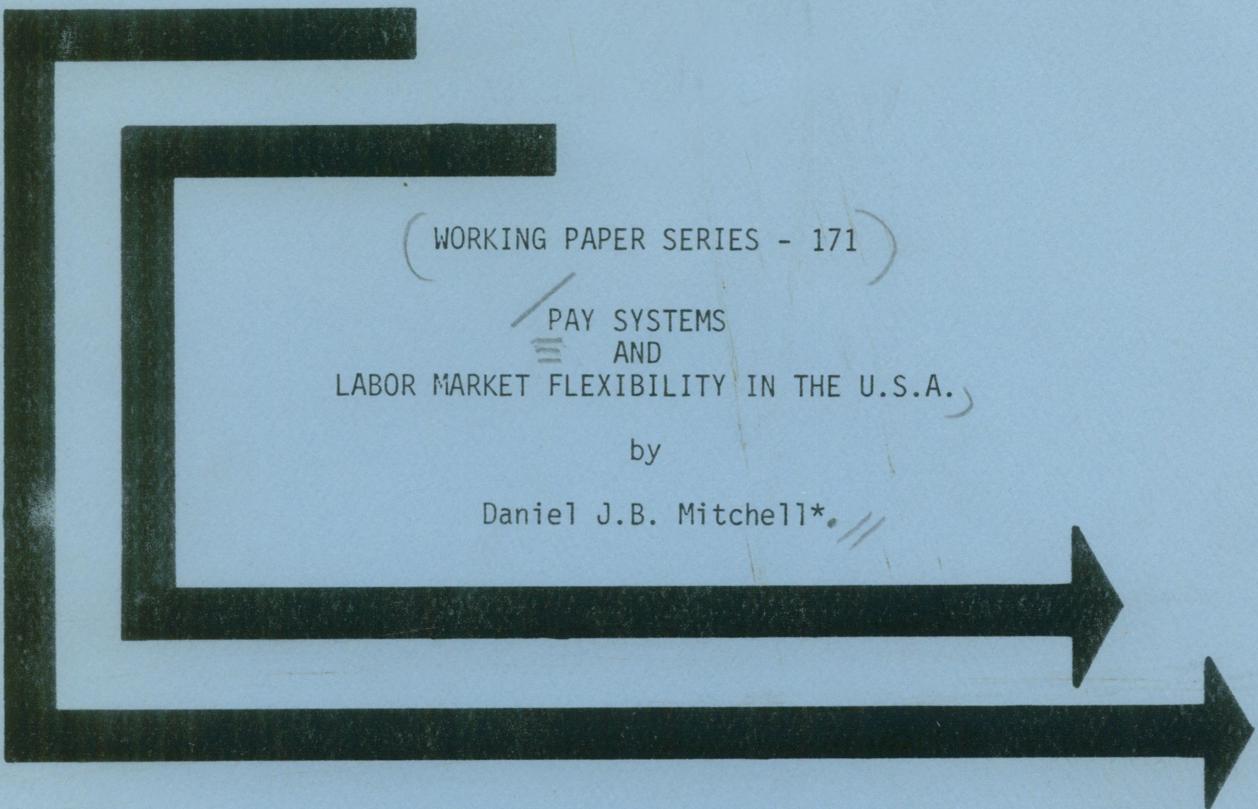


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PAY SYSTEMS
AND
LABOR MARKET FLEXIBILITY IN THE U.S.A.)

by

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PAY SYSTEMS AND LABOR MARKET FLEXIBILITY IN THE U.S.A.

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Flexibility in the U.S. Labor Market: Why the Concern?

There has been substantial European interest in enhancing labor market flexibility. And there has been a tendency to look with some envy at the United States where labor markets seem to be more flexible and where, after the recession of the early 1980s, dramatic advances were made in employment growth and unemployment diminution. The U.S. is viewed as a place where employers are freer than in many other developed countries to hire and fire at will, and to deploy their existing employees effectively. American wages are sometimes seen as more downwardly flexible during periods of slack demand - at least in real terms.

From the viewpoint of management, the characteristics enumerated above are often seen as highly desirable. Many economists also view them as desirable from a micro and/or macro perspective. But others raise questions about the consequences of such flexibility. Certainly, organized labor would not find these attributes to be uniformly desirable. And, in any case, some observers would question whether the stereotyped view of the U.S. labor market just presented is accurate, and whether the U.S. labor market is as sharply differentiated from those of European and other developed countries as is often assumed.¹

I. The Productivity Lag

One economic characteristic which is clearly common to the U.S. and most other developed countries is disappointing productivity performance after the early 1970s. As Table 1 illustrates, beginning in 1973, productivity in the U.S. rose very slowly compared with the prior trend. After 1979, there was a pick up of productivity growth but by no means a full recovery to pre-1973 levels.

i. Growth Accounting

Raw productivity figures on output per hour can hide the basic causes of

Table 1: U.S. Productivity Trends in the Private, Nonfarm Sector,
1960-1987 (Annual Percentage Rates of Change)

	1960-73	1973-79	1979-87
Output per Hour	2.4%	.5%	1.2%
Multifactor Productivity	1.6%	.9%	.4%

Source: Monthly Labor Review, vol. 119 (January 1989), p. 117.

productivity trends. One factor that economists would certainly want to consider is the degree to which capital deepening, i.e., a rise in the capital/labor ratio, is occurring. Yet, even on a multifactor basis, taking both capital and labor into account, Table 1 shows that the productivity lag after 1973 persists. Most more elaborate studies of growth accounting reveal the same effect; a substantial part of the productivity slowdown which occurred after 1973 cannot be attributed to measurable changes in the quantity or quality of factor inputs.²

ii. Employment Relations

While an unexplained productivity residual is open to almost any speculation as to cause, labor market specialists naturally turn to the possibility of internal problems in the employment relationship as a possible explanation. From a conventional human resource perspective, however, it is difficult to point to some sharp change in employment relations practice which occurred in the early 1970s, and whose influence would persist into the 1980s. Nonetheless, even if causes for the break in the productivity trend are difficult to find, possible solutions to the problem in the human resource area may be suggested. One possible solution, the one on which this report will focus, is a change in the internal employee incentive systems used by employers toward more flexible arrangements.

The Conventional HR View. Many - perhaps most - human resource specialists would argue that some form of flexible "pay for performance" has the potential to raise productivity on a one-shot basis and, possibly, to keep it rising.³ The issue, however, is whether conventional pay systems which do not use an explicit formula linking pay to performance, but instead rely on subjective performance reviews and discretionary merit pay awards and promotions, already provide sufficient incentives. As Table 2 demonstrates, American employers typically do undertake performance appraisal and typically do claim to link

Table 2: Use of Performance Appraisals by U.S. Employers

Occupational Group	Percent of Employers with Formal Plans	Percent of Employers with Performance Appraisals using them to Determine Pay Adjustments
Top Management	67%	8%
Middle Management	87	87
First-Line Supervisors	91	87
Professional, Technical	88	87
Office, Clerical	88	86
Production Workers	63	78

Source: Bureau of National Affairs, Inc., Performance Appraisal Programs, PPF Survey No. 135 (Washington: BNA, 1983), pp. 4, 12.

pay decisions to the results of those appraisals. Yet it may be that this simple type of financial participation in improved performance is insufficient to achieve the desired degree of employee motivation.

The Radical View. While conventional human resource specialists in the U.S. debate the form of pay incentives and other details of personnel administration, there are alternative perspectives on the productivity slowdown.⁴ The period of the slowdown in the early 1970s came after a decade which was marked in the American case by an escalation in social tensions around racial issues, social policy, and the Vietnam War. At the same time, a demographic bulge of young people born after World War II - the so-called baby boom - hit the labor market amidst much discussion of a "generation gap" in attitudes toward work, authority, and society.

If such factors contributed to the productivity slowdown, it is hard to imagine that a simple change in compensation systems would alleviate the problem. However, more elaborate efforts to enlist workforce cooperation, i.e., through what have come to be known as "quality of working life" programs, might address the issue in combination with a revision in the pay system. That is, participation in decision making might be combined with economic participation in a mutually reinforcing package of human resource practices.

II. The Influence of Capital Markets on Labor Markets

Productivity issues are not the only source of renewed interest in flexible pay arrangements and other forms of labor market flexibility in the U.S. Various changes in the economic climate have made the economic climate for enterprises less stable than had been the case in the past. For example, observers of the economic scene in the 1980s have pointed to the impinging of capital markets on labor markets.⁵

Two influences have strengthened the impact of capital markets on labor

markets in the U.S. First, there is the intangible effect of the "finance view," which treats firms as assets with varying yield/risk characteristics. Advances in the theory of finance have spilled over from academia into American financial markets, producing such innovations as portfolio insurance.⁶ But the finance view has also contributed to heightened activity in the "market for corporate control."⁷ The result has been increased corporate restructuring in the U.S. through mergers, acquisitions, spinoffs, etc. A second influence - relaxed enforcement of antitrust laws - reinforced this financial influence, by making corporate restructuring easier from a legal viewpoint. One factor in this relaxed view of government's role in influencing the structure of the product market has been competition from the foreign sector, an issue discussed below.

Changes in corporate ownership and management in the U.S. have created a potential instability on the employer side of the employer-employee relationship. Notions of a long-run reward implicitly promised by an employer (in terms of career advancement or pay linked to seniority) are hard to reconcile with periodic (or even potential) changes in who that employer is. Less stability on the employer side naturally pushes attention to creation of pay systems which reward today's performance today. It also complicates wage setting under long-term collective bargaining agreements which take a stable employer as a given.

III. Deregulation

A trend in public policy toward increased reliance on market forces was also apparent in the American deregulation movement which began in the late 1970s. Prior to that period, federal and state governments played a major role in controlling pricing and entry in the transportation, communications, and financial sectors. A variety of motivations contributed to a reduction in the governmental role.

In some cases, e.g., airline fares, there had long been criticism that

consumers would be better served by price competition. In others, e.g., railroads, the argument was made that the advent of alternative suppliers of the service (such as trucking) now created sufficient competition in an industry once viewed as monopolistic and therefore in need of regulation. Finally, technological advances, for example, advances enabling larger private firms efficiently to provide their own internal communications services if the regulated rate was too high, made old principles of regulation difficult to sustain.

Deregulation meant that new competitive pressures were unleashed in previously very stable industries, disrupting wage structures and bargaining relationships.²⁹ Flexible prices created pressure for flexible wages. Some deregulated industries were characterized by relatively high fixed costs for equipment but low marginal costs for service (airlines, telephone systems), a combination likely to produce periodic price wars and intense competitive pressures which ultimately affected the labor market. In other cases, deregulation opened the door to low-cost entrants (independent nonunion truckers, new financial institutions) which forced pre-existing, once-protected firms to revamp their wage and other human resource policies.

IV. Foreign Competition

There has always been competition in American product markets from abroad. Dealing with those pressures has been a longstanding political issue in the U.S. For example, the great debates over tariffs in the early 19th century are generally believed to have been a major contributory factor to the American Civil War of the 1860s. However, changes occurred in the 1970s and 1980s which made American product markets more sensitive to foreign developments than had been the case in the 1940s, 1950s, and 1960s.

i. Exchange Rate Fluctuations

In the early 1970s, the Bretton Woods international fixed exchange rate

system was abandoned, and various forms of floating exchange rates have dominated since that period. This shift meant that the intensity of foreign competition could change rapidly due to exchange rate changes. As Table 3 shows, the ratio of American labor costs relative to foreign can be rapidly altered by such fluctuations, as occurred dramatically in the 1980s. Thus, competition from the foreign sector, when combined with flexible exchange rates, creates added uncertainty in U.S. product markets and pressure for risk sharing with employees in the American labor market.

The rapid appreciation of the dollar in the 1980-85 period led to substantial American trade deficits and a remarkable increase in net foreign claims against the U.S. Some of these increased foreign holdings have taken the form of direct investments, contributing an international dimension to the domestic corporate restructuring which has already been referenced. With foreign ownership of new or previously American-owned firms comes new thinking about human resource practices, collective bargaining, and pay.⁷

ii. Long-Term Trends

Although the U.S. was clearly the world's highest-wage country through the 1960s, it was able to sustain its high wage against foreign competition by maintaining a sufficient technological lead. However, the American lead time was reduced in the 1980s (and in some cases eclipsed) by both technology importation and technology development, first in Japan, and then in the so-called newly-industrializing countries. The combination of foreign technological diffusion and low wages has put downward pressure on American wages. This pressure has been one factor behind a tendency for real wages in the U.S. to grow less rapidly than productivity which developed in the 1980s.¹⁰

V. The Flexible Specialization Hypothesis

One feature of the U.S. economy has been more rapid growth in employment

Table 3: Foreign Manufacturing Hourly Compensation as Percent of U.S. Level, 1980-87, Selected Countries

	1980	1985	1987
France	91%	58%	92%
Germany, West	125	74	125
United Kingdom	76	48	67
Italy	81	57	92
Japan	57	50	84
Real Trade-Weighted U.S. Dollar Exchange Rate, 1980=100	100	156	107

Source: Patricia Capdevielle, "International Differences in Employers' Compensation Costs," Monthly Labor Review, vol. 111 (May 1988), p. 44; U.S. President, Economic Report of the President, 1988 (Washington: GPO, 1988), p. 371.

within smaller firms and establishments, as Table 4 illustrates. This effect does not seem to be simply the product of more rapid growth in services relative to manufacturing; even within the manufacturing sector, comparatively more rapid employment growth among smaller units is occurring. Research in the "leading-edge" sectors, such as high technology electronics, suggests a trend toward downsizing and smaller employment units.¹¹

Although a variety of explanations might be offered, one view is that technological change is driving firms toward a "flexible specialization" approach.¹² According to this view, firms of the future will be locked in a competitive struggle to find niches in the market place, making small batches of customized output rather than large-scale, assembly line products. In such a world, there will be a high premium on having an adaptable, multi-skilled labor force, and - presumably - the reward system will have to encourage such employee attributes.

Small, competitive employers, on the other hand, are not well equipped to provide long-term career attachments or elaborate training programs (needed to learn skills). Their pay systems are not likely to be characterized by generous nonwage benefits such as health insurance and pensions. Thus, the type of labor-market flexibility that seems to go with small size and lack of career attachment to an employer raises a variety of social welfare issues related to pay and benefits in the U.S.

VI. Macro Performance

To this point, the focus has been primarily at the micro level, even where macro variables such as productivity and exchange rates have been considered. The issue has been how individual employers may react to these macro influences. However, the flexible pay issue in the U.S. has a macro dimension, with its roots in disappointing macro performance in the 1970s and in the painful steps undertaken to improve that performance during the early 1980s.

Table 4: U.S. Employment Trends in the 1980s

	Annual Percent Change in Employment
Establishment Size Class, 1979-85	
1-20 Employees	+2.0%
20-99 Employees	+1.9%
100-499 Employees	+1.7%
500-999 Employees	-.2%
1000 or more Employees	-.5%
Fortune 500 Companies, 1979-88	-2.7%
Nonfarm Private Payroll Employment, 1979-88	+2.0%

Source: U.S. Bureau of the Census, Statistical Abstract of the United States, 1988 (Washington: GPO, 1987), p. 499; Fortune Magazine, Employment and Earnings, various issues.

i. The Stagflation Years

During the 1970s, concern about inflation tended to dominate macroeconomic thinking and policy in the U.S. Traditional anti-inflation medicine, i.e., recession, appeared to have only a moderate, temporary effect in restraining inflation; the paradox of "stagflation," a combination of relatively high unemployment and inflation, characterized parts of the decade. Nontraditional approaches, such as wage-price controls and guidelines did not resolve the American macro dilemma.¹³

One interpretation of this disappointing macro performance has been that greater nominal wage flexibility might have assisted traditional anti-inflation policy in bringing about price stability without high unemployment. Price inflation might have cooled more rapidly, and with less pain, if wage inflation had responded quickly to the periodic reduced demand levels engineered by the monetary authorities. More widespread use of flexible pay arrangements, such as profit sharing, might have produced this more rapid response, in the views of some observers.¹⁴ As it was, it took the worst postwar recession in U.S. history to bring down inflation in the 1980s, and unemployment remained at comparatively high levels (around 7%) until 1987-88, i.e., until five years after the recession bottomed out in 1982.

Certainly, not all macro economists believe that wage flexibility, whether direct or through a share system, would yield greater economic stability. There has been a tradition in macroeconomics, going back to Keynes, that the solution to unemployment and the business cycle does not lie in adjusting wages. At the micro level, the notion that wage flexibility could stabilize industry employment has been subjected to empirical skepticism.¹⁵ Under some assumptions, macro models can suggest that wage rigidity - in particular - is a stabilizing force.¹⁶ However, in modern economies such as that of the U.S., where active macro policies are followed,

the issue is less one of stability per se and more one of whether the stability is characterized by relatively full employment and low inflation or by stagflation.

If the labor market is viewed as ultimately setting a real wage (W/P , where W = a general wage index and P = a general price index), and if the product market is viewed as ultimately setting a price markup over costs (P/W), it is evident that the targets of the two markets must be consistent. For example, W/P and P/W cannot be simultaneously raised; attempts to do so will lead to a wage-price spiral. Incompatibilities of the two targets, absent some flexibility on one side or the other, can only be corrected by raising the degree of economic slack (unemployment) through macro policy sufficiently to reduce both to consistent levels. The share proposal, viewed in this light, can be seen as an attempt (through making an element of compensation more flexible) to bring about compatibility in price and wage determination and thus produce improved macro performance.

ii. Employment Expansion

Apart from its business cycle aspects, macro performance also encompasses long-term trends. In particular, there has been concern over many years in the U.S. about hard-core structural unemployment, especially among blacks and Hispanics in inner-city neighborhoods. For example, in 1988, the black unemployment rate stood at 11.7%, the Hispanic rate at 8.2%, while the white rate was a comparatively low 4.7%. Rates among minority youth have been extremely high.

While a variety of targeted programs have been aimed at this socio-economic problem in the U.S., it has been suggested that certain forms of flexible pay would provide an additional employer incentive to expand hiring. In essence, the argument is that such pay systems would lower the marginal cost of hiring sufficiently to create a labor shortage, leading employers to reach out to any sources of available labor, even the hard-to-employ. The

Weitzman "share economy" proposal thus takes a non-traditional view of such pay practices as profit sharing and gain sharing which have usually been seen as providing incentives to employees, not employers.¹⁷ To date, the share economy proposal has not found expression in any new American public policy, although some legislative proposals have been made.¹⁸ It has, however, stimulated considerable debate among American academics.¹⁷

The Meaning of Flexibility

Flexibility is a normative word with good connotations. It is difficult to favor its reverse: inflexibility or rigidity. To be useful, however, flexibility must be defined in practice. Not all forms of labor-market flexibility need involve pay flexibility, but the degree of nonwage flexibility has potential links to pay.

I. Internal Firm Deployment of Labor

From the management perspective, labor is a resource and an input to production. Yet the labor contract, whether explicit (as in the case of U.S. union-management agreements) or implicit (as with most nonunion employment relationships), is complex. Employers may not be, or may not feel, entirely free to deploy labor in ways which achieve short-run maximum efficiency.

i. Manning Requirements

In the American case, workrules dealing with manning requirements are sometimes found in union contracts. One survey in 1980 found over a fifth of workers under major agreements covered by contract clauses limiting or regulating crew size.²⁰ The motivation behind such clauses comes from various sources. There may be safety implications involved in insufficient manning of a task. But also involved is the pace of work.

Since virtually all American studies of the impact of collective bargaining suggest that unions raise wages significantly,²¹ there is created on the management side extra incentive to economize on the use of labor, and

to seek ways of raising productivity through thin deployment and increased speed. Contractual manning requirements are an attempt to control this managerial reaction. In addition, narrowly-defined craft jurisdictions over certain kinds of work reflect craft union structures in particular industries.²²

There have been cases in American industrial relations in which pay has been used by management to buy out workrules which are perceived to have become excessively costly.²³ For example, pay may simply be raised as a *quid pro quo* for workrule relaxation. Or it may be used to reduce employment by encouraging attrition through early retirement programs. This option has been used by nonunion managements as well as union, where the former have made a prior commitment to avoid layoffs and feel obligated to redeem the pledge through some form of severance compensation.

ii. Job Classifications

Closely related to the manning issue is the definition of job classifications. Use of some form of job analysis is a common practice in American firms.²⁴ Under job analysis, the functions of a particular job are described. Jobs are then grouped into an appropriate pay structure.

Even in the absence of craft-based unions, the structure of job classifications can rigidify over a period of time or become obsolete due to changes in technology. One option is to reduce the number of job classifications and train workers with the skills needed to cross classification lines. In some cases, especially during the concession bargaining that developed in the 1980s, American unions were forced to accept reductions in job classifications and more flexibility in managerial discretion to assign across pay and job classifications. But there have also been examples of more positive incentives through pay, i.e., so-called "pay-for-knowledge" schemes under which workers increase their pay rates by successfully completing training in a variety of skills.

iii. Work Sharing and Job Sharing

One of the rigidities in U.S. employment practices is the standardization of the work day. According to one survey, the standard American workday typically begins somewhere between 7 AM and 8 AM in the morning and ends between 4 PM and 5 PM in the afternoon.²⁵ Similarly, there are norms of what a full-time work week entails, supported by legal requirements for overtime pay after 40 hours.²⁶

During periods when the demand for labor falls, there is a tendency of American firms to rely much more on employment adjustments than on hours adjustments. While elimination of overtime is a comparatively easy step, cutbacks in the work week below "normal" hours is perceived as more difficult. One factor in this hours rigidity is the structure of state unemployment insurance laws, which until the 1980s provided benefits to workers only for complete layoffs and not for partial layoffs (hours reductions).

Beginning with California, however, a number of states have adopted work sharing provisions allowing partial benefits for partial layoffs.²⁷ These provisions have tended to be complex and the option is not widely used. Apart from unemployment insurance considerations, the structure of pay - especially at larger firms with more generous fringe benefit packages - can limit the cost reduction achieved by partial layoffs. Some benefit plans, notably health insurance, involve a flat cost per employee, regardless of hours worked. Thus a reduction in hours by, say, 10% will produce less than a 10% reduction in total labor compensation. Changes in U.S. tax law in the 1980s further limited the option of employers to reduce such fixed benefits as hours declined.²⁸

While the issue of work sharing typically involves general demand pressures and a large group of workers, "job sharing" more commonly involves individual employee preference. Sometimes employees may propose that a given

job be shared by two people, with each working a portion of normal full-time hours. The job-sharing issue often arises in connection with women who wish to withdraw only partially from the labor force in order to care for children.

As in the case of work sharing, the issue is complicated by the structure of compensation. Because of fixed benefit plans, the costs of two half-time employees may be more than one full-time employee. And, again, tax code restrictions may limit employer discretion on the provision of benefits to part-timers. These examples, and others to follow, suggest that the provision of fringe benefits, although fostered by public policy as a Good Thing in the United States, can limit labor-market flexibility. The benefit issue will be considered more fully below.

iv. Alternative Hours Scheduling

The fact that standardized norms of working hours developed in the U.S. is not surprising; many businesses depend on interactions with other businesses. Thus, all tend to gravitate toward compatible work schedules. However, these schedules do not necessarily coincide with employee preferences, which may be shaped by both leisure-labor trade-offs and the need to accommodate family responsibilities.

Sometimes, employees effectively influence their work schedules through absenteeism. And, of course, employers may respond with both negative incentives (discipline) or positive incentives via the pay system (such as good attendance bonuses). However, employers may ultimately find it necessary to adapt to employee preferences - especially during periods of labor shortage - or may themselves want non-standard hours from employees in order to use capital equipment more effectively. Two major forms of hours flexibility have emerged in the U.S.: compressed work weeks (which often are employer-initiated and reflect the incentive to use capital more effectively)²⁹ and flextime (which involves accommodation to employee desires).³⁰

The Compressed Work Week. The compressed work week involves working the "normal" 40 hours in a period of less than five days, say, four 10-hour days followed by a three-day period of time off. In general, federal law does not limit an employer's scheduling of hours; it simply demands overtime pay at a rate of time-and-a-half for hours above 40. However, some state laws may make use of the compressed work week difficult, as do requirements for certain federal government contractors. For example, in California, overtime pay is required after 8 hours per day as well as after 40 hours per week. In cases such as California's, employers have sought changes from an 8 hour to a forty hour standard on grounds that their ability to schedule hours flexibly is impeded by the overtime premium.

Flextime. Under flextime, employees are permitted to make their own work schedules subject to specified constraints.³¹ For example, they may be required to put in 8 hours per day but are given the option of coming into work earlier or later than normal, so long as they are present at certain core hours. Professional employees are most likely to be given such flexibility. The proportion of American workers covered by flextime-type arrangements is small but growing. Also contributing to hours flexibility is another small and growing group of employees who work some hours at home.³² Some of these employees may be old-fashioned industrial homeworkers but others may be using modern technology such as personal computers and computer terminals in their work.

Lesser forms of employee discretion are also used by some American employers. In certain cases, employees are given a limited number of days of personal leave with pay. Such plans sometimes arise out of sick leave arrangements where there is suspicion that sick leave is being used for purposes other than illness. Rather than enforce the sick leave requirements, the employer instead switches to limited discretionary leave. Employees also may be given some discretion in scheduling their vacations, although the

number of vacation days accorded to employees in the U.S. is notably less than found in certain other developed countries.

In short, certain American benefit practices - such as paid personal leave and vacation plans - permit some employee flexibility concerning hours. They may also permit employers to reduce layoffs in some cases. For example, an employer during a slack period may require or encourage employees to use up their vacation or leave days, in effect helping to match hours availability with labor demand.

v. Contingent Workers

During the 1980s, there was considerable discussion of the use of contingent workers by American employers.³³ The term is difficult to define precisely but carries the connotation of workers to whom the employer has little ongoing obligation and who can be hired and terminated at short notice, i.e., on "spot" contracts. Usually included are workers supplied by outside temporary agencies, workers employed on an explicitly temporary basis directly by the employer, part timers, and workers employed by one firm to provide services to another firm when the latter's product demand peaks. Table 5 gives an estimate of the size of the U.S. contingent workforce using these categories; as can be seen, over a fifth of the workforce might be classified as contingent.

Contingent workers tend to be drawn disproportionately from the female and minority populations. It is known that the use of employees hired through temporary supply agencies increased rapidly in the early 1980s, although such workers are still a small fraction of the labor force.³⁴ The timing of this increase, coming after the two back-to-back recessions of the early 1980s, suggests that the phenomenon was employer-driven. Employers, finding themselves in an environment perceived to be more unstable than in the past, sought employment relationships which could be readily ended. Related to "official" contingent employment is the informal use of day workers - often

Table 5: Components of the U.S. Contingent Workforce, 1986

	Number in Millions	Growth: 1980-86
Temporary Workers	.7	75%
Part-Time Workers	19.5	20%
Business Services Employees	4.8	45%
Civilian Employment	109.6	10%

Source: Adapted from Richard S. Belous, "Contingent Workers and Equal Employment Opportunity," paper presented at the December 1988 meetings of the Industrial Relations Research Association, forthcoming.

illegal aliens - hired for a particular task by small construction contractors, gardening firms, and homeowners, from street corner labor exchanges.

Use of illegal aliens was addressed by Congress through new immigration controls enacted in 1986 which penalize their employers.³⁵ The congressional goal for illegal contingent workers, therefore has been to remove them from the American workforce. Congress's concern about other, legal contingent workers has been different, however. As has already been referenced, changes in the tax code were made in the 1980s to try and cover a larger proportion of legal contingent workers with the type of employee benefits commonly provided to "regular" workers, especially health insurance.

II. External Labor Mobility

The line between internal deployment of labor and external labor mobility is not precisely drawn. For example, the use of contingent workers to meet peak production needs can protect a core group of regular workers who have steady employment with the firm and who the employer may invest a considerable sum in training and skill development. However, steep declines in labor demand may push employers to terminate even core employees. An important issue is the level of labor mobility, particularly for workers who have had a long-term attachment to their employers, and who have a considerable stake in maintaining their existing employment relationship.

i. Industrial Shifts

Declining industries can pose special problems of labor mobility, since core workers will eventually be affected. During the early 1980s, U.S. manufacturing was especially hard hit by recession and dollar appreciation. The subsequent recovery from recession and eventual dollar depreciation gave U.S. exports and manufacturing output a boost. However, manufacturing employment in the late 1980s still stood below the level of the late 1970s.³⁶

Much of the American discussion about the shifting industrial mix of employment in the 1980s centered on concerns over both income distribution and level. However, there was also a substantial interest in the labor mobility of those displaced in the 1980s by mass layoffs and plant closings.³⁷ Table 6 shows that a considerable lag may occur between loss of a job and the finding of a new one for American workers. Moreover, the new job may not pay a wage as high as the old, and may involve the loss of nonwage benefits and seniority-related privileges. Even if pay at particular jobs is relatively inflexible, involuntary mobility may create (downward) flexibility in the pay of individual workers forced to change jobs.

ii. Pay and Job Attachment

The labor mobility aspects of flexibility in the labor market are intimately linked to the pay system. Possible uses of alternative share systems of pay to reduce the need for (outward) involuntary labor mobility have already been referenced. However, ordinary (non-share) pay practices found in American firms also are very important.

Level of Pay. One of the stylized facts of the U.S. labor market has been that the so-called "law of one price" does not seem to be reflected in wage determination. Table 7 illustrates this point with data for two occupations within a single urban American labor market. As the table shows, there can be a substantial range of pay rates for seemingly comparable jobs across employers. In general terms, large firms tend to pay more than smaller firms, unionized firms pay more than nonunion, and certain industries seem to pay more consistently than others for the same occupations.

Recent economic literature has rationalized this finding in two interrelated ways. First, one view emphasizes the cost of employee turnover to employers, especially where considerable costs of recruitment, screening, and training are involved in each new hire. By paying a relatively high rate

Table 6: Employment Status as of January 1988 of Workers Displaced During 1983-87

Age	Percent Employed
20-24 years	77.7%
25-54 years	77.1
55-64 years	50.7
65 years or more	30.4
Total	71.4

Note: Data refer to persons with 3 or more years of tenure who lost their jobs due to plant closing or move, slack work, or abolishment of their positions or shifts.

Source: U.S. Bureau of Labor Statistics, press release USDL 88-611, December 9, 1988, Table 1.

Table 7: Range of Earnings of Secretaries and Truckdriver in the Los Angeles - Long Beach, California Metropolitan Area, October 1987

Weekly Earnings	Number of Surveyed Secretaries Level-1 ¹	Straight-Time Hourly Earnings	Number of Surveyed Truckdrivers, Light Trucks
\$200-219	31	\$4.50-5.99	7
220-239	31	5.00-5.49	71
240-259	--	5.50-5.99	517
260-279	29	6.00-6.49	464
280-299	185	6.50-6.99	615
300-319	158	7.00-7.49	98
320-339	215	7.50-7.99	34
340-359	312	8.00-8.49	124
360-379	291	8.50-8.99	14
380-399	294	9.00-9.49	4
400-419	151	9.50-9.99	8
420-439	151	10.50-10.99	15
440-479	74	11.00-11.99	110
480-519	16	12.00-12.99	19
520-559	8	13.00-13.99	2
		14.00-14.99	18
Median weekly wage:		Median hourly wage:	
All firms in survey	\$361.00	All firms in survey	\$6.70
Firms with at least 500 workers	\$369.00	Firms with at least 500 workers	\$10.94

¹Non-manufacturing.

Source: U.S. Bureau of Labor Statistics, Area Wage Survey: Los Angeles - Long Beach, California, Metropolitan Area, October 1987, bulletin 3040-45 (Washington: GPO, 1988), pp. 3, 11, 16, 22.

of pay in such cases, the firm attracts a queue of workers from which a good selection can be made. High pay also increases the probability of employee retention, since alternative pay at other firms is not so high. Because the cost of turnover will vary from employer to employer, some firms will adopt relatively high pay policies, others will simply meet the market average, and still others will be content to be lower payers, even if the cost is high turnover.³⁸

A second view - sometimes termed the "efficiency wage" approach - identifies pay policy with a need to provide employee motivation and discipline.³⁹ Since employee performance may be expensive to monitor, the firm provides a pay premium which the employee will lose if he or she is terminated due to discovery of inadequate performance. Under the efficiency wage approach, the pay level, especially if it is relatively high compared with the market average, amounts to a bond which the employee loses on termination.

Regardless of rational, a high level of pay tends to inhibit voluntary outward labor mobility. Thus, when demand declines normal attrition rates may be low and the employer is more likely to rely on layoffs to reduce the labor input. Even if laid off, employees may await recall - rather than seek alternative work - if there is any prospect of rehire by the high-wage employer. Unemployment may thus be exacerbated.⁴⁰

The Career Profile of Pay. The timing of pay over a career may not closely match employee productivity. Some firms may provide relatively low compensation levels initially in exchange for higher earnings in the future. It has been argued that such pay profiles are intended as incentive devices; good performance today will be rewarded tomorrow. But poor performance will lead to termination and loss of access to the premium pay later in the career.⁴¹

While there is acknowledged to be a correlation in the U.S. between

seniority and pay, lack of detailed information on employee performance makes the statistical interpretation of this correlation difficult. It has been argued, for example, that the correlation is simply the result of unmeasured job matching characteristics.⁴² Yet the use by American employers of devices such as mandatory retirement (until outlawed in the early 1980s) and pension formulas which encourage retirement at particular ages, suggests that there is an element of "overpayment" at high seniority levels.⁴³

Private Employee Benefits. Although their value to employees may be more difficult to measure than cash wages, benefits are an important part of the compensation package of American workers, as Table B illustrates. Some benefits are privately provided by employers, often at employer expense due to tax code incentives. Others, such as Social Security, are mandated by law.

Private benefit plans, especially defined-benefit pensions, often have the effect of adding to compensation of higher seniority employees in the U.S. Under defined-benefit pensions, for example, quitting before at least early retirement age may substantially reduce the value of the pension.⁴⁴ Health benefits may be more valuable to senior employees simply because older workers are more likely to have costly medical problems than younger ones. Where unions are involved, the tilt in compensation via benefits toward senior workers is often ascribed in the American literature to the internal union political mechanism under which the "median voter," typically a relative senior employee, is key to union policy formulation.⁴⁵

Employees who are involuntarily terminated may suffer a considerable capital loss in terms of benefits, even if they find new jobs at comparable cash wages. Others, who might otherwise voluntarily seek to leave their employers, may be dissuaded from doing so if they perceive such benefit losses to be large. Generally, the rise of significant private fringe benefits in the U.S. economy coincided with reductions in quit rates.⁴⁶ Certain types of private benefits therefore appear to be a barrier to labor mobility and to

Table 8: Composition of Employee Compensation in the U.S.,
March 1988

Type of Payment	Payment as Percent of Private Compensation	Payment as Percent of Private Benefits
Wages and salaries	72.7%	--
Legally-required payments	8.8	--
Private benefits	18.5	100.0%
Pensions and savings	3.3	17.6
Insurance	5.6	30.6
Vacation pay	3.5	18.8
Holiday pay	2.4	12.9
Sick leave	.9	4.7
All other	2.8	15.3
Total Compensation	100.0	--

Note: Total private benefits = \$2.55; legally-required payments = \$1.22; average hourly earnings = \$10.02.

Source: U.S. Bureau of Labor Statistics, press release USDL: 88-293, June 16, 1988, Table 2.

reduce the flexibility of the labor market.

It has been argued that the attraction of such benefit plans for employers is precisely their turnover-retarding effect and that, therefore, the existence of such plans is an example of labor market optimality. However, there are two problems with this view. First, historically, employers in the U.S. did not offer very much in the way of benefits prior to World War II, i.e., prior to the period in which considerable tax incentives became available for their use. What benefit plans existed were typically employee-paid and often resulted from marketing efforts of insurance companies who saw the employees of larger firms as potential customers.⁴⁷ If offering turnover-retarding benefits was optimal policy, why didn't American employers do it prior to the provision of tax incentives?

Some might respond that economic conditions prior to World War II were different - so that what is optimal now was not optimal then - or that employers simply had not discovered the beneficial aspects of fringe benefits at the time. But even if the historical evidence is discounted, there is a second objection. The use of benefits as a turnover-retardant is a very blunt instrument of employee control.

For example, health insurance will be a retardant to quitting mainly if the employee (or a dependent) has developed a health condition that might not be covered by the carrier of another employer. The same can be said of employer-paid life insurance. Is there any reason to suppose that employees in such circumstances will necessarily be more valuable to the employer than others? Similarly, the formulas of defined-benefit pension plans do not show signs of being carefully worked out to retard turnover of selected valuable employees. The incentives they create are haphazard and sometimes perverse. And they tend to occur abruptly at certain ages rather than along a continuum.

There are alternative ways of providing benefits which would not retard labor mobility. For example, a shift to defined-contribution pensions rather

than defined-benefit would eliminate the anti-mobility effect of the latter. Workers under defined-contribution pensions can simply take their equity with them when they quit. However, such plans create uncertainty about the future value of retirement benefits; upon retirement the worker's monthly pension will depend on such factors as prevailing interest rates and the value of the assets in his/her account. It is possible - but by no means certain - that in a world in which most pensions were defined contribution, private insurance carriers could offer options for employees to convert them into actuarially equivalent defined benefits, thus reducing risk to the retiree.

For benefits such as health insurance and life insurance, where coverage may depend on pre-existing health status, more radical changes would be required to reduce the mobility constraints and increase labor-market flexibility. Essentially, employees would have to contract for their own personal policies with private carriers; their employers would then simply pay all or part of the premiums entailed in the contracts in pre-tax dollars. Such policies would thus carry over from employer to employer. But unless employees were required to obtain insurance policies and continue them in force at all times, there would be problems of adverse selection which could drive up costs. In addition, the economies of scale of administering uniform benefits across the workforces of large firms would be lost if each employee had his/her own private health plan. Thus, there has been no significant shift in public policy toward encouraging portable benefits.

Social Insurance. The decision - really a series of incremental decisions - by Congress to provide tax incentives for development of a nexus of employee benefits on a decentralized, employer-by-employer basis, necessarily entailed the creation of barriers to mobility. Paradoxically, it is the publicly-provided or publicly-mandated social insurance benefits in the U.S. which are most compatible with free-market labor mobility and flexibility. These programs consist mainly of Social Security (which includes old-age pensions,

survivor benefits, disability benefits, and Medicare for workers and retirees over 65 years of age), unemployment insurance (a joint federal/state program), and workers' compensation (primarily consisting of state-administered and regulated programs with coverage provided by private carriers).

Employees can move from employer to employer under the public social insurance programs without the potentially large costs entailed in private benefit programs. Obviously, there are many considerations in the policy choice between public and private benefits other than labor mobility effects of these programs. For example, there has long been concern in the U.S. about the impact of Social Security pensions on the national saving rate,⁴⁸ about the effects of unemployment insurance on the unemployment rate,⁴⁹ and about the impact of disability and workers' compensation benefits on labor force participation. However, it is the case that the mobility aspects have not received much public airing and may not have been much considered when critical policy choices were being made.

iii. Is Mobility Always a Good Thing?

Labor mobility is usually taken as the hallmark of labor market flexibility. Generally, it is considered a Good Thing if someone who is laid off or enters the labor market initially can quickly find a job. And it is considered a Good Thing if employees displaced from declining industries can readily and painlessly find work in expanding sectors. However, as noted above, there can be costs to mobility as well as benefits.

Internal Labor Markets. Research on human resource practices in the U.S. has developed the concept of the internal labor market.⁵⁰ Such markets feature limited ports of entry from the external labor market, typically at starting positions. Once within the firm, the employee progresses along a career ladder. That is, promotion from within is the general rule. Obviously, such internal structures are more likely to be found in large firms than in small

ones.

Indeed, the American internal labor markets literature also spawned notions of dualism in the labor market, with some employers in the "secondary sector" featuring relatively low wages, high turnover, and little internal structure while others in the "primary sector" fit the model described above.⁵¹ It might be expected that rates of pay in the primary sector would be less sensitive to external demand and supply conditions for labor than those in the secondary sector, simply because the latter has less contact with the external labor market and may pay wages above the market average.

American labor market data - as illustrated by Table 9 - reveal that it is not at all unusual for employees, especially males, to spend periods of 20 years or more with a single employer. This pattern may change in the future; as already noted, the flexible specialization hypothesis and evidence of a bias toward growth of employment in smaller firms suggest future changes toward shorter spells of job tenure. Nevertheless, data for the 1980s do not yet reveal a substantial shift in the pattern of job tenure. Even if it comes, the change will be gradual.

Investment in Employees. The continuing existence of a sector in which pay determination is relatively insulated from the external labor market does not inherently prove that such an institutional arrangement is optimal from an economic perspective. However, a structured internal labor market in which employees remain with the firm for substantial periods does help both employers and employees recoup investments in human capital. Casual labor markets, in contrast, may be less conducive to worker skill enhancement.

Economic theory posits two types of human capital investments. General training is of value to many employers. Thus, the cost of providing the training will, according to theory, be borne by the employee. Employers could not recoup investments in general human capital since they would have to pay below-market wages after the training was completed to do so, and the

Table 9: Tenure with of U.S. Employees with Current Employer,
January 1987

	Median Tenure in Years			Percent with Tenure of 20 or More Years	
	Both Sexes	Males	Females	Males	Females
16-24 years	1.2	1.2	1.1	-	-
25-34 years	3.4	3.7	3.1	*	*
35-44 years	6.1	7.6	4.9	7.2%	2.7%
45-54 years	9.6	12.3	7.3	36.8	11.0
55-64 years	12.7	15.7	10.3	42.2	21.7
65 years and over	12.4	15.0	10.8	43.9	29.7
Total	4.2	5.0	3.6	12.7	5.2

Source: "Most Workers Who Switched Occupations Lost Jobs Through Plant Closings, Layoffs," Daily Labor Report, October 23, 1987, p. B4.

generally-trained employees would simply move to other employers. Employees, on the other hand, would not invest in specific training - training of value only to a single firm - since the return on such investments would flow to the firm and not to them.

The difficulty with these conceptual distinctions is that it is hard to find official recognition or awareness of them among U.S. human resource practitioners. With long-term employer-employee attachments, however, it is not surprising that the distinction would not be very sharp in practice. Employers might well recoup investments in general training, and employees might well recoup investments in specific training, once the two are linked together over extended periods. Generally, the internal labor market helps secure and encourage investments in human capital by limiting mobility. This attribute may compensate for the relative rigidity that accompanies internal labor market arrangements.

The Winning Team View. There may also be a motivation side to the internal labor market. Employees who stay with their employers for long periods inherently have a relationship and identification with "their" firms. They may feel they have a stake in the firm's performance and economic welfare and may be encouraged to view themselves as being on a winning team.⁵² Obviously, those who have taken this position feel that the wave of mergers, takeovers, and other corporate restructurings that occurred in the 1980s made American enterprises less competitive in the long run by harming employee morale and identification with their employers.

In any case, the relative degree of pay rigidity seen in U.S. internal labor markets may thus be a part of the compact which holds the employee to the firm. Employees seem to feel that it is unfair that, for example, pay should be cut simply because the economy has turned down and there is an external surplus of labor.⁵³ Employers who want to encourage employee identification with the firm might accommodate this perception by limiting the

reaction of pay to the business cycle. But if product markets of the 1990s are volatile, some form of pay flexibility may be seen as increasingly necessary.

Insiders vs. Outsiders. It has been suggested that apart from considerations of human capital investments and team motivation, firms may respond to the interest of "insider" (current) employees rather than "outsiders" (job seekers).⁵⁴ The outsiders, of course, represent the external labor market so that an insider-sensitive firm is unlikely to exhibit substantial pay flexibility over the business cycle. Insider sensitivity may occur in both the union and nonunion sectors, although it is likely to be stronger in the former.

Where unions are present, their internal political processes will reflect the interests of insider-members rather than outsiders. This tendency is perhaps best illustrated in the American case by the development of two-tier pay plans in the 1980s.⁵⁵ Under these plans, unions under severe pressure from employers to accept reductions in labor cost agreed to cut pay of new hires, but to retain higher pay rates for incumbent workers.⁵⁶

Unions are potentially capable of levying costs on employers through work stoppages and other tactics, and thus can enforce the insider interest with regard to pay and other matters. But in the case of nonunion workers, there may still be avenues by which the insider interest is expressed. It has long been known, for example, that nonunion employees in the U.S. are capable of acting collectively and withholding full effort from their work when they feel dissatisfied.⁵⁷ As a result, it is not unusual for nonunion firms to avoid cutting wages of incumbents when their jobs are re-evaluated as part of a wage structure review. Rates of pay of workers who are considered overpaid are "red circled" (retained at current levels) rather than cut to the evaluated level. But new hires into the same jobs are likely to be brought in at lower rates, a process similar to the two-tier approach in the union sector.

III. Adjustments in American Labor Costs

That there are complex connections in the U.S. between flexibility in workplace arrangements and pay flexibility should now be apparent. Especially in the 1980s, however, the issue of adjusting labor costs became critical for reasons already discussed: foreign competition, deregulation, and sharp business cycle fluctuations. Although American labor markets do not feature auction-style market clearing, pay adjustments do respond to real and nominal economic indicators. Econometric evidence does suggest some reaction of nominal wage inflation to the level of real activity (as proxied, say, by the unemployment rate). And wage inflation also responds to the pace of price inflation.

i. Evidence from Wage-Change Regressions

Table 10 presents some descriptive American wage-change regressions for the period 1954-87 to illustrate general tendencies of American wage setting at the macro level.⁸⁶ The dependent variable is the annual percent change in compensation per full-time equivalent employee (%W) from the national income accounts. This variable includes wages, fringe benefits, and employer-paid payroll taxes as components of employee compensation.

To measure price inflation, the annual percent change in the Consumer Price Index for Urban Wage Earners and Clerical Workers (%CPI) and the less volatile annual change in the private GNP deflator (%PGNP), both lagged one period, are used. Alternative views that lagged wage inflation - as opposed to price inflation - determines current wage inflation are considered by substituting lagged %W as an explanatory variable for price inflation.⁸⁷

Four alternatives were used to construct measures of real economic activity and/or labor market pressure: 1) the inverse of the official civilian unemployment rate ($1/U$), 2) the ratio of help-wanted advertising to trend (HELP), 3) the ratio of average weekly hours of production and nonsupervisory

Table 10: Annual Wage-Change Regressions

Equation number	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dependent Variable	XW	XW	XW	XW	XW	XW	XW	XW	XW	XW	XW
Constant	-.13	-.54	-.07	.29	-.90	-73.87*	-16.76**	.07	-.40	-58.81*	-14.50**
XCP1 ₋₁	.54**	-	.54*	.54**	.49**	.52**	.60**	-	-	-	-
XPGNP ₋₁	-	-	-	-	-	-	-	.71**	.60**	.74**	.73**
XW ₋₁	-	.85**	-	-	-	-	-	-	-	-	-
U ⁻¹	20.57**	7.69	20.80**	19.53**	-	-	-	15.06**	-	-	-
HELP	-	-	-	-	6.09**	-	-	-	4.85**	-	-
HOURS	-	-	-	-	-	1.92*	-	-	-	1.53*	-
GNP	-	-	-	-	-	-	20.17**	-	-	-	17.36**
PROFITS ₋₁	-	-	-.01	-	-	-	-	-	-	-	-
PROD	-	-	-	-.12	-	-	-	-	-	-	-
ar(1)	.42*	-	.43**	.36	.27	.52*	-.02	.05	.07	.15	-.20
R ²	.78	.59	.77	.78	.83	.72	.81	.74	.78	.70	.80
Standard error	.95	1.32	.97	.96	.84	1.09	.89	1.04	.96	1.11	.91
Durbin-Watson	2.17	-	2.17	2.15	2.11	2.15	1.90	2.00	1.95	1.96	1.95
n	34	34	34	34	34	34	34	34	34	34	34

Note: Period of observation is 1954-1987. See text for details.

*Significant at .05 level.
 **Significant at .01 level.

Source: Daniel J.B. Mitchell and Mahmood A. Zaidi, "Macroeconomics: Implications for Human Resource Management," working paper no. 158, UCLA Institute of Industrial Relations, October 1988.

workers (standardized to 40 hours) to trend (HOURS), and 4) the ratio of real private GNP to trend (GNP).⁴⁰ Also included in some regressions on Table 10 are equations utilizing the ratio of after-tax corporate profits to corporate labor compensation (PROFIT), lagged one period, and a productivity variable - the percent change in business output per hour (%PROD).

The first lesson about American wage determination to be drawn from the table is that all specifications perform reasonably well, with fits as measured by the adjusted R^2 ranging from just under .6 to just over .8. Given the well-known sensitivity of such equations to period of estimation and to precise variable definition, it is best not to draw strong conclusions from minor differences. If more details on U.S. wage determination are sought, they must be developed from micro-level data and institutional analysis.

Second, Table 10 reveals that profits and productivity do not work well in aggregate wage-change equations, as can be seen from equations (3) and (4). Thus, arguments that U.S. wage setting functions as a de facto profit sharing or gain sharing economy are not supported. That is, U.S. employers do not as a group move their wages in response to variations in profitability or productivity, although some firms may well do so.

Profit variables have been found to influence wage setting in disaggregated union situations.⁴¹ But they are not important enough in the aggregate significantly to affect the overall pay index for the U.S. used for the regressions of Table 10.⁴² Of course, apart from wage effects, movements in profitability may influence hiring and layoffs, thus leading to some de facto "sharing" of enterprise performance with employees. But this is not the same thing as sharing through the wage-setting mechanism.

Third, the use of lagged wage change, rather than lagged price change, in the equations does not improve the results. In fact, the lagged wage equation (2) exhibits the poorest fit of any on the table.⁴³ Employers certainly look at wage changes around them when they make their own wage decisions. But

price movements - if they are of domestic origin - reflect the demand for labor; they provide information on demand as well as the cost-of-living effect. A boot-strap model of wage setting, in which wages set wages, does not appear descriptive of the American case.

Fourth, the coefficients on lagged prices (all equations except (2)) are consistently less than 1. This result is often found in wage equation estimates. It could be that the price effect is being incorrectly measured by the specifications chosen, biasing down its coefficient. But the equations indicate that American wages react less than fully to inflation in the short run. Wage setters may look to price inflation as a guide, but they do not see it as an external indicator which must be slavishly followed. As a result, periods of unexpected inflation acceleration or deceleration in the U.S. may lead to real wage losses or gains. It is this characteristic which suggests nominal wage rigidity - but real wage flexibility - in American wage setting.

As for the choice of price index, some of the equations involving %CPI require autoregressive corrections; those using the GNP deflator do not.⁶⁴ This difference suggests that %CPI for an extended period deviated from what wage setters considered relevant to their decisions. Problems with the Consumer Price Index in the 1970s, particularly regarding housing costs, probably are the cause.⁶⁵ Wage setters, especially those without mechanical escalators, will downplay the CPI when it departs from reality as they see it.

Use of lagged prices in wage-change equations can be given two interpretations: 1) a backward-looking process, in which current wages are adjusted to make up for previous inflation, or 2) an expectations process in which past price inflation is used as a forecast of future. In practice, it is very difficult to distinguish between these alternative approaches. Direct measures of inflationary expectations are not included in the regressions of Table 10. However, studies using direct measures indicate that such expectations move sluggishly with past inflation. Thus, the two processes -

backward looking and forward looking - are virtually the same. Even when U.S. wage setters explicitly try to forecast inflation, they have historically looked back at recent inflation in an adaptive expectations process.⁴⁶

In the union sector, where long-duration contracts are the rule, the escalator option can be used to deal with future inflation, if uncertainty over the future course of inflation is considered to be a problem. And in the nonunion sector, wage decisions are largely annual. Thus, unless very rapid rates of inflation were to occur, there is little need for nonunion wage setters to worry about incorrect projections of future inflation.

Fifth, it is difficult to distinguish which of the variables representing real economic activity and/or labor market pressures is the best statistical performer. Thus, the GNP variable works about as well as the labor market variables. Help-wanted advertising happens to perform better than the other labor market variables, but this feature is a function of the particular estimation period chosen. All that can be said is that in Good Times, American nominal wages rise faster than in Hard Times, other things equal.

Sixth, the wage-change impact of Good Times and Hard Times is attenuated. For example, the unemployment coefficient in equation (1) indicates that a one percentage point increase in unemployment from 6% to 7% would slow U.S. wage inflation by only 0.5 percentage points. While the effect may be greater than found in some other countries, it is a far cry from an auction model of flexible wage setting in which even a glimmer of excess supply or demand would have a very large impact on wage change.

ii. "Sharing" Through Employment and Hours

As already noted, at the macro level, evidence of *de facto* sharing of profitability through the wage setting mechanism is difficult to find for the U.S. But there is a possibility that employees share in profitability through adjustments in employment and hours. That is, the wage bill may be correlated with profits, even if wages are not.

In fact, such a process seems to occur. A descriptive regression of annual percent change in corporate labor compensation against percent change in after-tax corporate profits suggests that each 1% rise in the latter over a two-year period is associated with about a .25% rise in the former.⁶⁷ Thus, employees as a group are "better off" during periods of profit expansion and worse off during periods of declining profits. But the effect is largely felt at the margin by those workers who are being hired or laid off.

iii. Trade Off for Job Security

The fact that sharing in the U.S. economy occurs largely through changes in employment suggests that there could be periods in which workers might be willing to make trade offs of wages for job preservation. It might be expected that such trade offs would occur in the union sector when senior workers (who dominate union decision making) felt that their job security was threatened. Since layoffs - especially in the union sector - are by reverse order of seniority, the threat would have to come from a very severe business downturn in which mass layoffs and plant closings were a real possibility. Only in such dire cases are the most senior employees at risk. Indeed, in the early 1980s, during a severe economic recession, a union wage concession movement appeared in the U.S. which then continued throughout the decade.

Wage Concessions. A precise definition of a "wage concession" is difficult to make since there is always some give-and-take in collective bargaining. However, one often-used index of concession bargaining is a contract providing either no increase, or an actual decrease, in the nominal base wage during the first year. Table 11 shows the proportion of workers under newly-negotiated major union contracts (those covering 1,000 or more) experiencing first-year wage freezes and cuts over the period 1981-1988. An alternative measure, the proportion of newly-negotiated contracts covering 50 or more workers with first-year wage freezes and cuts, is also provided. For the alternative

Table 11: Newly-Negotiated Wage Concessions, 1981-88

	1981	1982	1983	1984	1985	1986	1987	1988
Percent of Workers Under Major Settlements with:								
First-Year Wage Freezes	3%	42%	22%	18%	33%	21%	23%	20%p
First-Year Wage Cuts	5	2	15	5	3	9	4	2p

Percent of All Settlements with:								
First-Year Wage Freezes and Cuts	3	12	29	27	25	37	34	27
Freezes and Cuts Excluding Contracts with Lump-Sums and Active Escalators	2	7	21	21	14	15	16	12

Note: Major settlements refer to private agreements covering 1,000 or more workers, as surveyed by the U.S. Bureau of Labor Statistics. All settlements refer to contracts covering 50 or more workers as surveyed by the Bureau of National Affairs, Inc. (BNA). The adjusted figures on the bottom row of the table are estimates of the author, based on contract summaries published by BNA.

Source: Current Wage Developments, various issues; Daily Labor Report, various issues.

measure, an adjustment is shown eliminating contracts with active escalator clauses or lump-sum bonuses, since workers under these agreements are likely to have received some nominal pay increment in the first year even though their base wage was frozen.⁶⁶

The various measures suggest a peaking of concession activity in the early-to-mid 1980s, a period during which there was much discussion of deindustrialization in the U.S., especially within the older industrial base in which unionization is concentrated. In most cases, wage concessions were not accompanied by specific job security guarantees. However, the unions which made the concessions often avoided (or terminated) strikes which could have resulted in job loss if their members were replaced by nonunion employees. In other cases, wage concessions were made to help an ailing employer which might have otherwise gone out of business. And, in some instances, explicit job guarantees were negotiated such as an agreement not to close a particular plant.

Probably the most notable guarantees were obtained in the U.S. automobile industry from General Motors and Ford during an unscheduled contract reopening in 1982.⁶⁷ Under these renegotiated contracts, the United Auto Workers union agreed to forego scheduled wage and escalator increases and received income and job guarantees for senior employees in exchange. These guarantees were enhanced and extended in subsequent contracts.

Formula Adjustments. In some cases of concession bargaining, including the auto contracts just cited, profit sharing arrangements were part of the new agreements. Profit sharing provides a way for unions which make wage concessions to obtain a recoupment of their losses via an automatic formula if and when the employers with which they are negotiating regain their economic health. About 5% of the concession agreements negotiated during 1981-88 contained some form of profit sharing.⁷²

Certain American industries displayed a higher propensity to negotiate

profit sharing wage concession agreements than others. Table 12 provides a distribution by industry of concession agreements in industries where at least 3 profit sharing wage concessions were reported during 1981-88. Industries with the largest number of concessions and the highest proportion of profit sharing contracts included metal and motor vehicle manufacturing (both industries subject to foreign competition) and airlines (subject to deregulation). Also represented is the meatpacking industry, a largely domestic industry which was not subject to deregulation, but one in which nonunion competition and aggressive management bargaining tactics were prominently featured.

Profit sharing concession contracts, in short, tended to be negotiated in situations in which there was substantial downward pressure on wage costs. Concessions involving wage decreases, rather than just freezes, were more likely to contain profit sharing than others. The American emphasis in the 1980s was not on profit sharing as an incentive plan but on profit sharing as a way of introducing labor cost flexibility. In general, profit sharing was more likely to accompany concessions involving nominal wage cuts rather than freezes and concessions under which escalator clauses (the other main form of contingent wages) were eliminated or frozen.

iv. Real vs. Nominal Adjustments

As previously noted, a common view of the U.S. is that its wage-setting practices feature nominal wage stickiness, but real wage flexibility, as compared with other countries.⁷¹ Measured by the official Consumer Price Index (CPI), total compensation per hour fell in real terms during the recession of the mid 1970s and during the accelerating inflation and subsequent recessions of the early 1980s. Real compensation growth in the 1980s was very slow, despite an acceleration of productivity growth compared with the 1970s.

The CPI contained a faulty methodology involving mortgage interest rates

Table 12: Industrial Distribution of Profit Sharing Concession Contracts, 1981-88

	Profit Sharing Concessions Accounted for Less than 10% of All Concessions in the Industry	Profit Sharing Concessions Accounted for 10% or More of All Concessions in the Industry
10 or More Contracts Reported	Retail Foodstores Machinery Lumber & Paper	Metals Motor Vehicles Meatpacking Airlines
3-9 Contracts Reported	Food Manufacturing except meatpacking	Rubber Printing & Publishing Mining

Note: Table is based on 134 concession contracts in a data file maintained by the author drawn from settlement listings appearing in various issues of the Daily Labor Report. A concession is defined as a first-year wage freeze or cut.

until the early 1980s which tended to make it more volatile and to bias up its measurement of inflation during periods of inflation acceleration. Correcting for this problem produces a picture of somewhat improved real pay growth in the 1980s, but still less than might have been forecast based on productivity trends. Real earnings (as opposed to total compensation) of nonsupervisory employees - using a corrected CPI as the deflator - have shown a generally downward trend in the 1980s.⁷²

In nominal terms, aggregate compensation and earnings indexes have risen annually in the U.S. throughout the post-World War II period. Of course, during periods of slow nominal wage growth, individual firms and industries may experience nominal wage decreases. In the union sector - as already noted - there were nominal wage cuts in the 1980s under concession bargaining. Yet there are symptoms of nominal wage rigidity in the distribution of wage changes, even in the union sector.

Table 13 compares major construction industry first-year union wage adjustments in 1980, a year in which the median such adjustment was 13.5%, with 1983, a year in which the median was zero. Use of construction industry data has the virtue of avoiding distortion of the figures by escalator adjustments and lump-sum bonuses since these are rare in the industry. As can be seen from the table, the impact of shifting down the distribution over 1980-83 is largely a bunching at zero. Although the median adjustment in 1983 was zero, only 12% of the workers received wage decreases and the median decrease for those who did was less than 2%. In short, the unionized construction industry evidence suggests that zero is a "magic number" in U.S. wage determination. This finding, in turn, suggests a nominal orientation in setting pay.

Even outside the union sector, much the same phenomenon is observed. Table 14, for example, compares changes in average hourly earnings for 57 two-digit industries during 1978-79 and 1986-87.⁷³ Economic conditions were

Table 13: Major Union First-Year Wage Adjustments in the Construction Industry, 1980 and 1983

	Percent of Workers Covered by Settlement Range Shown	
	1980	1983
Wage Cut	0%	12%
Wage Freeze	0	44
0.1-1.9%		16
2.0-3.9%	3	6
4.0-5.9%	5	7
6.0-7.9%	12	5
8.0-9.9%	16	6
10.0-11.9%	19	
12.0-13.9%	22	4
14.0-15.9%	5	
16.0-17.9%	17	
18% or more		
<hr/>		
Median Adjustment	13.4%	0.0%
Median Increase	13.4%	3.9%
Median Decrease	--	-1.7%

Note: Details need not sum to 100% due to rounding.

Source: Current Wage Developments, vol. 33 (April 1981), p. 65;
Current Wage Developments, vol. 36 (April 1984), p. 65.

**Table 14: Change in Average Hourly Earnings in the Private,
Nonagricultural Sector, 57 Industries, 1977-78 and
1986-87**

	1977-78	1986-87
Mean Change in Earnings	8.7%	2.5%
Percent of Industries Below Mean Change	54%	44%
Standard Deviation of Earnings Change	2.3%	1.8%

Source: Employment and Earnings, various issues.

roughly similar in real terms during these periods; in 1977-78, the annual unemployment rate dropped from 6.9% to 6.0% while in 1986-87, the rate dropped from 6.9% to 6.1%. Both were also periods of accelerating inflation.

In the low inflation 1986-87 period, only 4 industries (7% of the total representing about 4% of private, nonagricultural employment) exhibited a negative change in average hourly earnings, although the average adjustment for all 57 industries was only 2.5%.⁷⁴ The distribution seemed to compress at the bottom as its mean approached zero. Only 44% of the industries exhibited below-mean adjustments in 1986-87 compared with 54% in 1977-78. Again, zero seems to be a point of resistance in American wage setting, suggesting a form of nominal wage rigidity.

Formal Escalation. The nominal orientation of American wage setting should not be taken to indicate complete money illusion, i.e., a complete ignoring of price trends. As already noted, American wage-change equations indicate that price inflation does affect wage inflation, even if the impact is not fully transmitted in the short term. Within the private union sector, there has been significant use of escalation in major bargaining situations - those involving 1,000 or more workers - since the late 1940s.

In general terms, use of escalation in the American union sector has tended to rise during periods of high inflation and has fallen off during low inflation periods. Economists often prefer to think of escalation as being sensitive to uncertainty over inflation rather than inflation itself; in fact, inflation variation is correlated with the rate of inflation, making it difficult to unravel the linkage. Escalation in the early 1970s was also stimulated by certain regulatory oddities in the then-existing wage controls program which gave favorable treatment to escalator increases.⁷⁵

At its peak in the late 1970s, escalators covered about 6 out of 10 private workers in the major union sector. (Escalation was much less common among state and local government workers but has been included in the large

postal contracts at the federal government level). During the 1980s, employers pushed for elimination of escalator clauses, a pressure which resulted in a decline in coverage in the major private union sector to about 40% toward the end of the decade.⁷⁶ By that period, even with a generous allowance for escalation coverage in small union contracts, the proportion of all private wage and salary earners (union and nonunion) covered by escalation, could not have exceeded 5-6%.⁷⁷

Those American union contracts which retained escalation by the late 1980s often contained various limits on the operation of the escalator formula, the results of compromises with employers who did not achieve total escalator elimination. However, these limits were not invented in the 1980s. Caps (absolute limits on the escalator pay out), corridors (requirements that inflation reach a specified level before the escalator clause would operate), and formulas which provide less than proportionate wage increases when prices rise, all existed in the 1970s and before. Indeed, escalators which provide a simple 1% wage increase for each 1% price increase are almost never found in the U.S. There is evidence that until the 1980s, union sector workers covered by escalators were more protected from inflation than others, through a combination of escalator and fixed wage adjustments.⁷⁸ But even then, these workers were a distinct minority of the overall workforce.

Informal Practice. Although formal escalation covered relatively few American workers, there are some American practices in wage setting which suggest that price inflation is recognized as a pay determinant. Among these is the widespread use of the phrase "cost of living adjustment" to refer to any across-the-board pay increase made by employers. Even employers who insist that they only give individual pay increases based on "merit" somehow seem to give bigger merit awards during periods of high inflation.

Employers which provide health care coverage to their employees often absorb some of the effect of health-care cost inflation. These commitments

became less common during the 1980s, partly due to concerns about the rising price of health care. But some absorption persisted. Although almost no private pension payments are indexed, it is not uncommon for employers to provide ad hoc pension increases for retirees which partly compensate for the erosion of retirement income by inflation.⁷⁷ Still, the lack of indexing in private pensions is yet another indication of the nominal orientation of the American compensation system.⁸⁰

v. Flexible Pay or Norm Shift?

During the 1980s, with relatively high unemployment rates prevailing in some European countries, there was a tendency for economists to attribute the faster rate of job creation in the U.S. to a variety of labor market flexibilities, including pay flexibility.⁸¹ Yet flexibility is a misleading word in the American case when it comes to pay. As already shown, wage-change equations for the U.S. indicate that the level of real economic activity has only a modest short-run effect on wage inflation.

To some extent, the nominal orientation of wage setting in the U.S. can lead to circumstances in which real wages can be reduced by price inflation. Thus, external inflation shocks from oil prices in the 1970s cut into U.S. real wages, whereas in some other countries, wages were escalated or otherwise boosted to compensate for such shocks, leading to domestic wage-price pressures and to stagnation. In the 1980s, however, the external shocks were negative in the U.S., and yet real wage growth was surprisingly moderate when compared with productivity trends.

What seems to occur in American wage setting are discrete shifts in what George Perry has termed "wage norms" that persist for extended periods.⁸² These norms seem to be influenced by extended episodes of economic slackness, by government programs (such as wage guidelines), and by the general political climate, and seem to be especially concentrated in the union sector.⁸³ Thus, the early 1960s was a period of a downward shift in the norm, leading to very

moderate wage inflation. American wage inflation was slow to accelerate, even in the face of rising price inflation in the mid-to-late 1960s.

Eventually, however, rising price inflation and tightening labor markets shifted the norm up. The 1970s became a difficult period from a macroeconomic perspective, with symptoms of wage-price spirals appearing at relatively high unemployment rates. This norm shift reversed in the 1980s, following a severe recession and during a period of political conservatism. With wage moderation guaranteed by the downward norm shift, economic expansion could proceed without risk of inflation acceleration until the unemployment rate fell towards the 5% level in the late 1980s. It was the downward wage norm shift, rather than short-term pay flexibility, which led to improved U.S. macroeconomic performance.⁸⁴

Workplace Decisions on Alternative Pay

Although it is possible to view flexible pay systems as part of a macroeconomic strategy, decisions to install particular pay systems in the U.S. are generally undertaken at the micro level for micro-level reasons. Usually, management is concerned about such issues as productivity, loyalty, and morale when it determines the pay system for a work unit. In some cases, however, certain forms of pay systems receive favorable treatment under U.S. tax laws, thus interjecting an element of public policy into the pay system choice. And there are elements of faddism which have influenced the choice of pay system in some periods.

I. The Idea of Self-Enforcing Contracts

Firms face a dilemma in determining the ideal pay system from a managerial perspective. They can pay workers a time-based wage or pay on the basis of some formula linked to firm, group, or individual performance. There has been in the U.S. a long-term trend toward time-based pay and away from simple incentive systems (as defined below).⁸⁵ Interest in other forms of

firm-based or group-based pay seems to have followed historical ebbs and flows.

Economists have generally characterized the choice of pay system as resulting from imperfect information, the costs of monitoring, and potential "shirking" behavior by employees. Even if employers pay for labor on a time basis, they are really seeking work effort, not just time spent on the job. To ensure that appropriate effort is delivered, firms rely on supervisory overhead personnel to direct, motivate, and monitor the workforce. Supervisors, however, are costly, and the alternative has been seen as an automatic formula-based pay system which would provide the correct incentives without costly overhead expenditures. What is being sought is a self-enforcing employment contract, which from the management perspective is one which reduces shirking behavior.²⁴

II. Individual Effort

The idea of paying for performance (rather than time) has been around since the early industrial revolution, if not before. However, it has turned out to be an easier concept to describe in the abstract than to implement in practice in the American context. Usually, as applied to the individual, pay for performance has meant a choice between some kind of automatic piece rate system or bonuses awarded after supervisory reviews. The former, in theory, involves reduced supervisory overhead costs; the latter involves subjective judgment.

Several hurdles appear to have contributed to a decline in the popularity of the automatic approach in the U.S. and have been featured in the American literature. First, defining the target on which pay is to be based has proven to have pitfalls. For example, if the target is quantity, quality may be sacrificed.

Second, dynamic problems have been found to arise over changes in standards. Workers may restrict output if they believe high productivity will

result in readjustment of the pay formula as higher production norms are set. Resentment over the resetting of standards, often through some form of time and motion study, can lead to workplace frictions which also compromise productivity.

Third, simple formulas making pay proportionate to output or value produced do not necessarily marry the interests of worker and employer. Workers receive only a fraction of the incremental market value of what they produce. Thus, the value of effort to them will generally be less than it is to management under simple pay formulas. The interests of worker and employer may actually diverge under such formulas.⁹⁷

III. Team Cooperation

In many workplace situations, individuals have only partial control of their own productivity. Where team production is involved, the productivity of each individual on the team depends importantly on the output of others. Such situations run the gamut from assembly lines in the blue-collar case to project task forces among professional workers. In fact, situations in which some interaction between workers is required are commonplace.

Where it is difficult to attribute output to an individual, various pay systems are available which make payments to the entire work group contingent on group output. Such systems may involve an overlay of employee participation mechanisms but not all do. Often seen as a dilemma for such systems is the so-called "free-rider" problem. Since pay is not conditioned on the output of the individual worker, there may be incentives for the individual to shirk, leaving the burden to fall on other members of the team. In a situation in which there are, say, 100 workers in the group, each individual will collect only 1/100 of the incremental bonus generated by his or her extra effort.

The free-rider problem is not inherently insurmountable. It is possible that the work group will develop its own norms and systems of social pressure

which will ensure optimal effort from each member. Indeed, the overlay of participative machinery sometimes used with such pay systems in the U.S. may be viewed as a way of encouraging such pressure.

IV. Loyalty to the Firm

American employers often seek to have loyal workforces. Loyalty can be an ephemeral concept but it generally connotes cooperative attitudes, willingness to make productivity-enhancing suggestions, and low rates of voluntary quits. This last attribute of loyalty will be especially important in cases in which the firm has made substantial investments in the employee.

One way of promoting loyalty is to create a pay system under which employees feel they are receiving something "extra" from their employer, something not readily available elsewhere in the labor market. Pay plans which involve bonuses based on overall firm performance may be structured to provide such extra pay. For example, the American practitioner-oriented literature on profit sharing has long suggested that the resulting bonuses be depicted as "gravy" on top of the regular pay which would be received in any case.⁶⁶ Firms are urged not to provide less than the going market wage in regular pay so that the bonus is truly a sharing of firm performance. In the theoretical literature, the concept of a "gift exchange" to motivate workers has been put forward, a concept which can be linked to the gravy view of share systems.⁶⁷

V. Stakeholder View

There is growing recognition that employees behave as if they have a substantial investment in their jobs. As already depicted on Table 9, long durations of employment with a single employer are common in the U.S. Given such investments, employees can be characterized as stakeholders in the enterprise. That some element of pay would reflect a return on investment seems appropriate, given the stakeholder view. And just as the returns to

shareholders vary with the economic conditions of the firm, so, too, might the returns to employee/stakeholders.

VI. Specific Alternative Pay Systems

There are many systems of pay found in the U.S. Particularly complex are the various arrangements involving executive pay. Apart from American executive pay plans - which are not the subject of this report - the alternatives to time-based pay most widely discussed are simple incentive plans, gain sharing plans, profit sharing plans, and employee stock ownership plans (ESOPs). In addition, pay for knowledge schemes and the use of lump-sum bonuses (in place of wage increases) have sometimes been linked to new thinking on employee compensation.

Unfortunately, U.S. data on the incidence of the various types of pay systems are spotty. One study, conducted by the American Productivity Center (APC) in the mid 1980s provides some indication of the popularity of the alternative systems. Summary data from that survey are shown on Table 15. However, the APC results are undoubtedly biased towards firms which have such plans, and thus exaggerate their usage.⁹² Alternative information on plan incidence is therefore also provided on Table 15.

i. Simple Incentives

Simple incentives (such as piece rates for individuals and small work groups or commissions for sales workers) are usually viewed by human resource professionals as productivity motivators. This view is mirrored on Table 16, which summarizes a survey of American managers taken in the mid 1980s. Forty-two percent of the managers, when asked to rank alternative pay systems by their effect on productivity, chose simple incentives as the best device, a figure substantially exceeding those selecting profit sharing, gain sharing, or ESOPs.

Although piece rates and similar pay systems have a long history pre-

Table 15: Incidence of Alternative Pay Systems in the U.S.

Type of System	Percent of Firms in APC Study [A]	Other Information
Individual Incentive	28%	A 1971 study of urban plantworkers found that only 14% were paid on an incentive basis (20% in manufacturing). A study in the early 1980s found a decline in manufacturing. [B & C]
Small Group Incentive	14%	
Gain Sharing	13%	A report in the found fewer than 400 Scanlon plans and indicated that the number of other types of gain sharing plans was unknown. [D]
Profit Sharing	32%	22% of full-time employees in medium and large firms had profit sharing in 1986. Of these, only 1% were under cash plans, 18% were under deferred plans, and 3% were under plans with both cash and deferred options. [E]
Employee Stock Ownership Plans	n.a.	30% of full-time employees in medium and large firms had some form of ESOP in 1986. But only 2% of these were under "regular" ESOPs; the rest were under tax-credit ESOPs. [E]
Pay for Knowledge	5%	--
Lump-Sum Bonuses	30%	43% of workers under major private union agreements had lump-sum provisions [F]

Note: [] = Source of information. See below.

Table 15 - continued

- [A] = Carla O'Dell and Jerry McAdams, People, Performance, and Pay (Houston: American Productivity Center, 1987).
- [B] = John Howell Cox, "Time and Incentive Pay Practices in Urban Areas," Monthly Labor Review, vol. 94 (December 1971), pp. 53-56.
- [C] = Norma W. Carlson, "Time Rates Tighten Their Grip on Manufacturing Industries," Monthly Labor Review, vol. 105 (May 1982), pp. 15-22.
- [D] = U.S. General Accounting Office, Productivity Sharing Programs: Can They Contribute to Productivity Improvement?, AFMD-81-72 (Washington: GAO, 1981).
- [E] = U.S. Bureau of Labor Statistics, Employee Benefits in Medium and Large Firms, 1986, bulletin 2281 (Washington: GPO, 1987).
- [F] = William M. Davis and Fehmida Sleemi, "Collective Bargaining in 1989: Negotiators Will Face Diverse Issues," Monthly Labor Review, vol. 112 (January 1989), pp. 10-24.

Table 16: Attitudes of Management Respondents Toward Selected Pay Systems (percentages)

	Profit Sharing	ESOP	Gain Sharing	Simple Incentives
Plan best for:				
raising productivity	28(30)	5(5)	26(59*)	42(55*)
increasing loyalty	48(49)	17(22)	18(41*)	15(20*)
retirement income	81(88*) ¹	12(24*)	n.a.	n.a.
linking labor costs to firm's economic condition	53(56*)	n.a.	28(57*)	19(23*)

*Chi-squared test indicates that the pattern of responses by those whose firm had the plan was significantly different from that of other respondents at the 5% level.

¹Refers only to tax-deferred profit sharing plans.

Note: Figures on table refer to the number of management respondents who agreed with statement. The first figure refers to all respondents; the second figure in parentheses refers only to those managers whose firms had the pay system listed in the row.

Source: Daniel J.B. Mitchell and Renae F. Broderick, "Flexible Pay Systems in the American Context," Advances in Labor Economics, vol. 5, forthcoming.

dating modern industrialization, American interest in such system was heightened by the "scientific management" movement associated with Frederick W. Taylor at the turn of the century.⁷¹ Taylor argued that existing piece rate systems were improperly and unprofessionally administered, leading to worker restriction of output, what Taylor termed "soldiering." He proposed the use of scientific time-and-motion studies, administered by a professional planning department, to determine output norms. Taylor also suggested the use of a "differential piece rate," one which provided a higher rate per piece above the scientifically-chosen norm.

The idea of applying science and analysis to economic and social issues was much in vogue in the U.S. when Taylor wrote. A number of Taylor's followers - Bedaux, Halsey, Rowan, and others - produced their own versions of differential piece rate systems. By the 1920s, the use of piece rates in American industry appeared to be at its height, although many firms did not adopt the differential approach.⁷²

With the start of the Great Depression, a long-term trend away from simple incentives began. Three influences seemed to play a part in this decline. First, despite Taylor's hope, the use of time-and-motion studies did not eliminate worker-employer frictions over the establishment of output norms. As unionization rose in the 1930s, firms dropped piece rate systems hoping this would reduce internal frictions and avert unionization of their employees. Second, academic research and writings began to suggest that simple incentives were not progressive human resource policies.

Restriction of output under incentives was found to be a greater problem than many managers believed and it was found to occur in nonunion situations as well as union.⁷³ Moreover, the use of psychology was becoming popular and some writers in that field tended to take a dim view of the "economic man" assumption inherent in simple incentives. Other, more humanistic motivational approaches were seen as appropriate. The famous Hawthorne studies conducted

by Harvard researchers were viewed as evidence that good human resource practice was the key to higher productivity rather than use of incentives.⁷⁴

Finally, the threat of unionization in the 1930s and after elevated the status of personnel departments within American enterprises. From the viewpoint of these departments, continued use of incentives meant that industrial engineers and line managers would control the pay and reward system. In contrast, time-based pay combined with subjective performance appraisals and merit awards were more the province of the personnel department and helped maintain their new status.

There was some reversal of the move away from simple incentives during World War II. However, in the postwar period the decline in use of incentives resumed. Although the APC study of Table 15 reports that 28% of the firms covered used individual incentive systems, not all workers employed by these firms were involved. In many cases, only a small proportion of the overall workforce of the firms may have been covered by simple incentives. Thus, while no comprehensive data source is available, an educated guess would be that the proportion of the overall American workforce covered by simple incentives by the 1980s was well under 10%.

ii. Gain Sharing

Three types of plans are commonly cited as examples of gain sharing in the U.S.: Scanlon plans, Rucker plans, and Improshare plans. Although there is a substantial literature related to gain sharing plans, it seems disproportionate to their actual usage. The APC study found that 13% of respondents had some form of gain sharing, a proportion that was most likely upward biased. There may have been some increase in incidence of gain sharing in the 1980s, and their use may have spread to larger firms, whereas at one time these plans were almost always associated with small employers.⁷⁵

Scanlon plans are essentially union-sector plans. They originated in the 1930s as part of a cooperative union-management effort to save a floundering

enterprise. Under a Scanlon plan, workers receive cash bonuses geared to the value of sales (adjusted for inventory change) if the ratio of labor costs to sales value is decreased below a target value. The plan involves a participative mechanism, a forerunner of the quality circle, by which workers are enlisted to reduce costs.⁷⁶

American academics were much attracted to the Scanlon approach with its emphasis on combining union-management cooperation, employee participation in decision making, and a sharing of financial outcomes. The cooperative idea was especially attractive immediately after World War II when the union sector was characterized by a wave of strikes. Textbooks of the 1950s and 1960s praised the Scanlon approach.⁷⁷ Yet few workers were covered by such plans. The academic influence that had contributed to the decline of simple incentives in the U.S. seemed unable to stimulate a trend toward gain sharing.

As noted above, Scanlon plans are not the only form of gain sharing found in the U.S. Rucker plans are similar to Scanlon plans, except that value added rather than sales value is used to calculate the bonus. Improshare plans are based on physical output and need not include a participative mechanism. An interesting finding of the APC study was that most gain sharing plans are not Scanlon, Rucker, or Improshare systems. Rather they are specialized pay systems developed by the firms themselves. Indeed, probably the most widely publicized U.S. gain sharing plan (with the possible exception of the original Scanlon plan itself) was the Kaiser (Steel) Long Range Sharing Plan, a pay system custom-designed by union and management in the early 1960s. Heralded in the 1960s as an exciting pay innovation, the Kaiser plan receded from public attention by the 1970s, then surfaced again as an irritant during the concession bargaining of the 1980s.⁷⁸

Despite disappointments such as the Kaiser plan, those managers whose firms actually have gain sharing tend to be enthusiastic about the concept. As Table 16 shows, 59% of such managers (as opposed to 26% of all managers)

thought that gain sharing was best for raising productivity. Gain sharing was also seen as best for linking labor costs to the firm's economic situation by managers whose firms used these plans.

iii. Profit Sharing

American profit sharing comes in two basic forms: cash and deferred. Under the latter, bonuses based on profits are placed in a tax-deferred trust fund which employees can draw upon when they retire. The employee incurs no income tax liability until the funds are withdrawn from the trust. Cash plans, which Table 15 shows are far less common, receive no tax advantage. Under such plans, employees receive cash bonuses based on profits which are subject to taxation in the same manner as regular wages.

Unfortunately, the tax aspects of profit sharing add to a confusion of terminology in the American case. Under the tax code, the amounts paid into the trust need have no relationship to firm profitability. On the other hand, employers have a freer hand in investing the trust's assets as compared with other forms of retirement and pension plans; substantial amounts may be invested in the firm's own shares. Thus, there are many tax-deferred retirement plans labeled profit sharing which are not true profit sharing plans. A 1986 survey found that 46% of reported profit sharing plans did not use a fixed formula geared to profits. Generally, small firms were more likely to have such "discretionary" plans than large firms."

Profit sharing has a long history in the U.S., going back into the 19th century if not before. Social reformers of the period sometimes saw profit sharing as the answer to labor-management conflict. Profit sharing proponents with a more managerial orientation sometimes argued that it was a better incentive system than piece rates because it avoided perverse motivations to favor quantity over quality. However, Taylor and his followers were not keen on profit sharing because they regarded the incentives as too remote from the individual worker.

This view of profit sharing has remained a part of American managerial thinking. Profit sharing is often viewed as a tool for encouraging worker morale, loyalty, and goodwill, but not a direct incentive. As Table 16 shows, modern managers are likely to see profit sharing as a retirement income scheme and as a way of making labor costs more sensitive to the firm's economic situation. Evidently, the free-rider problem is an element in American managerial thinking about the incentive potential of profit sharing.

iv. Employee Stock Ownership Plans

Under employee stock ownership plans, a trust is set up to hold stock for employees. The firm may contribute stock to the trust which it either creates or buys in the open market. Substantial tax advantages have been bestowed on these plans and survey evidence suggests that it is these advantages, rather than a belief in an employee-motivation effect, that has stimulated their use.¹⁰⁰

Workers under ESOPs do not have to be given voting rights of the type normally associated with share ownership, especially in privately-held firms. ESOPs have sometimes been used to finance employee buyouts of troubled enterprises, but most ESOPs are not of this variety and in most cases the ESOP holds well below a controlling interest in the firm.¹⁰¹ As Table 16 shows, ESOPs tend not to be highly rated by managers for their impacts on productivity, loyalty, or even as a source of eventual retirement income.

These low ratings undoubtedly result from the fact that ESOPs have been treated by Congress largely as a financing tool for firms. Although Congress seems to have been interested in addition in spreading wealth and raising productivity, it has used tax incentives which revolve around the financial function. Leveraged ESOPs are able to borrow from outside sources - such as banks - and pass the funds to the enterprise which in turn contributes what is supposed to be an equal value of shares to the trust.

Under such a leveraged transaction, the firm is able to deduct both

interest and principal repayments (rather than just interest payments as under conventional lending). ESOP proponents have tended to view this feature as a tax subsidy, although it really is not if the shares are properly valued.¹⁰² The difficulty is that ESOPs are often associated with privately-held firms and thus no open market exists in which share value can be objectively determined. There is a resulting temptation to inflate the declared value of the stock for tax purposes.¹⁰³

In the 1980s, additional tax benefits were provided to ESOPs. For example, lenders to leveraged ESOPs need not pay tax on one half of the interest income they thereby earn; as a result, ESOPs borrow at lower rates than other borrowers. In addition, Congress enabled firms to establish special "tax-credit ESOPs" while deducting the costs from their tax liabilities. Tax-credit ESOPs were thus essentially paid for by the federal treasury. Although they were limited to a very small share of payroll, the provisions became very expensive as the tax-credit plans became popular.

The provisions for tax-credit ESOPs were repealed in 1986, but they left a legacy of a large number of employee participants in these special plans with small values of asset per participant. The tax-credit plans tend to distort the general view of the incidence of regular ESOPs, since the two types of plans are often lumped together. As Table 15 indicates, 30% of full-time employees in medium and large firms were covered by some type of ESOP in 1986. But 28% were under tax-credit ESOPs leaving only 2% under regular ESOPs. Regular ESOPs will undoubtedly expand in coverage because of their favorable tax treatment, but they cover a much smaller fraction of the workforce than is widely believed, because of the statistical distortion associated with the tax-credit plans.

The various tax incentives for ESOPs arose from an alliance between their initial proponent, Louis Kelso, and the chair of the Senate Finance Committee, Russell Long. Kelso advocated ESOPs as a social reform designed to spread

capital ownership to employees.¹⁰⁴ Long, whose father Senator Huey Long led a populist "share the wealth" movement in the 1930s, was attracted to the proposal. Although Kelso continues to push for expansion of the ESOP concept,¹⁰⁵ Russell Long's retirement from the Senate may eventually lead to reduced tax benefits for ESOPs.

v. Pay for Knowledge

Pay for knowledge schemes involve paying the employee on the basis of skills acquired rather than specific job performed. In recent years, the idea has been associated in the U.S. with quality of working life initiatives such as the "team concept."¹⁰⁶ Under this approach, workers are organized into autonomous groups with members all able to perform a variety of tasks with minimal supervision. But it can also be traced back to notions of "job rotation" and "job enlargement" developed in the 1950s and earlier.

Only 5% of the respondents to the APC survey indicated that pay for knowledge was used in their firms. The relative rarity of pay for knowledge is confirmed by another study, this one of Fortune 1000 companies, which found that 60% had no pay for knowledge schemes at all, and another 25% had them for no more than 20% of their employees.¹⁰⁷ Unfortunately, the lack of time-series data makes it difficult to draw conclusions about trend. Since 40% of the companies surveyed had some pay for knowledge coverage, albeit for only a small proportion of employees in most cases, there probably was growth in this type of pay system in the 1980s. It is doubtful that the figures would have been even as high as the low level indicated on Table 15 in the 1970s.

vi. Lump-Sum Bonuses

Lump-sum bonuses came into wide use in the American union sector as part of the general wage concession movement in the 1980s. These bonuses are used as substitutes for basic wage increases. The result is a saving in total labor costs for the employer. For example, if an employer substitutes three

annual 3% bonuses in a three-year contract for three annual 3% wage increases, the base wage in the former case will be no higher at the end of the contract than at the beginning. As a first approximation, the cost of the contract will be equivalent to a 3% increase in the first year with no increase thereafter. In contrast, with three 3% wage increases, wages will rise by 9%. The saving from lump sums will probably be even greater than the 6% difference because certain fringe benefits, such as pensions, will probably be geared to the base wage and will be unaffected by the bonuses.¹⁰⁸

As Table 15 shows, by late 1988, 43% of workers under private sector major union agreements (those involving 1,000 or more workers) were covered by provisions involving lump-sum payments. Not all of these workers were under contracts with no wage increases; many contracts by the late 1980s provided for a mix of lump-sum bonuses and wage increases. In some cases, a lump-sum payment was to be made immediately on contract ratification by the membership, thus providing an incentive for union members to accept the wage package negotiated for them.¹⁰⁹

One possibility that has received some attention in the U.S. is that the lump-sum bonuses might be transformed into a *de facto* profit sharing system along the lines said to occur in Japan. That is, there might come to be a base wage negotiation and a bonus negotiation with the bonus linked to the economic conditions of the employer. As Table 17 shows, concession contracts (defined as those with wage freezes and cuts) were less likely to contain lump-sum bonuses if they also contained profit sharing.

This negative correlation might be taken to suggest that profit sharing and lump-sum provisions were seen as substitutes. However, it appears that the negative relationship stems almost entirely from those profit sharing contracts which also cut the base wage. Since lump-sums are rare in contracts with cuts, the negative association of lump-sums and profit sharing seems to stem from the positive association between cuts and installation of profit

Table 17: Selected Characteristics of Union Wage Concession Contracts, 1981-87, Non-construction Sector

	All Contracts	Contracts with Profit Sharing		
		All	With Cuts	Without Cuts
Wage Cuts	15%	36%	100%	0%
Profit Sharing	7%	100%	100%	100%
Lump-Sum Bonuses	41%	27%	11%	37%

Note: Figures show the proportion of contracts in each column falling into category specified in row.

Source: Daniel J.B. Mitchell, "Will Collective Bargaining Outcomes in the 1990s Look Like Those of the 1980s?," Labor Law Journal, vol. 40 (August 1989), forthcoming.

sharing. As yet, therefore, there is no concrete evidence that lump-sum bonuses are evolving into a profit sharing system in the U.S.

Methods of Implementation

The American labor market is characterized by an extremely decentralized system of wage setting and establishment of human resource policies. In the private sector as of 1988, 86% of wage and salary employees were not union-represented. Their pay policies were thus unilaterally determined by employers, influenced - of course - by external labor market conditions. Union-sector employees are more prone than nonunion to be influenced by pattern settlements, especially within the major contracts covering 1,000 or more employees, which account for about half of all union workers. However, the scope of pattern bargaining narrowed in the 1980s as part of the concession movement.

Many American workers are employed by relatively small firms. Unfortunately, comprehensive data by size of firm are not available for the U.S. workforce. The 1982 Enterprise Statistics survey, which included roughly 8 out of 10 paid employees, reported that 46% of covered employees worked for firms with fewer than 100 workers and 63% worked for firms with fewer than 1,000 workers. Twenty-four percent worked for firms with 10,000 or more employees.¹¹⁰

I. Unilateral Employer Establishment

There is no national policy which compels the myriad small employers in the U.S. economy, or even the larger ones, to follow uniform human resources practices with regard to pay or pay systems. The only significant exceptions to this rule are the establishment under the Fair Labor Standards Act of a federal minimum wage and the requirement that an overtime premium of 50% be paid for weekly work hours above 40. Certain incentives through the tax code, to which references have already been made, also affect the choices employers

make regarding pay systems. Apart from tax incentives, three considerations appear to have influenced these choices in the U.S.: efficiency, founder philosophy, and union avoidance.

i. Efficiency

From the economic perspective, efficiency is usually taken to mean profit maximization. Absent perfect information and in the presence of costly monitoring and supervision expenses, employers adopt pay systems which they believe to be cost effective. Thus, for example, commission pay systems may be used for sales workers, especially in circumstances in which supervisory monitoring is difficult such as door-to-door or traveling sales personnel. Truck drivers may be paid on the basis of distance traveled, rather than hours worked, for similar reasons.

However, what matters is the perception of efficiency. Employers may not always know which pay system is most efficient. As previously noted, a complex interplay of social norms and fads - historically influenced in the American case by trends in academic research, government policies, and political movements - seems to have altered this perception throughout the twentieth century.

ii. Founder Philosophy

Innovations in human resource policy in the U.S. are often found in firms which are innovators in the products and services they offer. During the first half of the 18th century, the textile industry in Lowell, Massachusetts - an industry which was then at the forefront of modern technology - offered its heavily female workforce dormitory arrangements and comparatively high wages. American and foreign reformers visited Lowell to see and describe this innovation of the early industrial revolution.¹¹¹ Similarly, in the early part of this century, when Henry Ford introduced the mass-produced, low-priced automobile to the American market, the Ford Motor Company also was noted for

paternalistic "welfare work" among its employees and a high-wage policy.¹¹²

American popular books which appeared in the 1980s focused on successful firms, especially "high-tech" firms such as IBM and Hewlett-Packard, and often commented on their human resource policies.¹¹³ But being an innovator in the market place and having innovative human resource policies - including pay policies - is not a guarantee of ultimate success. During the early 1980s, for example, American business schools often used the case of People Express, an upstart airline which took quick advantage of deregulation, as an illustration of a firm with forward-looking human resource policies.¹¹⁴ People Express used both profit sharing and employee stock ownership, a reflection of its founder's interest in "high commitment and participation" of employees. By the late 1980s, despite these policies, People Express was no longer in business and the case had disappeared from the business school textbooks.

Innovative firms such as People Express, whether they eventually succeed or fail, are commonly entrepreneurial in character. Often they are owned and managed by individuals who are receptive to new ideas, both in the product market and labor market. These founding figures may have philosophies of human resource management which are reflected in the forming corporate cultures of their enterprises and which may outlive the founder if the firm prospers.¹¹⁵ Thus, a favorite case in American compensation courses for many years has been that of the Lincoln Electric Company whose founder, James F. Lincoln, was a firm believer in incentive pay and profit sharing.¹¹⁶ Unlike People Express, Lincoln Electric has a long history of successful operation.

iii. Union Avoidance

American employers have been more aggressive in implementing union avoidance strategies than employers in many other industrialized countries. The reasons for this difference has been widely debated. It is sometimes attributed to a lesser degree of radicalism within the U.S. workforce than

exists elsewhere.¹¹⁷ Whatever the cause, American employers have sometimes implemented particular pay systems in an effort to reduce the odds of being unionized.

American unions have never had a unified posture regarding piece rate systems.¹¹⁸ Their views tended to be influenced by the pre-existing practices in the industries they organized. However, they did initially oppose the more elaborate piece rates and other accoutrements of scientific management because the scientific management approach was often viewed by employers as a way of avoiding union control of jobs. Profit sharing was sometimes seen by employers in the early part of the century as a device to avoid unions as well, leading to union hostility toward that pay system, too.¹¹⁹ There is some evidence that profit sharing is still sometimes used in the U.S. for union avoidance.¹²⁰

II. Collective Bargaining

Even if sometimes used by nonunion employers for union avoidance, alternative pay systems may also be implemented at unionized firms by mutual agreement through collective bargaining in the U.S. The Scanlon form of gain sharing, as has already been noted, is a union-oriented plan developed by a union official. During the 1920s, unions - facing hostile employers and declining membership - formed an alliance with advocates of scientific management hoping to make themselves more attractive to employers concerned with efficiency.¹²¹ And during the 1980s, under somewhat comparable circumstances, unions evidenced increased interest in profit sharing and employee stock ownership, especially where employers in economic difficulty were pushing for wage concessions.

Just as in the nonunion sector, the adoption of an innovative pay system pursuant to a collective bargaining contract has not been a guarantee of success. There were instances in which companies which became employee owned through union-sponsored buyouts later failed and went out of business. The

Rath Packing Company is probably the best known example.¹²² But there have been other cases in which employee ownership has led to economic success, as at Weirton Steel.¹²³

The largest breakthrough for profit sharing in the American union sector in the 1980s came in the automobile concession negotiations with Ford and General Motors of 1982. It has already been noted that these settlements included a variety of job and income security provisions in exchange for wage concessions. Profit sharing was included in these agreements for the first time, in part to provide more labor cost flexibility in exchange for less employment flexibility. Eventually, profit sharing was also included in the Chrysler contract as well. Since these three firms have had varied histories of performance in the 1980s, the profit sharing bonuses they have paid have differed considerably, even though other elements of compensation remain similar across the automobile industry.

Union involvement in profit sharing inevitably pushes union leaders toward greater involvement in management decision making. At a minimum, unions need access to corporate accounts in order to assure that the profit sharing bonuses are being appropriately calculated. Concern about the quality of management decisions (which influence profitability) may follow.¹²⁴ At this point, however, the full impact of profit sharing on American unions has yet to be determined.

III. Government Incentives or Mandate

Although the economic role of government began to increase in the 1930s, the pattern established at that time was for the government to establish a process of collective negotiations to determine wages and conditions. Under the Wagner Act of 1935, an election framework for resolving disputes over union representation was created. Once a union was certified as the winner of a representation election, employers were to bargain with it over the terms of the employment contract. The federal government did not mandate particular

outcomes of the negotiating process in the 1930s, other than the already-noted floor minimum wage and overtime premium.

Much government policy in the post World War II period with regard to compensation has been aimed at fringe benefits such as pensions and health insurance. In keeping with the precedents of the 1930s, the federal role in these matters has primarily been to create incentives through the tax system for the establishment of certain kinds of benefits. Some benefits - such as life insurance up to specified limits - completely escape income taxation. Employer contributions for such insurance are deductible from company income taxes as legitimate business costs. The eventual beneficiaries of the insurance payments upon the death of the insured pay no tax on their receipts.

In other cases, a lesser subsidy is provided. Thus, pension contributions by the employer are not taxable to the employee at the time the contributions are made, nor are the earnings on the investments made with those contributions. Upon receipt on pension benefits, however, the recipient incurs a tax liability. But this liability has been deferred for many years and the recipient is likely to be in a lower tax bracket at retirement time than during worklife, due to the progressive U.S. tax rate structure.

The policy of the 1930s that workplace disputes and outcomes would be resolved primarily through collective bargaining limited government's role in such matters to policing the negotiating process and to providing tax incentives. But as unionization of the workforce fell after the 1950s, it became more and more difficult to frame public policy within a collective bargaining rationale. The idea that public policy might mandate certain outcomes in the workplace began to gain more currency. An early example of this trend was the passage of the Occupational Safety and Health Act of 1970, which established a variety of federal safety and health standards.

A number of conditional mandates were adopted in the 1970s in the benefit area. For example, employers were not required to offer health insurance to

employees. But if they chose to do so, employers had to meet the requirements of the Health Maintenance Organization Act of 1973.¹²⁵ Employers were not required to offer pensions or other retirement programs. But if they did offer them, these plans had to meet the requirements of the Employee Retirement Income Security Act of 1974.¹²⁶ Employers were not required to provide disability leave plans for employees. But if they chose to do so, these plans were required to include leaves for pregnancy and childbirth pursuant to the Pregnancy Discrimination Act of 1978.

The trend toward mandates and quasi-mandates continued in the 1980s. Legislation in the mid 1980s required that employees offering health insurance give laid-off workers the option of continuing to purchase the insurance at the advantageous employer group rate. In the late 1980s, legislation was adopted requiring employers to give 60 days notice to employees in the event of mass layoffs and plant closings. Mandates were also adopted at the state level. California, for example, required limited unpaid leaves for pregnancy with reinstatement privileges at the end of the leave. Massachusetts adopted compulsory employer-financed health insurance.

Courts in various states began providing limited protections for employees in cases of "wrongful termination."¹²⁷ In addition, employees and their attorneys began to use pre-existing legal protections to restrict employer freedom to discharge. For example, a discharge of workers over age 40 might lead to charges of age discrimination under federal and state laws and to potentially expensive lawsuits.

To date, no moves have been made to regulate the type of pay system offered by employers, except for tax incentives available to deferred profit sharing and to ESOPs. However, to the extent that the accretion of mandates and litigation makes employment variability more difficult, American employers may seek other forms of labor-cost flexibility as a safety valve. Increased use of contingent workers has already been referenced. But in addition,

adoptions of pay plans under which formulas gear an element of pay to the variations in the employer's economic circumstances may prove attractive. Gain sharing, profit sharing, and - conceivably - variable lump-sum bonuses fall into this category.¹²⁶

i. Norms of Fairness

Notions of fairness and the appropriate way of doing things permeate the labor market. Due in part to disappointing productivity performance and concerns over international competitiveness, there have been initiatives at the federal level to encourage various quality of working life innovations such as quality circles and autonomous work teams. The Bureau of Labor-Management Relations and Cooperative Programs within the U.S. Department of Labor has begun publicizing successful quality of working life programs in a series of bulletins and case histories. Similarly, the Federal Mediation and Conciliation Service has assisted labor and management in establishing more cooperative relations in place of traditional adversarial postures.

These types of efforts through exhortation and example may help innovative approaches to human resource management become more firmly established as norms of practice in the American workplace. To the extent that employees come to expect participative programs, more employers will adopt them. Quality of working life programs do not inherently require alternative pay systems. However, a number of companies which have adopted employee participation in decision making also feature some form of employee financial participation in the enterprise. There is a natural affinity between the two programs, as recognized in the old Scanlon plan approach.

It is quite common for successful quality of working life arrangements to be accompanied by job security assurances of some type. In order to enlist worker assistance in raising productivity, protections against displacement as productivity improves are generally needed.¹²⁷ As already noted, with employment flexibility reduced, American employers may seek to re-establish

cost flexibility through profit sharing and gain sharing.

ii. Social Externalities

To the extent that alternative pay systems raise enterprise productivity and profitability, firms will have incentives to adopt such programs. But to the extent that such program provide greater employment stability and employment expansion, a case can be made that such externalities should be subsidized. As already noted, although the share economy proposition has received attention in the U.S., there has been no serious move to adopt additional tax incentives for profit sharing or similar programs.

However, the share economy proposal arrived on the American scene in the mid 1980s when the economy was generally expanding and inflation was quite low. For that reason, it is hardly surprising that a plan aimed at stagflation failed to be adopted as a public policy initiative. If in the future the problem of stagflation reappears in the U.S., undoubtedly the share economy idea will received additional public attention.

Economic Participation and Participation in Decision Making

When employees participate in managerial decision making, they may well come to expect economic participation. Similarly, when employees participate financially in the firm's performance, they may come to expect a say in decision making. These kinds of issues are unlikely to arise under individual or small group piece rate systems, because of the narrow focus of the economic participation they provide. However, under gain sharing, profit sharing, or ESOPs, economic participation is more broadly defined and may thus raise the question of decision-making participation.

I. Management Concerns

In a nonunion setting, management has unilateral authority to determine scope of participation, both economic and in other matters. To the extent that management does not want to share its decision making authority, it might

be expected that the provision of just economic participation would be less inhibited in the nonunion sector than in the union sector. And, indeed, until the concession bargaining of the 1980s, programs such as profit sharing and employee stock ownership were seen as mainly nonunion plans. Gain sharing, because of the Scanlon plan's historical link to the union sector, was an exception to this rule.

i. Union Sector History

To understand the reluctance of management in unionized firms to see a potential widening of the union role in decision making, it is necessary to consider the history of American union-management tensions. Widespread unionism arose in the U.S. in the 1930s, under the pressures of the Great Depression and the encouragement of government policies such as the Wagner Act. Traditional individualist attitudes and fears of union infringement of property rights, led American management to seek means to combat the threatened encroachment. Managerial fears were intensified by the fact that many of the new industrial unions which had formed in the 1930s were led by radical elements.

Representation Plans. In the early days of the New Deal, government encouragement of collective bargaining led many firms to establish management-controlled company unions and representation plans. Such plans had been encouraged by government action during World War I and some were created during the 1920s. A few of these early plans contained elements of profit sharing.¹³⁰ However, as independent unionization became a threat to management in the mid 1930s, many American firms quickly created representation plans until these "company unions" were outlawed by the Wagner Act.¹³¹

The Role of Supervisors. American management also fought union encroachment of its traditional authority through a careful delineation of the supervisory

role. A major issue by the mid 1940s was whether first-line supervisors should be permitted to belong to unions along with their subordinates. Higher-level management opposed any moves which would blur the adversarial line between union and management. Ultimately, as part of the 1947 Taft-Hartley Act, American management was successful in having supervisors excluded from the protections to unionize afforded by law to nonsupervisory employees.¹³²

Reserved Rights. A major theme in the management community in the 1940s was the protection of management's reserved rights in collective bargaining situations. Management was anxious to limit the union role to bargaining over wages, hours, and working conditions, with as narrow a definition of these items as possible. For example, there was managerial resistance to including fringe benefits as bargainable union demands until a Supreme Court decision explicitly included such benefits among mandatory bargaining issues.¹³³ But more generally, American management was successful in reinforcing the idea that issues such as pricing, marketing, and corporate finance were within the exclusive jurisdiction of managers. To avoid circumstances arising in which arbitrators, in interpreting union-management agreements, might erode managerial authority, clauses explicitly defining or protecting management's reserved rights are still common contractual language.¹³⁴

Information Sharing. In some circumstances, the National Labor Relations Board requires that management share information with the union so that the union can intelligently carry out its representation function. Thus, in cases where a firm cites financial distress in refusing wage demands or demanding concessions from the union, it is required to document its assertions.¹³⁵ This situation is really the only breach in the sharp wall between the union and management roles which survived the framework of law and practice that had developed by the late 1940s. Even here, however, firms can easily avoid

requirements to share information by not explicitly citing their financial condition in putting forth their negotiating posture. Experts in labor law can, and do, counsel management on how to avoid information sharing.

ii. Statistical Evidence

Given this history, it might well be the case that American managers would be uneasy about adopting pay systems which could lead to a widening of the union role beyond negotiating wages, hours, and working conditions. Indeed, a survey of American managers in the mid 1980s bears out the supposition that unionization is thought to raise the likelihood of demands for employee participation when sharing pay systems are already present. As Table 18 shows, managers from firms with high unionization rates are more likely than others to believe that pay systems such as profit sharing, gain sharing, and ESOPs will lead to demands for employee participation in decision making.

Concern about loss of managerial authority and control in unionized situations relative to nonunion may be easing, however. Such a shift could reflect a perceived weakening of the union side by management. One survey of large business units taken in the mid 1980s found union and nonunion units to report comparable rates of usage of quality of working life/participation schemes; 49% of the unionized units and 44% of the nonunion units reported undertaking such activities. The differences were not statistically significant between the union and nonunion samples.¹³⁶

II. Spectrum of Participation

Unfortunately, there are no comprehensive, ongoing surveys of the scope of participative activities in American firms. Most information available comes from one-shot studies which are typically dependent on the voluntary cooperation of respondents. The spectrum of participation ranges from simple suggestion systems to quality circles and autonomous work groups and - in a

Table 18: Management Attitudes Toward Unionization and Demands for Employee Participation

Type of Plan	Percent Agreeing that Implementation of Plan Leads to Demands for Employee Participation in Management		
	Unionization Rate for Nonexempt Employees in Respondent's Firm:		
	Zero	.1 - 49.9%	50% or Greater
Profit sharing			
Cash bonus	39%	46%	55%
Tax deferred	33	40	50
ESOP	22	26	36
Gain sharing	25	43	45

Source: Daniel J.B. Mitchell and Renae F. Broderick, "Flexible Pay Systems in the American Context," Advances in Labor Economics, vol. 5, forthcoming.

few instances - to some involvement in firm strategic planning. Big firms now appear to be more prone to engage in such activities than small ones.¹³⁷

Even when surveys provide data on the occurrence of particular activities, there is often little information on the depth of the programs. For example, a survey by the New York Stock Exchange in the early 1980s reported that 55% of U.S. firms with 500 or more employees had programs which involved workers in "setting company objectives."¹³⁸ However, the degree of involvement must be questioned. Many of the respondents may simply have been referring to some kind of one-way information dissemination about company plans.

Where human resource policies are more specifically stated, greater credence can be placed in the results reported. Thus, 44% reported having quality circles, 38% reported using suggestion systems, and 45% reported having employee attitude surveys.¹³⁷ Attitude surveys and suggestion systems are not new techniques whereas quality circles in comparative terms are. The fact that quality circles were reported so frequently suggests that there has been a substantial increase in their use.

Generally, it appears that serious participative innovations in the U.S. have been focused on local workplace issues rather than strategic considerations. There is some evidence that companies with flexible pay systems are more likely to have more employee participation in decision making.¹⁴⁰ But the details of the interaction are not known. Nonetheless, the growth in innovative participatory schemes in the U.S. suggests that flexible pay systems of the sharing type will also eventually spread.

Evidence on the Effects of Alternative Pay

Various studies have been undertaken in the U.S. on the impact of alternative pay systems. Some of these studies are statistical analyses while others are based on case reports. Generally, the American case literature has tended to report successful applications of alternative pay; several such

cases and reports are summarized as examples on Table 19. Most commonly, the effect being sought is an impact on productivity or firm performance although the necessary data for analyzing these variables are not always available. However, because of the Weitzman proposal regarding profit sharing and gain sharing, some recent American work has also been focused on the issue of employment stabilization.

I. Productivity Effects: Incentives, Profit Sharing, and ESOPs

Data on productivity at the firm level are often not readily available. However, if workers under an alternative pay system receive more pay than comparable workers under conventional systems, then it may be inferred that their employer believes the alternative system is producing added productivity and/or some form of cost saving. In fact, with regard to simple incentive systems, it has long been observed - based on industry wage surveys conducted by the U.S. Bureau of Labor Statistics - that incentive workers earn more than time workers in the same occupations.¹⁴¹ Evidence from the 1970s and 1980s suggests that a differential in favor of incentive workers continues to be a characteristic of the American workplace. After standardization for other characteristics, the differential still appears to be in the range of roughly 5-15%.¹⁴²

Even if such wage differentials do reflect a productivity difference between incentive and time workers, the data do not indicate how the difference is induced. One possibility is that the pay system motivates incentive workers to work harder; the other is that there is a sorting of employees. Those who are more productive may prefer to work under incentive systems. The possibility of a sorting effect is suggested by the fact that individual establishments rarely employ both time and incentive workers in the same occupation. In those cases where they do, there is evidence that the wage advantage of incentive workers vanishes.¹⁴³

Earlier, reference was made to the view in the American practitioner-

Table 19: American Case Study and Report Summaries

Incentive System Example:

Lincoln Electric Company. Lincoln Electric bases its compensation system heavily on piece rates and performance-related bonuses. It has existed as a nonunion firm since the late 19th century as a manufacturer of welding equipment. Case analysts have found the company's performance and productivity to have benefited substantially from its pay system. Accompanying the pay system are employment security, promotion from within, an elected employee committee, and a strong emphasis on the company's incentive-based philosophy.

Source: Fred K. Foulkes and E. Robert Livernash, Human Resources Management: Cases and Text, second edition (Englewood Cliffs, N.J.: Prentice Hall, 1989), pp. 206-233.

Gain Sharing Example:

Preston Trucking Company. Preston Trucking installed a Scanlon plan in 1984. It is a unionized interstate carrier serving the eastern United States specializing in small loads. Because of deregulation pressures, the plan paid only a few bonuses but has generated a stream of cost-saving suggestions from employees. Various participative committees have been established and improvements have been noted in the labor relations and in declining grievance rates.

Source: Gloria Pearlstein, "Preston Trucking Drives for Productivity," Labor-Management Cooperation Brief No. 13, U.S. Department of Labor, Bureau of Labor-Management Relations and Cooperative Programs, February 1988.

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Profit Sharing Example:

Nucor Corporation. Nucor is a nonunion steel firm, based in North Carolina, which operates "mini-mills" and has had a good record of sales and profit growth despite generally adverse conditions in the overall American steel industry during the 1980s. Under its profit-sharing plan, 10% of pre-tax profits are earmarked for employee bonuses. 80% of the bonus goes into a retirement fund, with the remaining 20% paid out in cash. The company also features a no-layoff policy for production workers, various forms of sharing of business information with employees, and incentive pay.

Source: "Winning Out in the U.S. Steel Industry," Strategic Direction, February 1989, pp. 4-6.

Employee Stock Ownership Example:

Seymour Specialty Wire Company. Seymour Specialty Wire was a division of a larger firm producing brass alloys used for manufacturing a wide variety of products. The parent firm decided to sell the business in 1984 due to pressures from foreign competitors. However, the local union arranged for an employee buyout through an ESOP in 1985. Company board of directors includes management, elected employees, and union representatives. The firm also has a profit sharing plan. Employees took a pay cut as part of the buyout. Moves toward greater employee participation in decision making created some tensions but company remained open, thus preserving jobs.

Source: Gary B. Hansen and Frank T. Adams, "Saving Jobs and Putting Democracy to Work: Labor Management Cooperation and Seymour Specialty Wire," Labor-Management Cooperation Brief No. 11, U.S. Department of Labor, Bureau of Labor-Management Relations and Cooperative Program, September 1987.

oriented literature that incentive bonuses and share bonuses should be paid above and beyond what the employee would otherwise receive under a conventional pay system. That is, the alternative pay should be perceived as something extra by the employee, not as a substitute for a time wage. The pay differential in favor of incentive workers suggests that this advice is actually implemented in practice where simple incentives are used. There is also some evidence that in the U.S., workers under profit sharing receive more total pay than workers without it.¹⁴⁴ And recent econometric work suggests that the deferred form of profit sharing is associated with modest productivity increases.¹⁴⁵ It is quite possible, therefore, that the rarer cash form of profit sharing has still larger effects since cash profit sharing plans tend to be more closely linked to firm profitability and provide an immediate reward to employees.

One study found that the effect of ESOPs on employee attitudes was more dependent on the size of the employee share in the firm than on participation in decision making. However, many of the attitude questions asked of employees really related to the financial value of their holdings. For example, 84% of the employees agreed with the statement that "owning stock... makes me more interested in the company's financial success." Where the questions related to productivity, the percentages were notably different. For example, only 43% agreed with the statement that "I work harder on my job because I own company stock."¹⁴⁶

Various American studies have attempted to link ESOPs to productivity and firm performance indexes rather than to employee attitudes. The results have been mixed, partly because in some cases large numbers of employees under relatively insignificant tax-credit ESOPs were included.¹⁴⁷ An elaborate study by the U.S. General Accounting Office matched a sample of ESOP and non-ESOP firms. No ESOP effect on firm performance was found. Using a productivity measure, however, the study found that employee participation in

decision making had a positive effect although the creation of an ESOP by itself did not.¹⁴⁶

Statistical studies of alternative pay systems, even if they control for certain industry or firm characteristics, often do not include information on other firm human resource practices. For example, the use of alternative pay systems might be correlated with use of employee participation in decision making, formalized human resource practices, or the general status of the human resource function within the firm. One study that did include such information using a data base from the mid 1980s found some evidence of a productivity impact of profit sharing within business units.¹⁴⁷ However, there was also evidence that business units with economic participation systems (mainly profit sharing and ESOPs) tended to show an improved trend in profitability and productivity during 1983-86. Since those years were a period of economic difficulty for many American firms, the study suggests that alternative pay systems may have aided the process of adaptation.

In principle, the productivity and firm performance effects of pay for knowledge plans and lump-sum bonuses could be analyzed statistically, using the kinds of techniques that have been applied to ESOPs and profit sharing. However, lump sums have not been studied that way, probably because they have not been seen as incentive or motivational systems; indeed their association with concession bargaining generally puts them in the category of take-aways from the employee perspective. Even if that is the case, lump sums might improve firm performance simply by reducing labor costs. Or they might have negative productivity effects - surely an issue of concern. Thus, perhaps future American researchers will apply their skills to the lump sum issue. Pay for knowledge schemes have not been studied because they are few in number and difficult to identify in most data sets.

II. Limited Research on Gain Sharing

Because gain sharing plans are comparatively rare, and because they do

not have tax-favored treatment which would allow them to be identified from tax records, statistical studies of their impact have also been rare. Research that has been done across firms must rely on researcher-gathered data. Measures of success are often not productivity or profitability but rather "softer" indicators such as continuance or discontinuance of the plan. Generally, gauged in this way, success of gain sharing has been found to depend on the degree of employee participation and managerial attitudes.¹⁵⁰ There is some evidence that enthusiasm and optimism about the plan on the part of both workers and managers declines shortly after initial implementation as the participants face operational realities.¹⁵¹ But after a longer period of experience, attitudes seem to become more positive.¹⁵²

Because opportunities for broad statistical studies of gain sharing in the U.S. have been limited, some studies have relied on surveys of available case materials. Such approaches will generally find moderately positive evidence for plan success.¹⁵³ The difficulty is that many the case studies of gain sharing have been developed by proponents.¹⁵⁴ Where careful academic research has been undertaken, however, success stories have nonetheless been reported.¹⁵⁵

III. Employment Stability

Mention has already been made of the Weitzman argument that profit sharing could have both an employment expansion and an employment stabilization effect. Within the Weitzman model, these two effects are linked. Firms are stimulated to expand employment, collectively producing a labor shortage. Since they have unfilled vacancies, firms tend not to lay off existing employees during economic downturns. For the Weitzman employment stabilization effect to be felt, therefore, in theory there would need to be a full-blown share economy already in place.

However, there may be other routes to employment stabilization associated with profit sharing and other related forms of flexible pay. If pay is made

more variable, employers' ability to stabilize employment - if they wanted to do so - would be enhanced. During an economic downturn, labor costs could be cut by reducing pay rather than reducing the number of employees.

Only one study has addressed this issue empirically in the U.S. Companies with deferred profit sharing were identified from tax records and their employment histories studied in a report by Douglas Kruse.¹⁵⁶ For manufacturing firms, some evidence was found of greater employment stabilization among profit-sharing firms. Since cash profit sharing firms typically exhibit greater bonus variability than those with deferred plans, it might be that still greater employment stabilization effects could be found. However, because cash profit sharing cannot be identified from tax records, studies including such plans would require more extensive data gathering than has yet been done.

Summary and Conclusions

Foreign observers should avoid the mistaken view that the American employment practices constitute a flexible, auction-style labor market. The U.S. does have fewer legal mandates regarding employer behavior than many other developed countries, but its public policies have been shifting toward increased intervention through mandates and tax incentives. Moreover, American employees seem to maintain relatively long job tenures and attachments to their employers. Some of the firms which are identified as the most progressive in their human resource policies and successful in terms of economic performance constrain themselves to provide at least partial job security.

The search for pay flexibility in the U.S. is partly a reflection of inflexibility elsewhere. American firms were buffeted in the 1980s by such product market disturbances as dramatic exchange rate changes, deregulation, and more fluid conditions in financial markets. They sought both absolute improvements in productivity - after a poor showing in the 1970s - and a way

of obtaining some degree of risk sharing with employees and labor cost variability. These efforts led to a reexamination of conventional fixed wage pay practices.

While it is clear that a reexamination is occurring, a lack of good data limits the ability to identify resulting trends. Simple incentive programs such as piece rates are probably not on the increase. The proportion of employees in industries where output is clearly measurable is declining. And even in those industries, there is no sign of a shift toward simple incentives. Gain sharing plans have historically covered relatively few employees and have been confined to smaller firms. There is some impressionistic evidence that gain sharing spread to larger firms in the 1980s. Such plans, however, still cover only a small fraction of the American workforce.

Profit sharing did spread into the union sector in the 1980s, as part of concession bargaining. Although most American union contracts did not provide for profit sharing, some large agreements - notably in the automobile industry - brought profit sharing coverage to well over a million union workers. In the automobile case, the connection between employment inflexibility and pay flexibility through profit sharing seems clear. Profit sharing was introduced at the same time that job and income security guarantees were given in exchange for wage concessions.

The use of ESOP plans has also been linked in some cases to job security and concessions. In a few highly-publicized cases, ESOPs were used for worker buyouts of firms which otherwise might have gone out of business. However, most of the growth of ESOPs is related to the generous tax advantages provided to these plans; they are often seen more as a financial tool due to these tax incentives than as a human resource practice. Unless Congress - under pressure to reduce federal budget deficits - removes the tax subsidy to ESOPs, these plans will undoubtedly continue to expand.

Pay for knowledge programs have certainly increased in frequency, since there were no such arrangements prior to the related quality of working life movement of the 1970s. However, they still cover relatively few employees. In contrast, lump-sum bonuses came to cover many union workers by the late 1980s, since employers found them to be less expensive than base wage increases. It is possible that in the future American lump-sums could evolve into a de facto profit sharing system following the model often attributed to Japan. As yet, however, there is no evidence that such an evolution is taking place. Because of the widespread use of multiyear union contracts in the U.S., even if lump sums were moving toward a form of profit sharing, it would take a decade's worth of experience to detect the trend.

There are conflicting forces pressing on the American labor market as it enters the 1990s. The kinds of product market uncertainties experienced by employers in the 1980s will continue. Yet the American workforce is aging and older workers put more value on employment security and stability than younger workers. Public policy in the product market has tilted toward deregulation and less government control. But in the labor market, courts, state legislators, and the Congress have moved in piecemeal fashion toward more regulation. Declining unionization in the U.S. has encouraged this tendency; the notion that workplace problems will be settled privately through collective bargaining is no longer viable when the vast majority of the private workforce is nonunion.

The trend toward smaller employing units in the U.S. economy is another element in the interplay of conflicting forces. Smaller enterprises may well be better equipped to meet changes in product demand. But they have historically offered lower pay, fewer benefits, and less employment stability to workers than larger firms. Yet the tendency to intervene in the labor market has the greatest impact on smaller employers; larger firms often already follow the practices and offer the benefits which the regulators are

seeking to encourage or require. In the 1990s, pay flexibility may ultimately become one of the safety valves developed by American employers (along with other approaches such as contingent workers and work sharing) to deal with product market pressures and public policy encroachments.

FOOTNOTES

1. Michael J. Piore, "Perspectives on Labor Market Flexibility," Industrial Relations, vol. 25 (Spring 1986), pp. 146-166.
2. Edward F. Denison, Trends in American Economic Growth, 1929-1982 (Washington: Brookings Institution, 1985).
3. A survey of managers in the early 1980s, as competitiveness concerns were beginning to build, indicated that 77% thought that "pay for performance" would become more important as a tool for achieving company objectives. See William M. Mercer, Inc., Employer Attitudes Toward Compensation Change and Corporate Values (New York: William M. Mercer, Inc., 1983), p. 5.
4. Thomas E. Weisskopf, Samuel Bowles, and David M. Gordon, "Hearts and Minds: A Social Model of U.S. Productivity Growth," Brookings Papers on Economic Activity (2:1983), pp. 338-441.
5. Richard S. Belous, "Flexibility and American Labour Markets: The Evidence and Implications," working paper no. 14, World Employment Programme Research, International Labour Office, Geneva, June 1987.
6. Gerald R. Faulhaber and William J. Baumol, "Economists as Innovators," Journal of Economic Literature, vol. 26 (June 1988), pp. 588-591.
7. The phrase "market for corporate control" is used in the discussion of the phenomenon in U.S. President, Economic Report of the President, 1985 (Washington: GPO, 1985), chapter 6.
8. Jean T. McKelvey, ed., Cleared for Takeoff: Airline Labor Relations Since Deregulation (Ithaca, N.Y.: IIR Press, 1988).
9. Perhaps most discussed as an illustration is the change in management practice and labor relations climate achieved after a joint Toyota-General Motors venture took over a closed former General Motors assembly plant in northern California. See Clair Brown and Michael Reich, "When Does Union-Management Cooperation Work?: A Look at NUMMI and GM-Van Nuys" in Daniel J.B. Mitchell and Jane Wildhorn, eds., Can California Be Competitive and Caring? (Los Angeles: UCLA Institute of Industrial Relations, 1989), forthcoming.
10. Between 1979 and 1985, changes in employment mix reduced compensation per employee by 2.5%. About .6 percentage points of this reduction can be attributed to deterioration of the American net export balance. See Richard S. Belous and Daniel J.B. Mitchell, "International Trade and Employment: Dynamic Labor Market Implications" in Barbara D. Dennis, ed., Proceedings of the Fortieth Annual Meeting, Industrial Relations Research Association, December 28-30, 1987 (Madison, Wisc.: IRRRA, 1988), pp. 31-33.
11. Allen J. Scott, "High Technology Industry and Territorial Development: The Rise of the Orange County Complex, 1955-1984," working paper no. 85, UCLA Institute of Industrial Relations, 1985.
12. Michael J. Piore and Charles F. Sabel, The Second Industrial Divide: Possibilities for Prosperity (New York: Basic Books, 1984).

13. For discussion of these efforts, see Arnold R. Weber, In Pursuit of Price Stability: The Wage-Price Freeze of 1971 (Washington: Brookings Institution, 1973); Arnold R. Weber and Daniel J.B. Mitchell, The Pay Board's Progress: Wage Controls in Phase II (Washington: Brookings Institution, 1978); Robert F. Lanzillotti, Mary T. Hamilton, and R. Blaine Roberts, Phase II in Review: The Price Commission Experience (Washington: Brookings Institution, 1975); U.S. General Accounting Office, The Voluntary Pay and Price Standards Have Had No Discernible Effect on Inflation, PAD-81-02 (Washington: GAO, 1980).
14. Daniel J.B. Mitchell, "Gain-Sharing: An Anti-Inflation Reform," Challenge, vol. 25 (July/August 1982), pp. 18-25.
15. Daniel J.B. Mitchell, "Wages and Keynes: Lessons from the Past," Eastern Economic Journal, vol. 12 (July-September 1986), pp. 199-208.
16. Richard B. Freeman and Linda Bell, "Does a Flexible Industry Wage Structure Increase Employment?," working paper no. 1604, National Bureau of Economic Research, April 1985.
17. See Martin L. Weitzman, The Share Economy: Conquering Stagflation (Cambridge, Mass.: Harvard University Press, 1984).
18. Several prominent Democrats have been attracted to the Weitzman proposal. See Alan Murray, "Sharing the Wealth: Democrats Latch On to Bonus Pay System in Search for New Ideas," Wall Street Journal, April 28, 1987, Sec. A., p. 1. Senator Bumpers of Arkansas introduced a "Profit Sharing Incentive Act" in Congress in 1987 which would have provided tax incentives for profit sharing plans. Curiously, unlike their Conservative Party British counterparts who enacted such incentives in Britain, key figures in the American Republican Party have not shown an interest in the Weitzman idea.
19. William Nordhaus and Andrew John, eds., "The Share Economy: A Symposium," Cowles Foundation Discussion Paper no. 783, Yale University, February 1986.
20. U.S. Bureau of Labor Statistics, Characteristics of Major Collective Bargaining Agreements, January 1, 1980, bulletin 2095 (Washington: GPO, 1981), p. 106.
21. H. Gregg Lewis, Union Relative Wage Effects: A Survey (Chicago: University of Chicago Press, 1986).
22. Craft demarcations still are significant in the construction industry and motion pictures. To some extent, they also persist on the railroads despite mergers of various craft unions.
23. Probably, the most widely-publicized such arrangement occurred in West Coast longshoring in the early 1960s. See Lincoln Fairley, Facing Mechanization: The West Coast Longshore Plan (Los Angeles: UCLA Institute of Industrial Relations, 1979).
24. Daniel J.B. Mitchell, Human Resource Management: An Economic Approach (Boston: PWS-Kent Publishing Co., 1989), pp. 182-183.
25. Earl F. Mellor, "Shift Work and Flexitime: How Prevalent Are They?," Monthly Labor Review, vol. 109 (November 1986), pp. 14-21.

26. The federal Fair Labor Standards Act establishes a 50% overtime pay premium after 40 hours per week for most nonsupervisory workers. State laws can vary and can be stricter than the federal standard. For example, California requires overtime pay after 8 hours per day.
27. A symposium on these provisions entitled "Work Sharing: New Experiences" appears in Barbara D. Dennis, ed., Proceedings of the Thirty-Eighth Annual Meeting, Industrial Relations Research Association, December 28-30, 1985 (Madison, Wisc.: IRRRA, 1986), pp. 424-464.
28. The Tax Reform Act of 1986 imposed various non-discrimination requirements (high-paid vs. low-paid employees) on employers for certain tax-favored benefits such as health and life insurance. Part-time employees who work at least 17.5 hours per week must be included in the required calculations of low vs. high-paid employees. Employers may provide reduced benefits for part-timers but for many workers who receive coverage, the cost to the employer will be more than proportional to their wages.
29. About 8 out of 10 of full-time wage and salary earners in 1985 worked a 5-day week. However, the proportion working less than 5 days appeared to be increasing. See Shirley J. Smith, "The Growing Diversity of Work Schedules," Monthly Labor Review, vol. 109 (November 1986), pp. 7-13.
30. About 12% of full-time wage and salary earners in 1985 were on flexible schedules, with higher concentrations among professional, managerial, technical, and sales employees. See Mellor, "Shift Work and Flexitime," op. cit., p. 19.
31. George W. Bohlander, Flexitime: A New Face on the Work Clock (Los Angeles: UCLA Institute of Industrial Relations, 1977).
32. Francis W. Horvath, "Work at Home: New Findings from the Current Population Survey," Monthly Labor Review, vol. 109 (November 1986), pp. 31-35.
33. Bureau of National Affairs, Inc., The Changing Workplace: New Directions in Staffing and Scheduling (Washington: BNA, 1986).
34. Garth Mangum, Donald Mayall, and Kristin Nelson, "The Temporary Help Industry: A Response to the Dual Internal Labor Market," Industrial and Labor Relations Review, vol. 38 (July 1985), pp. 599-611; Max L. Carey and Kim L. Hazelbaker, "Employment Growth in the Temporary Help Industry," Monthly Labor Review, vol. 109 (April 1986), pp. 29-36.
35. Under the Immigration Reform and Control Act, employers are required to request and retain copies of documents from newly-hired employees attesting to the legal work status.
36. Manufacturing payroll employment peaked at 21 million in 1979. In 1988, it stood at 19.5 million. In contrast, total nonagricultural payroll employment rose from 89.8 million to 106 million over the same period.
37. U.S. Secretary of Labor's Task Force on Economic Adjustment and Worker Dislocation, Economic Adjustment and Worker Dislocation in a Competitive Society (Washington: U.S. Department of Labor, 1986).
38. Mitchell, Human Resource Management: An Economic Approach, op. cit., chapter 6.

39. George A. Akerlof and Janet L. Yellen, eds., Efficiency Wage Models of the Labor Market (New York: Cambridge University Press, 1986).
40. Employees on layoff status are not required to cite job-seeking activity in order to be counted as unemployed in the Current Population Survey. On layoff unemployment, see Martin S. Feldstein, "The Importance of Temporary Layoffs: An Empirical Analysis," Brookings Papers on Economic Activity (3:1975), pp. 725-744.
41. Mitchell, Human Resource Management: An Economic Approach, op. cit., pp. 88-90.
42. Katharine G. Abraham and Henry S. Farber, "Job Duration, Seniority, and Earnings," American Economic Review, vol. 77 (June 1987), pp. 278-297.
43. See Edward P. Lazear, "Why Is There Mandatory Retirement?," Journal of Political Economy, vol. 87 (December 1979), pp. 1261-1284. It should be noted that pension formulas do not provide incentives to retire that seem tightly aimed at promoting a kind of ersatz mandatory retirement. This point is made in Alan L. Gustman and Thomas L. Steinmeier, "An Analysis of Pension Benefit Formulas, Pension Wealth and Incentives from Pensions," working paper no. 2535, National Bureau of Economic Research, March 1988. However, the Gustman-Steinmeier data do show that large losses in pension wealth from quitting drop off around age 55. Mandatory retirement was abolished through amendments to the Age Discrimination in Employment Act.
44. Hay/Huggins Company, Inc., "The Effect of Job Mobility on Pension Benefits," report submitted to Pension and Welfare Benefits Administration, U.S. Department of Labor, PB88-232194 (Springfield, Va.: National Technical Information Service, 1988).
45. Richard B. Freeman and James L. Medoff, What Do Unions Do? (New York: Basic Books, 1984), chapter 8.
46. Arthur M. Ross, "Do We Have a New Industrial Feudalism?," American Economic Review, vol. 48 (December 1958), pp. 903-920.
47. Sanford M. Jacoby, Employing Bureaucracy: Managers, Unions, and the Transformation of Work in American Industry, 1900-1945 (New York: Columbia University Press, 1985), p. 199.
48. Henry J. Aaron, Economic Effects of Social Security (Washington: Brookings Institution, 1982), chapter 4.
49. Finis Welch, "What Have We Learned from Empirical Studies of Unemployment Insurance?," Industrial and Labor Relations Review, vol. 30 (July 1977), pp. 451-461. There is recent evidence that those on unemployment insurance exhibit a greatly increased probability of leaving unemployment at around the time benefit eligibility ends. See Lawrence Katz and Bruce Meyer, "Unemployment Insurance, Recall Expectations and Unemployment Outcomes," working paper no. 2594, National Bureau of Economic Research, May 1988.
50. Peter B. Doeringer and Michael J. Piore, Internal Labor Markets and Manpower Analysis (Lexington, Mass.: Heath, 1971).
51. Doeringer and Piore, Internal Labor Markets and Manpower Analysis, op. cit., pp. 163-183.

52. Lester C. Thurow, "Production Economics" in Barbara D. Dennis, ed., Proceedings of the Forty-First Annual Meeting, Industrial Relations Research Association, December 28-30, 1988 (Madison, Wisc.: IRRRA, 1989), forthcoming.
53. Daniel Kahneman, Jack L. Knetsch, and Richard Thaler, "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," American Economic Review, vol. 76 (September 1986), pp. 728-741. Although this paper cites data from a Canadian survey, there is no reason to believe American respondents would not exhibit the same attitudes. Indeed, the author has asked students in his (American) university classes to respond to the survey questions with much the same results as found in the Kahneman-Knetsch-Thaler paper.
54. Assar Lindbeck and Dennis J. Snower, "Wage Setting, Unemployment, and Insider-Outsider Relations," American Economic Review, vol. 76 (May 1986), pp. 235-239.
55. Marvin J. Levine, "The Evolution of Two-Tier Wage Agreements: Bane or Panacea in Labor-Intensive Industries?," Labor Law Journal, vol. 40 (January 1989), pp. 12-20.
56. Not surprisingly, there is evidence of a positive association between the incidence of two-tier pay plans and industry unemployment in the U.S. See Richard S. Belous, "Two-Tier Wage Systems in the U.S. Economy," report no. 85-165 E, Congressional Research Service, August 12, 1985, p. 11.
57. Stanley B. Mathewson, Restriction of Output Among Unorganized Workers (Carbondale, Ill.: Southern Illinois University Press, 1969 (1931)).
58. Material for this section is derived from the paper cited on Table 10.
59. Robert J. Gordon, "The Role of Wages in the Inflation Process," American Economic Review, vol. 78 (May 1988), pp. 276-283.
60. In all cases, the trend was based on 1948-1979, with both years being cyclical peaks. The ratio variables (other than HOURS) were thus equal to unity in both 1948 and 1979. HOURS is equal to 40 in both years. (In 1948, actual average weekly hours were just equal to 40).
61. Daniel J.B. Mitchell, Unions, Wages, and Inflation (Washington: Brookings Institution, 1980), pp. 151-152.
62. Early studies by Kuh (1967) and by Siebert and Zaidi (1971) found significant effects of productivity in U.S. wage equations.
63. If both lagged price change and lagged wage change are entered in the same regression, lagged wage change is insignificant. Note that the use of annualized data does not permit exploration of very short term lags.
64. All equations, except the one with the lagged dependent variable, include an autoregressive correction. The autoregressive parameter, however, is insignificant in the equations not involving the CPI.
65. For details, see Daniel J.B. Mitchell, "Should the Consumer Price Index Determine Wages?," California Management Review, vol. 25 (Fall 1982), pp. 5-21.
66. Thus, Vroman and Abowd (1988) find little difference when they use an expected inflation measure based on lagged CPI changes, or one based on the Livingston expected inflation survey, in wage equations covering over 2,700

union contracts in U.S. manufacturing. Experiments were made with inclusion of actual future inflation and with bond yields (which presumably include an inflation expectations element) in the wage equations, but the results were less satisfactory than the equations shown on the table.

67. An annual regression over 1954-1987 of the percent change in domestic corporate employee compensation (%CECD) against current and lagged percent change in after-tax domestic corporate profits (%CPAT) and the year of observation (YEAR) indicates that

$$\%CECD = -280.09 + .14 \%CPAT + .10 \%CPAT_{-1} + .15 YEAR \quad \bar{R}^2 = .46$$

with all coefficients significant at the 5% level or better.

68. The adjustment was based on information in a data file on concession bargaining maintained by the author. The file is drawn from contract summaries appearing biweekly in the Daily Labor Report.

69. Harry C. Katz, "Automobiles" in David B. Lipsky and Clifford B. Donn, eds., Collective Bargaining in American Industry: Contemporary Perspectives and Future Directions (Lexington, Mass.: Lexington Books, 1987), pp. 32-35.

70. Daniel J.B. Mitchell, "Will Collective Bargaining Outcomes in the 1990s Look Like Those of the 1980s?," Labor Law Journal, vol. 40 (August 1989), forthcoming.

71. Dennis Grubb, Richard Jackman, and Richard Layard, "Wage Rigidity and Unemployment in OECD Countries," European Economic Review, vol. 21 (March-April 1983), pp. 11-39.

72. U.S. President, Economic Report of the President, 1988 (Washington: GPO, 1988), pp. 69-72.

73. The two-digit industries used were those appearing regularly in Employment and Earnings. In a five cases, the tables in Employment and Earnings deviate from the two-digit format. Thus, industries 11 and 12 are combined and separate breakouts are provided for industries 4011, 701, 721, and 723.

74. Note that changes in average hourly earnings reflect both changes in pay schedules and compositional effects (such as changes in the occupational mix within the industry). Thus, exact zeros in earnings change cannot be expected.

75. Stephen G. Cecchetti, "Indexation and Incomes Policy: A Study in Wage Adjustment in Unionized Manufacturing," Journal of Labor Economics, vol. 5 (July 1987), pp. 391-412.

76. William M. Davis and Fehmida Sleemi, "Collective Bargaining in 1989: Negotiators Will Face Diverse Issues," Monthly Labor Review, vol. 112 (January 1989), p. 14.

77. Unions represented about 14% of private wage and salary earners by 1989. Even if workers under non-major union contracts had the same 40% coverage as those under major contracts, there would only be $.14 \times .40 = 5.6\%$ of the workforce under escalation.

78. Daniel J.B. Mitchell, Unions, Wages, and Inflation (Washington: Brookings Institution, 1980), p. 147.

79. Donald G. Schmitt, "Postretirement Increases Under Private Pension Plans," Monthly Labor Review, vol. 107 (September 1984), pp. 3-8. Forty percent of retired pension participants covered by a pension survey experienced ad hoc benefit increases during the inflationary period 1978-1981. The increases received were typically less than half of the official rate of inflation.

80. Some public-sector pensions are indexed. Private pensions are covered by the Employee Retirement Income Security Act of 1974 which sets standards for appropriate funding. These standards tend to discourage indexing since conservative actuarial techniques require substantial funding of indexed pension guarantees. However, even before the Act was passed, indexed private pensions were extremely rare.

81. U.S. President, Economic Report of the President, 1989 (Washington: GPO, 1989), pp. 68-69.

82. George L. Perry, "Inflation in Theory and Practice," Brookings Papers on Economic Activity (1:1980), pp. 207-241; George L. Perry, "What Have We Learned About Disinflation?," Brookings Papers on Economic Activity (2:1983), pp. 587-602; George L. Perry, "Shifting Wage Norms and Their Implications," American Economic Review, vol. 76 (May 1986), pp. 245-248.

83. For discussion of union vs. nonunion aspects of norm shifts, see Daniel J.B. Mitchell, "Shifting Norms in Wage Determination," Brookings Papers on Economic Activity (2:1985), pp. 575-599; Daniel J.B. Mitchell, "Union vs. Nonunion Wage Norm Shifts," American Economic Review, vol. 76 (May 1986), pp. 249-252.

84. For a related and supporting view, see Richard B. Freeman, "Evaluating the European View That the U.S. Has No Unemployment Problem," working paper no. 2562, National Bureau of Economic Research, April 1988.

85. References can be found on Table 15 to recent studies.

86. Various authors have used the idea of internal firm human resource policies as attempts to construct incentives which avoid opportunistic behavior on the part of both employee and employer. See, for example, Michael L. Wachter and George M. Cohen, "The Law and Economics of Collective Bargaining: An Introduction and Application to the Problems of Subcontracting, Partial Closure, and Relocation," University of Pennsylvania Law Review, vol. 136 (May 1988), pp. 1349-1417.

87. Mitchell, Human Resource Management: An Economic Approach, op. cit., pp. 111-114.

88. The idea of incentive pay as something extra can be found, for example, in Ordway Tead, Human Nature and Management: The Applications of Psychology to Executive Leadership (New York: McGraw-Hill Book Co., 1929), p. 261. An even earlier expression of this notion, applied to profit sharing, can be found in Arthur W. Burritt, Henry S. Dennison, Edwin F. Gay, Ralph E. Heilman, and Henry P. Kendall, Profit Sharing: Its Principles and Practice (New York: Harper & Brothers, 1918), p. 8.

89. George A. Akerlof, "Labor Contracts as Partial Gift Exchanges," Quarterly Journal of Economics, vol. 97 (November 1982), pp. 543-569.

90. The survey depended on voluntary responses and it is likely that firms which had such plans - and thus had an interest in them - would choose to participate. The survey also was biased towards goods producing firms using large numbers of production workers. See Table 15 for source.
91. Frederick W. Taylor, The Principles of Scientific Management (New York: Harper & Brothers Publishers, 1911).
92. National Industrial Conference Board, Systems of Wage Payment (New York: NICB, 1930), pp. 5-9.
93. Mathewson, Restriction of Output Among Organized Workers, *op. cit.*
94. F.J. Roethlisberger and William J. Dickson, Management and the Worker: An Account of a Research Program Conducted by the Western Electric Company, Hawthorne Works, Chicago (Cambridge, Mass.: Harvard University Press, 1967 [1939]).
95. Professor Edward Lawler of the University of Southern California, whose Center for Effective Organizations works with firms establishing alternative pay and participative systems, is the source of this observation.
96. Frederick G. Lesieur, ed., The Scanlon Plan: A New Frontier in Labor-Management Cooperation (Cambridge, Mass.: Technology Press of Massachusetts Institute of Technology, 1958).
97. For example, see George Strauss and Leonard R. Sayles, Personnel: The Human Problems of Management (Englewood Cliffs, N.J.: Prentice-Hall, 1967), p. 681.
98. William Aussieker, "The Decline of Union-Management Cooperation: Kaiser Long Range Sharing Plan" in Barbara D. Dennis, ed., Proceedings of the Thirty-Fifth Annual Meeting, Industrial Relations Research Association, December 28-30, 1982 (Madison, Wisc.: IRRRA, 1983), pp. 403-409.
99. Hewitt Associates, 1987 Profit Sharing Survey (1986 Experience) (Chicago: Profit Sharing Research Council, 1987), p. 13.
100. Joseph R. Blasi, Employee Ownership: Revolution or Ripoff? (Cambridge, Mass.: Ballinger Publishing Co., 1988), p. 124.
101. There appears to be a split between ESOPs at publicly-traded and privately-held ESOPs. One survey suggests that 72% of the publicly-traded firm ESOPs owned less than 25% of the firm and 93% below 50%. The figures for privately-held firm ESOPs were 28% below 25% and 65% below 50%. Owners of privately-held firms may be able to maintain effective control, even with a majority-owned ESOP, and thus may be more willing to have it control a larger fraction of shares. Source: ESOP Association, ESOP Survey 1987 (Washington: ESOP Association, 1987), p. 8.
102. If the shares are properly valued, the firm has given its workers a bonus equal in value to the principal, thus meriting a tax deduction for that sum.
103. U.S. General Accounting Office, Employee Stock Ownership Plans: Who Benefits Most in Closely Held Companies?, HRD-80-88 (Washington: GAO, 1980), chapter 3.

104. Louis O. Kelso and Mortimer Adler, The Capitalist Manifesto (New York: Random House, 1958); Louis O. Kelso and Patricia Hetter, How to Turn Eighty Million Workers into Capitalists on Borrowed Money (New York: Random House, 1968).
105. Louis O. Kelso and Patricia Hetter Kelso, Democracy and Economic Power: Extending the ESOP Revolution (Cambridge, Mass.: Ballinger Publishing Co., 1986).
106. Edward E. Lawler III and Gerald E. Ledford, "Skill Based Pay," working paper G 84-18 (66), Center for Effective Organizations, University of Southern California, 1984.
107. Edward E. Lawler III, Gerald E. Ledford Jr., and Susan Albers Mohrman, Employee Involvement in America: A Study of Contemporary Practice, Center for Effective Organizations, University of Southern California, 1989, Figure 4-1.
108. In addition, new employees who join the payroll after the bonus is given will not be eligible for it.
109. For example, the petroleum industry contracts negotiated early in 1988 included a "ratification bonus."
110. U.S. Bureau of the Census, 1982 Enterprises Statistics: General Report on Industrial Organization, ES82-1 (Washington: GPO, 1986), p. 93. The report omits certain important sectors such as transportation.
111. Edward Pessen, "Builders of the Young Republic" in Richard B. Morris, ed., The U.S. Department of Labor Bicentennial History of the American Worker (Washington: GPO, 1976), pp. 65-66.
112. Daniel M.G. Raff and Lawrence H. Summers, "Did Henry Ford Pay Efficiency Wages?," Journal of Labor Economics, vol. 5 (October 1987), Part 2, pp. S57-S86.
113. See, for example, Thomas J. Peters and Robert H. Waterman, Jr., In Search of Excellence: Lessons from America's Best-Run Companies (New York: Warner Books, 1983), which singles out IBM and Hewlett-Packard (among others) in its introduction. See also William G. Ouchi, Theory Z: How American Business Can Meet the Japanese Challenge (New York: Avon, 1982); and Archie Kleingartner and Carolyn S. Anderson, eds., Human Resource Management in High Technology Firms (Lexington, Mass.: Lexington Books, 1987).
114. Debra Whitestone and Leonard A. Schlesinger, "People Express" in Michael Beer, Bert Spector, Paul R. Lawrence, D. Quinn Mills, and Richard E. Walton, eds., Human Resource Management: A General Manager's Perspective - Text and Cases (New York: Free Press, 1985), pp. 748-781.
115. Fred K. Foulkes, Personnel Policies in Large Nonunion Companies (Englewood Cliffs, N.J.: Prentice-Hall, 1980), pp. 46-51.
116. "The Lincoln Electric Company" in Fred K. Foulkes and E. Robert Livernash, eds., Human Resources Management: Cases and Text, second edition (Englewood Cliffs, N.J.: Prentice-Hall, 1989), pp. 206-233. Further information on Lincoln Electric appears on Table 19, below.
117. Lloyd Ulman, "Who Wanted Collective Bargaining in the First Place?" in Barbara D. Dennis, ed., Proceedings of the Thirty-Ninth Annual Meeting, Industrial Relations Research Association, December 28-30, 1986 (Madison,

Wisc.: IRRRA, 1987), pp. 1-13.

118. David A. McCabe, The Standard Rate in American Trade Unions (Baltimore: Johns Hopkins Press, 1912).

119. Daniel J.B. Mitchell, "Wage Flexibility in the United States: Lessons from the Past," American Economic Review, vol. 75 (May 1985), pp. 38-39.

120. Foulkes, Personnel Policies in Large Nonunion Companies, op. cit., pp. 251, 253; Edgar R. Czarnecki, "Profit Sharing and Union Organizing," Monthly Labor Review, vol. 92 (December 1969), pp. 61-62.

121. Sanford M. Jacoby, "Union-Management Cooperation in the United States: Lessons from the 1920s," Industrial and Labor Relations Review, vol. 37 (October 1983), pp. 24-26.

122. Tove H. Hammer and Robert N. Stern, "A Yo-Yo Model of Cooperation: Union Participation in Management at the Rath Packing Company," Industrial and Labor Relations Review, vol. 39 (April 1986), pp. 337-349.

123. See the section on Weirton Steel in Bureau of National Affairs, Inc., Employee Ownership Plans: How 8,000 Companies and 8,000,000 Employees Invest in their Futures (Washington: BNA, 1987), pp. 73-78.

124. Daniel J.B. Mitchell, "The Share Economy and Industrial Relations," Industrial Relations, vol. 26 (Winter 1987), pp. 14-15. As an example, a dispute arose between the Steelworkers and LTV Steel over the treatment of a write-down which might have eliminated profit sharing payments. A settlement was reached providing for bonuses. See "Steelworkers, LTV Settle Profit-Sharing Dispute," AFL-CIO News, January 21, 1989, p. 3.

125. This act requires that employers providing fee-for-service health insurance also offer employees the alternative of belonging to a health maintenance organization (HMO) if an HMO is available in the local area. An HMO is a health care provider which charges a flat monthly fee per subscriber, regardless of actual usage. The act was seen by Congress as a method of restraining health care cost inflation.

126. This act establishes standards for funding of pensions, eligibility and vesting rules, and requires that defined benefit pension plans carry federally-sponsored termination insurance in case of inability to pay benefits due to inadequate funding.

127. Historically, state laws in the U.S. applied the "at-will" doctrine to the employment relationship. Under this doctrine, employers were free to discharge employees for any reason or no reason. Similarly, employees were free to quit without notice. In various states, courts have begun to see exceptions to employer freedom to discharge.

128. The reader is reminded that so far there is no evidence that lump-sum payments are becoming a variable element in pay.

129. David Levine and Laura D'Andrea Tyson, "Participation, Productivity, and the Firm's Performance," paper presented at Brookings Institution conference on Worker Compensation and Productivity, March 1989.

130. Some of the employee representation systems which developed during the World War I period had "collective economy dividend" plans connected with them as a form of gain sharing. See National Industrial Conference Board, Experience with Works Councils in the United States (New York: Century, 1922), p. 2.

131. U.S. Bureau of Labor Statistics, Characteristics of Company Unions, 1935, bulletin 634 (Washington: GPO, 1938).

132. Charles O. Gregory, Labor and the Law, second revised edition (New York: W.W. Norton & Co., 1961), pp. 347-349.

133. Jacoby, Employing Bureaucracy, op. cit., p. 254. The court decision cited in the text is Inland Steel v. NLRB (1948).

134. A study of union contracts in the mid 1980s found that 84% of manufacturing contracts and 74% of nonmanufacturing contracts contained some form of management rights clause. The right to manage the business was a common feature of such clauses. See Bureau of National Affairs, Inc., Basic Patterns in Union Contracts, eleventh edition (Washington: BNA, 1986), p. 80.

135. "An employer who claims he cannot afford a wage increase must furnish the union with information to support his claim if asked to do so, but he need not give the union any information if he flatly says he is unwilling to raise wages." Quote taken from Commerce Clearing House, Inc., Labor Law Course, twenty-fifth edition (Chicago: CCH, 1983), pp. 1888-1889. The Supreme Court decision usually cited in this regard is NLRB v. Truitt Mfg. Co. (1956).

136. Casey Ichniowski, John Thomas Delaney, and David Lewin, "The New Human Resource Management in U.S. Workplaces: Is it Really New and Is it Only Nonunion?," paper presented at the First Industrial Relations Congress of the Americas, Quebec City, Canada, August 1988.

137. New York Stock Exchange, People and Productivity: A Challenge to Corporate America (New York: NYSE, 1982), p. 24.

138. New York Stock Exchange, People and Productivity, op. cit., p. 25.

139. New York Stock Exchange, People and Productivity, op. cit., p. 25.

140. New York Stock Exchange, People and Productivity, op. cit., p. 35.

141. For example, see U.S. Bureau of Labor Statistics, Effect of Incentive Payments on Hourly Earnings, bulletin no. 742 (Washington: GPO, 1943), p. 1.

142. Eric Seiler, "Piece Rate vs. Time Rate: The Effect of Incentives on Earnings," Review of Economics and Statistics, vol. 66 (August 1984), pp. 363-376; Charles Brown, "Firms' Choice of Method of Pay," working paper, University of Michigan, November 1987; Daniel J.B. Mitchell, David Lewin, and Edward E. Lawler, "Alternative Pay Systems, Firm Performance, and Productivity," draft paper for Brookings Institution conference on Worker Compensation and Productivity, March 1989.

143. Sandra L. King, "Incentive and Time Pay in Auto Dealer Repair Shops," Monthly Labor Review, vol. 98 (September 1975), pp. 45-48; John H. Pencavel, "Work Effort, On-the-Job Screening, and Alternative Methods of Remuneration" in Ronald G. Ehrenberg, ed., Research in Labor Economics, vol. 1 (Greenwich, Conn.: JAI Press, 1977), pp. 241-248.

144. Mitchell, Lewin, and Lawler, "Alternative Pay Systems, Firm Performance, and Productivity," op. cit.
145. Douglas L. Kruse, "Profit Sharing and Productivity: Microeconomic Evidence," working paper, Institute of Management and Labor Relations, Rutgers University, August 1988.
146. Corey Rosen, Katherine J. Klein, and Karen M. Young, Employee Ownership in America: The Equity Solution (Lexington, Mass.: Lexington Books, 1986), chapter 5.
147. Reviews of American studies on ESOPs can be found in Michael A. Conte and Jan Svejnar, "The Performance Effects of Employee Ownership Plans," paper presented at Brookings Institution conference on Worker Compensation and Productivity, March 1989; and Blasi, Employee Ownership, op. cit., chapter 8.
148. U.S. General Accounting Office, Employee Stock Ownership Plans: Little Evidence of Effects on Corporate Performance, PEMD-88-1 (Washington: GPO, 1987).
149. Mitchell, Lewin, and Lawler, "Alternative Pay Systems, Firm Performance, and Productivity," op. cit.
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155. Michael Schuster, "The Scanlon Plan: A Longitudinal Analysis," Journal of Applied Behavioral Science, vol. 20 (February 1984), pp. 23-38.
156. Douglas L. Kruse, "Profit-Sharing and Employment Variability: Microeconomic Evidence on the Weitzman Theory," working paper, Institute of Management and Labor Relations, Rutgers University, August 1988.