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Wage-Price Behavior Under External Price Shocks and Productivity Slowdown: A U.S.-Japan Comparison

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CENTER DISCUSSION PAPER NO. 402

WAGE-PRICE BEHAVIOR UNDER EXTERNAL PRICE SHOCKS AND PRODUCTIVITY

SLOWDOWN: A U.S.-JAPAN COMPARISON

Ching-yuan Lin

April 1982

Notes: I have benefitted immensely from communications with, and comments from, Kazuo Sato on an earlier draft of this paper as well as on other parts of my study.

Center Discussion Papers are preliminary materials circulated to stimulate discussion and critical comment. References in publications to Discussion Papers should be cleared with the author to protect the tentative character of these papers.

(Introduction)

- 1. Divergence in the Trends of Wage Rate, Unit Labor Costs, and Finished Goods Prices in the Aftermath of 1974-75 Disturbances**
- 2. Major Factors Behind the Divergent Wage Behavior**
- 3. Variations in Wage and Price Behavior Between Large Corporations and Small Business Sector**
- 4. A Reassessment of Japanese and U.S. Employment Systems**

Wage-Price Behavior Under External Price Shocks and Productivity Slowdown

In the 1960s the moderation of factor cost inflation in the industrial economies was facilitated^{by}/at least two factors: (1) The declining trend of the prices of raw materials and fuels in relation to the factor costs; and (2) the satisfactory growth of labor productivity relative to the steadily rising wage costs. The situation changed drastically in the second half of the 1970s, in the aftermath of the global commodity boom, quantum jumps in oil prices, and the protracted recession that followed. The jumps in the prices of fuels, raw materials, and foodstuffs, whether externally or internally originated, tended to be incorporated into wage increases through cost of living adjustments. Unless offset by productivity gains, the price shocks were passed on to the prices of finished products. The latter, in turn, necessitated further cost of living adjustments for wages, thus prolonging the inflationary process. Worse still, the wage pressures were accompanied by a marked slowdown in productivity growth. The latter occurred, as far as the second half of the 1970s is concerned, largely because of a sharp slowdown in the growth of real domestic demand and the resulting sharp decline in the rate of capacity utilization. In turn, the sharp decline in the growth of real domestic demand occurred, because of (1) losses in real income caused by the rise in the prices of primary products, and (2) the restrictive monetary policy pursued by the authorities in response to surging inflationary movements. Even without a restraint in the rate of its expansion, monetary growth in real terms would have declined steeply because of the increased import costs. The additional monetary squeeze, combined with increased transaction demand for money, inevitably caused nominal interest rates to rise sharply.

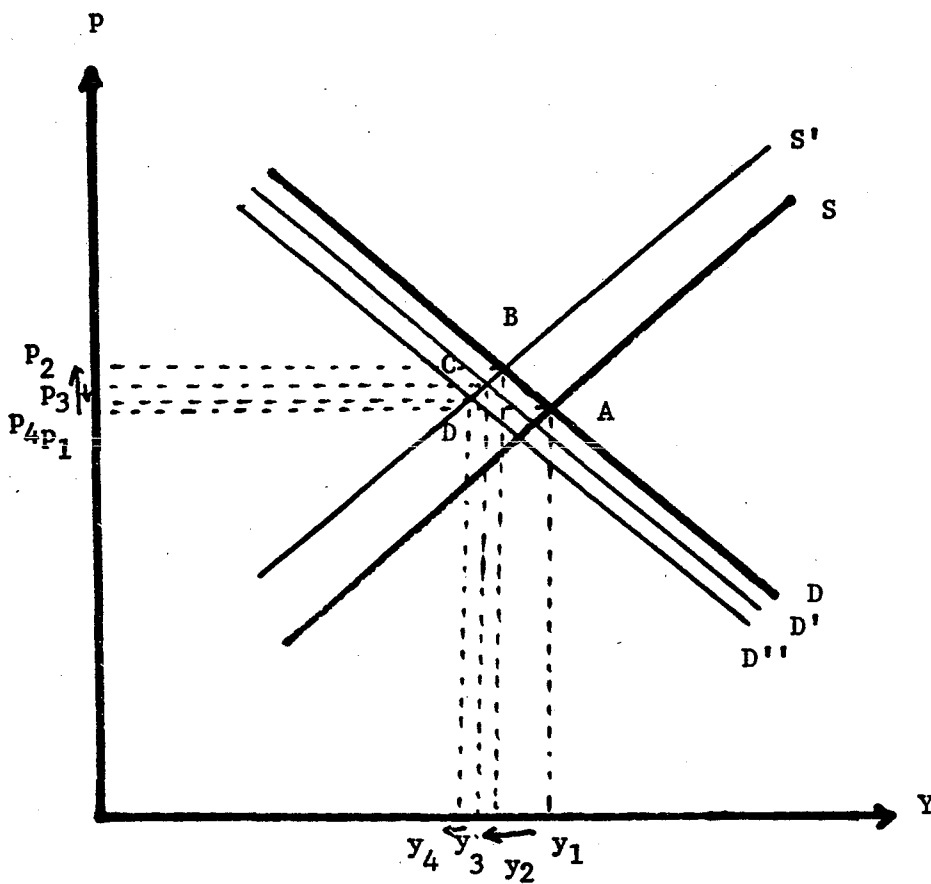
The combination of wage pressures and productivity slowdown naturally resulted in a sharp rise in unit labor costs. This, together with increased costs for material inputs and higher interest rate, as well as declines in the growth of sales, caused a severe squeeze on corporate profit margins. Investment demand became sluggish, thereby depressing further the growth of income and employment. In consequence, the ultimate loss in income and employment that occurred in the industrial countries far exceeded the direct effect of the loss in terms of trade.

In an analysis presented elsewhere,¹ I have suggested that the effect of a quantum jump in oil import price is to shift inward both the aggregate demand and aggregate supply curves, causing the economy to operate at a lower level of real output and with a higher price level. This is shown in Chart 1.² The aggregate supply curve shifts upward

¹Why Did Inflation Subside in Japan, But Not in the United States (unpublished), Ch. 1.

²The aggregate supply curve is upward-sloping, because wages and prices are assumed to be neither perfectly flexible nor completely inflexible. The aggregate demand curve is downward-sloping, because a given quantity of money supply can support a higher level of aggregate demand for labor when prices are lower and the real money stock is greater. For these assumptions and analyses on alternative policy responses to external price shocks, see Robert J. Gordon, "Alternative Responses of Policy to External Supply Shocks," Brookings Papers on Economic Activity (1975:); Edmund S. Phelps, "Commodity Supply Shock and Full Employment Monetary Policy," Journal of Money, Credit and Banking, 10 (May 1978); Edward M. Gramlich, "Macro Policy Responses to Price Shocks," Brookings Papers on Economic Activity (1979: 1). For alternative assumptions or views, see Robert H. Rasche and John A. Tatom, "The Price Shocks, Aggregate Supply and Monetary Policy: The Theory and International Evidence," in Karl Brunner and Alan H. Meltzer (eds.), Supply Shocks, Incentives, and National Wealth (North Holland: Carnegie Rochester Conference Series on Public Policy, 14 (1981), and Knut Anton Mork and Robert E. Hall, "Energy Prices, Inflation, and Recession, 1974-75," (MIT Working Paper No. MITEL 79 028WP, August 1979). For the differential impacts of a rise in the price of intermediate goods imports versus the price of final goods, see Louka T. Katseli Papaefstratiou, "Transmission of External Price Disturbances and the Composition of Trade," Journal of International Economics, 10 (1980), 357-375.

Chart 1.1 A Hypothetical Example of the Effects of A Large Increase in Oil Import Price on the Supply and Demand of GDP and the Effects of a Tightening in Monetary Policy in Response to Externally Originated Inflation



because of increased wage and interest costs for a given level of real output and money supply.¹ The aggregate demand curve shifts downward largely because of a decline in real income or purchasing power caused by the loss in terms of trade. Under such conditions, the pursuit of a restrictive monetary policy can push the price level downward, but only at the cost of a further cutback in output and employment. Instead of pursuing policies whose effect is to shift the demand curve further downward, the preferable approach is to pursue policies whose effect is to shift the supply curve downward. This can be attained through a moderation of wage demands, an improvement in productivity performance, and a reduction in financial costs. The government can help in this process through the provision of tax incentives for maintaining employment in exchange for wage moderation, as well as for maintaining investment demand, particularly for replacing equipment which has become uneconomic because of the radical rise in the relative cost of imported inputs. Where necessary, the government should intervene in the wage negotiation process to promote labor management collaboration. The pursuit of tight money policy should be avoided under the circumstance, in order not to exacerbate the decline in the growth of domestic demand or the rise in interest rates.

¹The increased cost of material inputs is not mentioned here, because the aggregate supply curve shows only the value added part of the value of production here.

In the years that followed the deep recession in 1974-75, both wage and productivity behavior and the underlying economic conditions diverged widely between the United States and Japan. In the United States, strong recovery in the growth of domestic demand was accompanied by steadily increasing employment and a marked decline in the rate of civilian unemployment. On the other hand, an initial decline in unit labor costs was followed by subsequent worsening, as the continued rise in nominal wages at high rates was accompanied by a steady decline in the growth of real output per manhour. By contrast, the growth of domestic demand and employment remained sluggish in Japan until 1978, although the rate of civilian unemployment increased relatively little as compared to the United States. However, unit labor costs continued to experience an absolute decline, as a marked deceleration in the growth of nominal wages was accompanied by a steady growth in real output per manhour.

The questions, then, are: Why was there a marked moderation in wage behavior in Japan in the period after 1975, while there was apparently no distinct change in this regard in the United States? Was this difference in wage behavior attributable to the divergence in economic conditions that occurred in the two countries, or was it attributable also to differences in institutional factors, namely the employment system and unionism? Why did productivity performance, following an initial recovery, deteriorated in the United States despite a strong recovery of domestic demand and capacity utilization, while in Japan the growth of labor productivity was sustained at a satisfactory rate despite a sluggish growth of domestic demand?

While major factors underlying the differential productivity trends are examined elsewhere,¹ the following sections are devoted to an analysis of the divergent wage behavior and associated factors and developments in the two countries. Section 1 examines the evolution of nominal wages, unit labor costs, and finished goods prices in the United States and Japan in the aftermath of 1974-75 disturbances. Section 2 discusses the major factors behind the divergent wage behavior in the two countries, focusing on differences in the evolution of domestic demand and the unemployment rate. Emphasis is placed on the differing effect of the different employment system and labor-management relations in practice in the two countries. Section 3 examines the variations of wage behavior in the large corporate sector and small business sector under different labor market conditions, and considers their effect on the movement of finished goods prices in Japan. Section 4 reassesses the merits and demerits of the Japanese and the U.S. employment system, and considers the possibility of modifying U.S. wage-price behavior in light of Japanese experience.

1. Divergence in the Trends of Wage Rate, Unit Labor Costs, and Finished Goods Prices in the Aftermath of 1974-75 Disturbances

In the period since the 1974-75 disturbances, there has been a sharp divergence in wage behavior between the United States and Japan. This divergence is found not just in the movements of wages, but also in those of unit labor costs, and finished goods prices for manufactures. In the seven years from 1974 to 1980, hourly compensation for U.S. manufacturing workers increased by 9.6 percent per year in nominal terms, at nearly

¹See Why Did Inflation Subside in Japan ..., op.cit., Ch. 5.

twice the rate (5.0 percent per year) that prevailed in the preceding 13 years. In comparison, nominal hourly compensation for Japanese manufacturing workers increased by 12.2 percent per year during the same period, at four-fifth of the rate that prevailed in the preceding 13 years. The divergence in wage trends is even more pronounced for the five years after the explosive spurt of 1974-75. From 1976 to 1980, the Japanese hourly compensation increased by only 7.8 percent per year against the U.S. rate of 8.9 percent per year. Also, while the Japanese wage rate trended downward except for a brief resurgence in 1979, the U.S. wage rate trended upward except for a moderate declineⁱⁿ/1978. (Table 1.)

More important from the international competitive point of view, the deceleration in the growth rate of Japanese wages took place against the background of a deceleration in the rate of growth of labor productivity which, though quite sharp from the Japanese standpoint, was nevertheless much milder compared to the U.S. productivity slowdown, thus resulting in a marked gain in relative unit labor costs in Japan's favor. To wit, the growth rate of real output per manhour in U.S. manufacturing industries declined by nearly two thirds in the period under review, from 3.1 percent per year in 1961-73 to 1.1 percent per year in 1974-80. With a near doubling of wage growth at 9.6 percent per year, this resulted in an increase of unit labor costs at 8.4 percent per year in the period after the first shock, compared to a mere 1.8 percent per year in the preceding 13 years. By contrast, the growth rate of Japanese labor productivity in manufacturing declined by only one third during the same period, from 10.3 percent per year in 1961-73 to 6.8 percent per year in 1974-80. With a slowdown in the growth rate of hourly compensation at 12.2 percent per year, this

Table 1 United States and Japan: Evolution of Hourly Compensation, Real Output Per Manhour, and Unit Labor Costs in Manufacturing, 1960-80

(In annual percentage changes)

	<u>Hourly Compensation</u>	<u>Real Output Per Manhour</u>	<u>Unit Labor Costs</u>
1. <u>United States</u>			
1960-73	5.0	3.1	1.8
1973-80	9.6	1.1	8.4
1960-65	3.6	4.2	-0.6
1965-70	6.0	1.8	7.9
1970-73	6.2	4.2	1.9
1973-75	11.2	-0.1	11.3
1975-80	8.9	1.6	7.2
2. <u>Japan</u>			
1960-73	15.1	10.3	4.4
1973-80	12.2	6.8	5.1
1960-65	13.4	8.5	4.5
1965-70	15.0	13.1	1.7
1970-73	18.0	8.5	8.8
1973-75	24.0	4.0	19.2
1975-80	7.8	7.9	-0.1

Sources: Patricica Capdevielle and Donato Alvarez, "International Comparisons of Trends in Productivity and Labor Costs," Monthly Labor Review (December 1981) and other articles on the same subject published in other issues of the same magazine.

only resulted / in a moderate increase in unit labor costs at 5.1 percent per year in the post-oil shock period, compared to an annual average increase at 4.4 percent in the preceding 13 years. (Table 1 and Charts 2 and 3.)

The sharp divergence in the movements of unit labor costs, given a similar rate of increase for the prices of material inputs (at 9.5 percent per year for Japan versus 9.1 percent per year for the United States, during 1974-80), caused a marked divergence in the price trends of finished manufactured goods in the two countries. At 5.3 percent per year in the second half of the 1970s, the rate of increase in the producer prices of Japanese manufactured goods compares favorably with the 8.6 percent annual rate of increase recorded by the producer prices of U.S. manufactured goods. Moreover, whereas the Japanese price trend represented a significant stabilization from the 9.0 percent annual average prevailed in the first half of the 1970s (which includes the explosive price surges of 1973-74), the U.S. price trend indicates a worsening situation from the 7.8 percent annual average prevailed earlier. (Table 2 and Charts 4 and 5.)

2. Major Factors Behind the Divergent Wage Behavior

The divergence in wage behavior in the United States and Japan in the aftermath of 1974-75 disturbances can be seen even more vividly when the current year change in wage rate is contrasted with the ^{combined} /rate of change in consumer prices and labor productivity in the preceding year. Ceteris Paribus, the latter is the maximum rate of wage increase that can be justified from the labor point of view, and it is also the maximum rate that can be afforded from the management point of view, without causing

Chart 2. United States: Real Output Per Manhour and Unit Labor Costs in Manufacturing, 1961-80

(in annual percentage changes)

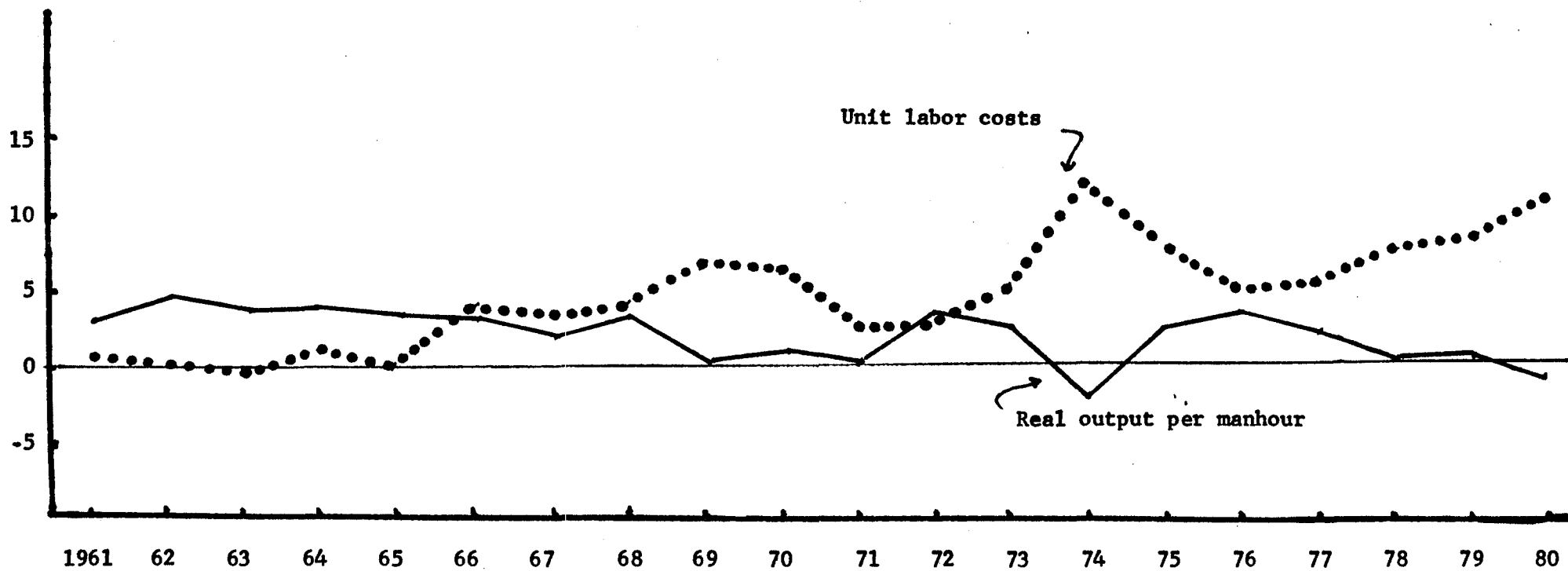


Chart 3. Japan: Real Output Per Manhour and Unit Labor Costs in Manufacturing, 1961-80

(in annual percentage changes)

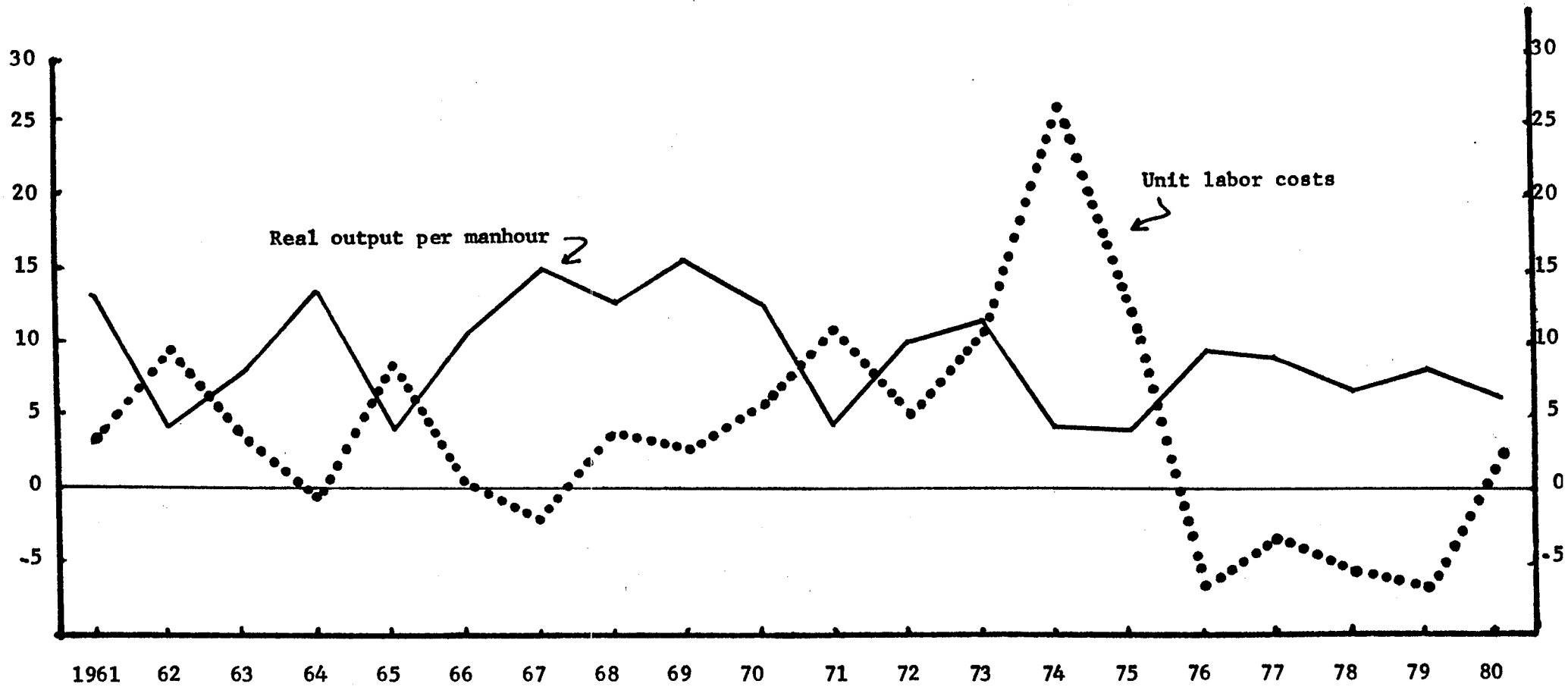


Table 2 United States and Japan: Evolution of Producer Prices
Of Crude Materials and Finished Manufactured Goods,
and Unit Labor Costs, 1965-80

(In annual percentage changes)

	<u>Producer Prices of Crude Materials</u>	<u>Unit Labor Costs in Manufacturing</u>	<u>Producer Prices of Finished Manufactured Goods</u>
1. <u>United States</u>			
1965-73	7.3	3.3	3.9
1973-80	8.3	8.4	9.9
1965-70	2.5	4.1	3.5
1970-73	15.7	1.8	4.6
1973-75	6.3	11.3	5.3
1975-80	9.1	7.2	8.6
2. <u>Japan</u>			
1967-73	3.6	6.2	3.5
1973-80	12.3	5.1	8.0
1967-70	1.7	3.7	2.0
1970-73	5.5	8.8	5.0
1973-75	19.8	19.2	14.9
1975-80	9.5	-0.1	5.3

Sources: Japan: Bank of Japan, Economic Statistics Annual (various issues), and Table 1.
United States: Dept. of Commerce, Handbook of Cyclical Indicators (May 1977) and Business Conditions Digest (various issues), and Table 1.

Chart 4 United States: Indexes of Producer Prices of Crude Materials and Finished Goods, and of Manufacturing Unit Labor Costs, 1963-80

(1967 = 100)

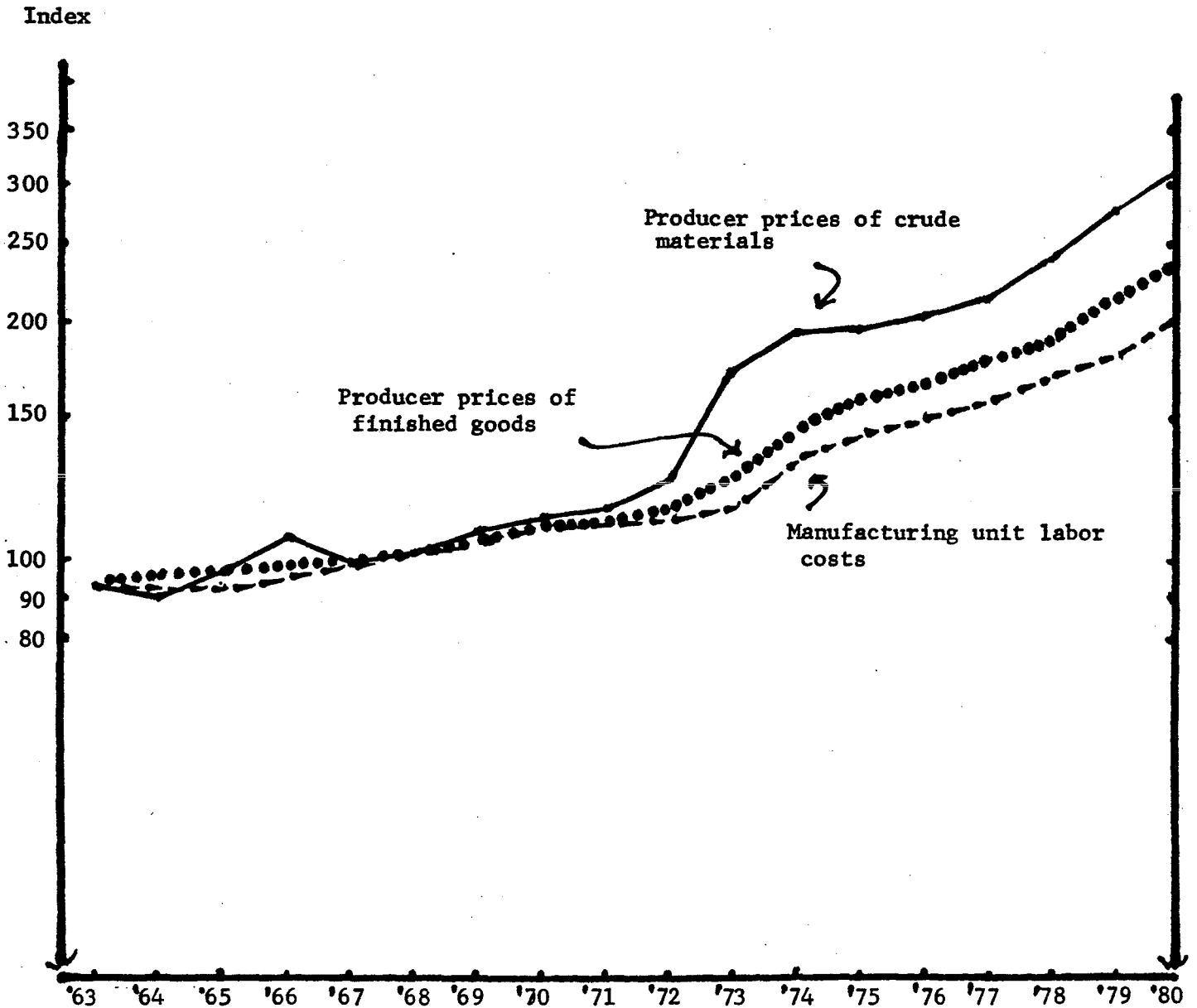
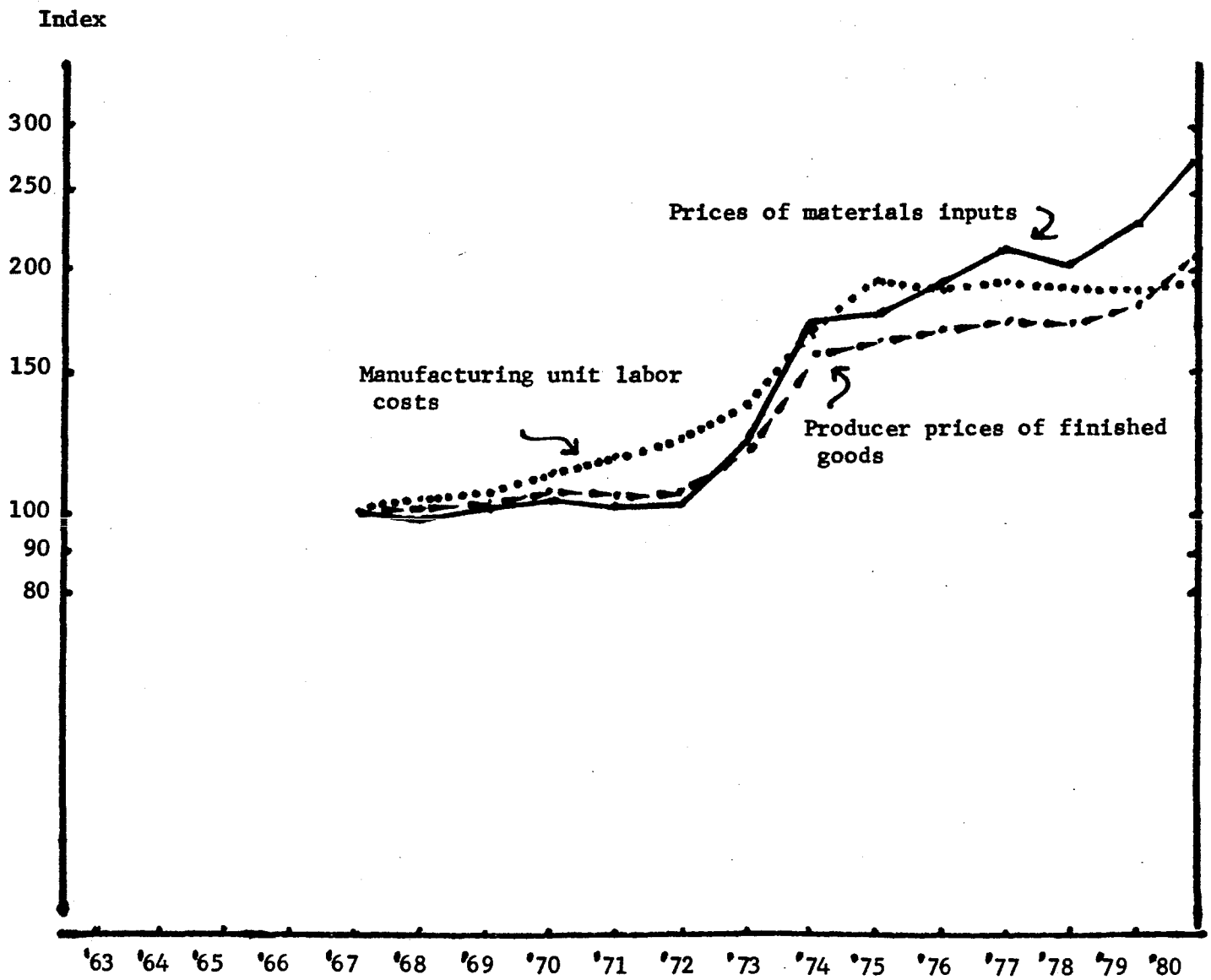


Chart 5 Japan: Indexes of Producer Prices of Materials Inputs and Finished Goods, and of Manufacturing Unit Labor Costs, 1963-80

(1967 = 100)



an acceleration in the prices of end products or a deterioration in corporate profit margins. Needless to say, with the sharp rise in the inflation of material inputs that occurred in 1973-74, the actual rate of wage increase will have to be restrained well below this maximum rate, if the pass-through of input inflation to output prices or the deterioration in corporate profit margins is to be contained.

The average maximum rate for wage increase thus estimated for the United States is 9.8 percent per year for the period 1974-80. The actual increase of 9.6 percent per year thus came quite close to the maximum rate in labor's favor. The resulting ratio of actual to maximum rate, 0.98, for the post-oil shock period exceeded that estimated for the preceding 12 years, 0.85. This indicates that inclusive of the excessive wage adjustment that occurred in 1974-75, there was no moderation in wage behavior in the United States in the post-oil shock period. Although the estimated ratio for 1976-80 (0.82) declined sharply from the abnormal 1974-75 ratio of 1.49, that ratio approximates the average for the 1960s, and hence, should be considered a return to normal after the aberration of wage control in 1971-73 and the subsequent reaction. (Table 3.)

By contrast, the actual annual average rate of wage increase that took place in Japan in the period 1974-80 (12.2 percent) ran well below the estimated maximum rate (17.6 percent), resulting in a sharp reduction of the actual/maximum ratio (0.69) from the one estimated for the preceding 12 years (0.96). The moderation of Japanese wage behavior in the post-oil shock period is reflected particularly in the extremely low actual/maximum ratio (0.53) estimated for 1976-80. During this period, the Japanese wage adjustment covered not much more than the cost of living increase, leaving nearly all the

Table 3 United States and Japan: A Comparison of Actual Rate of Increase in Hourly Compensation in Manufacturing With the Combined Rate of Increase in Cost of Living and Real Output Per Manhour in Manufacturing in the Preceding Year, 1961-80

(In annual percentage changes)

	Manufacturing Hourly Com- pensation, Actual rate	Cost of Living ¹	Real Output Per Manhour in Manufacturing (Preceding Year)	(2) plus (3)	Ratio, (1)/(4)
	(1)	(2)	(3)	(4)	(5)
1. <u>United States</u>					
1961-73	5.3	2.9	3.3	6.2	0.85
1973-80	9.6	8.2	1.6	9.8	0.98
1961-65	3.7	1.1	4.2	5.3	0.70
1965-70	6.0	3.4	2.5	5.9	1.02
1970-73	6.2	4.5	3.5	8.0	0.78
1973-75	11.2	8.5	-1.0	7.5	1.49
1975-80	8.9	8.1	2.7	10.8	0.82
2. <u>Japan</u>					
1961-73	15.2	5.7	10.2	15.9	0.96
1973-80	12.2	10.3	7.3	17.6	0.69
1961-65	13.6	5.9	9.7	15.6	0.87
1965-70	15.0	5.3	11.3	16.6	0.90
1970-73	18.0	6.0	8.9	14.9	1.21
1973-75	24.0	17.9	7.1	25.0	0.96
1975-80	7.8	7.3	7.4	14.7	0.53

Sources: As in Table 1.

¹Based on consumer price index.

still sizable productivity gains to offset the sharp rise in the prices of material inputs. The moderation of Japanese wage behavior in the aftermath of 1974-75 disturbances represented a reversal to its own more aggressive behavior in the late 1960s through the early 1970s when the actual/maximum ratio continued to increase under a tightened labor market. (Table 3.)

Why was there a marked moderation of wage behavior in Japan in the aftermath of 1974-75 disturbances, but not in the United States? There are at least two major factors - one economic and one institutional and structural - which may have accounted for the divergence in wage behavior.

(1) The acceleration in nominal wage growth in the United States occurred in the context of a strong recovery in domestic demand after the 1974-75 recession. The rate of capacity utilization in manufacturing (based on the Federal Reserve series), following a steep decline in 1975, recovered steadily from 1976 through 1979, when it reached 85.7 percent, near the previous peak of 87.6 percent in 1973. (Chart 6.) By contrast, the slowdown of wage growth in Japan took place in conjunction with a protracted recession in the domestic economy. The recovery of capacity utilization rate in manufacturing in the years after 1975 was much slower and weaker in Japan than in the United States (Chart 7.)

Reflecting the difference in the strength of economic recovery, the growth of employment was maintained at a much higher rate in the United States than in Japan. Between 1973 and 1980, total civilian employment increased by 15.2 percent in the United States, while it increased by only 6.1 percent in Japan. Although the employment situation was much bleaker in the manufacturing sector, it nevertheless increased by 1.5 percent in the United States in the

Chart 6. United States: Unemployment Rate and Manufacturing Capacity Utilization Rate, 1961-80

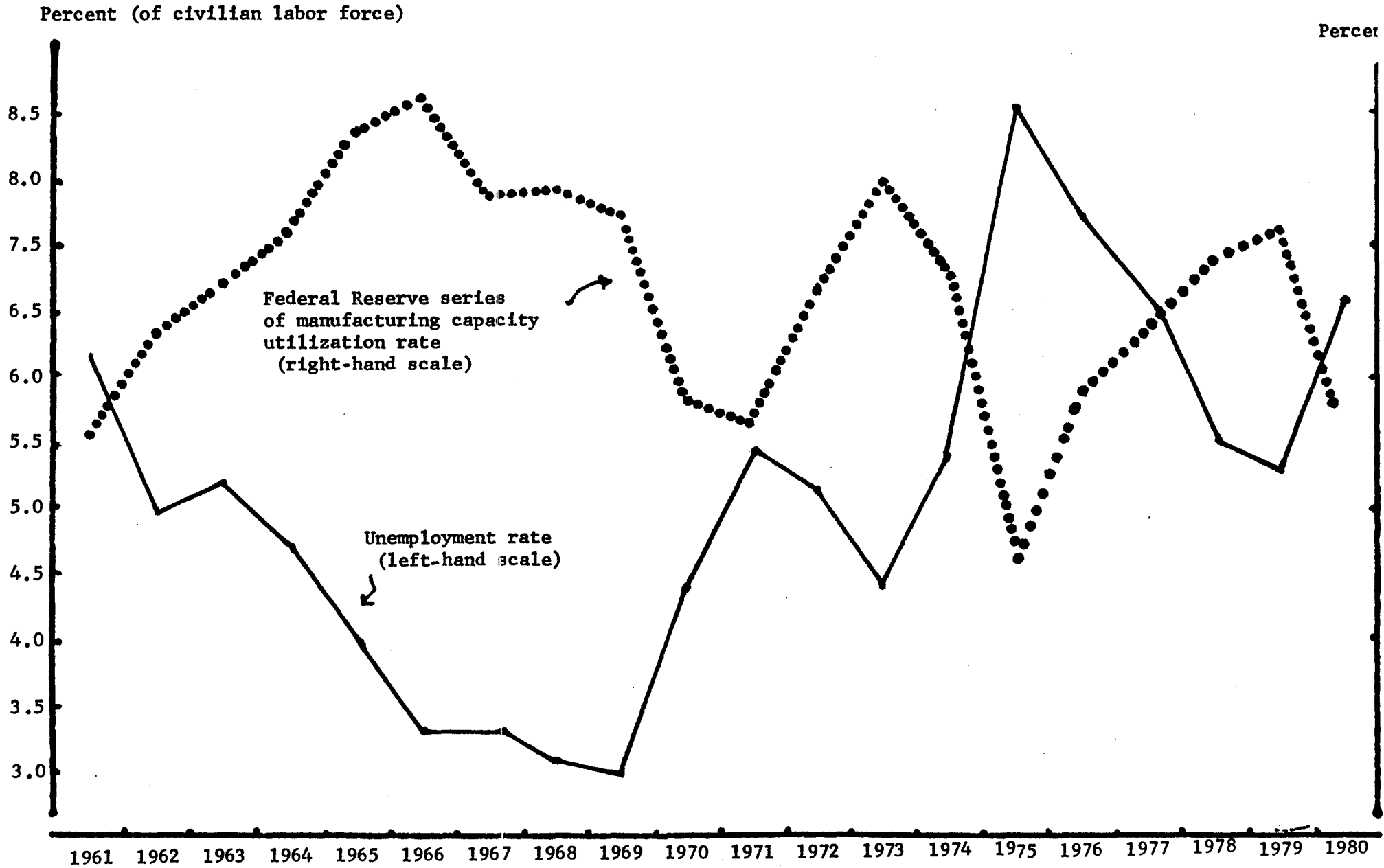
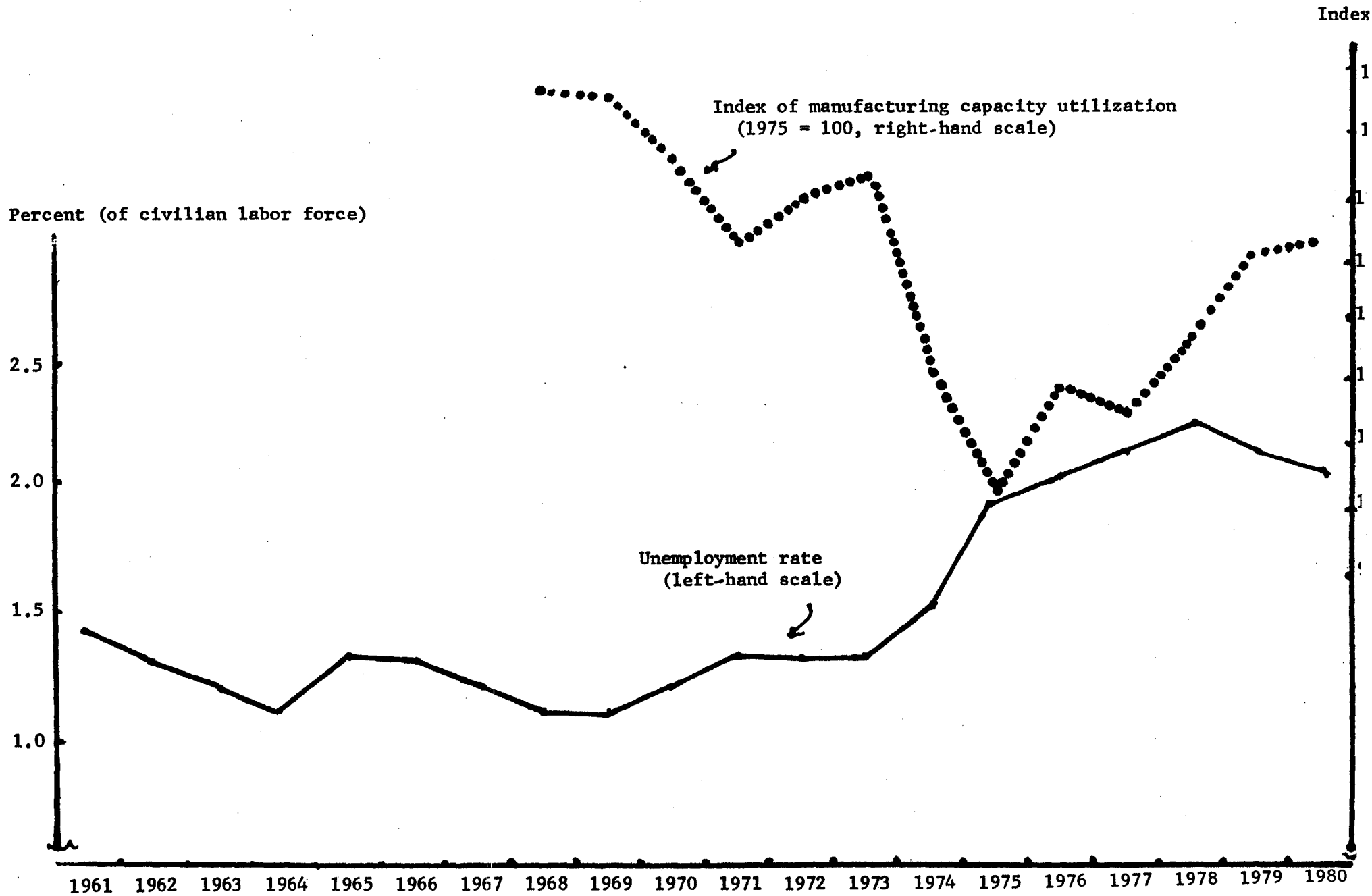


Chart 7. Japan: Unemployment Rate and Manufacturing Capacity Utilization, 1961-80



same period (despite a decline in 1979-80), while declining by as much as 5.3 percent in Japan. (Table 4.)

(2) The U.S. wage behavior changed very little despite a large fluctuation in civilian unemployment rate. This contrasts sharply with the Japanese situation, where the moderation in wage behavior occurred despite the fact that the unemployment rate increased only moderately. Admittedly, the reported unemployment statistics cannot be compared directly because of certain differences in the definition of unemployment¹. However, the adjusted Japanese series, according to a U.S. Bureau of Labor Statistics staff estimate², do not differ materially from the original series. They still show the Japanese/^{un}employment rates at only a fraction of U.S. rates for all years³. It appears therefore that the levels of unemployment rate differ widely between the two countries, less from differences in the definition of unemployment, than from differences in social practices governing employment. While the issue is important (and will be touched upon in the last section), we are here concerned less with differences in the level of the unemployment rate,⁴ than with differences in the size

¹This involves, e.g., the inclusion of temporary layoffs in the U.S. statistics, and their exclusion in Japan. In contrast with the U.S. practice, where there is no sharp distinction between a temporary layoff and a permanent termination of employment, the Japanese workers temporarily laid off are not considered terminated from their employment. As such, they do not look for work elsewhere.

²Joyanna Moy and Constance Sorrentino, "Unemployment, Labor Force Trends, and Layoff Practices in 10 Countries," Monthly Labor Review (December 1981), Table 2, P. 5.

³Further adjustments, e.g., by adding discouraged female workers who retired from the labor force during the cyclical trough, can boost the unemployment. See articles by Shimada and Ono noted on page 17.

⁴For the reasons why the U.S. unemployment rate was much higher than in Japan and the European countries, see Roger Kauman, "Why the U.S. Unemployment is So High," in Michael J. Piore (ed.), Unemployment and Inflation: Institution-
alist and Structuralist Views (M.E. Sharpe, Inc. 1979), pp.155-169.

Table 4. United States and Japan: Total and Manufacturing Employment,
1960-80

(in annual percentage changes)

	<u>United States</u>		<u>Japan</u>	
	<u>Total civilian</u>	<u>Manufacturing</u>	<u>Total</u>	<u>Manufacturing</u>
1960-73	1.9	1.4	1.4	3.2
1973-80	2.1	0.1	0.8	-1.8
1960-65	1.6	1.5	1.3	5.5
1965-70	2.0	1.4	1.5	3.2
1970-73	2.4	1.4	1.0	-0.5
1973-75	0.2	-4.7	-3.6	-3.3
1975-78	2.8	2.1	1.2	-0.9

Sources: United States: Council of Economic Advisors, Economic Indicators (July 1981) and 1980 Supplement to Economic Indicators.
Japan: Economic Planning Agency: Economic Statistics Handbook (1980) and Bank of Japan, Economic Statistics Annual (1980)

of its change over time.

At any rate, the U.S. unemployment rate, after hitting the postwar peak of 8.5 percent in 1975, steadily declined in the following years to reach a bottom of 5.5 percent in 1979; before it climbed sharply again in the 1980 recession. By contrast, the Japanese unemployment rate increased relatively little during 1974-75 (increasing from 1.1 percent in 1972-73 to 1.8 percent in 1975), but continued to rise moderately over the years until 1978, when it reached 2.2 percent and started declining somewhat. (Charts 6 and 7.)

Why was there little change in U.S. wage behavior when there was large fluctuation in the unemployment rate? Conversely, why was there a marked moderation in wage behavior in Japan, when there was only a moderate increase in the unemployment rate? Apparently, there was a trade-off between wage moderation and the rate of increase in the unemployment rate, and the difference in the pattern of this trade-off between the United States and Japan apparently has to do with the differences in the employment system and labor-management relations in the two countries. In other words, by minimizing the layoff of workers, the Japanese business organizations were able to obtain in exchange a significant moderation of wage demands at a time when there was a protracted sluggishness in the growth of the economy. By contrast, the U.S. business organizations faced more difficulties than their Japanese counterparts in obtaining the necessary wage concessions, largely because they have more freedom to lay off workers.

This difference in wage and employment behavior is deeply rooted in the differences in the employment system and unionism practiced in the two countries. Under the lifetime employment system practiced by large corporations and government agencies in Japan, employees join an organization as a new graduate and there are very few recruitment (for regular positions) or change

of employment at mid-career. The employees are hired for their long-term potentials, not for their current expertise. Upon joining an organization, they are given ample opportunities for on-the-job training and rotation of posts to gain work experiences. Except for very serious mishaps, their employment is not terminated, and their ranks and salaries increase in steps with the length of their service with the organization. Under the system, the employees' long-term welfare is intimately tied to the health and growth of the organization. Therefore, just as the company does not casually lay off employees, the employees also do not ask for unreasonable compensations in times of corporate difficulties.

In comparison with the Japanese system, U.S. organizations recruit both new graduates and experienced workers for their regular positions. However, the U.S. organizations tend to hire employees for their current worth than for their long-term potentials. Promotions within an organization are open to competition from new recruits from other organizations. Under the circumstances, there is little emotional attachment between the employer and the employees, and the latter freely change jobs to seek compensations commensurate with their own perceived worth.¹ Although a large proportion of U.S. workers ended up being employed by the same company for many years,²

¹It is often cited that the Japanese workers, when asked about what did they do, would state their company affiliations (such as Mitsui or Mitsubishi), while the U.S. workers would state their job functions (such as a machinist, or a computer analyst).

²According to a U.S. population survey, over 35 percent of U.S. workers aged 50-54 have not changed jobs for at least 15 years. See Robert E. Hall, 'Employment Fluctuations and Wage Rigidity,' Brookings Papers on Economic Activity (1980:1), p.98, Table 3.

there is no moral obligation on either party to sustain such relationship, and the U.S. workers lack job security except where it is explicitly negotiated under collective bargaining.

Because of this difference in the employment system, the nature and character of labor unions tend to differ widely between the two countries. Most Japanese unions are enterprise unions, where one becomes a member only after being employed by a particular company. By contrast, the U.S. workers are often required to join the local branch of a national union before becoming eligible for employment. Whereas the "rights" of Japanese workers are based mostly on unwritten social conventions and require no protection from the labor union, those of the U.S. workers are gained through and protected by collective bargaining. Therefore, the Japanese labor-management relations tend to be more accommodative than confrontational, whereas the reverse is true for the U.S. counterpart. This explains why in times of corporate difficulties the U.S. firms tend to adjust by cutting the number of employees, while the Japanese firms adjust by restraining the growth of employee compensations. It also explains why the U.S. labor unions are less willing to accept a cutback in compensations, without an exchange for job security.

It is true that not all Japanese employees or workers are under the protection of the lifetime employment system. Most female workers which account for nearly 40 percent of the labor force are not. In fact, only regular male employees in large corporations are entitled to such protection. Including government employees which enjoy similar privileges, the total number may not exceed more than one third of the labor force.¹

¹Kazuo Sato, in his communication with the author, pointed out that the male employees in large corporations may number about one quarter of the total labor force. For estimates in the range of 30-40 percent, see Ezra F. Vogel, The Japanese Middle Class (University of California Press, 1963), p. and Roger Kauman, "Why the U.S. Employment Rate is So High," in Michael J. Piore (ed.), Unemployment and Inflation: Institutional and Structuralist Views (M.E. Sharple, Inc. 1979), p.167.

Nevertheless, it is the modern corporate sector that sets the pattern for wage movement in Japan (particularly during the tight market conditions in the 1960s), just as it is the unionised sector that sets the pattern for wage movement in the United States, although the proportion of union members may not exceed one third of the labor force. At any rate, the divergence of union wage behavior in the two countries in the aftermath of the 1974-75 disturbances is shown in the following data:

(1) In Japan, the moderation of union wage demands in the period since 1975 is indicated by the steep decline in the ratio of wage increase demanded in the annual spring wage offensive to wage increase justifiable on the basis of preceding year's cost-of-living increase plus labor productivity growth¹. For the period 1977-79, this ratio declined to 0.7-0.8, from 1.7-2.2 in 1972-74 and 1.1 in 1975-76. (Chart 8.) Moreover, the actual annual wage increase obtained declined even more sharply, running well below the rate warranted on the basis of preceding year's cost-of-living increase and productivity growth.

(2) By contrast, in the seven years from 1974 to 1980, median wage adjustment obtained in collective bargaining (for units with 1,000 or more workers) in the U.S. manufacturing and nonfarm business sectors amounted to 0.94 and 0.97, respectively, of the combined rates of increase in the cost of living and real output per manhour (of the respective sector) in the preceding year. (Table 5.) Both ratios were higher than those estimated

¹For this estimate, productivity growth is approximated by the growth rate of real output per manhour in manufacturing shown in Table 1.

Chart 8 Japan: Wage Increases Demanded in Annual Spring Offensives, Wage Increases Justifiable On the Basis of Preceding Year's Increase in Cost-of-Living and Output Per Hour, And Actual Wage Increases Obtained, 1962-79

(In annual percentage changes)

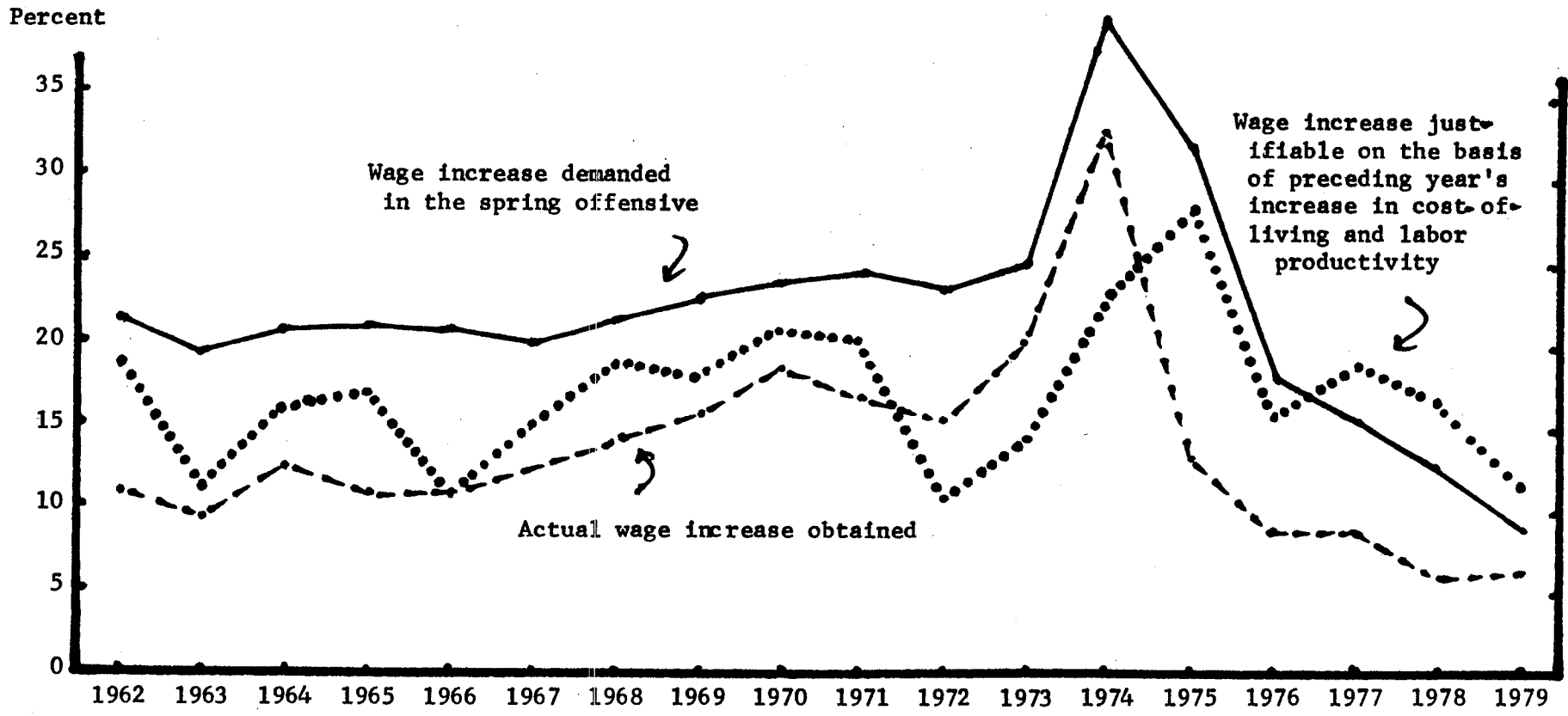


Table 5. United States: A Comparison of Effective Wage Increases Obtained¹ by Collective Bargaining Units With the Combined Rate of Increase in Cost of Living and Real Output Per Manhour in Preceding Year, 1961-80

(In annual percentage changes)

	Effective Wage Changes Obtained for the Year		Cost of Living Plus Real Output Per Manhour		Ratio	
	<u>Manufactur- ing²</u>	<u>Private, Nonfarm</u>	<u>Manufactur- ing</u>	<u>Private Nonfarm</u>	<u>(1)/(3)</u>	<u>(2)/(4)</u>
	(1)	(2)	(3)	(4)	(5)	(6)
1961-73	4.4	4.9	6.2	5.3	0.71	0.92
1973-80	9.2	8.6	9.8	8.9	0.94	0.97
1961-65	2.7	3.0	5.3	4.0	0.51	0.75
1965-70	4.7	5.2	5.9	5.5	0.80	0.95
1970-73	6.3	7.1	8.0	7.8	0.79	0.91
1973-75	9.9	9.1	7.5	8.7	1.32	1.05
1975-80	8.9	8.4	10.8	9.0	0.82	0.93

Sources: Bureau of Labor

¹Median effective adjustments for the year concerned; includes both positive and negative changes.

²Collective bargaining units with 1,000 or more workers.

for the preceding 12 years, even though they were slightly lower than the ratio estimated for the manufacturing sector as a whole (0.98, shown in Table 3.) Both ratios declined in the second half of the 1970s after a sharp jump in 1974-75, but the decline was more pronounced for the manufacturing sector than for the broader nonfarm business sector because productivity growth in the nonfarm business sector declined even more than in the manufacturing sector. (Table 5.)

3. Variations in Wage and Price Behavior Between Large Corporations and Small Business Sector

Whereas there was a divergence in wage behavior between the modern corporate sector in Japan and the unionised sectors in the United States, in response to a slowdown in economic growth in the aftermath of the 1974-75 disturbances, the relative wage behavior of the small business sector or the ununionized sectors in both countries was more similar. The labor markets in these sectors tend to be more competitive and mobile than in the corporate or highly unionized sectors in both countries. This led to an improvement of the relative wage position for workers in these sectors in the 1960s when the unemployment rate was lower and an excess demand condition prevailed. The situation was reversed in the second half of the 1970s when the unemployment rate was higher and an excess supply condition prevailed.

This is true in both countries¹, but the situation may have been more significant in Japan than in the United States, because of the greater differences in technological and wage levels between the modern corporate sector and the more traditional small business sector/ ^{in Japan.}² Under the tighter labor

¹On the situation in the United States, see George L. Perry, "Slowing the Wage Price Spiral: The Macroeconomic View," Brookings Papers on Economic Activity (1978:2), pp.266-267.

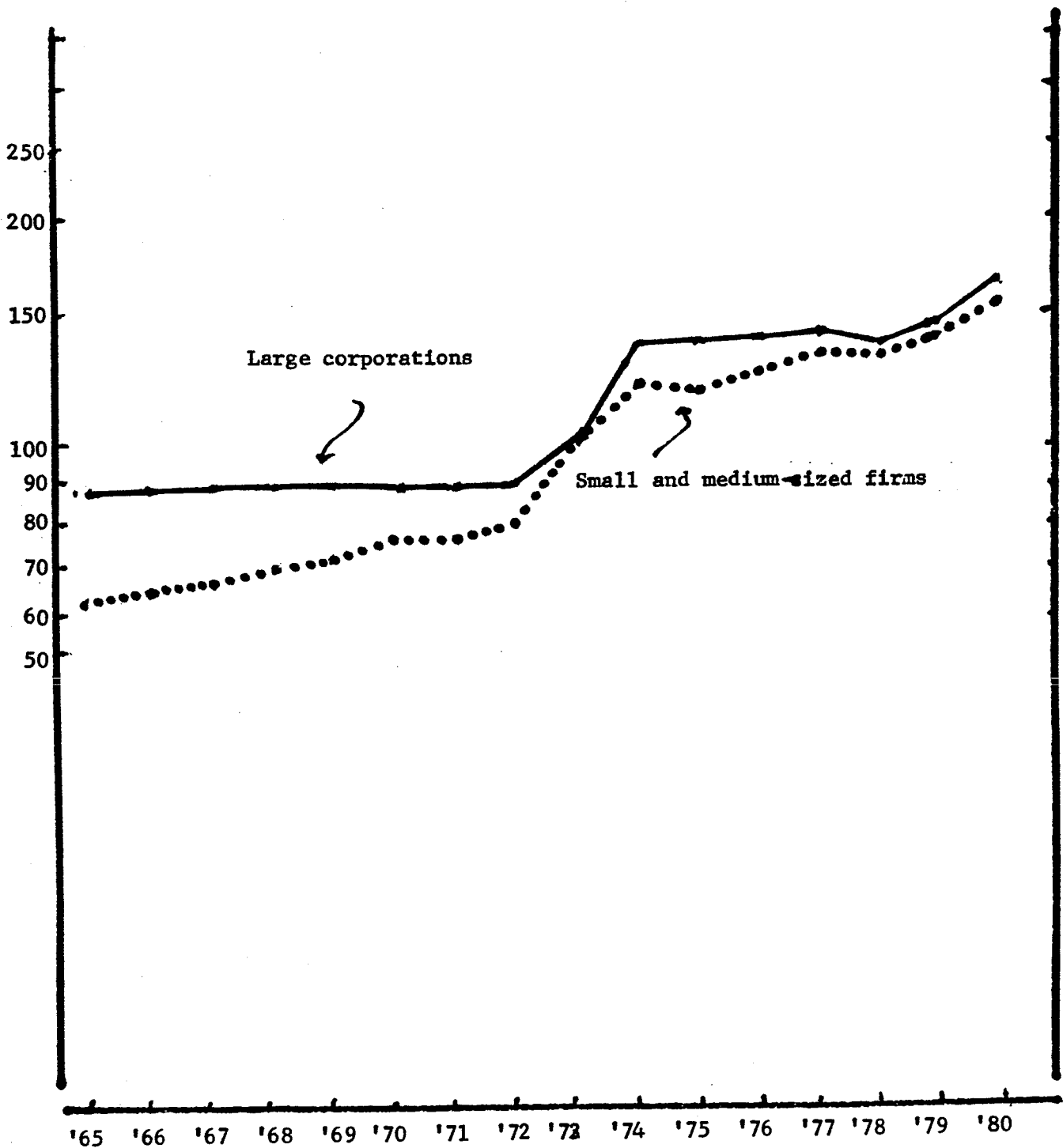
²Such differentials resulted, in turn, from the rapid industrialization and the inevitable lag of introduction of modern practices in the large small business sector.

market situation in the 1960s, wage costs in the smaller firms in Japan tended to rise faster than in the large corporations because of the former's lower productivity growth, resulting in a rapid reduction of wage differentials between the two sectors. This process was reversed in the second half of the 1970s along with the slackening in the labor market condition. Thus, the ratio of wage payments of firms with 30-90 employees to those of firms with 500 or more employees increased from 58.9 percent in 1960 to 69.6 percent in 1965 and 70.8 percent in 1973. Since then, however, such a ratio declined, to 66.4 percent in 1979.

This reversal in relative wage trend is significant from the price stabilization point of view, because it was the rise in the relative wage cost of the small business sector that had caused a steady rise in Japan's consumer prices in the 1960s, despite stable wholesale prices for goods produced by the more productive modern corporate sector. The decline in the small business sector's relative wage position in the second half of the 1970s therefore contributed to the gradual stabilization of consumer prices in this period. In fact, from 1966 to 1973, the output prices of smaller firms increased by 6.3 percent per year, compared to a mere 1.7 percent per year for the output prices of large corporations. By contrast, during 1974-80 the output prices of smaller firms increased at a rate slightly lower than those of the large corporations, at 6.5 percent per year versus 7.6 percent per year. (Chart 9.)

Chart 9. Japan: Producer Prices of Finished Goods Produced by Large and Small Firms, 1965-80

(Index, with 1973 = 100)



4. A Reassessment of Japanese and U.S. Employment Systems

In sum, it is clear that other than the impact of a more protracted recession, differences in the employment system and labor-management relations apparently contributed to a marked moderation of wage and price behavior in Japan since 1975. Does this mean/that the Japanese labor and employment system is preferable to the U.S. system, from the macroeconomic point of view? It will be so, if the moderation in wage and price behavior in Japan was attained without the cost of a protracted recession. But, since this was not the case, the question remains: Would the marked moderation in wage and price behavior take place, had there not been the protracted recession? This is an empirical question for which there is no clear-cut answer. In fact, the Japanese authorities were not sure of it themselves, and that explains why in the wake of the second oil shock the Bank of Japan implemented a preemptive tightening of monetary policy, despite the fact that there was no excess demand condition in the economy.

A related question is: Will a similarly marked moderation in wage and price behavior occur in the United States, if the authorities allow a protracted recession to take place as in Japan? This is a question which cannot even be seriously considered, in light of the much higher unemployment rate that prevailed in the United States even without a protracted recession. The more sensible questions, then, are: What are the merits and demerits of the Japanese labor and employment system? What seems to be the problem with the U.S. system? What can we do to modify the U.S. wage and price behavior and to make it more responsive to macroeconomic policy needs?

The merits of the Japanese system appear to include: (1) its ability to generate a moderation in wage and price behavior despite a relatively low

- 10 -

unemployment rate; and (2) its ability to keep the unemployment rate low in despite a protracted recession/the economy. In comparison, the problem with the U.S. system appears to be: (1) its apparent inability to reduce the unemployment rate even without a protracted recession; and (2) its failure to generate a marked moderation in wage-and-price behavior despite the existence of a very high rate of unemployment. An additional problem with the U.S. system is that (3) the unemployment rate has rached up at each cyclical peak during the last decade, from 3.5-4.0 percent in the second half of the 1960s to 5.0-5.5 percent in 1972-73 and around 6.0 percent in 1978-79. (Charts 6.)

The fact that the unemployment rate was kept low despite a protracted recession and a low level of capacity utilization implies the presence of widespread underemployment or hidden unemployment in Japan during the second half of the 1970s. This is reflected in several developments, including the following: (1) the widely known practice of assigning temporary excess workers to do maintenance or incidental work; (2) the sharper dip in average monthly hours worked by regular workers during 1974-75, compared to the milder decline in the employment of regular workers; and (3) the sharper than usual decline in female participation rate in 1974-76.¹ (Charts 10 and 11.) However, as the sluggishness in economic activity continued, the excess workers became a burden to corporate

¹ Although the female participation rate had been declining through the 1960s because of the reduction of women workers in the rural households in conjunction with the rapid decline of agricultural employment, its sharper decline in 1974-76 was widely attributed to the discouragement encountered in obtaining suitable employments. See Haruo Shimada, "The Japanese Labor Market After the Oil Crisis: A Factual Report," in Keio Economic Studies, XIV, 1 & 2 (1977), p. 40-42; and Akira Ono, "Keiki Kotai to Rodo Shijo" (Recession and the Labor Market), in Kenjiro Ara (ed.), Sengo Keizai Seisaku Ron no Soten (Controversies on Postwar Economic Policies) (Keiso Shobo, Tokyo, 1980), pp. 322-327. Since 1976, however, there has been an increase in female participate rate in the 25-39 age group. See Economic Planning Agency, Keizai Hakusho, 1981 (White Paper on the Economy), pp. 154-155.

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Chart 10. United States and Japan: Employment of Regular Workers and Average Weekly or Monthly Hours in Manufacturing, 1970-80

(Index, with 1973 = 100)

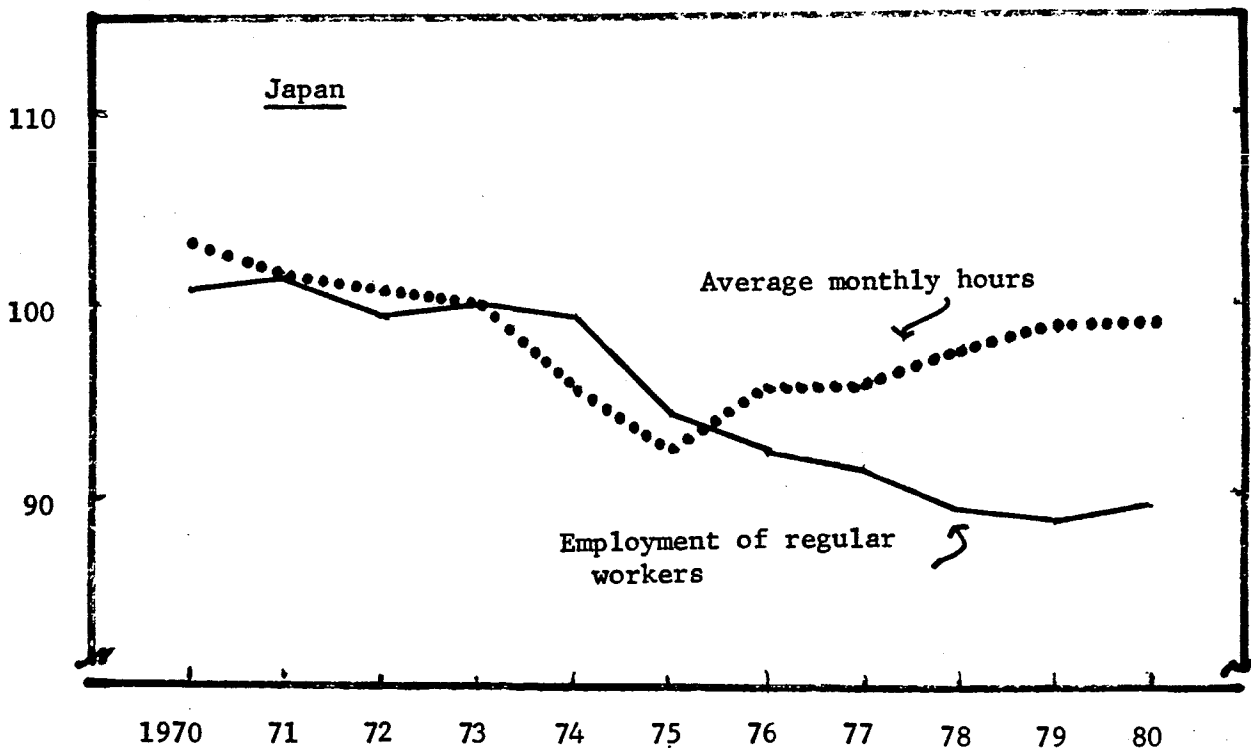
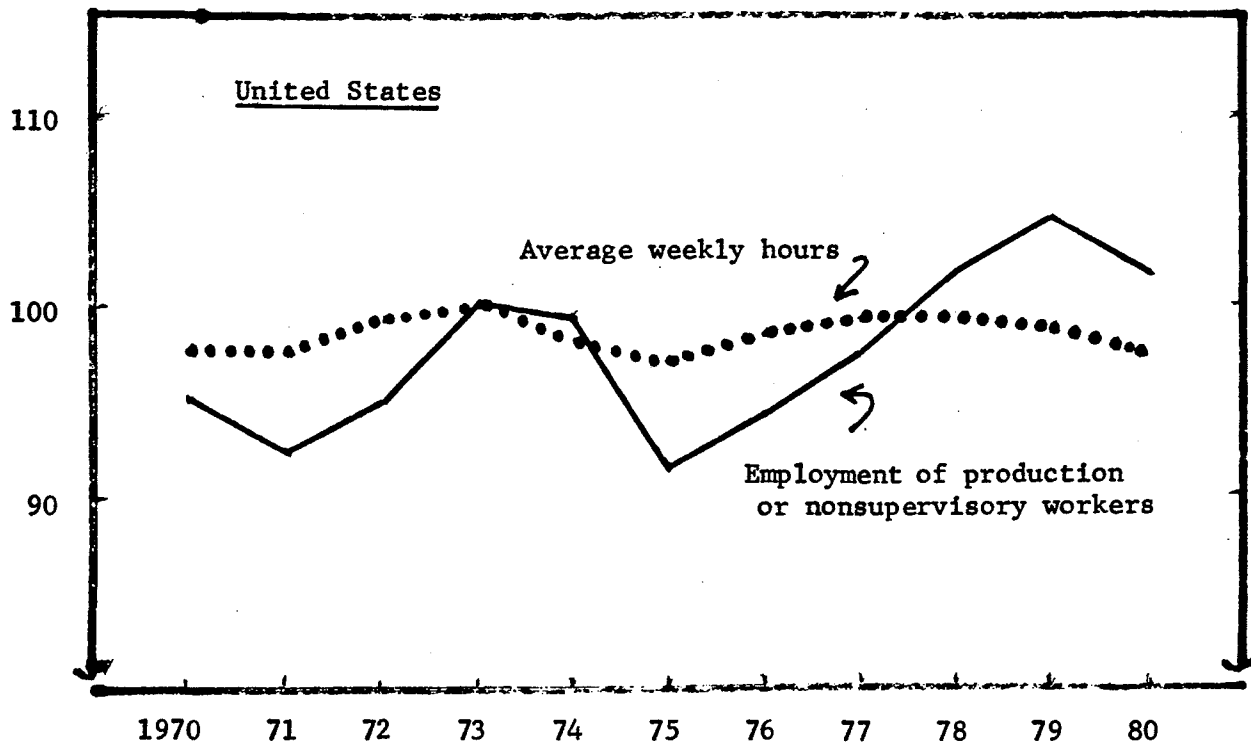
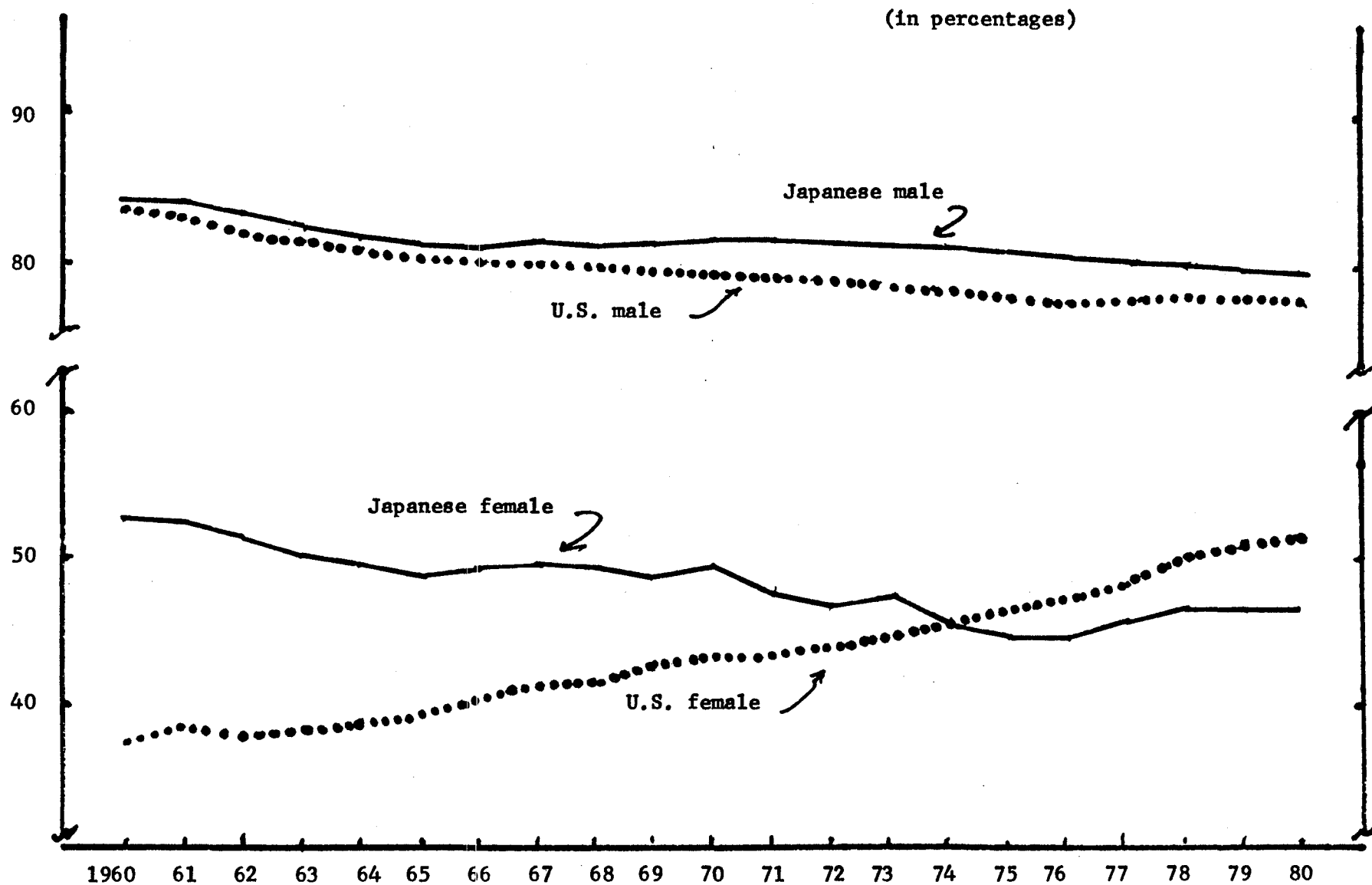


Chart 11. United States and Japan: Male and Female Labor Force Participation Rate, 1960-80



finance, despite government subsidies for maintaining the employment status of the workers temporarily laid off¹. This led to the termination of temporary workers and reduced recruitment of new graduates, as well as a reduction in the rate of wage and salary increase based on the length of service. Although outright dismissals of regular workers are rather rare even for smaller firms, prolonged restraint on new hiring while the older workers were being retired resulted in a continued decline in the regular employment in the manufacturing sector, while the average hours worked by regular workers made a slow, gradual recovery. (Table 6 and Chart 10.)
the situation in

In contrast with Japan, the persistence of a relatively high unemployment rate in the United States at cyclical peaks in economic activity apparently reflected the fact that (1) people changed jobs, either voluntarily or involuntarily, more often in the United States than in Japan, and that (2) there has been serious structural unemployment in the United States largely because of the heterogeneous racial mix of its labor force. The first point is indicated by the fact that unemployment rates in the United States for such key groups as "men 20 years and over" and "experienced wage and salary workers" in a cyclical peak year, say 1973, were 3 to 4 times higher than unemployment rates for comparable groups in Japan. Moreover, the U.S. unemployment rates for these groups have increased over each cyclical peak in the last decade, reflecting perhaps the rapid increase in the share of employment in the service sectors where the job turnover rate appears even

¹Workers temporarily laid off received about 90 percent of their normal pays. In turn, the employers were subsidized by the government for a half (in the case of large firms) or two thirds (in the case of small firms) of their wage payments to the laid-off workers. See Haruo Shimada, op. cit., p. 46 47.

Table 6. Japan: Relative Popularity of Various Methods Used in Reducing Worker Redundancy, in the Machinery Industry, 1974-76

(in percentages of firms surveyed)

	Larger Firms ¹			Smaller Firms ¹		
	1974	1975	1976	1974	1975	1976
1. Restricting over-time	61.3	90.3	80.6	39.2	74.3	55.4
2. Reducing new recruits	35.5	77.4	80.6	21.6	52.7	67.6
3. Stop filling vacancies	35.6	67.7	71.0	23.0	60.8	55.4
4. Transferring to other posts within the plant	48.4	64.5	64.5	35.1	64.9	52.7
5. Transferring to other plants	51.6	77.4	74.2	23.0	45.9	50.0
6. Transferring to subsidiaries	48.4	61.3	58.1	16.2	23.0	14.9
7. Dismissal of temporary workers	2.9	41.9	29.0	21.6	48.6	14.9
8. Temporary layoff of regular workers	38.7	38.7	6.5	10.8	36.5	6.8
9. Soliciting early retirement	6.5	--	--	8.1	14.9	6.8
10. Selective dismissals	--	--	--	2.7	1.4	1.4

Source: Haruo Shimada, "The Japanese Labor Market After the Oil Crisis: A Factual Report," Keio Economic Studies, XIV, 1 & 2 (1977), p. 62. The original data are based on unpublished interim result of a survey on intra-firm labor mobility organized by MITI and managed by Prof. S. Matsushima.

¹Larger firms are those listed in the First Section of Tokyo Stock Exchange, and smaller firms are those listed in the Second Section of the same exchange. The sample includes 31 larger firms and 74 smaller firms.

higher than in the goods producing sectors. The second point is manifest in the extremely high unemployment rate for "black and other" minority groups in cyclical peak years (6.4 percent in 1969, 8.9 percent in 1973, and 11.9 percent in 1979). Although the unemployment rate for youths (16 to 19 years old) is even higher, it partly reflects the transitory nature of youth life-style before settling down to a more permanent job.¹ The two points combined together made the unemployment rate in the United States much higher than in Japan during both cyclical peaks and cyclical troughs.. (Table 7.)

Nevertheless, abstracting from the problem of structural unemployment in the United States, there is a trade-off between explicit unemployment and hidden underemployment. Thus, in contrast with the situation in Japan, manufacturing employment dropped sharply in the United States during 1975 recession, while average weekly hours declined only moderately. (Chart 10.) This leads to the question: Which is more desirable, in a cyclical downturn, to have more explicit unemployment as in the United States, or to have less explicit unemployment, but more hidden underemployment as in Japan? From the microeconomic point of view, the U.S. system,

being able to lay off employees as the need arises, appears more conducive to an efficient allocation of manpower. However, this is not necessarily so, because lack of job security tends to make labor unions

¹See Paul Osterman, "The Structure of the Labor Market for Young Men," in Michael J. Piore (ed.), Unemployment and Inflation, op. cit. For comparative study of international statistics, see Constance Sorrentino, "Youth Unemployment: An International Perspective," Monthly Labor Review (July 1981).

Table 7 United States and Japan: Unemployment Rate, By Selected Groups and For Selected Years

(Percent of Civilian Labor Force in Group)

	<u>United States</u>				<u>Japan</u>		
	<u>1969</u>	<u>1973</u>	<u>1975</u>	<u>1979</u>	<u>1973</u>	<u>1975</u>	<u>1978</u>
Total	3.5	4.9	8.5	5.8	1.3	1.9	2.2
Men 20 years and over	2.1	3.2	6.7	4.1	1.2	1.9	2.3
Both sexes, 16-19 years	12.2	14.5	19.9	16.1	2.8	3.0	4.6
Black and other minority	6.4	8.9	13.9	11.3			
Memo: Share of Service employment ¹	48.1	49.7	51.5	52.8	46.4	48.2	50.1

Sources: United States: Dept. of Commerce, et.al. 1980 Supplement to Economic Indicators (Washington, D.C., 1980)

Japan: Ministry of Labor, Year Book of Labor Statistics (various issues) (Tokyo)

¹Includes transportation and public utilities, wholesale and retail trade, finance, real estate, and other services, but excludes all levels of government.

less flexible on wage cutback and other issues of importance to corporate management (such as the option of increased resort to subcontracting in order to reduce production cost). In consequence, the management may continue to face wage pressure despite a cutback in the number of employees, and it may also fall short of making all the necessary adjustment in corporate operations to ensure a rejuvenation of corporate life!¹ The result is a higher unemployment, but without the benefit of wage moderation. Thus, the U.S. system appears less efficient from the macroeconomic point of view, even though it may appear more efficient from the micro viewpoint.

By contrast, under the lifetime employment system practiced in the modern corporate sector in Japan, there is a congruence of interests between employees and management. This allows the management to introduce various measures to cut production cost and to improve labor productivity, even though it cannot lay off employees at will. The result is a moderation/^{in wage behavior} in times of corporate difficulties, but without much increase in the unemployment rate. Although the wage bill is relatively inflexible except for bonus payments, this is offset over time by the improvement in labor productivity, as exemplified by the experience in the second half of the 1970s. It appears that the Japanese employment system, while being relatively rigid and hence inefficient from the microeconomic point of view, turned out to be quite flexible and efficient from the macroeconomic point of view.

¹In fact, some of the major declining industries in the United States (such as automobile and steel) continued to suffer from an upward bias in wage rates in relation to industrial average, while failing to make the necessary investments to improve their productivity performance. For more comments on problems faced by the U.S. declining industries, see the author's Why Did Inflation Subside in Japan ..., op. cit., Chapter 5, Section 4.

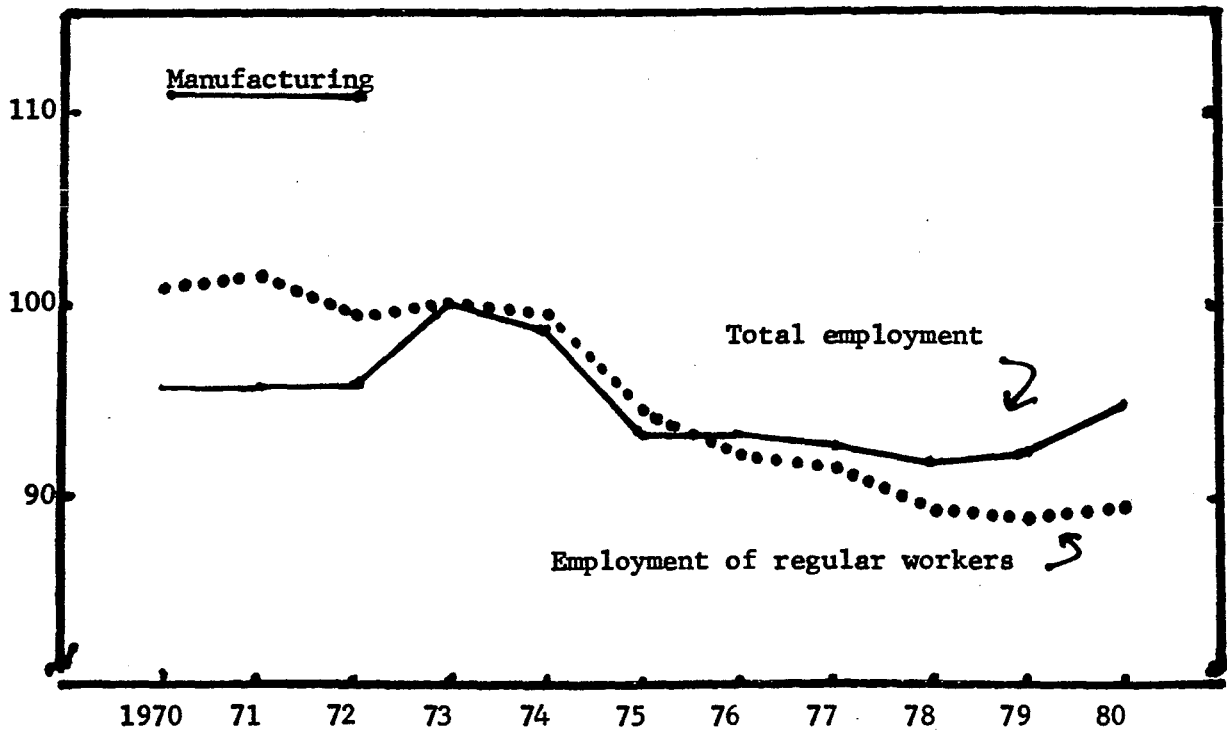
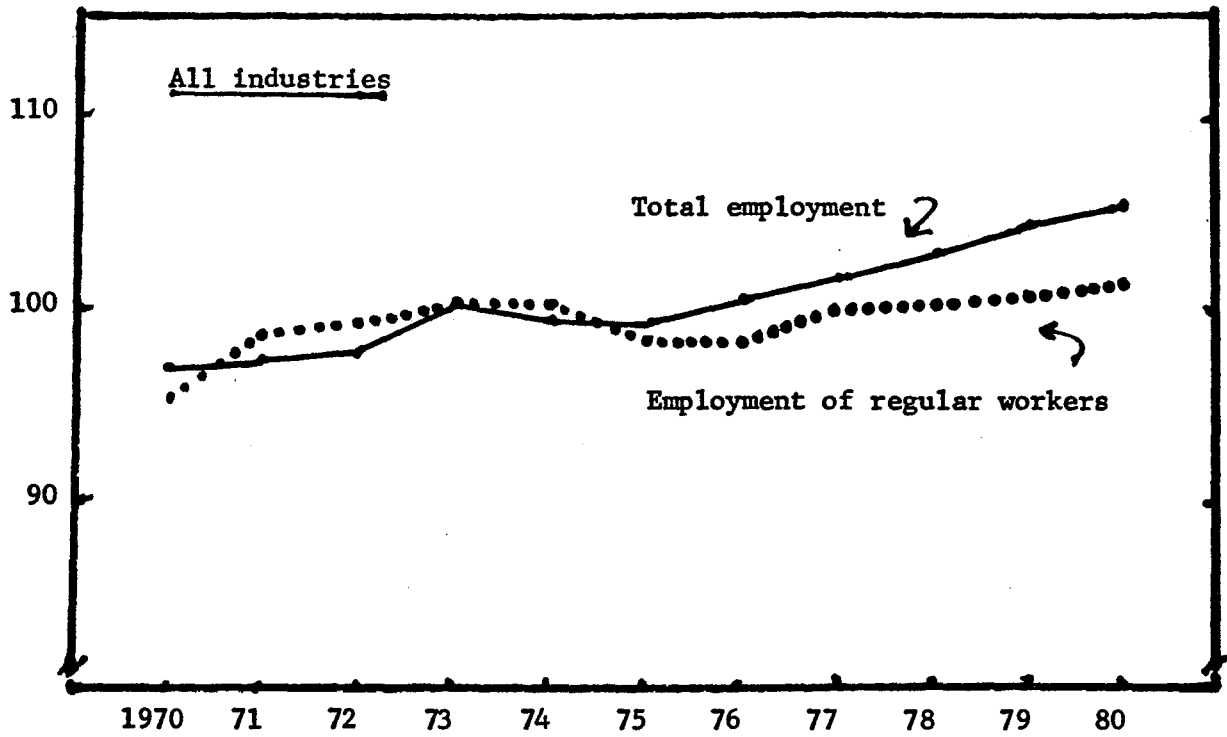
Nevertheless, the Japanese system is not without its problems, particularly if the sluggish economic growth becomes a permanent feature. In such a case, lack of flexibility in adjusting the number of employees will become a burden to corporate management. The morale of employees will also be affected by the diminishing opportunities for promotions. Under such condition, an increase in labor mobility between sectors will become necessary. Mindful of these problems, the Japanese industries have been trying hard to control the numbers of regular male employees, while using more temporary workers to meet the fluctuation in business demand.¹ (See Chart 12.) The largely automatic increase in wages and salaries based on the length of service has been reduced under the pressures of protracted sluggishness in the economy as well as increased average age of employees. Although mandatory retirement at age 55 is being extended because of the much increased life expectancy, this is done with reduced pay and changes in posts in order to minimize the burden on wage bill and also not to disturb the system of orderly promotions. However, in the final analysis, the essence of the Japanese system lies in the commitment to lifetime employment, and this feature of the system receives wide support from both the management and the employees despite the onslaught of protracted recession in the second half of the 1970s.²

¹For a detailed discussion of employment adjustment problems in Japan after the oil shock, see Thomas P. Rohlen, "'Permanent Employment' Faces Recession, Slow Growth, and an Aging Work Force," The Journal of Japanese Studies, 5, 2 (Summer 1979).

²70-80 percent of those polled expressed support for lifetime employment and enterprise unionism. They also expected the system to continue in the 1980s. However, over 40 percent of them did not express support for the automatic increase in wage and rank and over 80 percent of them expected the system to change in the future. See Economic Planning Agency, Keizai Hakusho (The White Paper on the Economy), 1980, pp. 305-330.

Chart 12. Japan: Total Employment and Regular Employment, 1970-80

(Index, with 1973 = 100)



As the U.S. economy suffered another deep recession in 1980-81 without a marked deceleration in price inflation, the question inevitably arises: Will it be possible to modify U.S. wage price behavior in light of Japanese experience? Since both the U.S. and Japanese employment systems are products of long-term evolution peculiar to the respective society, it is not possible, nor desirable to copy the Japanese system in its entirety. However, it might be possible to make U.S. labor-management relations less confrontational and more collaborative, if the management can offer job security in exchange for wage moderation. This can be promoted by government policy, along the following line: In order to minimize excessive unemployment in cyclical downturns, large businesses in distress may be encouraged to keep their employees through the provision of a reduction in payroll taxes and a granting of tax credits for wage payments for employees who will otherwise be laid off. The duration of tax reduction and tax credit can be limited to the period for which the firms can produce evidence of business distress, and the amount of tax reduction and tax credit can be limited to the amount of unemployment insurance payments entitled by the employees who otherwise will be laid off. Under such an arrangement, the firms may operate more flexible work hours for a more stable work force, the economy will have less fiscal burden for the unemployed labor force, and the society may remain more cohesive.