educational system and gave it very high marks. See *Japanese Education Today*, U.S. Department of Education, January 1987. The report is summarized in "The Brain Battle," *U.S. News and World Report*, January 19, 1987, pp. 58-65.

[11] Some of these possible factors are discussed in Koichi Hamada and Yoshio Kurosaka, "Trends in Unemployment, Wages, and Productivity: The Case of Japan," *Economica*, Vol. 5, No. 210(S), 1986, pp. S275-S296; *Flexibility in the Labour Market: The Current Debate*, OECD, Paris, 1986; Tachibanaki, "Labour Market Flexibility ...;" and Sorrentino, "Japan's Low Unemployment ...." For a general discussion of the determinants of a country's unemployment rate, see Stuart E. Weiner, "The Natural Rate of Unemployment: Concepts and Issues," *Economic Review*, Federal Reserve Bank of Kansas City, January 1986, pp. 11-24.

[12] The discussion that follows focuses on adverse shocks, defined here as shocks that cause the unemployment rate to rise in the short run. However, the argument is symmetric with respect to positive shocks, defined here as shocks that cause the unemployment rate to fall in the short run. That is, Japan's unemployment rate has been more stable than the U.S. rate in part because the Japanese economy has also been more flexible in the face

and firms expecting and getting a given inflation rate. Then suppose there is an unexpected decline in aggregate spending due, say, to a decline in consumer spending.[13] What happens?

Demand for firms' products declines, inventories rise, and pressure builds throughout the economy for prices to rise less rapidly (disinflation) or even to fall (deflation). If a firm can pay its workers lower nominal wages, real wages in terms of product prices remain the same. But if the firm cannot lower workers' wages, real wages in terms of product prices rise. As a result of this rise in labor costs, labor demand falls, employment falls, and unemployment rises.

Alternatively, consider an adverse supply shock, such as an oil embargo that forces the price of oil much higher.[14] What happens in this case? General price indexes will register gains and, if these gains are incorporated into nominal wages, workers will be no worse off. But firms will be worse off because, though their product prices have not risen, they are now paying their workers a higher nominal wage, so that real wages in terms of product prices rise. Labor is now more expensive and, as before, labor demand falls, employment falls, and unemployment rises. Without some kind of adjustment, both adverse demand shocks and adverse supply shocks will cause unemployment to rise.

This rise in unemployment can be avoided through three possible types of adjustment—wages, working hours, and labor force participation. Japan has exhibited all three types to a greater extent than the United States.

Wage adjustment

One way an economy can adjust to adverse demand and supply shocks is simply not to allow real wages to rise, so that labor does not become more expensive. In the case of adverse demand shocks, this means nominal wages fall with general prices, that is, nominal wages are flexible. In the case of adverse supply shocks, this means nominal wages do not rise as general prices rise, that is, real wages are flexible. The impact adverse shocks have on employment and unemployment can be minimized if the sources of these shocks are accurately identified and wages are adjusted accordingly.

How do the United States and Japan compare with respect to wage flexibility? Empirical studies suggest that Japan is somewhat more flexible. Regarding nominal wage flexibility, several studies indicate that Japan is more flexible in the manufacturing sector although at least one study indicates little difference in the non-manufacturing sector and the economy as a whole.[15] Regarding real wage flexibility, some studies suggest that

of positive demand and supply shocks. Examples of positive demand shocks include increases in consumer, investment, and government spending. Examples of positive supply shocks include oil price declines and the appreciation of a country's currency (i.e., improvement in the terms of trade).

[13] Other examples of adverse demand shocks include declines in investment spending and government spending.

[14] Other examples of adverse supply shocks include depreciation of a country's currency (i.e., deterioration in the terms of trade), crop failures, and real wage demands in excess of productivity gains.

[15] Studies suggesting greater Japanese nominal wage flexibility in manufacturing include Robert J. Gordon, "Why U.S. Wage and Employment Behavior Differs from that in Britain and Japan," *Economic Journal*, Vol. 92, No. 365, March 1982, pp. 13-44; Dennis Grubb, Richard Jackman, and Richard Layard, "Wage Rigidity and Unemployment in OECD Countries," *European Economic Review*, Vol. 21, March 1983, pp. 11-39; and Robert J. Gordon, "Productivity, Wages, and Prices Inside and Outside of Manufacturing in the U.S., Japan, and Europe," National Bureau of Economic Research Working Paper No. 2070, November 1986. A study suggesting greater Japanese nominal wage flexibility in the economy as a whole is David T. Coe, "Nominal Wages, the NAIRU, and Wage Flexibility," *OECD Economic Studies*, No. 5, Autumn 1985, pp. 87-126. A study suggesting little difference in Japanese and U.S. nominal wage flexibility in the economy as a whole and in non-manufacturing

Japan is more flexible while others show little difference.[16] Taken together, it is probably fair to say that Japanese wages are somewhat more flexible than U.S. wages. This greater flexibility has helped reduce fluctuations in employment in Japan and contributed to Japan's more stable unemployment rate performance.

Chart 5 shows that employment has varied less in Japan than in the United States.[17] The standard deviation for employment growth in the United States over the 1965-85 period was 1.54. The standard deviation for Japan was only 0.75. Partly because of its greater wage flexibility, Japan has been able to avoid employment "flexibility."

But why are wages more flexible in Japan than in the United States? At least three factors have contributed to more flexibility in Japan: a higher degree of synchronization in wage bargaining, a higher degree of cooperation between workers and firms, and a higher degree of payment through bonuses.

Turning first to the degree of synchronization, wages are set annually in Japan, on essentially an economywide basis. This is the so-called "Shunto" process. In the United States, in contrast, wage setting is far more decentralized and, in the case of most union agreements, conducted only every three years. This system of staggered multiyear contracts—with only incomplete wage indexation—generates a high degree of nominal wage rigidity in the U.S. wage adjustment process.[18]

Japanese workers and firms also share a heightened sense of cooperation. Japanese employees tend to be quite loyal to their employers, and employers, in turn, tend to be quite loyal to their employees. This sense of cooperation is due in part to the lifetime employment practice at large firms. It also reflects different union orientation. Although union participation is almost as large in Japan as in the United States, Japanese unions are organized along enterprise lines, not occupational lines.[19] Blue-collar and white-collar employees belong to the same union, strengthening firm identity and lending support to a more egalitarian workplace.

Finally, the Japanese wage-setting process is perhaps also more flexible because of the widespread use of semiannual bonus payments in Japan. These payments are made to almost all workers and are linked, at least in part, to a firm's revenues or profits. So part of a worker's pay automatically adjusts to the firm's performance,

is Robert J. Gordon, "Productivity, Wages ...." For a summary of some of these studies, see Charles Adams, Paul R. Fenton, and Flemming Larsen, "Differences in Employment Behavior Among Industrial Countries," *Staff Studies for the World Economic Outlook*, International Monetary Fund, July 1986, pp. 24-26.

[16] Studies suggesting greater Japanese real wage flexibility include Gordon, "Why U.S. Wage ...;" Grubb *et al.*, "Wage Rigidity ...;" and (in the long run) Coe, "Nominal Wages ...." Studies suggesting little difference in Japanese and U.S. real wage flexibility include Gordon, "Productivity, Wages ...," and (in the short run) Coe, "Nominal Wages ...." For a summary of some of these studies, see Adams *et al.*, "Differences in Employment ...," pp. 24-26.

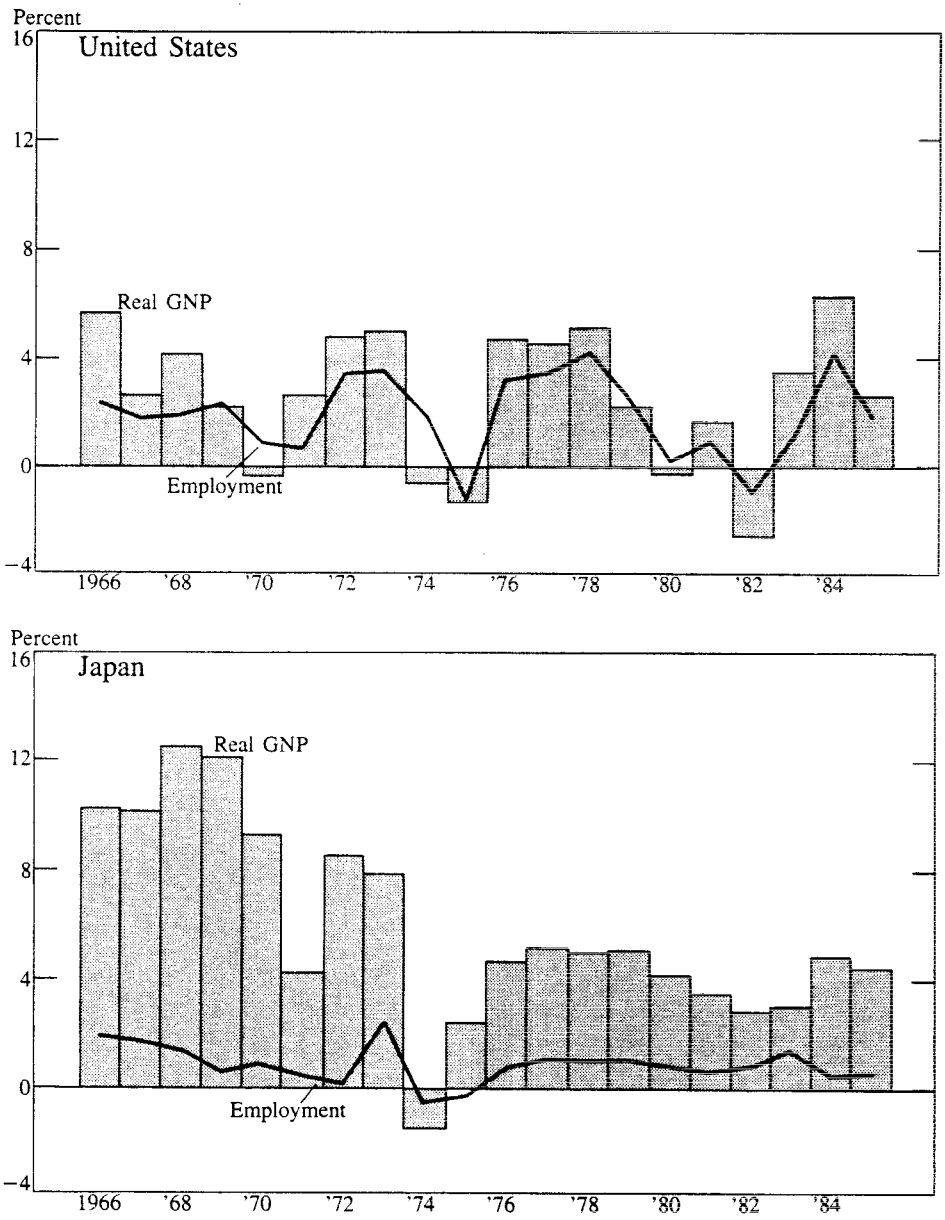
[17] Adams *et al.*, "Differences in Employment ...," present a similar chart adding data for European countries (Chart 2, p. 3).

[18] For further discussion of the Shunto process, see Hamada and Kurosaka, "Trends in ...," p. S288; and Gordon, "Why U.S. Wages ...," p. 37. For further discussion of the U.S. wage-setting process, see Gordon, "Why U.S. Wages . . . ," p. 40; and Jeffrey Sachs, "Wages, Profits, and Macroeconomic Adjustment: A Comparative Study," *Brookings Papers on Economic Activity*, 1979:2, pp. 301-311. Rigid nominal wages may actually have helped the United States adjust to the 1973 and 1979 oil shocks by generating lower real wages. On the other hand, rigid nominal wages likely exacerbated the early 1980s demand shocks.

[19] Michael Bruno and Jeffrey D. Sachs report that over the 1965-77 period, union membership as a percentage of all employees averaged 22.6 percent in Japan and 28.2 percent in the United States. See *Economics of Worldwide Stagflation*, Harvard University Press, 1985, Table 11.2, p. 225. For further discussion of unionization in Japan, see Tachibanaki, "Labour Market Flexibility ...," pp. 13-14; and Hamada and Kurosaka, "Trends in ...," pp. S286-S288.

CHART 5

Real GNP and employment growth, United States and Japan, 1966-85
(Annual percentage changes)



Source: Organization for Economic Co-operation and Development

providing some built-in wage flexibility and stability for employment and unemployment.

How important these bonus payments are in stabilizing employment is a matter of some debate. To the extent that the bonuses are linked to a firm's profits or revenues, as opposed to an individual's performance or a simple markup over normal salary, such bonuses could help stabilize employment in the face of adverse shocks. Thus, the Japanese economy would take on aspects of a "share economy," a theory developed in recent years by Martin Weitzman in his exploration of alternative compensation arrangements.[20] Evidence suggests, however, that the Japanese bonus system is probably not too important an explanation for Japanese wage flexibility and employment stability. Bonuses are not predominantly profit driven but are linked largely to individual performance or a markup over salary. Weitzman estimates that only 2.5 percent of a Japanese worker's total pay automatically responds directly to profits. Thus, a comparison of wage flexibility in the United States and Japan leads to the conclusion that the greater wage flexibility in Japan is due primarily to its higher degree of synchronization and cooperation.

Working hours adjustment

A second way an economy can adjust to adverse demand and supply shocks is through adjustments in hours worked per employee, or working hours. Suppose, for example, that an economy is hit by an adverse demand shock and nominal wages do not adjust enough to keep real wages from rising. Labor becomes more expensive, and firms react by reducing their demand for labor. This reduction can take the form of either fewer employees or the same number of employees working fewer hours. In the first case, working hours remain the same, employment falls, and unemployment rises. In the second case, working hours decline, employment remains the same, and unemployment remains the same.

How do the United States and Japan compare with respect to working hours flexibility? Empirical evidence suggests that Japan is more flexible in working hours. When standard deviations are calculated for annual percentage changes in working hours over the 1966-85 period, Japan is shown to exhibit more variability than the United States in both the total economy and the manufacturing sector alone.[21] So greater hours flexibility has apparently joined greater wage flexibility in helping Japan reduce its employment and unemployment fluctuations.

But why is Japan more flexible in working hours? For one thing, the average number of hours worked by employees tends to be higher in Japan than in the United States, so that cut-

[20] The Japanese bonus system is described in Richard B. Freeman and Martin L. Weitzman, "Bonuses and Employment in Japan," National Bureau of Economic Research Working Paper No. 1878, April 1986. The 2.5 percent figure cited in the text is reported on page 23. Tachibanaki, "Labour Market Flexibility ...," provides further valuable discussion, pp. 10-11. Weitzman's "share economy" theory is presented in Martin L. Weitzman, *The Share Economy*, Harvard University Press, 1984, and commented on by Lawrence Summers and Alan Blinder in "On the Share Economy," *Challenge*, November/December 1986, pp. 47-52.

[21] For the total economy, the standard deviations are 1.11 for Japan and 0.85 for the United States. For manufacturing, the standard deviations are 1.56 for Japan and 1.13 for the United States. The underlying total economy data are taken from Table L, "Average Annual Hours Worked Per Person in Employment," *OECD Employment Outlook*, September 1986, p. 142, for 1976-85 and from comparable unpublished OECD data for 1966-75 and 1986. John Evans furnished the latter. The underlying manufacturing data are taken from unpublished U.S. Department of Labor data, "Average Weekly Hours in Manufacturing, Twelve Countries," furnished by Christopher Kask. Gordon ("Why U.S. Wages ...," Table 1, p. 19) and Tachibanaki ("Labour Market Flexibility ...," Table 1) also report more variability in Japanese working hours. See them and Hamada and Kurosaka, "Trends in ...," p. S285, for further discussion.

backs in hours worked often entail cutbacks in overtime hours, not cutbacks in base-week hours.[22] But more fundamentally, large Japanese firms are simply reluctant to lay off their workers. This reluctance is due largely to the much publicized "lifetime employment" agreements.

About 30 percent of employees in Japan are covered by implicit lifetime employment agreements with their firms.[23] Hired directly out of school, these employees work for the same employer virtually their entire working life. Though no formal commitments are made by either the employee or employer, it is understood that employment will be stable, with few or no periods of layoff, and it is through this long-term relationship that firm-specific skills and firm-specific loyalty are bred.

Lifetime employment is granted almost exclusively to men. Women are rarely included. Lifetime employment is also concentrated almost exclusively among the largest firms. So, contrary to popular western beliefs, lifetime employment is not all encompassing in Japan.[24] It is important enough, however, to contribute to Japan's reduced employment "flexibility" and greater hours flexibility.

Also contributing to Japan's hours flexibility is its substantial reliance on part-time and temporary workers. About 30 percent or so of the total non-agricultural labor force in Japan works part-time or on a temporary basis.[25] For them, almost by definition, hours variability is assured.

Two points need to be made about these part-time workers. First, there is evidence that many part-time workers in Japan would prefer to work full time. Second, two-thirds or more of these involuntary part-time workers are women. The picture that emerges is one of a large pool of involuntary part-time women workers.[26] So hours flexibility in this case does not come without a cost.

Labor force participation adjustment

The third way an economy can adjust to adverse demand and supply shocks is through adjustments in labor force participation. Suppose, again, that an adverse demand shock or supply shock hits an economy, labor becomes more expensive, and

[22] Tachibanaki makes this point in "Labour Market Flexibility ...," pp. 7-9.

[23] This figure is taken from Tachibanaki, "Labour Market Flexibility ...," p. 25.

[24] For further discussion of Japanese life-time employment practices and layoff practices, see Tachibanaki, "Labour Market Flexibility ...;" Sorrentino, "Japan's Low Unemployment ...;" Hamada and Kurosaka, "Trends in ...;" Ito, "Why is the ...;" and Joyanna Moy and Constance Sorrentino, "Unemployment, Labor Force Trends, and Layoff Practices in 10 Countries," *Monthly Labor Review*, U.S. Department of Labor, Bureau of Labor Statistics, December 1981, pp. 3-13.

[25] This figure is taken from Tachibanaki, "Labour Market Flexibility ...," p. 2. For further discussion of these "non-regular" workers and the role they play in the Japanese economy, see Tachibanaki, pp. 3-6; and Sorrentino, "Japan's Low Unemployment ...," pp. 25-26. Women's share of part-time employment in Japan was 70.7 percent in 1983. See *OECD Employment Outlook*, September 1985, Table 10, p. 26.

[26] According to a recent report to the Japanese Ministry of Labor (authored in Japanese by A. Wakisaka), women on average accounted for 66 percent of involuntary part-time workers in Japan over the 1979-84 period, with the figure at 72 percent in 1984. See Tachibanaki, "Labour Market Flexibility ...," Table 3 and pp. 22-25. U.S. Department of Labor estimates indicate a similar percentage: of the 1,530,000 Japanese workers in March 1980 who reportedly usually worked part time but wanted more work, 64 percent were women. This figure, provided by Constance Sorrentino, is an unpublished component of Sorrentino, "Japan's Low Unemployment ...," Table 5, p. 25. In comparing part-time workers (male plus female) in the United States and Japan, Sorrentino estimates that the civilian U.S. unemployment rate would have been some 30 percent higher but the (BLS-adjusted) Japanese rate some 74 percent higher if, in 1980, the unemployment concept had been expanded to include involuntary part-time workers. See Sorrentino, "Japan's Low Unemployment ...," pp. 25-26; figures were derived by author from Table 5, p. 25.

firms react by laying off workers. But suppose that instead of joining the pool of unemployed, these newly disemployed workers simply leave the labor force. Though employment declines, unemployment does not rise. What adjusts is the pool of nonparticipants.

How do the United States and Japan compare with respect to labor force flexibility? Empirical evidence suggests that Japan is more flexible, with women much more flexible. When standard deviations for labor force growth are calculated on annual data over the 1966-85 period, Japan is shown to be more variable. When the calculations are performed for women alone, Japan is shown to be much more variable.[27] Japanese women have seen considerably more labor force variability than their U.S. counterparts over the past two decades.

Other evidence suggests that these fluctuations in Japanese women's labor force growth have helped smooth out Japanese unemployment. In the two years following the 1973 oil shock, for example, 600,000 women left the Japanese work force, the participation rate among women falling from 54.1 percent to 51.7 percent.[28] More formal econometric work shows Japanese women's participation rate to be more cyclically sensitive than Japanese men's participation rate. In contrast, participation rates for men and women in the United States show similar cyclical patterns. So it appears that Japanese women have helped smooth out the overall Japanese unemployment rate by leaving the labor force when conditions have soured.[29]

Whether Japanese women have left voluntarily or involuntarily is a key question. Evidence suggests that much female nonparticipation is involuntary.[30] This would accord well with the "semi-discriminatory" status that some observers have attributed to Japanese women.[31] Whatever the reason, Japanese women—in terms of both their part-time work experience and their labor force participation experience—seem to exhibit more flexibility than Japanese men. Willingly or unwillingly, Japanese women are an important source of flexibility in Japanese labor markets.

Thus, while the United States has seen more employment adjustments in the face of demand and supply shocks over the past 20 years, Japan has seen more wage, hours, and labor force adjustments. This greater flexibility has contributed to Japan's more stable unemployment rate over the period.

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[27] For men and women combined, the standard deviations are 0.69 for Japan and 0.54 for the United States. For women alone, the standard deviations are 1.52 for Japan and 0.90 for the United States. For men alone, the standard deviations are 0.53 for Japan and 0.46 for the United States. Underlying data are taken from OECD data files.

[28] Data are taken from *Labour Force Statistics, 1964-84*, OECD, 1986, pp. 104, 472. Hamada and Kurosaka draw attention to this outflow in "Trends in ...," p. S286.

[29] See *OECD Employment Outlook*, September 1986, pp. 22-28, especially Chart 3; and Haruo Shimada and Yoshio Higuchi, "An Analysis of Trends in Female Labor Force Participation in Japan," *Journal of Labor Economics*, Vol. 3, No. 1, part 2, January 1985, pp. S355-S374.

[30] U.S. Department of Labor estimates indicate that 1.4 million non-participating Japanese women desired jobs in March 1980 but were out of the labor force because they believed they were not likely to find work. The comparable number for men was 230,000. These figures, provided by Constance Sorrentino, are revised, unpublished components of Sorrentino, "Japan's Low Unemployment . . . ," Table 5, p. 25, and will be reported in a forthcoming *Monthly Labor Review* article. For a discussion of "discouraged" workers in Japan and the United States, see Sorrentino, pp. 25-26; and Tachibanaki, "Labour Market Flexibility . . . ," pp. 20-25.

[31] Hamada and Kurosaka wonder whether "behind harmonious and homogeneous [Japanese] behavior patterns ... sacrifices arising from the semi-discriminatory treatment of women may be concealed," in "Trends in ...," p. S294. See also Alice H. Cook and Hiroko Hayashi, *Working Women in Japan: Discrimination, Resistance, and Reform*, Cornell International Industrial and Labor Relations Report Number 10, Cornell University, 1980.

Summary

The Japanese unemployment rate has been well below the U.S. unemployment rate for the past 20 years. Several factors have contributed to the lower, more stable Japanese rate. A larger agricultural sector, a larger self-employed sector, and the lack of a teen unemployment problem have contributed to the lower rate. Greater wage flexibility, hours flexibility, and labor force participation flexibility have contributed to the more stable rate. Working in tandem, these factors have allowed Japan to post an impressive unemployment record.

Given Japan's better unemployment rate performance over the past 20 years, a natural question to ask is, How might the United States emulate Japan in order to lower its unemployment rate? More specifically, what features of Japanese labor markets might the United States adopt?

Japanese labor markets have several desirable features. A high degree of wage flexibility and a high degree of cooperation between unions and firms allow the Japanese economy to react quickly to adverse demand and supply shocks. A high degree of intra-firm mobility—a by-product of the lifetime employment system—allows Japanese workers to build and utilize general and firm-specific skills. A superior educational system turns out a highly productive and highly motivated work force.

Clearly, the United States could improve in these areas. Although cooperation between unions and firms appears to be on the increase in the United States, particularly in distressed industries, it rarely approaches the levels common in Japan.[32] This and multi-year contracts contribute to the lower nominal wage flexibility in U.S. manufacturing. Regarding intra-firm mobility, U.S. firms and workers do not appear to be as flexible as their Japanese counterparts, possibly to the detriment of long-term skill accumulation. And the U.S. primary and secondary educational system may fall short of Japan's.

But Japanese labor markets also have undesirable features. Chief among them is the standing of women. Women are rarely made a part of the lifetime employment system and, more than men, often find themselves involuntarily employed part time or involuntarily out of the labor force. Societal and cultural factors appear to erect many barriers for women in the workplace. So Japan is not without its problems.

In sum, neither Japan nor the United States can claim to have perfectly operating labor markets. Improvements could be made in both countries.

[32] For a discussion of recent union settlements in the United States, see Daniel J.B. Mitchell, "Shifting Norms in Wage Determination," *Brookings Papers on Economic Activity*, 1985:2, pp. 575-608; and Stuart E. Weiner, "Union COLA's on the Decline," *Economic Review*, Federal Reserve Bank of Kansas City, June 1986, pp. 10-25.