

Super-Optimizing Examples Across Public Policy Problems
Stuart S. Nagel, ed. Nova Science Publishers, 1999
pp. 7-36

Chapter 2

**PROFIT SHARING AND JOB ANXIETY:
MOVING PUBLIC POLICY TOWARD A WIN-WIN
SOLUTION**

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Interest in profit sharing as a form of flexible pay is part of a larger interest in more flexible personnel practices. The interest in flexibility, in turn, reflects a perceived increase in product-market uncertainty. Where in the past employers have offered job security - due to legal mandate or practice - increased product market uncertainty makes such job "insurance" more costly. Job security protections can be viewed as an employee option to sell labor at the going wage, even when its value to the firm has dropped. As is true of financial options, the cost increases with the variability of the value of the underlying asset. Recent political trends in the U.S. suggest that there are social costs to the flexibility in American labor markets about which mainstream politicians have little to offer.

In European and other countries, permanent unemployment seemed to rise relative to the U.S. in the late 1970s and 1980s. Some interpreted this rise as a symptom of "classical" rather than "Keynesian" unemployment and attributed the rise to a too-high real wage. This interpretation suggests that a wage push caused the increase in unemployment. However, an alternative interpretation put forward in this paper is that increased product-market uncertainty made existing wage contracts more expensive and created upward pressure on pricing markups. Such an interpretation is in better accord with available data on real wages, real unit labor costs, and unemployment than the wage-push explanation.

Even in the U.S., with its comparatively low unemployment rate, unemployment durations became quite high in the 1990s, suggesting a reluctance of employers to hire. Employers shifted towards contingent workers and generally loosened the employment relationship. Neither European high unemployment nor American reductions in the quality of the employment relationship are desirable outcomes.

Profit sharing is a way of explicitly sharing product-market risk with workers. As such, it permits a more efficient employment contract to be determined than a traditional fixed wage system allows. In return for absorbing some risk, workers can be given improved job security. However, to have profit-sharing bonuses of sufficient magnitude to obtain desirable outcomes, the bonuses must be substitutes for the base wage. In a typical firm, profits are too small relative to total labor compensation to permit a substantial bonus, if such a bonus is simply an "add on" to the existing base wage. Only through substitution can this problem be overcome.

Cash profit sharing is most likely to be seen as a substitute for cash wages by workers. Yet public policies sometimes favor deferred profit sharing rather than cash. Appropriate public policy should provide encouragement to cash profit-sharing plans.

Profit sharing, and other alternative payments systems, are not new concepts. The notion of paying workers other than a time-based wage was certainly present in modern economies at their inception in the 19th century and even before. Yet there have been waves of interest in such systems during various periods; the 1980s was the most recent example. The latest wave of interest has now carried over into the 1990s.

An interesting question, therefore, is "why now?" What is there about the circumstances of the 1980s and 1990s that provoked renewed attention to alternative pay systems? A simple answer might be that economists - notably Martin Weitzman - happened to write about the advantages of profit sharing in the 1980s and that the idea passed from the academic literature to the popular.¹ Yet that response is clearly inadequate. Weitzman himself was induced to consider alternatives to the standard wage system by an American economic problem of the time, namely "stagflation." Moreover, actual high-profile experiments with profit sharing in the U.S. during the 1980s pre-date Weitzman's initial contributions, notably in the automobile industry.

My premise in this paper is that interest in profit sharing - often seen as a form of "flexible" pay - is part of a more general concern by employers and policy makers about flexibility in personnel practices. Therefore, we must ask why the employer push for flexibility developed in the 1980s in all market economies. At the most general level, my answer to that question is "increased uncertainty in the market place."

Flexibility (in pay or any other personnel policy) has value to employers only if future conditions cannot be predicted. In an unchanging economy, a stable equilibrium of labor practices would be achieved and there would be no need to worry about contingencies. The same practices would be optimum, period after period. Thus, if you believe that the uncertainties that appeared in the market place in the 1980s were (or are) transitory, you would predict that interest in flexibility - including the kind of pay flexibility represented by profit-sharing - will diminish. I will argue that such a return to stability is unlikely and, thus, that profit sharing in particular will have special value in the future.

During much of the 1980s, and into the 1990s, the flexibility of the U.S. labor market was often touted as the key to American job creation. But the kind of flexibility that proponents had in mind was the freedom to lay off without legal or social impediments. Mainstream politicians did not question this conventional wisdom. As a result, politicians on the margin - ranging from Jerry Brown on the left to Ross Perot in the center to Pat

Buchanan on the right picked up the job insecurity issue. Unfortunately, mainstream types - even when the issue caught on - had little to say about it other than vague exhortations to improve the education and training system.

At best, education and training improvements are long-term solutions. They have little relevance to mid-career voters anxious about their jobs. And, in any case, the authorities who run the educational system are at the local level and not easily amenable to national coordination.

Ultimately, if there is a problem with the employment relationship and contract, the response of public policy needs to be focused there. Profit sharing is a more desirable way to contract in the labor market; it allows some product market risk to be absorbed by labor in the form of variable pay in exchange for more job security. When such variable pay is not part of the contract, the result is likely to be socially-undesirable labor market outcomes. These outcomes may be excessively high unemployment rates (as in some European countries) or an excessively insecure employment relationship (as in the U.S.). Regardless of the level of overall unemployment, those who have the misfortune of becoming unemployed suffer long durations of job search due to employer reluctance to hire.

Although profit sharing is a more desirable way to structure the employment contract, it needs public encouragement. Firms will not adopt enough profit sharing on their own. In part this is due to the fact that the macro-level benefits of profit sharing are external to the firm.

PREVIOUS LITERATURE

There is now a considerable literature reviewing research evidence on the impact of profit sharing.² In general terms, this literature finds a positive impact of profit sharing on productivity and/or profitability. However, the conclusion is not unanimous and is sensitive to model specification; in particular, simultaneous specifications do not always support a causal link running from profit sharing to some firm performance measure. There is also some evidence that profit sharing has an employment-stabilizing effect in the face of varying demand. Profit sharing research is part of a wider range of studies dealing with other forms of alternative compensation ranging from piece rates to employee stock ownership and their impact on firm performance.

The historical literature suggests that the use of particular pay systems (including profit sharing) has varied over time. It suggests that there is a strong element of historical accident and management fad in plan usage in any particular period. That is, pure efficiency considerations play only a part in determining how pay systems evolve. However, government policy - either in the form of tax incentives or mandates - can strongly affect employer compensation policy.

Generally, historical review of the literature surrounding profit sharing indicates three motivations for installation of such plans. First, profit sharing is seen as a possible method of alleviating labor-management tensions in the larger society, or at particular

firms. A left-of-center interpretation might be that profit sharing is a social advance because it diverts income that might otherwise go to profit recipients to workers. A right-of-center view might be that by making workers into mini-capitalists, profit sharing will induce an appreciation of markets and capitalism. These various arguments for profit sharing can be characterized as *ideological*.

A *second* argument for profit sharing found in the historical literature is that profit sharing will function as a motivational device for workers. It is recognized that since profit sharing is a group plan, there is a danger of individual shirking and free riding. But steps can be taken to encourage group monitoring. Although other forms of motivational tools can be used, notably piece rates, such arrangements may create problems of quantity-over-quality and of labor-management frictions and restrictions of output when work standards must be reset. The motivational arguments for profit sharing can be characterized as the *incentive* approach.

Finally, the *third* argument for profit sharing has been that it will reduce unemployment. Weitzman's "share economy" proposal falls into this category. But the idea that profit sharing creates wage flexibility which might encourage employment can be found much earlier and was certainly present during the Great Depression of the 1930s. This argument for profit sharing can be characterized as *macroeconomic*.

ACADEMIC VS. ECONOMIC INFLUENCES ON THE USE OF PROFIT SHARING

The popular and practitioner literature has moved roughly in parallel with the academic in recent years. There was much discussion in the 1980s among personnel managers of creating systems of "pay for performance." However, the academic literature was helpful in focusing the popular media, and thereby the attention of politicians, on the topic. In the U.S., the *New York Times* - which is generally seen as the premier national newspaper - dubbed the Weitzman proposal for a share economy the "best idea since Keynes" in two editorials.³ But even before Weitzman's lucid analysis, proposals by academics - including one by this author - for widespread use of profit sharing as a macroeconomic remedy had appeared in the popular press and other non-technical sources. What Weitzman did, however, was to state a case for profit sharing in a rigorous way that would also capture the attention of professional economists.

Press Coverage and Actual Usage of Profit Sharing

Since the *New York Times* made itself a major proponent of profit sharing in 1985 with its endorsements of the Weitzman proposal, it is interesting to track that newspaper's coverage of the subject. Such coverage can be viewed as an index of popular and professional interest in profit sharing. Figure 1 shows annual citations of "profit sharing" in the *Times* in the 1980s and 1990s.⁴ *Times* coverage of this topic appeared to

have been rising prior to the Weitzman endorsement and seems generally to have declined after the mid 1980s.

Unfortunately, continuous, consistent data are not available. The profit-sharing coverage estimates shown on Table 1 depict a roughly parallel rise and then fall in the proportion of U.S. workers covered by profit sharing with *Times* citations.⁵ Note that the first half of the 1980s (when profit sharing seemed on the rise) was characterized by two severe, back-to-back recession bottoming out in 1982. It was also a period of substantial run up in the value of the U.S. dollar on world currency exchanges that reduced American international competitiveness dramatically. In addition, there had been a marked slowdown in productivity growth during the 1970s and it was not clear as of the mid 1980s whether this problem was continuing. The latter part of the 1980s, however, was a period of employment expansion, declining value of the dollar (greater U.S. global competitiveness), and accelerated productivity growth. In addition, the stagflation problem (simultaneous high unemployment and inflation) which had worried Weitzman abated. These trends toward improved economic performance may have accounted for lessened employer interest (and popular interest) in profit sharing after the mid 1980s.

Divergent Union Trends

Figure 1 also shows annual citations of profit sharing from another information source, the *Daily Labor Report*. This specialized publication focuses mainly on the union sector and is aimed at practitioners in labor and management rather than a general audience. Its coverage of profit sharing is highly variable from year to year. However, unlike the *New York Times'* the *Daily Labor Report's* coverage does not show a downward trend, suggesting that union sector interest in profit sharing was not declining. Figure 2, which is drawn from various sources, indicates that profit sharing's incidence rose dramatically in union contracts in the 1980s. But even with that rise, fewer than a tenth of private-sector union contracts in the U.S. had such provisions as of the mid 1990s.⁶

Considering this evidence, it is quite possible to conclude that the union and nonunion sectors diverged in their usage of profit sharing after the mid 1980s. Although private employment was generally growing, union membership in the private sector was falling for most of this period, both absolutely and relative to the overall workforce. By 1994, union contracts covered only about one eighth of private employment. Issues of job

Table 1. Profit Sharing Incidence Among Full-Time Employees

Percent of Employees in Establishments with Profit Sharing Plans Whether or Not All Employees Were Covered by the Plans	
Professional/ Technical/ Production/ All Administrative Clerical Service	
1981 O M-L na	25% 26% 17%
1982 O M-L na	25 28 18
1983 O M-L na	27 31 23
1984 O M-L na	28 31 23
Percent of Employees Covered By Profit Sharing Plans	
Professional/ Clerical/ Production/ All Technical Sales Service	
1985 O M-L 18%	19% 22% 16%
1986 O M-L 22	22 22 22
1988 O M-L 21	23 24 18
1988 N M-L 18	20 21 15
1989 N M-L 16	14 14 17
1991 N M-L 17	14 17 18
1993 N M-L 17	14 17 18
1990 Small 14%	15% 16% 13%
1992 Small 15	19 17 13
1994 Small 13	16 17 10

Note: O = old survey coverage; establishments of 100-250 or more workers, depending on industry.
N = new survey coverage; establishments of 100 or more employees.

M-L = medium-to-large establishments; old survey 1981-1988; new survey 1988-1991.

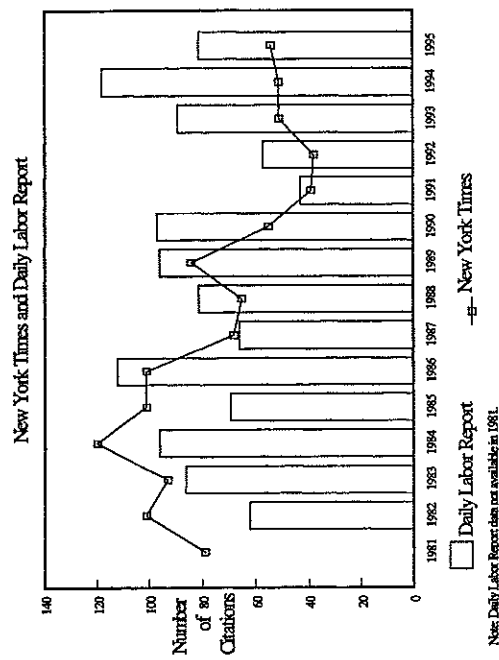
Small = small independent businesses with fewer than 100 workers. For 1994, only data for deferred profit sharing are available. However, in previous years, cash profit sharing has accounted for a negligible amount of coverage.

na = not available

Source: U.S. Bureau of Labor Statistics.

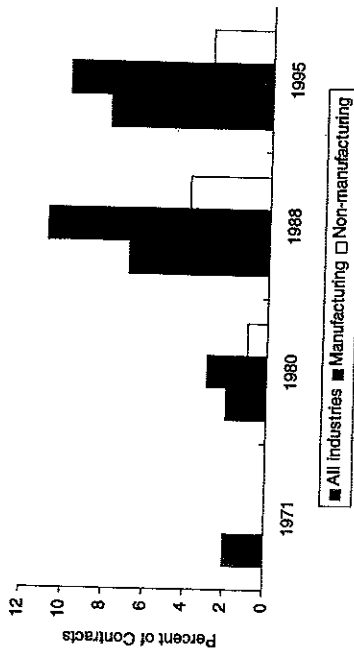
security and employment retention were of greater concern in the union sector and may account for a union-nonunion divergence in profit sharing trends.

Figure 1: Citations of Profit Sharing



In addition, wage trends in the American union sector had deviated from nonunion over the period from the 1950s through the mid 1990s. The deviation may have suggested to unionized employers that profit sharing would have been beneficial. The continuous line on Figure 3 shows an index of the ratio of union wages under major contracts to all wages (union + nonunion) for private production and nonsupervisory workers.⁷ During the first period when union relative wages fell (the 1960s), union employment in the private sector grew. But the large increase in the union wage differential in the 1970s and early 1980s seems to have precipitated a decline in union employment (also shown on Figure 3).

Figure 2: Frequency of Profit Sharing in Union Contracts



Note: 1971 data refer to contracts covering 1000 or more workers. 1980 data refer to contracts covering 500 or more workers. 1988 data refer to contracts covering 500 or more workers. 1995 data refer to contracts covering 50 or more workers. Source of Figures 1 and 2: See text.

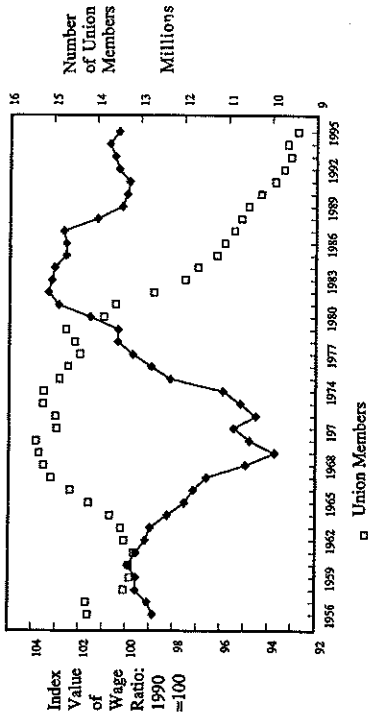
Only after a fall in the differential during the 1980s and early 1990s - a period of union concession bargaining - did the decline in American union employment seem to be arrested. Given this history and relationship, it may have seemed advantageous to some unionized employers to promote profit sharing as an alternative to the pay system that previous prevailed. By having compensation set in some direct relation to firm "ability to pay," deviations between firm wage levels and those of its nonunion competitors (or potential competitors) might be avoided.

THE POLITICAL INFLUENCE

The limited evidence available suggests that the academic literature has so far proved incidental to actual usage of profit sharing in the U.S. case. Employers may have tended to view profit sharing as an incentive. While some paternalistic employers may have been influenced by the ideological approach earlier in this century, such broad social notions have not had much influence on employer practice recently. Similarly, Weitzman-type arguments have not resonated with American employers. Macroeconomic benefits are not of direct concern to employers. Employers are by nature responsive to their micro-level environment. However, some of the employment-stabilizing elements of the macro

approach may be attractive to employers who see some advantage in providing job security (or who may be pressed to do so by unions).

Figure 3: Major Union Wages/Average Wages vs. Union Membership: Private Sector



Source: U.S. Bureau of Labor Statistics. Wage data refer to production and non-supervisory workers.

In the U.S. case, the ideological appeal of profit sharing, even when combined with Weitzman-style macro analysis, never found its way into political action. Some Democrats in Congress did suggest promoting profit sharing through tax incentives in the 1980s. There have been proposals along these lines in Congress as recently as 1994. But the Republican ascendancy in Congress in 1995 ended any such talk in the legislative arena. On the executive side, a presidential commission designated to propose changes in labor law, although identifying unemployment as an economic problem, failed to address profit sharing as a macroeconomic remedy. However, profit sharing has been endorsed by the Secretary of Labor as part of the "high road to productivity."⁸

Although the academic literature has not had much effect on actual public policy in the U.S., the British experience has been different. In the late 1980s, Britain adopted tax incentives for profit sharing (and certain other kinds of share plans), partly in response to Weitzman and partly in response to the right-of-center ideological approach. Even earlier, the French had required forms of profit sharing for right-of-center ideological reasons and later with some macroeconomic motivation as well. The fact that the profit-sharing approach can be attractive across the political spectrum internationally suggests it is one of those rare "win-win" targets for public policy. The trick is to bring that spirit to the U.S.

I will argue below that incentives for the installation of profit sharing are desirable, regardless of the motivation of the politicians who propose them. However, there is an unfortunate notion afoot that installation of profit sharing is just a hidden way of cutting wages induce hiring. Such a notion may be persuasive to those in authority who believe that current problems of unemployment are due to too-high real wages and that profit sharing will undo those wages by hidden means. But it will hardly serve to make the idea of profit sharing popular among wage earners. My argument is different: *profit sharing is a better way to allocate risk than current labor market institutions frequently allow.*

ARE WAGES THE CAUSE OF HIGHER UNEMPLOYMENT?

Economists generally find a justification for public policies to encourage profit sharing mainly through the macroeconomic channel. If profit sharing has sufficiently-desirable micro incentive effects, profit-maximizing employers will adopt it and capture the gains in higher profits. At best, government might have a role in spreading information about the advantages of profit sharing, although - as Figure 1 previously illustrated - there are private sources of this information.

If there are macroeconomic benefits, however, individual firms will not have incentives to achieve them since such benefits are largely external to the firm. Employers as a group might benefit from a more prosperous economy but no one employer can possibly have a noticeable role in achieving it. To the extent that profit sharing can reduce unemployment, some government action will be required to induce employers to adopt it.

Unemployment has been a major concern in parts of Europe and elsewhere during the 1980s and into the 1990s. A critical question, therefore, is the role of wage setting in creating the problem. One interpretation has been that real wages were pushed up too high, thus limiting job opportunities. Unemployment, according to this view, was of the "classical" rather than "Keynesian" variety. A corollary opinion was that because real wages were held in check, the U.S. was able to expand employment in this period while other countries were not.

A Simple Model of Unemployment Determination

On the surface, there is some statistical support for this view. But as I will show, the evidence quickly weakens when it is closely scrutinized. Let us review the theory of how an upward real wage push might cause a permanent rise in the level of unemployment.⁹ I should emphasize that the model to be presented is of a long-run character and does not deal with possible variation of real wages over the short-term business cycle.

Consider an economy with a *labor market* (in which a real wage is ultimately set), a *product market* (in which a level of profitability is ultimately established), and a demand-regulating authority, say a *central bank*. The real wage is defined as the nominal wage w

divided by a general price index p . Profitability is defined as a markup of prices over wage costs, i.e., p/w . The level of pressure in the market place - either labor market or product market - is measured by the unemployment rate U . Finally, the central bank can adjust the level of demand and, thus, the unemployment rate.

Given this bare-bones framework, we can imagine virtually any form of wage and price setting process ranging from classical auction markets to collectively-bargained outcomes to monopolistic wage or price determination. For convenience, I will use the terminology of bargaining in the labor market and of monopolistic price setting in the product market. However, the model is in fact quite agnostic concerning the actual arrangements of wage and price setting. That is, the actual institutions assumed will make little difference to the basic points established below.

We might expect that other things constant, higher unemployment would weaken labor's bargaining position and tend to force down the target real wage in the labor market. Downward-sloping line LL on Figure 4 illustrates this tendency. Target w/p drops as unemployment rises. In the product market, firms attempt to establish a markup above their costs. Most costs are interfirm transactions and net out, leaving profitability - as noted earlier - to be expressed as the ratio of prices to wage costs, e.g., p/w . With a softer economy, as measured by the unemployment rate, firms will be less able to achieve their profitability target. That is, target p/w will fall as the unemployment rate rises, other things equal. Figure 4 shows the relationship between the *inverse* of target p/w in the product market and the unemployment rate as upward-sloping line PP.

Only if the unemployment rate is held at U_1 by the central bank will the economy be in equilibrium in the sense of exhibiting a constant inflation rate. At lower unemployment rates ($U < U_1$), labor will attempt to raise w/p and firms will attempt to raise p/w , two mutually-incompatible objectives. The outcome of this tussle is accelerating inflation and an unsustainable wage-price spiral. At higher unemployment rates ($U > U_1$), the reverse occurs and inflation decelerates (and eventually becomes deflation). U_1 , therefore, is what economists sometimes call the "natural rate of unemployment" or the "non-accelerating inflation rate of unemployment" (NAIRU).

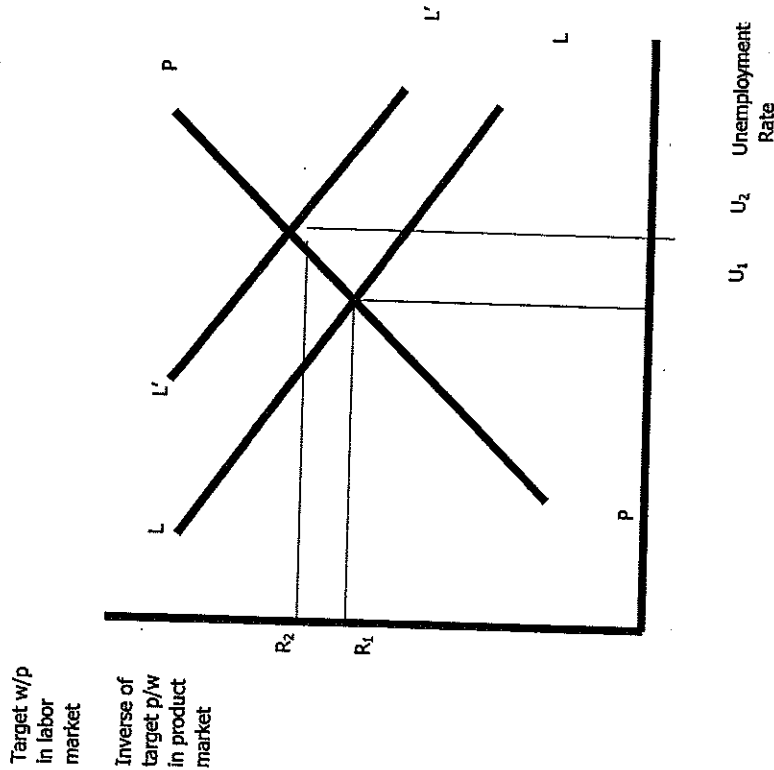
Impact of a Real Wage Push

If labor becomes more militant, i.e., if target w/p rises in the labor market at any given unemployment rate, the NAIRU will increase. This tendency is illustrated on Figure 4 by a shift in the labor-market function to $L'L'$ which raises the NAIRU to U_2 . Given the rise in militancy, the central bank must accept U_2 as its unemployment target; attempting to hold the rate at the former U_1 level will result in rising inflation.

As I noted earlier, there is superficial support for the notion that the higher unemployment which has afflicted many countries since the 1980s is the result of some type of real wage push suggested by the shift from LL to $L'L'$. But we will see below that the seeming association of a real wage push and unemployment masks a more

fundamental trend. And I will develop a role for profit sharing in coping with the new trend.

Figure 4: Impact of a Change in Target Real Wage on Real Wages and Unemployment



Actual Data on Wage Trends and Unemployment

Figure 5 traces the course of unemployment rates in several European countries relative to the U.S. in each year shown.¹⁰ Figure 6 illustrates the same calculation for three non-European countries. In all cases adjusted unemployment generally exceeded U.S. levels in the 1980s and 1990s. In comparative terms, the U.S. seems to have done better than the other countries in keeping its labor force employed.

Figures 7 and 8 show the trend in real wages in the same countries over the same period, calculated using official national consumer price indexes. For the U.S., two versions of real wage trends are depicted, one using the official price index and a second adjusted calculation using a corrected consumer price index known as CPI-U-X1.¹¹ In every case but Canada, real wages rose relative to the U.S. during the period shown. Figure 9 thus suggests a loose association between real wage growth and unemployment; countries whose real wages rose relative to the U.S. seemed also to experience an advance unemployment trend relative to the U.S. It was this sort of observation that convinced many that Europe in particular had experienced some kind of real wage push (classical rather than Keynesian unemployment) and that little could be done about it short of changing wage-setting institutions.

Adjusting for Productivity

In fact, this explanation is superficial. If productivity rises, unit labor costs will fall allowing for higher real wages without a squeeze on profits. Essentially, productivity growth permits a simultaneous rise in LL and PP without a change in the NAIRU intersection. To adjust for productivity, it is necessary to consider real unit labor costs rather than real wages.¹² And as Figures 10 and 11 show, most countries exhibited declining real unit labor costs relative to the U.S. The positive association between unemployment and real wage trends of Figure 9 vanishes on Figure 12 which substitutes real unit labor cost trends for real wage trends.

If a wage push in the sense of a shift up of the LL function did not cause the rise in unemployment, what did? Figure 13 suggests another candidate. A push for higher profitability (a higher p/w at any given unemployment rate) can be represented by a shift in the PP function to P'P'. As the figure shows, such an upward shift could raise the NAIRU. But what would account for such a shift? It is easy to point to product-market influences that could have moved PP in the opposite direction (up rather than down on Figure 13) including privatization and deregulation. However, competition and rising uncertainty in the product market inevitably affect labor-market outcomes. Below I will argue that employers are behaving as if employing labor has become more risky (costly) despite the officially-measured trends in real unit labor compensation. The result is an attempt to obtain a bigger markup over labor costs (a downward shift in the PP function) which leads to higher permanent unemployment.

Figure 5: Unemployment Indexes:
Standardized to U.S. Level in 1977: U.S. = 100

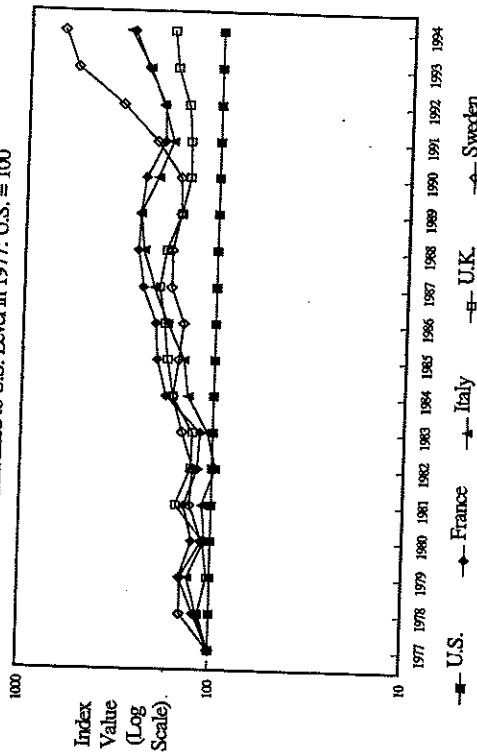
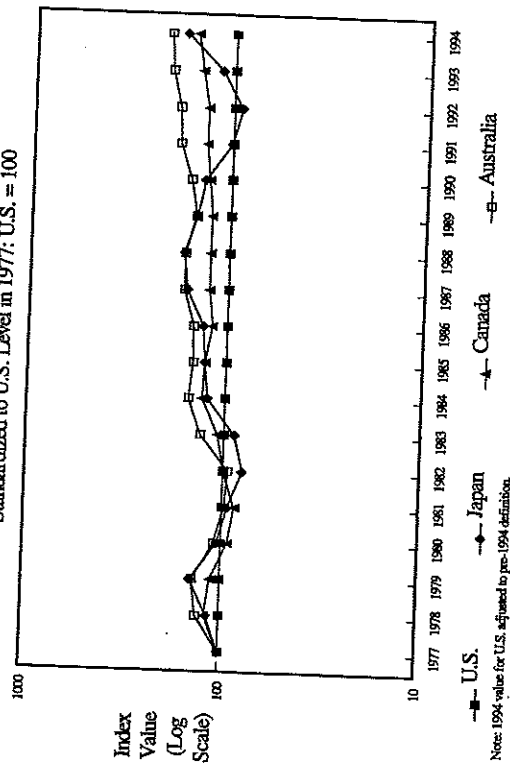


Figure 6: Unemployment Indexes:
Standardized to U.S. Level in 1977: U.S. = 100



Source of Figures 5 and 6: Calculated from U.S. Bureau of Labor Statistics data.

Figure 7: Real Compensation/Employee:
Business Sector

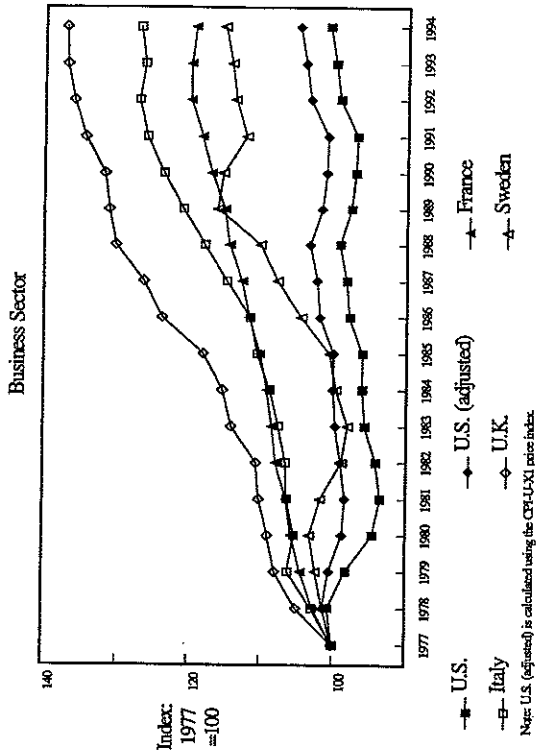
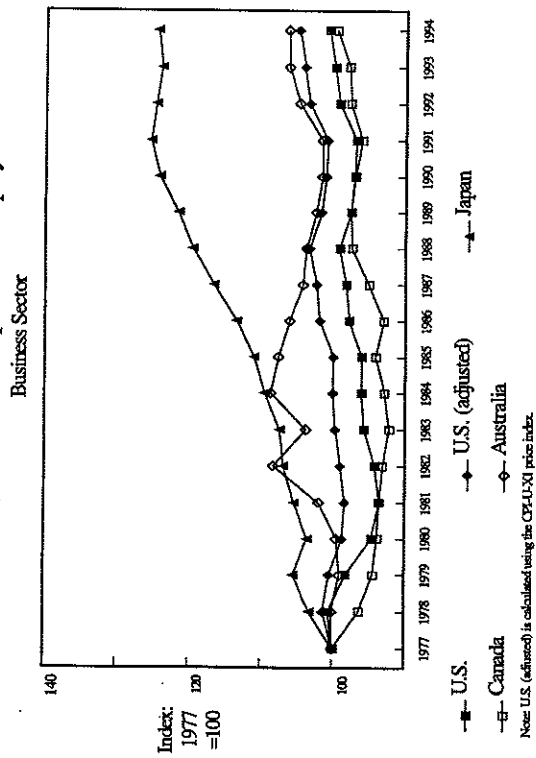
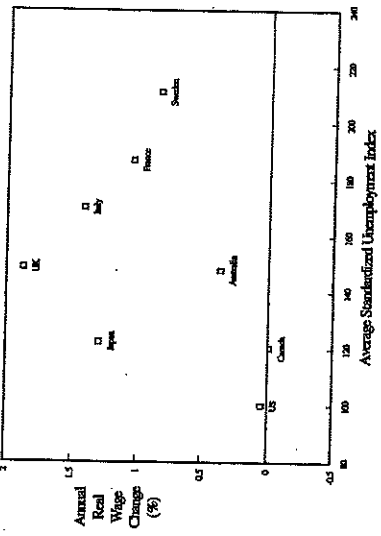


Figure 8: Real Compensation/Employee:
Business Sector



Source of Figures 7 and 8: OECD.

Figure 9: Annual Real Wage Change vs. Average Standardized Unemployment: 1977-1994



Source: OECD, U.S. Bureau of Labor Statistics.

Figure 10: Real Unit Labor Costs:

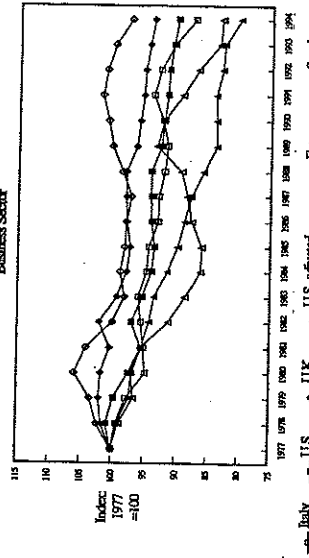
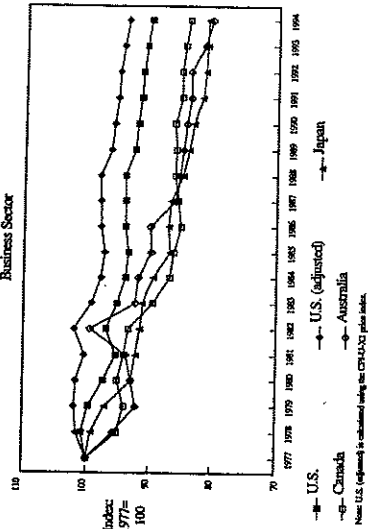
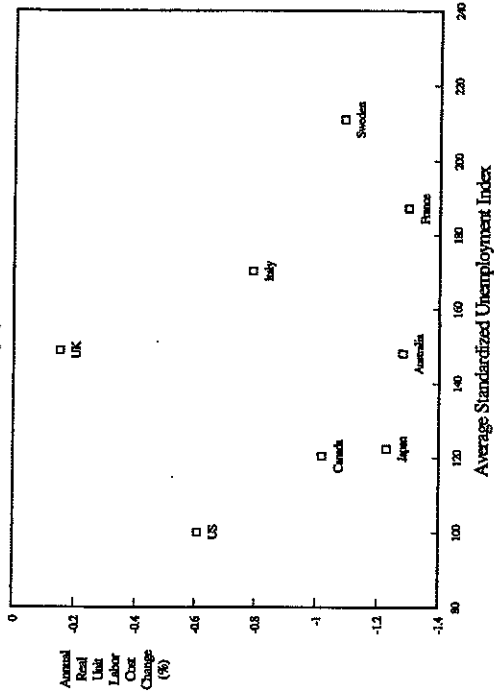


Figure 11: Real Unit Labor Costs:



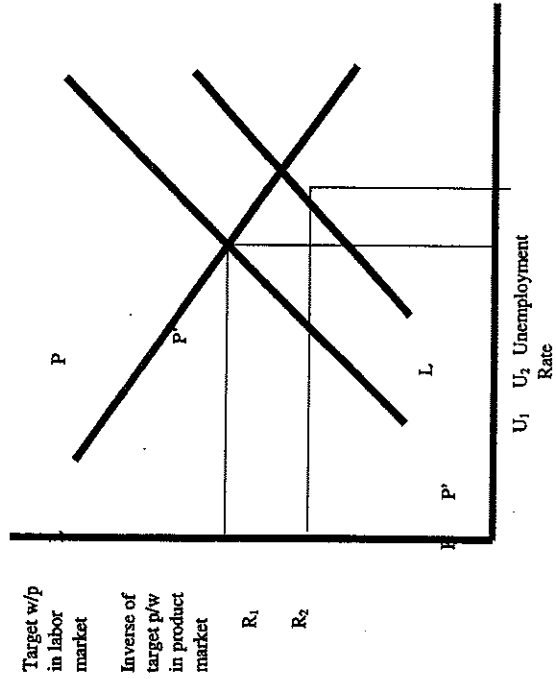
Note: U.S. (adjusted) is calculated using the CPI-UAC price index.

Figure 12: Annual Real Unit Labor Cost Change vs. Average Standardized Unemployment: 1977-1994



Source: OECD, U.S. Bureau of Labor Statistics.

Figure 13: Impact of a Change in Target Price Markup on Real Wages and Unemployment



EMPLOYER DEMANDS FOR FLEXIBILITY

One of the more striking aspects of U.S. joblessness compared to that of other industrialized countries has been unemployment *duration*. Figure 14 compares the proportion of long-term unemployed (defined as being unemployed 13 or more weeks at the survey date) among all unemployed workers in five countries for which comparable data were available during 1983-93.¹³ The long durations found outside the U.S. suggest that those who find themselves unemployed have been experiencing special difficulty in locating jobs. They must search for a long time. In turn, the long unemployment durations suggest an employer reluctance to hire.

The European literature in particular sometimes has attributed employer reluctance to hire to the employment protections enjoyed by law or practice of those who are working. Institutions that make it difficult to terminate employees are seen as making employers reluctant to take on new commitments through hiring. Evidence of such reluctance to commit is seen in the rise of what Americans call "contingent" employment and what Europeans term "atypical" (or "precarious") employment unless such employment is restricted by law.

Specifying a dividing line between contingent and non-contingent or between atypical and typical is arbitrary. However, contingent or atypical workers are typified by "temps" who are hired on a daily or very short term basis, sometimes through an intermediate agency. In effect, such workers are "just-in-time" people to whom the only commitment is a day's pay for a day's work. Growth in such arrangements suggests that employers are eager to avoid the costs of commitments associated with more traditional employment relationships. But it is not necessary to rely solely on the use of contingent workers to find symptoms of employer reluctance to hire. In the U.S. such symptoms include a decline in recall provisions for those who are laid off and the so-called "white-collar recession" of the early 1990s.

The Burden of Risk

American employers have more legal freedom to lay off or terminate unwanted workers than those in many other industrialized countries. Thus, the lesson has been drawn that by relaxing legal restrictions other countries could lower their unemployment rates. But there is a missing link in this argument. The kinds of employment guarantees that are seen as the culprits for unemployment in the flexibility literature are basically a form of "insurance" for risk-averse workers. Just as with other forms of insurance and benefits that employers often provide, employment insurance has a cost. However, it will not add to *total* labor costs on a one-for-one basis.

How much it adds depends on how much of the cost is absorbed by labor. In principle, all of the cost could be absorbed by labor, leaving no added cost to the employer. There is a considerable literature dealing with the absorption by labor of payroll taxes and benefit costs that is often ignored in calls for more employer flexibility

as a remedy for unemployment. There is, however, an important difference between the cost of a payroll tax or a benefit such as a pension and the cost of an employment guarantee. The difference lies in the degree to which the eventual expense can be predicted. Taxes and pensions have predictable costs but in an unstable economy the cost of job security to the employer may be both significant and hard to anticipate.

To the extent that such costs are predictable, and to the extent they are not absorbed by labor, the analysis surrounding Figure 13 applies. Higher labor costs (compensation plus the implicit cost of job "insurance") will push firms to seek higher price/wage markups. Such a reaction will raise the NAIRU. In addition, note that the cost of job insurance can be viewed as analogous to an option. The worker has an option to continue selling his/her labor to the firm at the going wage even if the shadow price of that labor has fallen (due to declining product demand).

As with other options, the cost will increase with the variability of the underlying asset (in this case, the value of the worker to the firm). If firms become more uncertain about the future, the cost of providing job insurance will be perceived to have increased and function P'P' on Figure 13 will be shifted to the right, raising the NAIRU.¹⁴ In addition, employers may behave as insurance companies sometimes do when faced with risks that are difficult to appraise; they will try to avoid writing policies rather than attempting to price them. For employers this means cessation of employment contracts that provide job security and/or reductions in hiring into positions that have security guarantees.

This interpretation of increased (but difficult-to-quantify) risk fits the facts cited earlier. Real wages have risen except in North America. But as noted earlier, a dynamic analysis requires examination of real unit labor costs which have been falling. And the NAIRUs of the countries previously reviewed seem to have risen. It appears, therefore, that firms are trying to raise target p/w to offset an increase in providing job protection, to the extent that they cannot avoid the costs by moving toward contingent workers. For whatever reason, it has not proved possible to shift the job insurance costs back to labor.

It is difficult to say exactly why the burden of the risk is not fully transferred to workers. A vertical LL function (total labor absorption) would permit p/w to rise without an increase in the NAIRU. Particularly in some European countries, one might turn to insider/outsider models to explain why - over time - a temporary rise in unemployment would become permanent. Note, however, that findings of wage rigidity and deviations from a classical supply-demand model for the labor market are hardly new. Whatever the explanation for non-absorption, it is difficult to view the upward shift of the NAIRUs outside the U.S. to be optimal social outcomes. Profit sharing could alleviate the problem by making explicit the trade off between risk sharing between employer and employee and provision of job insurance in the employment contract. I will return to that point below.

More Uncertainty to Come

As noted earlier, the U.S. has comparatively little regulation of employer freedom to lay off workers, especially in response to economic fluctuations in the product market. Thus, shifts in American labor-market structure are likely to reflect changing market forces rather than shifts in public policy. Changes observed in U.S. labor markets during the 1990s suggest that American employers have begun to exhibit the kind of reluctance to hire that earlier characterized their counterparts in other countries. In turn, these findings suggest that greater uncertainty in the market place is being anticipated.

Figure 15 illustrates two symptoms of this reluctance. First, the duration of unemployment - represented by the interrupted spells of the currently unemployed - reached very high levels by 1994 by U.S. standards. Yet the unemployment rate itself had fallen significantly from the recession peak. In the past, falling unemployment rates were accompanied by falling unemployment durations. But that relationship seems to have weakened dramatically in the 1990s.

Although there is no continuous measurement of the flow into the unemployment pool, the number of weekly new claims for unemployment insurance serves as a proxy. As Figure 16 shows, such claims had fallen to low levels by 1994. Taken together, the claims data and the duration data suggest a labor market in which relatively few individuals are becoming unemployed but those who do become unemployed have a hard time finding new jobs. That is, employers are hanging on to existing employees and showing surprisingly little interest in acquiring new ones. The unemployment rate is the product of those entering unemployment and their duration in the unemployment pool. Thus, it is quite possible for these two influences to produce both a low unemployment rate and a high duration.

There is other supporting evidence for this interpretation. Figure 15 shows that use of overtime hours in manufacturing (the only sector for which such data are available) rose to record highs by 1994. Employers were using their existing workers more intensively rather than hiring additional staff, despite the fact that by law overtime hours are paid at a 50% premium.¹⁵ While there is no direct measure of unfilled job vacancies, there is a data series on employer help-wanted advertising. As can be seen on Figure 16, this index rose after the recession of the early 1990s. But it remained low when compared with levels attained in the late 1980s. Again, the data suggest employers were shying away from new hiring in spite of the economic expansion after 1991.

Figure 17 shows that use of employees hired through temporary help supply agencies rose steadily in the 1980s, accompanied by a rise in the relative compensation of such workers. But in the 1990s, while use of "temps" accelerated, their wages fell. Apparently, job seekers unable to find regular employment after long searches had sufficiently saturated the temporary market to drive down relative pay there.

Although relatively few workers are temps, the greater use of such forms of employment suggests a general employer search for a lesser degree of employer commitment to employees. Observers have noted a decline in employer-provided benefits such as health insurance coverage and defined-benefit pensions in the 1990s. Perhaps

symptomatic of this change in the character of the employment relationship is the declining use of personnel managers within the managerial workforce shown on Figure 18. With a weaker employment relationship, firms could shift their managerial resources away from personnel departments and toward other uses.

Figure 14: Long-Term Unemployed As Percent of All Unemployed: U.S. Definitions: 1983-1993

Note: Long-term unemployed are those unemployed 13 or more weeks.

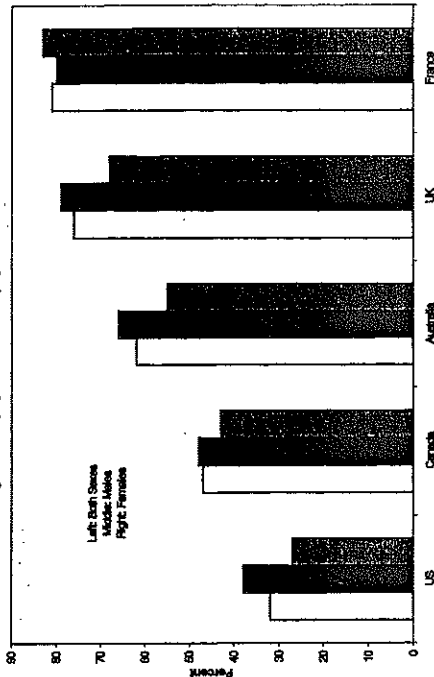
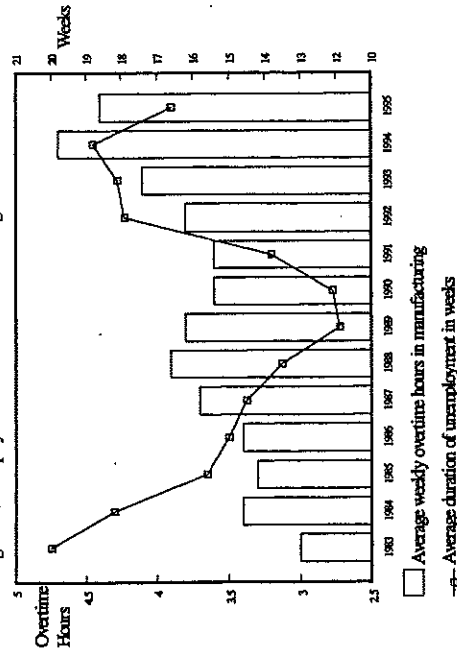


Figure 15: Unemployment Duration and Manufacturing Overtime Hours



Source of Figure 15: U.S. Bureau of Labor Statistics

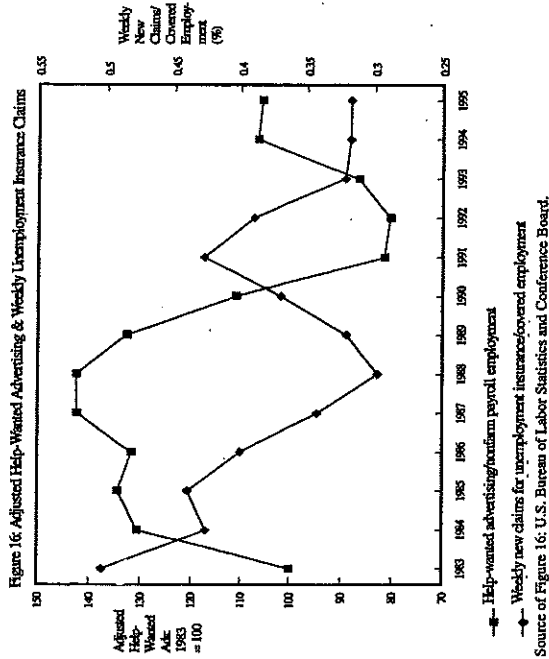
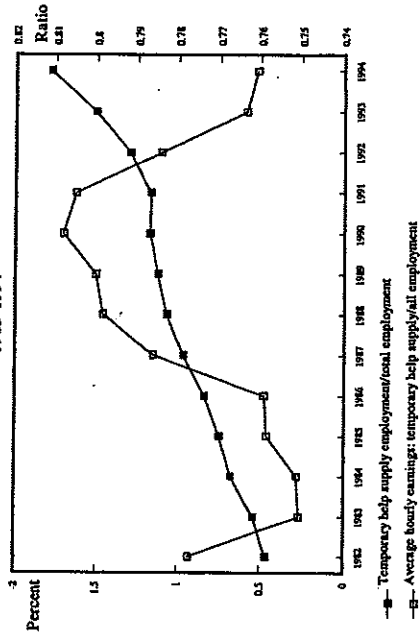
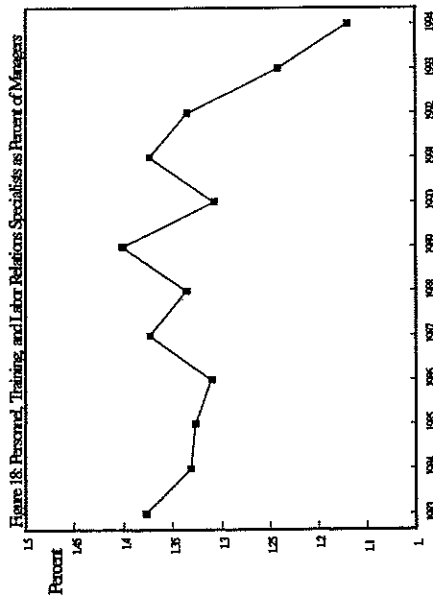


Figure 17: Trends in Temporary Help Supply Employment 1983-1994



In the U.S., as in other countries, employers seem to be reluctant to hire and to commit themselves to maintaining the employment relationship. An important question, therefore, is whether current labor market trends are producing employment contracts that



Source of Figures 17 and 18: U.S. Bureau of Labor Statistics.

meet employee demands for security and employer demands for flexibility. In my view, the answer is "no". Neither labor markets characterized by high levels of unemployment - as have appeared outside the U.S. - nor the erosion of the employment relationship - as has appeared in the U.S. - seem optimum. Profit sharing, however, can assist in structuring a better form of contract.

PROFIT SHARING AS A WIN-WIN APPROACH

If workers value both wages and job security and employers need flexibility to meet uncertain demand, an optimum contract is likely to reflect all of these preferences. It is likely to have a fixed wage element and a variable pay element in which the latter adjusts to changing demand levels. To some extent, the fixed wage element and the variable pay element should be substitutes (even if not perfect substitutes); pay received from the variable element adds to worker income just as does the fixed wage. In addition, if the employer is providing some degree of job security, that, too, represents a cost to the employer and a benefit to the worker.

Since such a system has a labor-demand stabilizing potential, it also has the potential to reduce the amplitude of the business cycle and the accompanying waste of economic resources. Such a potential represents an externality not captured at the micro level. That is, profit-sharing contracts will tend to be underused if pure market forces are relied upon to induce their implementation. Moreover, there may be institutional lethargy in departing from an existing pattern of employment contracts and pay systems.

Figure 19: Percent of Non-Construction Union Contracts Which Contain Lump-Sum Bonuses: Newly-Negotiated Agreements

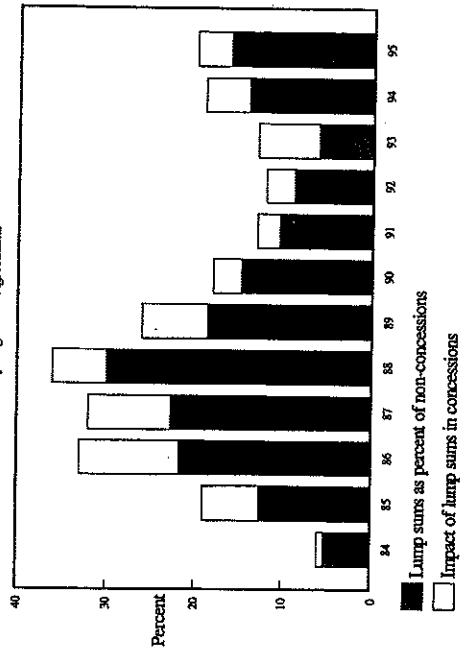
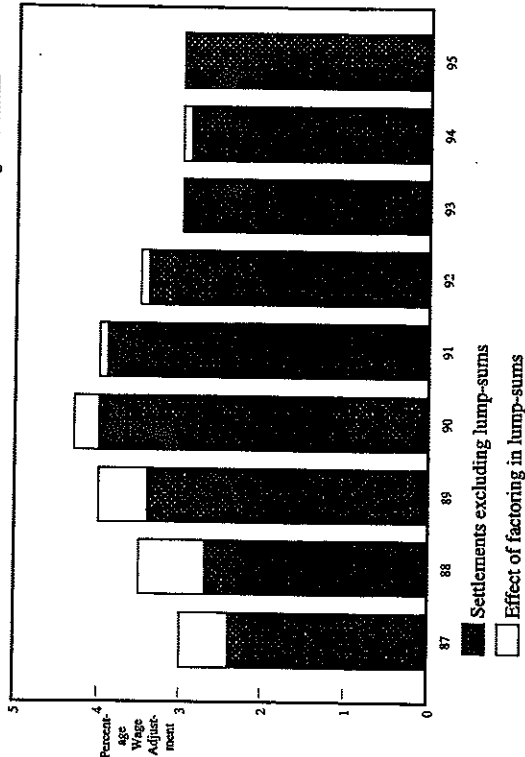


Figure 20: Impact of Lump-Sum Bonuses on First-Year Median Union Wage Settlements



Source of Figures 19 and 20: Bureau of National Affairs, Inc.

The Union Sector

Where there are union contracts, there is available to workers an agent to monitor the variable payment and to ensure that any adjustments in that component actually follow true product demand variations. In addition, the terms of the bargain - how much job security is to be provided in return for how much risk absorption by labor - can be specified in an explicit contract. However, as noted earlier, American experience suggests that while union attitudes have shifted with regard to profit sharing relative to the pre-1980 period, there is still only limited use of such arrangements in the union sector.

It is possible, however, that unions could bargain for wages in a manner that would simulate the effects of profit sharing without formally labeling the outcome. The psychological literature suggests that workers will be more willing to accept variable pay if it is labeled as a "bonus" rather than a wage. In the late 1980s in the U.S., the use of lump-sum bonuses became common in union contracts.

Figure 19 shows the proportion of new (non-construction) contracts containing lump-sum features. There was some association of these bonuses with concession contracts (defined as contracts with no nominal first-year wage increase or with a nominal wage cut). The lower portion of the bars on Figure 19 show the proportion of new non-concession contracts that had lump sums; the upper portion of the bars represents the impact of concession contracts.¹⁶

As can be seen, whether the analysis includes all contracts or just non-concessions, some cyclicality appears. That is, use of lump sums peaks toward the end of the business cycle in the 1980s, declines with the recession of the early 1990s, and then shows signs of increasing in the recovery. It could be that in future business cycles, union contracts will tend to eliminate bonuses during downturns and then recreate them during recoveries. Such a practice would add a *de facto* element of variable pay to the employment contract. In this respect, use of lump-sum bonuses in the U.S. could become similar to the use of bonuses in Japan and other Asian countries; many believe that the bonus systems there function as a form of profit sharing.

Typically, however, the bonuses negotiated have not been large - on the order of 3-4% of wages of covered workers. When spread over the entire union sector (contracts with and without bonuses) - as shown on Figure 20 - the impact was to add a variation of about a half a percentage point (at most) to union wages over the cycle. And the impact would be smaller if benefits are included in the calculation of labor costs. This variation is still significant but not anywhere near the magnitude needed to smooth out employment variation over the cycle.¹⁷ Moreover, first-year pay adjustments are more likely to be influenced by lump sums than are pay adjustments over the life of the contract (generally two to three years in the U.S.). Table 2 shows that "non-production" bonuses - which include lump sums - show no cyclical trend at all in the union sector.

In summary, the union sector has certain advantages for either formal profit sharing or *de facto* profit sharing. Workers have an agent that can monitor employer pay variation. Profit sharing usage did increase in the American union sector during the 1980s and it is conceivable that the lump-sum bonuses that also arose could evolve into some

kind of implicit profit sharing. Yet the magnitudes attained privately are small. If more is to be achieved, so that macro externalities are reflected, there will need to be a tilt in public policy in that direction.

The Nonunion Sector

Nonunion employees have a disadvantage under profit sharing arrangements in not having an agent that can monitor profits and negotiate explicit trade offs between risk sharing and job security. This problem is even greater in the case of lump-sum bonuses that do not have a formal tie to profitability. There is no information on how widespread bonuses of the lump-sum variety are in nonunion settings in the U.S. Nonunion employees have long received bonuses for individual productivity. But as Table 2 shows, non-production bonuses do not account for a large fraction of pay (although more than in the union sector). There may be a slight upward trend in the bonuses shown on Table 2 but the economic impact seems negligible at such low magnitudes. As in the union sector, a push from public policy is needed.

Appropriate Public Policy

Regardless of sector - union or nonunion - profit sharing cannot reach the magnitude of bonus needed for employment stabilization and risk sharing if it is simply added on to the levels of labor compensation that would prevail absent a share arrangement. The numbers simply will not add up. For example, in the U.S. corporate profits before tax amount to about a tenth of labor compensation in a reasonably good year. Thus, if *all* profit income were given to labor in a profit sharing scheme, the bonus payment would be only about 10%.

An "add-on" plan that gave, say, 20% of profits to workers (presumably in the hopes of raising productivity) would therefore provide a bonus payment of about 2% of total compensation in a typical American corporation. On the other hand, suppose the (fixed) base wage were reduced by 10% in exchange for a scheme which over the cycle provided an offsetting 10% bonus. Under such an arrangement, workers would receive the same *average* level of pay over the business cycle in wage-plus-bonus that they received before in wages alone. However, total pay would be more variable due to the bonus component. Pre-bonus profits would double over the cycle, but workers would have a profit-sharing plan that gave them 50% of profits (and 50% of the variability of profits).

At such magnitudes, employment-stabilizing effects would be available. Surely, with a reduction in profit variability of one half, stabilizing employment would be facilitated. In addition, there might be Weitzman-style employment-expansion effects because of the lower base wage and marginal cost of hiring.

Clearly, absorption of the bonus in the base wage is important if dramatic moves toward a profit-sharing economy are to take place. To encourage absorption, public

policy should aim at promoting plans in which the bonus is seen by workers to be highly substitutable for the base wage. Plans that put the bonus into a deferred retirement fund are less likely to promote absorption (given the absence of perfect capital markets) than those that pay cash bonuses. Thus, tax incentives should be given to cash plans that are at least as generous as those given to deferred plans.

National tax policies that only give tax preferences to profit sharing if it operates as a pension do not promote absorption. American tax policies are of this variety. The same is true of systems based on mandates; mandated deferred profit sharing does not promote absorption. Indeed, the French experience has been that mandating deferred profit sharing leads employers to discontinue cash profit sharing in order to finance the compulsory plan.

Obviously, if tax resources are to be used for encouraging profit sharing bonuses, it will be necessary for policy to specify a definition for profit sharing. Otherwise there will be a temptation simply to relabel wages as bonuses eligible for tax preferences. At a minimum, a qualifying plan must specify a formula linked to profits and that formula must stay in place for a significant period (several years). Note that with appropriate criteria written into tax law, the tax authorities may take on the missing role of a monitoring agent for workers that otherwise is lacking in the nonunion sector.

CONCLUSIONS

Interest in profit sharing among employers and policy makers since the 1980s is part of a general search for flexibility. Economic analysis of the type associated with the Weitzman proposal suggests that profit sharing as a form of flexible pay would have desirable macroeconomic properties. But these macro considerations are not reflected in private pay setting practices that are based solely on micro incentives. There is a win-win element in the profit sharing proposal; both employers and workers would benefit from a more stable economy. Thus, a role for public policy in fostering profit sharing is desirable and I advocate such an approach.

Perceived increases in risk in product markets will translate into higher unemployment if linked to an employment guarantee based on mandate or practice and if the cost of job insurance is not borne by labor. There is a need for more efficient employment contracts which balance employer and employee needs in the face of increased risk in the product market. Yet such arrangements seem to be slow in coming when left entirely to private determination, again suggesting a win-win aspect of the profit sharing proposal. An efficient contract would surely have a profit sharing element, even if that element were simply a bonus implicitly linked to profits. While there has been some move in that direction, the magnitude has been small.

Some European countries seem to be stuck with permanently high unemployment that cannot be reduced by demand measures without causing inflation. In contrast, the U.S. has achieved low unemployment but with a kind of employment flexibility that has downgraded the quality of the employment relationship. As in Europe, it has produced unusually long spells of unemployment for those unlucky enough to be jobless. On both

continents it is time to move beyond vague calls for pay for performance and flexibility and move toward more concrete encouragement of profit sharing as a major element in compensation. But there is no reason the U.S. cannot take the lead.

Table 2. Non-Production Bonuses as a Percent of Total Compensation

	All	Union Sector	Nonunion Sector
1987	.9%	-	-
1988	.8	.4%	1.0%
1989	.8	.5	.9
1990	1.0	.6	1.1
1991	.9	.5	1.0
1992	1.0	.6	1.0
1993	1.1	.6	1.3
1994	1.2	.5	1.3

Source: U.S. Bureau of Labor Statistics

ENDNOTES

¹Martin L. Weitzman, *The Share Economy: Conquering Stagflation* (Cambridge, Mass.: Harvard University Press, 1984).

²Detailed references are contained in a longer version of this paper available from the author. Due to space limitations, they are not included here.

³"The Best Idea Since Keynes," *New York Times*, March 28, 1985. Section A, p. 30; "How to Cut Unemployment, Without Magic," *New York Times*, April 25, 1985, Section A, p. 26.

⁴Data for Figure 1 were drawn from the Nexis on-line database.

⁵Data before 1985 refer to the proportion of workers in an establishment which had a profit sharing plan covering some workers. Data beginning in 1985 show the proportion of employees actually covered by a plan.

⁶Data for 1971 and 1980 were drawn from a now-discontinued series of bulletins published by the U.S. Bureau of Labor Statistics. Data for 1988 come from Contract Library and Information Service, *Characteristics of Major Private Sector Collective Bargaining Agreements as of January 1, 1988* (Cleveland: Industrial Relation Center, Cleveland State University, 1989), Table 3.9. Data for 1995 are from Bureau of National Affairs, Inc., *Basic Patterns in Union Contracts, 14th Edition* (Washington: BNA, 1995), p. 119.

⁷Major contracts are those covering 1,000 or more workers.

⁸Robert B. Reich, "Meet the Frayed-Collar Workers Getting the Boot," *Los Angeles Times*, September 4, 1995, p. B5.

⁹An earlier use of this model can be found in Daniel J.B. Mitchell and Mahmood A. Zaidi, "International Pressures on Industrial Relations: Macroeconomics and Social Concertation" in Tiziano Treu, ed., *Participation in Public Policy-Making* (Berlin: de Gruyter, 1992), pp. 59-72.

¹⁰Unemployment rates in the various countries shown on Figures 5 and 6 are converted to U.S. definitions by the U.S. Bureau of Labor Statistics. In initial year 1977, all rates were adjusted to equal the U.S. unemployment rate. Then for each year the ratio of each country's rate to the U.S. rate (multiplied by 100) was calculated. A value above 100 indicates that relative to 1977, the country's rate rose relative to the U.S. rate.

¹¹The official index was afflicted by a faulty housing component until a correction was made in the early 1980s. CPI-U-X1 is an estimate made by the U.S. Bureau of Labor Statistics of values of the corrected index in the period before the correction was actually implemented.

¹²There are many technical issues about the use of real unit labor costs. If the consumer price indexes used to deflate nominal unit labor costs move with the output deflator, a rise in real unit labor costs is equivalent to a rise in labor's relative share of output which might be interpreted as a profit squeeze. If the production of business output were well described by a Cobb-Douglas production function, and if wage and price setting were perfectly competitive, such a squeeze could not occur since, by definition, the share of labor would be constant. However, such conditions do not well describe modern economies which can exhibit changes in labor's share over time.

¹³The data were drawn from Constance Sorrentino, "International Unemployment Indicators, 1983-93," *Monthly Labor Review*, vol. 118 (August 1993), pp. 31-50.

¹⁴Suppose the LL relation is approximated in the relevant range by the equation $w/p = aU^b$ and the PP relation is approximated by $p/w = cU^f$, where all variables (p, w, U) and parameters a and c are positive and where parameters b and f are negative. It can be shown that $dU/dc = -U/[c(b+f)]$. Suppose b and f are set at values such that a 1 percentage point rise in unemployment (from, say, 5% to 6%) leads to a target drop of w/p or p/w of 1%. A boost in the value of c sufficient to raise target p/w by 10% will raise the unemployment rate about 4 percentage points (from 5% to 9%).

¹⁵It does not appear that a labor shortage could be the cause of this tendency. Although labor market tightness varied regionally, the overtime phenomenon appears even in areas of soft markets. Thus, in California - which had an above-average unemployment rate in 1994 due in part to declining aerospace and defense employment - the same high overtime usage occurred.

¹⁶The full height of each bar is the proportion of all (non-construction) contracts with lump sums. The lower portion of the bar is the proportion of all non-concessions with lump sums. Hence, the difference (the upper portion) is the impact of concession contracts.

¹⁷During the recession of the early 1990s, the employment-to-population ratio in the U.S. dropped about 3% from peak to trough. Thus, in principle a 3% reduction in a hypothetical bonus could have eliminated the cyclical employment drop, assuming it could have been carefully spread around all firms and workers. Comparable figures for Canada and Australia were 7% and 6%, respectively. Half a percentage point is far from these magnitudes which are themselves underestimates due to workforce and enterprise diversity.