Employer Ascendancy and Macro Performance: 
Analysis and Alternatives

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Paper presented at the meetings of the International Industrial Relations Association, 4th Congress of the Americas, held in Toronto, Ontario, Canada, June 28, 2002

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CHAIRMAN GREENSPAN. You realize that the labor unions would say that was awful: you say it’s wonderful.

MR. SYRON. That’s right, but we are not in an AFL-CIO meeting. And they have a little different view than we do on what is considered wage inflation as well.

Federal Open Market Committee transcript of February 6-7, 1990

The 1990s proved to be a puzzling period for economists and other observers. Indeed, the period was sufficiently surprising that a substantial literature has developed to explain it. (Krueger and Solow 2001) Particularly during the last half of that decade, the U.S. economy surged ahead by any indicator. And yet, inflation — whether measured by prices or wages — remained surprisingly quiescent despite a fall in unemployment to levels not seen since the Vietnam War. At its trough, the unemployment rate fell below 4%, despite an influx of presumably hard-to-employ unskilled single mothers pushed into the labor market by welfare reform.

Accompanying this drop in the unemployment rate was a reduced use of layoffs. By itself, the fact that layoffs fell with the unemployment rate is not especially surprising. Unfortunately, there is no ongoing time series on layoffs for the U.S. labor market. A proxy is the rate of new claims for unemployment insurance. And as Chart 1 shows, that measure not only fell in the late 1990s, but fell below Vietnam War levels. Moreover, at recession peaks (designated by the arrows on the chart), layoffs in the recessions of the early 1990s and 2001 ran at substantially lower rates than in earlier recessions. The fact that layoffs were low — we will argue below — can be tied to proliferating labor shortages — another surprising feature of American labor markets in the late 1990s.

A mainstay in macroeconomics since the 1960s has been a concept known as the NAIRU or “non-accelerating inflation rate of unemployment,” sometimes also termed the “natural rate of unemployment.” In essence, the argument has been that once the unemployment rate falls below a particular level, inflation will gradually accelerate. A corollary is that an unemployment rate below the NAIRU is ultimately unsustainable. When the Reagan administration took office in the early 1980s, and confronted a substantial inflation problem, it was widely assumed — certainly by policy makers within the administration — that the NAIRU was in the range of 6.5% and possibly more.¹ As late as the mid-1990s, key policy makers at the Federal Reserve (the “Fed”) apparently assumed the NAIRU stood at about 6% and tightened monetary policy when unemployment seemed likely to drop below that level. (Gordon 1997, 12)

Performance of the U.S. economy and labor market in the late 1990s, however, has convinced more recent observers that the NAIRU has dropped. (Staiger, Stock, and Watson 1997) Moreover, apart from the NAIRU, the economy seemed to exhibit more stability of output after the two back-to-back recessions of the early 1980s. (Blanchard and Simon 2001) This greater stability — whether measured by variations in unemployment or real GDP — was particularly evident in the 1990s. (Mankiw 2001, 17-18) The recession of 2001 was remarkably mild, particularly in view of the bursting of a stock market bubble — especially in the technology sector — the accompanying fall in business investment, and the terrorist attacks of September 11.

Not surprisingly, many explanations have been offered for the strong American economic performance of the 1990s. Federal Reserve chair Alan
Greenspan has been credited as a miracle worker. Senator John McCain, in fact, was quoted as saying that if anything happened to Greenspan, he should be propped up and kept seemingly on the job at the Fed. (Mankiw 2001, 1) In what follows, however, we offer an explanation for the surprising macro performance of the late 1990s based on changes in labor market institutions and what we term “employer ascendancy,” largely to the detriment of workers’ bargaining power and wage outcomes. In a sense, this shift has exacerbated one of the distinguishing aspects of the U.S. among developed countries: the creation of many jobs at low wages, compared to the “insider-outsider” European systems with high wages and high unemployment (see, for example, Blanchard and Summers 1988 and Krugman 1994). These changes suggest that such strong macroeconomic performance is likely to continue even if Fed chair Greenspan passes from the scene. But they also suggest that a variety of undesirable social and economic consequences will continue.

Union Erosion

Our story fits many of the stylized facts of the 1990s and the era that predated it. We identify the rise of employer ascendancy with the decline of labor unions, a change that was termed a “transformation” of industrial relations in a well-known book that appeared in the mid-1980s. (Kochan, Katz, and McKersie 1986) The book focused primarily on the micro side of the story. But the pace of that transformation accelerated markedly in the 1980s and continues to the present. And as the micro institutions of the labor market change, it is inconceivable that the transformation would not have macro impacts as well. Below we argue that with regards to the macro economy, the transformation of industrial relations to a nonunion regime of employer ascendancy occurred largely in the 1980s. By the recession of the early 1990s, its impact was already detectable.

We also note that the macroeconomic gains associated with employer ascendancy come with a cost in terms of lost employee voice, wage repression and increased income inequality, reduced enforcement of labor and employment laws, shifts from defined-benefit pension plans, reduced health insurance coverage and other job protections, etc. At the end of this paper, we suggest some ways in which the improved macro performance can be retained while the costs entailed can be reduced. These suggestions involve a change in the functioning of labor unions.

The accelerated weakening of American labor unions beginning in the early 1980s is a well-known story by now. Its most visible symptom was a substantial concession movement in which wages and benefits were frozen or cut, sometimes through unscheduled contract reopenings. (Mitchell 1994) Along with these concessions came a significant decline in union membership and coverage in private employment – a decline that actually switched from mere erosion relative to the workforce to absolute decline in the early 1980s. Moreover, the idea that weakened unions might lead to a lower NAIRU is also not new and goes back to the mid-1980s at least. (Mitchell 1986) In loose terms, anything that reduces “wage-pushiness” (or price-pushiness) will have that effect. (Mitchell and Zaidi 1992)

Macroeconomic Policy and Unions

We document below the interest of macroeconomic policy makers – mainly at the Federal Reserve, but also within the Reagan administration – in union-sector developments. But we argue that reaction to such developments among monetary policy makers was at crucial times seen through a monetarist prism that
precluded targeting unions per se. At other times, union-sector developments were viewed through an atheoretical and pragmatic lens.

Our analysis is based on transcripts of Federal Open Market Committee (FOMC) meetings and related documents, along with other sources. Inherently, this type of analysis is subjective and open to varying interpretations. Fed chairs in particular are noted for opaque statements about their objectives. Indeed, Alan Greenspan is said to have proposed to his wife in such obscure language that it took several iterations before she understood his meaning. (Woodward 2000, pp. 180-181) Nonetheless, statements made in private – FOMC meeting transcripts are released only after a lag of six years – may be more revealing than public utterances.

We also argue, based on available evidence, that while Reagan-Bush policy makers undertook actions that weakened unions, the monetarist beliefs of the administration suggest that those policies were not seen as affecting the macro economy. Unfortunately, access to internal evidence contained in presidential papers from the Reagan administration is limited, in part due to presidential directives. (Bush papers are not available at all.) Nonetheless, apart from the limited presidential documents that are accessible, there is some information available from Reagan-Bush insiders’ accounts.

It should be pointed out at the outset that we do not seek to mediate between variants and nuances of monetarist beliefs in discussing official economic policy. Alternative dates have been cited by various commentators as signaling the end of strict monetarism in Federal Reserve policy. The 1993 announcement by Fed chair Alan Greenspan that the monetary aggregates no longer seemed good guides for policy is one such date. (Mankiw 2001, 34) However, some observers put the end of strict monetarism a decade earlier when the Fed began routinely exceeding its official targets. (Niskanen 1988, p. 169) And some argue that Fed chair Paul Volcker never was a strict monetarist and that he simply used the monetarist doctrine to rationalize high interest rates in the early 1980s. The monetarism the Fed followed essentially involved use of various monetary aggregates as policy targets rather than interest rates. But the makers of monetary policy were always aware of interest rates and concerned about them. As one member of the Federal Reserve’s Board of Governors put it:

"Let’s rely on the broader definitions
While eyeballing the level of rates
And pray that the economy does not suffer
The worst of all possible fates."

For our purposes we use the word “monetarist” below to encapsulate the general doctrine that inflation should be seen as a monetary phenomenon and, therefore, that targeting particular wage settlements or weakening unions is not an appropriate form of macro policy. Monetarist beliefs suggest that wage settlements are symptoms of, and not causes of, inflation. Intervention in wage setting processes should therefore only be undertaken to improve micro level efficiency. Thus, monetarists might argue for cutting the minimum wage to increase teenage employment, but not to achieve some anti-inflation goal. It is surely the case that Greenspan – in signaling a change in the policy regime in 1993 – did not mean to imply that wage settlements were thereafter to be an appropriate direct target of macro policy. In our laisser-faire sense, macro policy as seen by the Fed and the various administrations in power since 1981 has remained largely “monetarist.”
Although policy makers have not done so, we make the connection between employer ascendancy and macro performance explicitly, building on recent work in labor-markets that can be extended to macroeconomics. As will be seen below, policy makers in a pragmatic way may have simply used visible union wage settlements as a proxy for success in achieving disinflation. Union developments were seen as analogous to the canary in the coal mine; when the bird stopped singing, inflation was assumed to be dead or dying.

We argue, however, that de-unionization changed important labor-market institutions, i.e., that the presence of the singing bird mattered to wage-setting outcomes. Unions, in other words, were more than an indicator; they helped determine macro outcomes. And restrictive anti-inflation monetary policy in the early 1980s in particular gave de-unionization a big push. In our view, the new nonunion labor market that resulted is best viewed as a monopsony, not textbook perfect competition in which demand=supply. In the perfect competition model, wage = marginal revenue product of labor. But under monopsony, wages are below marginal revenue product, i.e., income is shifted from labor to capital. Notably, labor’s share of corporate income began to fall in the 1980s, reversing a longstanding rising trend.1

Weitzman Effects Without Weitzman’s Share Economy

In the past, analysis of monopsony in the labor market – i.e., substantial employer discretion in setting pay – was applied only in limited cases seen as atypical. But we note that monopsonistic labor markets have characteristics that run parallel to Martin L. Weitzman’s proposal in the mid-1980s to remedy “stagflation” by encouraging a “share economy.” (Weitzman 1984) If such labor markets are general rather than atypical in the now-dominant nonunion sector, the kinds of macro effects proposed by Weitzman could be expected to characterize economic performance.

Weitzman suggested that if employers could be encouraged (through tax incentives) to shift compensation to profit sharing, gain sharing, and revenue sharing type plans, the result would be a chronic labor shortage. This labor shortage would both lower the NAIRU and promote economic stability. When hit with demand declines (as in a recession), employers with labor shortages would “lay off” their vacancies before they laid off real people. The vacancy cushion would help stabilize the economy by maintaining employment and – therefore – worker incomes.

Our argument is that labor markets characterized by monopsonistic nonunion employer ascendancy will have these Weitzman characteristics even if pay is not determined through share schemes. Thus, no special tax incentives or similar policies are needed to produce chronic labor shortages and the resulting stability cushion. As noted above, monopsony, not the classic demand=supply, is the relevant model for a nonunion labor market.

A monopsony labor-market story can account for the strong macro performance that surprised many observers in the 1990s. Unlike some of the other explanations that have been offered which rely on temporary factors, e.g., cheap energy, our institutional explanation indicates a more permanent shift. While our story does not suggest that the business cycle is dead, it does suggest that forecasters should expect a less inflation-prone and more stable economy than many believed possible in the past. But again, there are costs involving income distribution and conditions at work that need to be addressed.
Below we trace the shift of the U.S. labor market to an industrial relations system characterized by employer ascendancy which we identify with declining unionization of the workforce. We note how macroeconomic policy changed as the labor market altered. We defer a formal presentation of the monopsony model to a subsequent section. And we conclude with some implications for unions and for economic policy and with some observations on the lessons the U.S. experience suggests for other countries. In particular, we point out that while Weitzman effects may have been achieved without Weitzman-style pay practices, there is still a role for the Weitzman proposal if we are to retain macro gains while reducing attendant social and economic costs.

Wage Determination Prior to the 1970s

Before the 1980s, the importance of union wage determination was reflected in economic policy. Indeed, much of what might be termed empirical Keynesianism was based on an implicit notion that some kind of worker-oriented bargaining process explained such phenomena as downward wage rigidity. Explanations of wage rigidity were generally phrased in terms of what workers would "accept." Downward pressure on the nominal wage would not be acceptable, either because it would likely cut the real wage or because - in the presence of decentralized wage determination - it would lower one group's wage relative to others. (Mitchell 1993) Of course, acceptability might be reflected in individual bargaining - perhaps some variant of the insider/outsider stories that came along much later in economic theorizing. But in the era following World War II, the most prominent way in which workers could make their notions of acceptability felt was through collective bargaining.

During World War II and again during the Korean War, formal wage-price controls were imposed in the U.S. to hold down inflation. The assumption underlying controls was that wages were a key element in pricing. Thus, these programs sought to constrain wages and then allow a markup form of pricing above costs. During the Eisenhower years, however, use of formal controls in peacetime was viewed as distortionary and an overreaching of government. Nonetheless, there was much fretting about an upward inflationary creep in wages relative to productivity. (Gordon 1975) And when empirical Keynesianism came to power in the Kennedy-Johnson era, "voluntary" wage-price guideposts were put into place in an explicit attempt to link (and limit) wage setting to national productivity gains. (Sheahan 1967)

As might be expected, the guideposts program - even with its voluntary character - was controversial and sparked much debate among economists. (Shultz and Aliber 1966) But empirical work at that time supported the notion that union-sector wage "rounds" played an important part in wage setting, a belief that was widely held among labor relations specialists. "Key" settlements in a few major union situations were viewed as setting the pattern for others. Both early econometric evidence and survey research seemed to provide empirical support. (Eckstein and Wilson 1962; Rees and Schultz 1970, pp. 44-46)

Thus, if government could affect these key settlements through "incomes policy," it could achieve a faster rate of economic growth and lower unemployment with less inflation. Since the NAIRU concept was not yet born, the idea was usually phrased in terms of shifting the "Phillips curve." Views of this type were also widely held in other developed countries - especially in Western Europe and Australia, where various forms of incomes policy could be found. (Edelman and Fleming 1965; Ulman and Flanagan 1971; Hancock 1981) Indeed, the foreign experience with incomes policy was seen as informing American policy. (Galenson 1973)
Clearly, the simplistic view that a few union settlements not only determined union wages but also nonunion wages - through some sort of threat effect - was an overstatement. As Chart 2 shows, union wages could move up or down relative to other wages. The chart depicts union wages relative to average wages in the private nonfarm sector. Union wages rose relative to others in the late 1950s.

A combination of this rise and a recession in the early 1960s, provoked an employer backlash and a concession movement that proved to be a milder version of the concessions that developed in the early 1980s. In both cases - the early 1960s and the early 1980s - Chart 3 shows that union weakness corresponded to a period of decreased strike incidence. However, strike incidence rose again after the early 1960s, but diminished after the early 1980s. Union militancy, measured by strike activity, did not return in the 1980s as it had two decades before.

Job insecurity worries related to concerns about displacement due to "automation" seemed to play a role in repressing union wage demands in the early 1960s, along with sluggish economic performance. Thus, wage moderation in exchange for job security was a feature of wage bargains in such diverse industries as longshoring, meatpacking, and metals. The Kennedy-Johnson guideposts may also have had an initial influence in retarding wages and strikes. (Perry 1967)

Notably, a number of unions gave up their escalator clauses that linked wages to consumer prices by the mid-1960s. Thus, when the economy recovered and expanded rapidly during the Vietnam build-up, union wage gains under long-term contracts tended to fall behind those in the more frequently-adjusted nonunion sector. As Chart 2 shows, there was a notable drop in the union wage ratio during the late 1960s. Significantly, during this period of de facto erosion of union bargaining power, there were growing labor shortages and only a gradual uptick of wage inflation, phenomena foreshadowing those next seen in the late 1980s and 1990s. (Mitchell 1989)

Controls and Guidelines in the 1970s

A move by unions to catch up in wages began at the end of the 1960s, just as the Nixon administration and the Federal Reserve hoped to engineer an anti-inflation slowdown of the economy. The upward push on union wages - even if it could be rationalized as catch-up - was seen as a threat to this anti-inflation strategy. When an attempt at a soft landing turned into outright recession, a new economic policy was announced.

While the history of incomes policy in the U.S. through the 1960s suggested that such interventions were the province only of Democrats, in 1971 - much to the consternation of some key advisors - Republican Richard Nixon imposed formal wage-price controls as an anti-inflation device. (Stein 1994, pp. 159-163) Although it was never officially stated that the program was focused on union wage settlements, officials of organized labor certainly perceived the program that way. (Robinson 1981, pp. 304-320, esp. 312) Like their Kennedy-Johnson predecessors, those in the Nixon administration who designed the program had in mind a mechanism to deal with (union) wage push.

The Nixon controls program went through various phases before being abandoned in the face of inflationary shocks from dollar devaluation and an OPEC oil price hike. (Weber 1973; Weber and Mitchell 1978; U.S. Office of Economic
Chart 2 suggests that the controls did temporarily retard the wage catch-up movement in the union sector during 1972. Strike incidence also fell briefly. However, demand pressures — combined with the above-mentioned dollar depreciation in currency exchange markets and the OPEC oil shock — led to a resumption of inflation. The termination of controls coincided with a period of Federal Reserve restraint and deep recession.

Although inflation declined after the recession of the mid-1970s, there continued to be an upward push on union wages as seen on Chart 2. In place of Nixon’s controls, the Ford administration substituted a vague “Whip Inflation Now” (WIN) program and created a new Council on Wage and Price Stability to monitor inflationary developments. Pessimism increased about the degree to which unemployment could be reduced without causing inflationary pressure, i.e., about a high NAIRU. As a result, the Carter administration created a new program of “voluntary” wage-price guidelines. It also recommended that Congress enact a program of “real wage insurance,” essentially tax incentives for workers whose wage settlements met the standards. (Mitchell 1980)

Congress never enacted Carter’s complex tax proposal but the guidelines program and the Council on Wage and Price Stability Carter had inherited from Ford were continued. The focus on union settlements under Carter was clear; the director of the Council adhered to the longstanding notion of key settlements that set the wage pattern.5 However, the appointment of Paul Volcker as the new chair of the Federal Reserve in the later years of the Carter administration led to a shift in policy at the Federal Reserve.

Volcker officially moved the Fed to a monetarist policy focused on control of the money supply rather than control of interest rates. As noted earlier, whether Volcker and his Fed colleagues were ever confirmed monetarists — or whether monetarism was simply a pragmatic choice of an instrument thought necessary to wring inflation out of the system — has been disputed. (Neikirk 1987, pp. 5, 35, 68) Strict monetarism as guide to policy was more plausible in 1979 than it later became, as financial deregulation in the 1980s changed the relationship between measures of the money supply and inflation. (Hafer 2001, p. 19)

In any event, organized labor criticized this Fed shift as a violation of its anti-inflation “accord” with the Carter administration. But Carter’s policy makers had no hand in the design of the new Fed policy apparently and learned of it after the fact. (Greider 1987, p. 113; Neikirk 1987, pp. 65-66) And the new monetary approach continued into the Reagan years where it was to have its major impact on the macroeconomy and on unions.

The Early 1980s

Forecasting models of the early 1980s, in part rationalized by new theories of implicit contracting in the labor market, suggested that even a moderately severe recession would have only a limited effect in reducing inflation. (Baily 1982; Mitchell and Kimbell 1982, pp. 228-233) Nonetheless, the Fed decided to inflict the cost and engineered two back-to-back recessions under its new regime. These efforts brought the unemployment rate at its peak to 10.8% in the last two months of 1982. Although President Reagan reportedly had doubts about allowing Volcker and the Fed to operate autonomously in this fashion — and some political advisors urged the President not to reappoint Volcker in 1983 — the Reagan administration did not intervene in Fed policy despite the political risks of high unemployment. (Neikirk 1987, p. 95; Feldstein 1994, pp. 8-12)
In any event, monetarists within the Reagan administration in broad terms saw disinflation as primarily the Fed’s job and were able to place that notion into official policy at the outset of the new regime. (U.S. President 1982, p. 22) They certainly eschewed short-term “Keynesian” fine tuning and wage-price guidelines or controls. But apart from that broad consensus of views, the Reagan administration’s internal economic policy makers were riven with dissent. (Weidenbaum 1988, p. 16; Feldstein 1994b, pp. 24-25) There were crude supply-siders who were preoccupied with a return to the gold standard and who believed tax cuts would pay for themselves. These gold bugs were convinced that Nixon’s termination of the dollar’s tie to gold in 1971 was the root cause of inflation. And they were influential enough to push the 1984 Republican platform to refer to a return to gold. Meanwhile, the more mainstream economists within the administration noted that American monetary policy under a gold standard would be subject to random shocks in the gold market rather than directed at fighting inflation.

There were others in and around the Reagan administration concerned with the growing federal budget deficit that was linked to the combination of supply-side tax cuts, increased defense spending, and the recession. (Sawhill 1982; Stockman 1986, pp. 62-63, 400; Grieder 1987, p. 645; Niskanen 1988, pp. 18-20, 165-166; Mitchell 2000; U.S. President 1982, pp. 49, 73) As the federal deficit rose, various economic advisors began to suggest in public that deficits were not inflationary, leading to demands by one Republican congressman that they be fired. Former Nixon advisor Herbert Stein was quoted in the press as stating that “President Reagan is the only member of his administration who believes deficits are inflationary.”

These internal disputes may have protected the Fed from administration intervention, at least through the first Reagan term and well into the second. That is, jockeying for influence within the Reagan administration may have left little time for policy makers to challenge Volcker. Even in the mid-1980s, when the link between money supply growth and inflation seemed to have broken down, and when the Fed seemed to be targeting real economic growth rather than the money supply, the CEA could do little more than note these developments. (U.S. President 1986, pp.27, 54-57)

Administration Policy Toward Unions

Reagan administration policy makers had no particular liking for organized labor. The AFL-CIO was tied to the Democrats. Only two unions of significance had officially supported Reagan in 1980: the Teamsters (fearing trucking deregulation and potential legal problems of the union’s leadership) and PATCO, the Professional Air Traffic Controllers (hoping for support in its upcoming negotiations with the Federal Aviation Administration). However, the administration did not believe that intervention in micro-level wage setting was appropriate anti-inflation policy. Indeed, it almost immediately terminated the Ford-Carter Council on Wage and Price Stability upon taking office in 1981.

Despite a general hands-off labor-relations philosophy, the administration could not take that approach with regard to the PATCO strike of August 1981. As federal employees, air traffic controllers were forbidden to strike and, for that matter, to bargain over wages at all. Yet through various job actions short of formal strikes in the past, they had pursued a de facto bargaining agenda. Details of the PATCO strike have been described elsewhere. (Northrup 1984; Northrup and Thornton 1988) In essence, Reagan fired the controllers and
banned them from future federal employment. New controllers were then hired and trained.

Popular press accounts thereafter depicted the PATCO strike as the cause of subsequent union concessions and decline. The argument was that if it was all right for the president to take a hard line with a federal union, it was OK for private employers to do the same. However, it is difficult to prove this domino theory of union decline. (Farber and Western 2002) And Reagan-era economic policy makers have described the PATCO affair as a matter of dealing with strike disruption and not part of a macroeconomic strategy of reducing inflation. As one insider noted, “The major lesson of the controllers’ strike was that the Reagan administration would not tolerate an illegal strike by federal employees, not that it would intervene in other labor disputes.” (Niskanen 1988, p. 194)

Even apart from this assertion, there is good reason to believe that Reagan’s PATCO actions were not part of an anti-inflation strategy. Planning for a possible PATCO strike had actually begun under Carter. A postal strike was also threatened at around the same time and softness in dealing with PATCO might well have led to an even more disruptive postal work stoppage.

It is interesting to note that organized labor did not see itself as the next domino and was slow to come to PATCO’s defense. PATCO was not part of the AFL-CIO and – as noted above – had supported Reagan in 1980. Moreover, its job actions in the past had been costly to members of airline unions including those affiliated with the AFL-CIO. Yet PATCO had never sought a cooperative relationship with those unions. If one wanted to make the argument that the Reagan administration was targeting labor more generally, a better case might be made concerning its appointments to the NLRB since that agency covered the private sector. But the NLRB does not regulate wage settlements and any effect it might have would be through impediments to new union organizing – which had collapsed prior to the change in Board control. (Farber and Western 2002)

Of course, it cannot be said that no one in the Reagan administration saw any significance in union settlements. And the language used in the 1982 Economic Report of the President about the inflation process contained the implicit bargaining notion that workers “seek” higher wages when they anticipate inflation. The inflation process depended in part on what workers would “accept.” Because union contracts typically ran three years and because contracts set extended patterns and contain COLA clauses, it takes a long time to disinflate the wage process, according to the official report. (U.S. President 1982, pp. 55, 58-59)

Council of Economic Advisors Chair Murray Weidenbaum did at least track trends in these settlements and reported on them internally. Neither Weidenbaum nor Volcker had been enamored with the Nixon administration’s wage-price controls. But both had played some role in that program’s design, even if grudgingly. (Neikirk 1987, pp. 146-147) Several years after the fact, Weidenbaum did express the view that the PATCO episode had been “one of the most important labor events” of the 1980s. (Weidenbaum 1988, p. 7) But the importance, he said, was that its showed that the President would not become involved in private-sector disputes, only those involving the federal government. Reagan administration officials would not force private employers to settle strikes at excessive wages. Thus, it does seem to be the case that Reagan administration policy on wage setting was limited to special instances and then on micro rationales.
The Reagan administration supported a subminimum wage for teenagers on the grounds that this would create more youth employment opportunities. And it sought to push defense contractors to take a tougher stance in union negotiations to hold down military-related budget costs. Some outside supporters of Reagan-era reduced taxes argued that these lower tax rates would raise after-tax real wages; workers would therefore “moderate their demands for higher wages at the bargaining table,” according to this view. (Evans 1983, p. 109) But supply-siders within the Reagan administration tended to focus on alleged labor supply effects of lower marginal tax rates rather than any supposed anti-inflation impact.

Similarly, during the following Bush administration, there was no attempt to conduct anti-inflation policy through direct intervention in union wage setting. Michael Boskin, chair of the CEA under Bush, did not even mention PATCO or administration policy toward unions in his review of the Reagan years. (Boskin 1989) The political climate remained unfriendly toward unions, notably in the controversy over “Beck” notices. These regulations for federal contractors required notification of workers of their rights under a Supreme Court decision (CWA vs. Beck, 487 U.S. 735 [1988]) not to belong to a union. However, the impetus for such actions stemmed from the tendency for unions to support Democrats rather than from macroeconomic considerations. When the Clinton administration came into office, Beck requirements were eliminated.

All that being said, there were those within the Reagan-Bush administration who – at least after the fact – attributed macro/anti-inflation significance to such policies as PATCO and holding down the minimum wage. Lawrence Lindsey, a staff economist at the CEA under Reagan and an assistant to the President for policy development under Bush, saw the firing of the air traffic controllers as having established “credibility” in the fight against inflation. According to Lindsey, after PATCO “wage psychology changed virtually overnight, and inflationary pressures rapidly abated.” Lindsey argued that keeping the minimum wage fixed also had a psychological anti-inflation effect. “Here was a key price in the economy, posted in the newspapers, actively being discussed on television, that was not going to be automatically increased with inflation!” (Lindsey 1999, pp. 174-175) While Lindsey may not have been a key official within the Reagan-Bush administration, he did become a member of the Federal Reserve Board of Governors in late 1991.

Union Wage Setting and the Federal Reserve During the Reagan-Bush Years

Although the Reagan administration basically was inclined to a laissez-faire policy towards labor negotiations, at least those not involving the federal government as employer, Fed Chair Volcker seemed to regard the outcome of such negotiations as especially significant from a macro viewpoint. In particular, he regarded the PATCO strike as a blow to inflation. Like Lindsey, he saw an impact on inflationary expectations. According to Volcker, “The significance (of PATCO) was that someone finally took on an aggressive, well-organized union and said no.” He regarded the PATCO outcome as having “a psychological effect on the strength of the union bargaining position on other issues – whatever the issues were.” (Neikirk, p. 110)

In short, Volcker viewed affecting union wage determination as important for the Fed’s disinflation campaign. One commentator characterized the Fed chair’s view as founded on the idea that “inflation would not be securely defeated...until all those workers and their unions agreed to accept less. If they were not impressed by words, perhaps the liquidation of several million more jobs would convince them.” (Grieder 1987, quote on p. 431; discussion on
Others at the Fed apparently had similar ideas. (Grieder, p. 454) To Volcker, while direct intervention in wage settlements was not desirable (and clearly not the province of the Fed), a monetary squeeze that forced the union sector to hold down nominal wages to preserve jobs was an appropriate policy instrument.

Formulating Monetary Policy

Federal Reserve monetary policy is mainly conducted by the Federal Open Market Committee (FOMC) consisting of the seven members of the Board of Governors, the president of the Federal Reserve Bank of New York, and a rotating group of four of the presidents of the other eleven regional Federal Reserve Banks. A typical meeting of the FOMC includes staff presentations on domestic and international financial developments, a staff economic forecast, and a general discussion in which views on the presentations and other matters are exchanged.

FOMC members are provided with various written materials by Board staff at their regular meetings. Various documents, known by the color of their cover pages are part of the meeting package of materials for members. These include a “Green Book” containing staff economic forecasts and related data and a “Beige Book” summarizing anecdotal and other information gathered from the regional Federal Reserve banks. For some meetings, staff presentations include a “Chart Show” depicting highlights of recent economic trends and forecasts.

In some cases, meetings are conducted by telephone conference call, especially when sudden emergencies arise. Telephone meetings do not entail preparation of Green and Beige Books and there are no Chart Shows. Transcripts of these meetings – regular and telephone – are available on the Federal Reserve website with a six-year lag.

As might be expected at a central bank, most of the discussion at the FOMC revolves around financial matters such as interest rates and exchange rates. The Fed has certain regulatory roles that require administrative attention. And there are personnel matters relating to the appointment of key staff members.

During the Fed’s most strict period of monetarism in the early 1980s, a great deal of attention was paid to growth in various monetary aggregates. Because the relation between these aggregates was in flux – in part due to deregulation of financial institutions – reconciling the various Fed targets was often difficult. Although meeting transcripts are available only with a six-year lag, the FOMC typically issues press releases after its meetings explaining what action (or non-action) it has taken.

Much time is devoted to composing the language of these releases since the precise wording is thought to be a signal to the markets of Fed intent. Members sometimes fret over the way FOMC policy is being misinterpreted in the business press and seek to convey corrections in public statements. And there have been periodic episodes in which leaks of information to the press related to confidential FOMC meeting discussion have raised substantial concerns about security.

The Slide Into Recession: 1981-1982

Despite these many areas of discussion, the FOMC members and their staff economists did pay attention to matters relating to wage determination and union wage determination in particular. Not surprisingly given the history of union
negotiations and membership during the Reagan-Bush era, the attention became less focused on unions per se, and moved toward more generalized concerns about “wage pressures.” In March 1981, staff economists reported that economic slack was producing “some signs... of selected easing of wage pressures.” The notion that wage disinflation was necessary for price disinflation was repeated in the staff briefing of May 1981: “To achieve a sustained reduction in inflation will require a slowing of wage increases...” However, the staff reported “there is not convincing evidence of general progress on the wage front” yet.

At the July meeting, the staff anticipated that “the prolonged period of slack labor markets should soon pay dividends in some easing of wage inflation.” Fed Chair Volcker in August indicated that patience would be needed: “We have to play the game long enough so that we have a degree of confidence in the price outlook that begins to be inbred in behavior, including wage negotiations.” However, Volcker did not yet believe that such revised expectations had begun to occur, although they would do so “in the fullness of time.”

By October 1981, the union sector was beginning to slide into concession mode. Governor Frederick Schultz noted what he viewed as progress:

“I have never felt that there was any way to get inflation down without putting pressure on business and labor. Put pressure on business and they have to find a way to cut those costs because they don’t have [available] the path of least resistance of raising prices. And if you put pressure on business, labor begins to get the point that if they get too much in wages they won’t have a business to work for. I think that really is beginning to happen now and that’s why I’m more optimistic. Every business I know of out there is doing everything it can to cut costs. When the Teamsters open the master contract because they see some of their truckers going under, when the UAW talks about job security instead of wage increases, and when Pan Am workers are willing to take 10% wage cuts because the airlines are in trouble, I think those are signs that we’re at the point where something can really start to happen.”

Other FOMC members, including Volcker agreed. Minneapolis Bank President E. Gerald Corrigan argued that people would be looking for signs in 1982 that the Fed would ease up. Thus, the key was to convince “the business people who set prices; the union leaders who negotiate wages; and the institutional money managers” that the Fed would remain on its anti-inflation course. In December 1981, FOMC members exchanged new anecdotes about the reopened Teamsters Master Freight Agreement (interstate truckers) and the possibility that the United Auto Workers (UAW) union would reopen its contracts with the major automobile companies and other employers. It was reported that GM was freezing nonunion white-collar pay as a signal to the union. But FOMC Vice Chair Anthony Solomon indicated that his business contacts thought that union settlements would run at 9% or more in 1982. Even if the plants involved were nonunion, the same wage increases would apply as at union plants “as a matter of (personnel) policy.”

At the first meeting of the FOMC in February 1982, there was more talk about union concessions that were then occurring. Vice Chair Solomon fretted that some of the concession contracts had openers that could reverse the downward pressure on wages if economic conditions improved in the future. Concern was also expressed that high unemployment was causing political pressure to develop that could undermine Fed policy. The possibility of bankruptcies at Chrysler, Ford, and International Harvester was also discussed in the context of general economic distress.
At the June-July meeting, the staff reported that "the prolonged period of slack labor markets has paid handsome dividends in an easing of wage inflation." It cautioned, however, that relaxing monetary tightness might cast "doubt on the Committee’s longer-run intentions to curb inflation, with adverse impacts on whatever emerging tendencies there may be for labor and business to temper wage bargains and pricing decisions..." A bitter strike at Caterpillar that had begun by that time was discussed at the October meeting. It was argued that the UAW was basing its militancy on past conditions at Caterpillar and did not fully appreciate the firm’s worsened conditions. Nonunion pay increases in financial services were still said to be running high - even at the Fed’s own regional banks - due to salary survey methodology. But at the FOMC’s final meeting in December, the staff reported that "the wage sector in particular looks quite good..."

Early Recovery: 1983-1984

In February 1983, the theme of good wage performance from the FOMC viewpoint was repeated. Union concessions were having a dampening effect on wages. And the old 1980 contracts with high wage increases from the era of inflation were going to expire and be succeeded by contracts with lower wage increases. By the March meeting, the staff reported that "...in general union settlements continue to reflect the realities of the labor market, and apparently a decline in inflation expectations." The same view was repeated in May; wage settlements were now taking place in a low-inflation environment so that inflation expectations built into the new contracts would be low. In July, the staff argued that while one might argue that wage concessions are one-shot events, they were nonetheless continuing to occur. But better business conditions in the next year might lead to a reversal of some concessions.

FOMC Vice Chair Solomon argued in August that "I don’t see that the American labor movement is going to take the bit between its [teeth]..." Wage settlements, he said, would stay in a range compatible with 4-6% inflation. But Chair Volcker was concerned about an AT&T settlement that featured annual increases of about 5.5% over three years according to his information. There was debate on whether other unions would follow AT&T. AT&T, Volcker argued, was experiencing high productivity gains that could absorb big wage hikes, but other sectors were not. In October, notable union wage concessions in steel were discussed.

Some Chrysler workers voted against a generous contract because they wanted still more, it was reported; the problem was said to be that the ones who voted were the senior employees who were still working. Concern was expressed by Governor Preston Martin about younger leaders who were taking over unions. They would want to show the membership that the older leaders had made concessions because they "got tired." But other FOMC members pointed to the uncertain labor relations situation at Eastern Airlines; some workers there - it was argued - were more willing to make concessions than were their union leaders. Volcker agreed that the wage outlook was uncertain; it would depend on "psychology and expectations."

In November 1983, staff noted that 1984 would be a relatively light bargaining year. The concession contracts made in 1982 would not expire until 1985. Cleveland Bank President Karen Horn indicated that it was difficult to convince unions of the need for productivity increases because they feared that job loss could result. But Preston Martin seemed to back away from his old leader/young leader paradigm. The young leaders might want to be more militant. But since unemployment was above the natural rate and there was substantial
foreign competition, the new leaders couldn’t actually be more militant in practice.

Staff argued that the natural rate was in the 6-7% range because workers had grown used to productivity advances in the 1950s and 1960s that permitted real wage increases of 2-3% per year. But now those productivity gains were not occurring. The result was a boost in the NAIRU, which should gradually decline as worker expectations adjust. Still Governor Lyle Gramley argued in December that “the underlying factor driving inflation is wages... What we do now is going to affect wage bargaining throughout 1984 and 1985. That is what we have to worry about.”

Inflation worries continued into the new year. The Fed boosted the Federal Funds rate significantly during 1984, slowing the economy and causing the unemployment rate to stagnate at a relatively high level. At the January 1984 meeting of the FOMC, staff reported that since unemployment was going to be falling below the top end of its 6-7% NAIRU range estimate, there would no longer be “downward pressure” on wages. Governor Henry Wallich felt that staff estimates for inflation were understated. There was a feeling that the exchange value of the dollar would soon decline, pushing up prices. (Actually, the dollar did not peak until early 1985.)

At the March meeting, staff reported that with wage contracts running in the 4-5% range, people were “very, very apprehensive about the (upcoming) auto negotiations.” But there were other views. One member noted that airlines were still obtaining wage concessions from their unions. Another reported that the mayor of Philadelphia was taking a hard line in negotiations with his municipal unions. The auto negotiations were again discussed in May. Concerns were voiced that GM might not be willing to take a strike. But a hope was expressed that the ultimate contract might further link wages to profits.

In July, Chair Volcker continued to indicate concern about the auto negotiations. Coal operators and unions were negotiating and their positions were “far apart.” On the other hand, the union settlements coming out of the deregulated industries such as airlines were moderate. And nonunion competition was holding down wages in unionized construction. Vice Chair Anthony Solomon felt that employers would be more reluctant than in the past to give big pay increases since it would be harder to pass wage costs into prices than before.

At the August 1984 meeting, fretting about autos continued. Chicago Bank President Silas Keehn said the auto negotiations were the “key.” But he thought that the auto companies might be able to get a 4-6% settlement without a strike and absorb the pay increase through productivity gains. Governor Martha Seger, however, was not sure that productivity advances in autos were sufficient to absorb 4-6% wage gains. New leadership at the UAW was likely to be more militant than the old regime that had approved the earlier concessions of 1982. Other FOMC members wondered whether the supposed 4-6% would include COLA or not. However, staff reported that wage numbers generally were coming in below expectations and no acceleration of wage inflation could be detected.

By the end of 1984, however, the auto negotiations seemed to have passed from the FOMC’s consciousness. Oddly, no mention was made about the auto negotiations that had sparked so much prior concern. But there was a general sense that the union contracts of 1984 indicated that wage inflation was not accelerating. Cuts in the Federal Funds rate had already begun as concerns about inflation eased.
Cautious Expansion: 1985-1987

At the February 1985 meeting, staff reported that despite the fact that the economy was operating around the NAIRU (assumed to be about 6.5%), union wage settlements were generally below 4%. This theme continued into May when one member opined that union negotiators were becoming very flexible on workrules as well as wages. Much of the attention of the FOMC for the year, however, turned to the U.S. dollar, which had begun to fall in international exchange markets.

Wage settlements were still moderate, it was noted in October, but a declining dollar would expand exports and possibly cause selected skill shortages. Despite the declining dollar (which also had a direct price-raising effect), the staff reported it had become more optimistic about the inflation outlook. Notably, after 1985, the staff’s Chart Shows stopped containing graphics based on BLS major union settlements data. The staff, at least, was becoming less concerned about union wage setting.

Indeed, by early 1986, there began to be concerns about the impact of demand on the nonunion sector. Chicago Bank President Keehn reported that union settlements were coming in at 3% with workrule relaxations. Governor Wayne Angell said he could see no signs in wage settlements that the natural rate of unemployment had been attained. But he had reports that “hefty” wage increases were coming in financial services (which are largely nonunion).

Keehn’s assessment of union settlement became more nuanced by July. Contracts were still coming in at 3% with workrule changes. Some steel companies had been able to eliminate their COLA provisions. The longstanding Caterpillar strike had been settled but the new contract’s terms had not yet been disclosed. A Caterpillar competitor, Deere, was seeking a wage freeze and termination of COLA. But negotiations there were likely to be difficult. And Chicago construction workers had gotten a two-year contract with 5% per annum.

Still, the staff expected union settlements to be moderate and reported that pressure by business to hold down job-related health insurance costs was also making progress. Cleveland Bank President Karen Horn reported that business was on balance happy with the current labor situation. Again, there was discussion of labor shortages in nonunion employment. Boston Bank President Frank Morris reported that in the New England area, McDonald’s was having problems finding workers even though it was paying above the minimum wage.

The matter of relaxed union workrules came up again in September when Chair Volcker asked about a settlement at Weyerhaeuser and was told that workrules were the key issue. In November, Volcker asked why he kept hearing about workrule relaxations but did not see the results in increased productivity. Philadelphia Bank President Edward Boehne suggested that the changes in rules involved quality improvements rather than productivity improvements. But staff indicated that most of the rule changes were in manufacturing and productivity gains could in fact be seen in that sector. In December, staff took note of the growing use of lump-sum bonuses in union settlements but drew no conclusions from that observation.

At the February 1987 meeting, Keehn was still reporting that union settlements were moderate with workrule relaxations. The staff concurred and speculated that “wage norms” in the minds of labor and management have generally been lowered, providing some inertial force toward moderate pay increases.” However, consumer price inflation - which had shown some
acceleration – would eventually have an impact on wages “through formal and informal COLAs.”

During the May meeting, the staff in the context of a forecast for 1988 indicated it had moved its estimate of the NAIRU down to around 6%. Boehne, however, noted the dispersion of unemployment rates around the country so that a national average of 6% would mean some areas would be experiencing wage acceleration. Seger questioned the natural rate concept. Nowadays, she argued, management has “backbone” in labor negotiations; employers would no longer just raise pay and pass the costs into pricing. Aware of import competition, management pushes for wage freezes, productivity gains, and ties of pay to productivity. Kansas City Bank President Roger Guffey noted that in any event the calendar of union negotiations was light in 1987 except for the auto negotiations. The light union calendar should help hold down costs.

By September 1987, the concern about labor shortages had heightened. Boehne reported shortages for entry-level workers. San Francisco Bank President Robert Parry thought the labor market had entered the stage in which wages would accelerate. Robert Forrestal, President of the Federal Reserve Bank of Atlanta, reported that carpet shipments were being delayed by worker shortages. There were labor shortages in Michigan reported Keehne. And in New England, shortages were so acute firms were moving operations to the remaining labor surplus areas of Maine, according to Governor Edward Kelley and Boston Bank First Vice President Robert Eisenmenger.14

The stock market crash of October 1987 led to a downward revision of staff projections of real growth and inflation in 1988. Alan Greenspan, the new Fed chair, and the FOMC eased monetary policy in an effort to provide liquidity and avoid recession. Given the uncertain economic outlook, staff reported that pay increases were coming in lower than expected due in part to concerns over job security. Boston Bank President Frank Morris, however, cautioned against over-stimulation that could lead to the loss of the existing “benign wage environment.”

The Expansion Tops Out: 1988-1990

By the February 1988 meeting, the FOMC seemed to feel it had steered clear of recession dangers. But Edward Boehne reported that there was still much public talk about recession even though labor markets were very tight and orders were backlogged. In fact, the economy was close to the point, in his view, at which wages would accelerate. Chicago Bank President Silas Keehn agreed that there was beginning to be price inflation; he had heard that price increases were beginning to “stick” in metals and chemicals. But wages in his view were not the cause of that problem since they were “continuing to perform very, very well.”

By March, however, the staff believed that economy was operating at the NAIRU. And Frank Morris again warned against waiting to see if inflation accelerated. Once that process started, he felt, it would be hard to reverse. Chair Greenspan, while admitting that some indicators suggested the economy was on the verge of inflation, said he thought the hypothetical inflation was not yet apparent. Staff reported, however, that its forecast indicated “a need to move the unemployment rate back up if wage pressures are to be held in check.”

The issue of perception vs. empirical evidence again arose at the June 1988 meeting. Greenspan noted that “while the wage data don’t show this, there’s a subliminal sense of changing wage demand pressures.” Robert Parry
noted that the California minimum wage was going up and would have ripple effects. Moreover, a lumber strike was underway. FOMC Vice Chair Edward Corrigan noted that there were big union settlements in the public sector of New York State. Although by themselves these settlements have little importance, they were said to be high profile. Dallas Bank President Robert Boykin, however, reported that there were no pressures on wages in the Southwest. Workers were focused on job security, not wages.

Generally, the discussion continued with these discordant views. Atlanta Bank President Robert Forrestal said that while there were not actual wage increases yet, business expected them to creep back into worker expectations. But St. Louis Bank President Thomas Melzer said he had been told that even with the uptick in the CPI, strong wage pressures were not expected by his contacts. In contrast, Minneapolis Bank President Gary Stern reported that he had heard that manufacturers were beginning to have trouble with “aggressive” unions.

Edward Boehne said that while there were fewer COLA clauses in the union sector than in the past, the remaining ones would transmit price pressures directly into wages. Frank Morris postulated that because wages should have grown faster in the past, they would now start to catch up. But Cleveland Bank President W. Lee Hoskins said that manufacturers had been burned in the past by wages and inflation and would not allow that to happen again. Governor Wayne Angell warned that while the official data didn’t show that there was an acceleration in wages and prices, it is “right under the surface.”

The debate and anecdotes continued in August. Even with the minimum wage increase in that state, California employers were having trouble hiring, according to Robert Parry. Frank Morris reported that labor shortages in Massachusetts were so severe that real growth was being retarded and the state was suffering revenue losses as a result. Atlanta Bank President Robert Forrestal continued his theme that unions were worried about job security. Business executives kept anticipating wage pressures that don’t actually arise, due to these union concerns. But Richmond Bank President Robert Black said that upward pressures on wages were “becoming increasingly apparent.” And the staff noted in its forecast that Congress might raise the federal minimum wage.

In September 1988, Cleveland Bank President W. Lee Hoskins said that while wage demands in manufacturing remained moderate, there was upward pressure on pay in services. The service gains would eventually spill over and then there would be across-the-board pay increases. But in November, Vice Chair Corrigan took note of the fact that there were still wage freezes and cuts occurring in the union sector. Perhaps foreign competition was playing a role. Boston Bank First Vice President Robert Eisenmenger noted in December that while pay was rising, the pressures were not in the union sector. Hoskins indicated that manufacturers could still get needed labor at the wage levels they paid. And Martha Seger noted that unionized construction workers were constrained by nonunion competition; management’s bargaining power had thus increased in that sector.

At the February 1989 meeting, San Francisco Bank President Robert Parry indicated there was now definite upward pressure on wages. But Silas Keehn remained unconvinced:

"The common wisdom is that we are going to see some escalation, particularly on the wage side: yet the reports I get from companies are not necessarily consistent with that common wisdom. The labor market continues to tighten. We are continuing to hear comments about shortages of skilled labor. But despite
that, I’m surprised by how favorable the contract settlements continue to be --
[increases in] wages and fringe benefits of 3 to 4 percent on an annual basis.
And though labor attitudes certainly are hardening, they have at least not yet
begun to evidence themselves in significantly higher settlements. The price
side of the picture, I suppose as always, is quite uneven.”

Greenspan, however, had become convinced by this time that wage pressures
had appeared in recent data; they were no longer “subliminal” as he had termed
them a year before. Possibly, the latest wage numbers were an “aberration,”
according to Greenspan. But given low unemployment, such an aberration could
not be assumed. Meanwhile, the staff seemed to be hedging on wage inflation.
At the March 1988 meeting, the staff announced that the economy had overshot the
NAIRU. But, on the other hand, it believed that the consequence of that
overshooting would be less severe than other forecasters were projecting. The
anecdotes continued. Robert Forrestal noted the phenomenon of Boeing borrowing
workers from Lockheed. Vice Chair Corrigan said he had heard that when firms
lose workers due to quits, they have to pay 9-10% more to obtain replacements.

In May 1989, Robert Parry noted that Los Angeles teachers had gone on
strike after rejecting a 21% wage increase. In addition, given worker shortages
in aerospace, the expiring union contracts there would likely be renegotiated
with big increases. Cleveland Bank President W. Lee Hoskins took note of
substantial wage increases at Bethlehem Steel. Other steel companies were
likely to follow. And some parts of manufacturing will follow steel. But
Governor Manuel Johnson viewed the big steel settlements as catch up for past
concessions.

Greenspan seemed to agree with Johnson; the steel situation was probably a
special case. But the teachers’ strike in Los Angeles showed an “aggressive”
union attitude due to low unemployment, according to Greenspan. Despite this
concern, Greenspan noted surprise at a June phone call meeting about how
moderate wage pressures remained. He began to form a theory about how workers
who become nervous about job security act as a wage retardant (an issue we
discuss below). The staff picked up Greenspan’s job security proposition at the
July meeting, suggesting it might be a cause of the lack of wage inflation.

These themes continued into late summer and fall. In August, Minneapolis
Bank President Gary Stern explained the lack of wage pressure as a diversion of
growing “labor militancy” toward non-pay issues such as the union shop. In
October, Robert Parry forecast (incorrectly) that the Boeing negotiations would
not lead to a strike. A settlement at Nynex was reported in November by Boston
Bank President Richard Syron. “Sadly,” he noted, the result was less favorable
to management than it had admitted.

Rising benefit costs at a Kansas City GM plant were reported by Kansas
City Bank President Roger Guffey. There was some discussion of the risk of
inflation. But Governor Martha Seger argued that recession would not solve the
problem of medical cost inflation and a nursing shortage. At the December
meeting, the staff made a presentation concerning the possibility of achieving
complete price stability over a five-year period. In this context, the staff
noted that its estimate of the NAIRU had now dropped to 5.5%.

Recession and Initial Recovery: 1990-1992

In early 1990, staff still was not forecasting the recession that was to
come later in the year. Inflationary price expectations at the February meeting
were thought by staff to be placing upward pressure on wages. St. Louis Bank
President Thomas Melzer said he was still hearing reports of labor shortages and upward pressure on wages. In May, Thomas Melzer reported that some low wage firms were complaining that an increase in the federal minimum wage was causing a “compaction” of the pay structure. Martha Seger noted in July that there would be a round of negotiations in autos later in the year. Staff in August again indicated concerns that unemployment was below the NAIRU and there was not sufficient slack in the labor market to reverse a gradual uptick in wage inflation.

However, the widening Iraq-Kuwait crisis quickly became the center of discussion for the remainder of 1990. Reports accumulated of a weakening economy and a falling dollar. By November, staff was predicting an economic downturn. The softening economy and a drop in oil prices after an initial spike led staff to “greater optimism about wage pressures.”

Early 1991 brought with it the Gulf War and increased uncertainty about the direction of the real economy. A spike in oil prices was reported to have caused a labor shortage in the petroleum sector in Louisiana. Despite the risk of recession (that in retrospect had already begun), St. Louis Bank President Thomas Melzer and others argued that the focus should be on reducing inflation. Generally, however, the sluggish economy diminished FOMC concerns about wage issues and in 1991, most discussion of inflation was explicitly in terms of prices, not wages. And apart from the Gulf War, other external issues such as the collapse of the Soviet Union attracted FOMC attention.

Chicago Bank President Silas Keehn did report in July that “labor contracts continue to be favorable.” And the staff expressed worry about increasing employer expenses for health insurance, unemployment insurance, and workers’ compensation insurance. In August, Keehn reported that there were likely to be difficult labor negotiations at Caterpillar and Deere. “They can’t even agree on the sites where they’re going to hold the negotiations,” he noted. And in December, after a strike had begun, Keehn reported that while “the wage patterns continue to be favorable, ...there’s a growing level of anxiety about the Caterpillar strike, which at this point looks very, very difficult.” But labor shortages were reported to have eased. Indeed, the Boston Federal Reserve Bank was said to have a “sunrise shift” of 4-8 AM with no benefits and yet there many applicants for those jobs.

At the first regularly scheduled meeting of 1992 in February, Silas Keehn reported a positive inflation outlook. Wage increases in manufacturing were modest and could be covered by productivity growth. But the Caterpillar strike was very bitter and the union had “an enormous strike fund.” The United Auto Workers had settled a contract with Deere and wanted Caterpillar to follow that pattern. Caterpillar’s management, however, argued it was in a different industry and would not accept the Deere package. According to Keehn, Deere had a bad strike in prior negotiations and had decided it needed to settle this time. Staff reported that corporate restructurings had led to white-collar layoffs as well as blue. And newly-appointed Governor Lawrence Lindsey complained that recent federal requirements for advance notice of mass layoffs were undermining confidence. Announcements of such layoffs were leading to a pessimistic psychology.

During the March meeting, Silas Keehn reported that union settlements in the paper industry were coming in with modest wage increases in very long-term contracts. The ongoing Caterpillar strike, however, was very bitter and each party adamantly rejected the other’s position. Following (or not following) the Deere pattern remained the sticking point. In May, Keehn repeated his story
about moderate paper settlements. And on Caterpillar he reported that "the Caterpillar strike just went 'poof.' When the company threatened and then began to bring in replacement workers, the union attitude just collapsed. They have not, of course, settled the contract yet, but they're back at work. This won't necessarily set a pattern for the UAW negotiations with the auto companies this fall, but certainly it's going to have an effect on the tone as they go into those discussions."

Despite these references to union sector developments, the discussion in 1992 was more focused on whether the real economy was recovering, how fast if so, and whether there was a danger the recovery might stall. Inflation was discussed in the context of concerns about whether the economic slack the recession had engendered had reduced inflationary expectations. Vice Chair Corrigan characterized the process of fighting inflation as very costly and slow at the May meeting. And at the June-July meeting, the staff’s presentation suggested they had edged up their estimate of the NAIRU to 5.75%. Nonetheless, because staff estimated continued slackness, wage inflation was expected to slow. The staff report cited evidence from the early 1960s – also a period of slack – that such a wage projection was realistic.

The economic picture remained uncertain and soft in the fall. Staff lowered its real output projections in October. But by November 1992, FOMC members began to report a more optimistic outlook. Foreshadowing a return to a tight labor market, Minneapolis Bank president Gary Stern noted that there were labor shortages in the Minneapolis area and that “help wanted signs are popping up everywhere.” Cleveland Bank president Jerry Jordan reported some areas of labor shortage in his district, too. Still, small businesses were raising pay only 2-3%, although the banking industry was in the 4-5% range.

Staff speculated on what the new Clinton administration might do in the area of fiscal stimulus and what that might mean for inflation: “…(I)t doesn't take a stretch of the imagination to envision a combination of fiscal impetus and revived animal spirits that might make it necessary to tighten money market conditions sooner or more than we've anticipated, to head off an eventual re-acceleration of wages and prices.” And Governor Lawrence Lindsey fretted about costs of possible social legislation that would be added by the new administration to employer expenses.

Into the Clinton Era

During the Reagan-Bush years, the FOMC and the two Fed chairs never came up with an elaborated theory linking union decline to the fall of the NAIRU. Union settlements were of interest, however, as indicators of inflationary trends. And Volcker toyed with the idea that the PATCO strike had somehow played a part in disinflation. The shrinkage of the union sector, both in absolute terms and relative to the overall U.S. workforce, was not discussed as a factor although we will argue below that de-unionization, rather than just lower union settlements, were a key factor in changing labor-market institutions. And a reasonable reading of the history of the early 1980s suggests that the two Volcker disinflation-recessions of that era had much more to do with de-unionization than did PATCO, appointments to the NLRB, or any similar action taken by the Reagan administration.

New Clinton appointees to the Fed’s Board of Governors, like their predecessors, also did not evolve a theory regarding the impact of de-unionization and employer ascendancy. But a transformation of the labor market had nonetheless occurred, even if not recognized. The new appointees, while not following a theory of union-to-nonunion transformation, reported themselves to
be pragmatic with regard to how far down unemployment could be pushed before the NAIRU would be encountered. (Blinder and Yellen 2001) Thus, although the lowest unemployment level the economy was allowed to achieve in the expansion of the 1980s was 5.0% during 1989, the rate was permitted to fall as low as 3.9% during 2000.

Alternative Explanations of the Lowered NAIRU

Up to this point, we have documented the interest of U.S macro policy makers, especially monetary policy makers, in union sector developments. While many considerations went into the design of their policies, it does not appear that policy makers had a formal theory relating the decline of union coverage or bargaining power to aggregate economic performance. Rather, it appears that in the 1980s, union sector developments were seen by monetary policy makers as signals concerning inflationary trends. If union settlements were falling, if concession bargaining was occurring, and if union workers were thought to be concerned with job security rather than pay, then the policy of disinflation was succeeding. Conversely, any sense that such trends were reversing was taken as a sign that inflation might be in danger of returning to the U.S. economy.

Fed policy makers, of course, have no direct responsibility or authority for regulating labor-market institutions. In contrast, the executive branch does have capacity to intervene directly through such policies as appointments to the NLRB, requiring "Beck" notices, and the like. However, it does not appear that in the Reagan-Bush years, such interventions - including the dramatic air controllers strike/firing - were perceived by the two administrations as important instruments of macroeconomic policy. Indeed, direct intervention in negotiations was seen as part of the flawed policies of wage-price guideposts and controls of earlier administrations from Kennedy through Carter. (Boskin 1989, pp. 87-89)

The fact that neither the Fed nor the Reagan-Bush administrations intended to tinker with union-related institutions for macro purposes does not preclude the possibility that they inadvertently shifted those institutions in ways that produced a change in macroeconomic performance in the 1990s and beyond. There may not have been an elaborated institutional theory in place at the Fed or the executive branch. But certainly, there appeared to be changes in the way the economy behaved by the early 2000s compared with outcomes two decades earlier. These changes, we suggest below, can be tied to altered wage-setting institutions.

At the macro level, both the recessions of the early 1990s and the early 2000s were quite mild and featured much lower rates of layoff than, say, the recessions of the early 1980s. Despite fears that retail spending would plummet due to high personal debt loads and the terrorist attacks of September 11, 2001, consumers remained surprisingly buoyant. Presumably, this resiliency reflected the fact that the falloff in jobs was relatively mild.

The periods prior to the recession of the early 1990s and early 2000s, while characterized by some price and wage inflation acceleration, achieved levels of unemployment well below the NAIRU levels that were assumed to prevail in the late 1970s. In both cases - the pre-recession periods of the late 1980s and late 1990s - the Fed pushed up the federal funds rate, fearing the economy would overheat and become inflationary. Both the late 1980s and the late 1990s were characterized by widespread reports of labor shortages, contributing to Fed concerns about overheating. But in neither case did the shortages turn out to produce large jumps in wages. Union settlements rose moderately during the
pre-recession expansions but there remained a residue of concession bargaining (wage freezes and cuts) left over from the early-to-mid 1980s. (Appendix Charts A1-A4 summarize the key trends.) And by the late 1990s most wages were set through nonunion processes.

The shift in macro performance after the early 1980s occurred against a background of suggestive developments in the labor market. Defined-benefit (DB) pension plans declined relative to defined-contribution (DC) plans. DB plans, which shift financial risk to the employer, were associated with the union sector historically. DC plans, in contrast, are basically tax-favored savings accounts that leave the risk of inadequate returns on investment to the employee. The incidence of employer-provided health insurance also seemed to diminish in the 1980s and 1990s. As with DB pension plans, employer-provided health insurance has been historically linked to the union sector. The decline of both seemed connected to union weakening.

Generally, employers seemed less willing to offer job security by the late 1980s and 1990s than they had before. Use of temps grew rapidly. Job security is particularly valuable to senior workers who have age-associated mobility constraints. And as with certain benefit plans, respect for seniority was a longstanding norm in the union sector. But job tenure of older males dropped in the 1980s and 1990s as unions declined. And workers were told to manage their own careers and not to count on employers to look after their welfare.

Even within the union sector, pattern bargaining seemed to diminish as a wage-setting institution. Employers became willing to assert their need to break away from traditional patterns, even at the cost of long and bitter strikes, e.g., Caterpillar. Strikes have long tended to trigger media attention to union settlements. (Erickson and Mitchell 1996). But with strikes a comparatively rare event by the 1990s, nonunion wage setters were unlikely even to be aware of union settlements, let alone imitate them due to a perceived “threat effect.” (Erickson and Mitchell 1995)

Globalization and Technology

In short, much of what changed in explicit human resource policy by the 1990s can be linked to the dramatic drop in union influence. But more general labor market phenomena, notably the widening of income and wage inequality may also have ties to union erosion. Of course, many explanations for such widening have been offered. Change in technology that has reduced the relative demand for unskilled workers is a popular alternative explanation. But the skill-biased technology story has been increasingly questioned. (Card and Dinardo 2002; Mishel, Bernstein, and Schmitt 1999, pp. 197-207)

Globalization is also a popular explanation for the rise in wage inequality. Trade theory (the venerable Heckscher-Ohlin model) suggests that world labor markets – teeming with unskilled workers in newly industrializing countries – have been placed in indirect competition with corresponding workers in the developed world, including the U.S. Such competition should reduce demand for the unskilled in the developed world, potentially producing greater skill-related wage differentials. Note, however, that the trade/globalization story does not square with widespread reports of labor shortages of unskilled restaurant and similar workers of the late 1990s. Diminished demand for such workers should produce labor surpluses, not shortages. And the same can be said for technical change biased against the unskilled.
Globalization — in the sense of any international development — could have weakened unions in the U.S. during the early 1980s as the dollar appreciated relative to other currencies. Some tradable goods industries, e.g., steel, were especially hard hit and exhibited notable union wage concessions. Globalization gave employers a credible threat of moving jobs out of the country, along with the specter of world competition for the U.S. market place. Thus, in bargaining with unions in the tradable sector, the employer side was strengthened. Since labor costs and standards in many areas outside the U.S. are well below American standards, the possibility of a “race to the bottom” was opened.

However, much union concession bargaining in the 1980s occurred in industries such as construction and retail foodstores, sectors not subject to international competition. Other areas of union concessions were clearly linked to domestic policies of de-regulation, e.g., airlines and trucking, rather than international competition.

Increased Product Market Uncertainty

It may be that a variety of factors that contributed to uncertainty in product markets also contributed to union wage concessions and membership shrinkage. For example, under the globalization heading come volatile exchange rates — after fixed rates were abandoned in the early 1970s — and new sources of world competition. Currency crises — particularly with regard to the Mexican peso, the Russian ruble, and the currencies of East Asia — became a feature of the world economy in the 1990s.

Apart from international developments, the above-mentioned shift toward de-regulation is also an uncertainty generator by adding competition in key sectors that had formerly been protected from new entry. Increased uncertainty tends to create a management desire for more flexibility in response. Long-term union contractual obligations — which limit managerial flexibility — could be perceived as obstacles to such quick adaptation in the face of changing product markets. In the face of uncertainty, unions might be avoided with more energy by management than in earlier periods. And there were already considerable incentives for management to resist unionization even before the margin of uncertainty rose. (Kleiner 2002)

Add to this anti-union managerial incentive an unfriendly political climate during 1981-92 and it is not surprising that there was substantial union erosion in the 1980s and after. While the political climate became more union-friendly in the Clinton years — and union erosion slowed — other forces that were difficult for unions — such as de-regulation — continued. In addition, the NAFTA agreement came into force during the Clinton years (despite much union opposition), enhancing Mexico as a source of low-wage competition.

The New Economy and Productivity

There have also been a variety of “new economy” explanations — loosely linked to the Internet and computer-related technology — for the seeming lack of inflationary pressures in the 1990s. It is sometimes argued that productivity increased under the “new economy,” thus holding down unit labor costs and prices. (Ball and Moffitt 2001) Fed chair Alan Greenspan was said to favor some variant of this story. (Woodward 2000, pp. 172-175) But note that there are a number of problems with this explanation.

First, the productivity story depends on workers not being able to “demand” a share of this supposed productivity growth. If productivity growth
accelerated, but nominal wages also accelerated to capture the gain, unit labor cost movements would be unaffected. The economy would be no more or less inflationary than before. It could be argued that if workers didn’t perceive that productivity growth has accelerated, the NAIRU might fall “until workers’ aspirations catch up.” (Mankiw 2001, 24) However, the implicit assumption is that once aspirations do catch up, workers will be in a position to do something about them, a view that suggests that workers will have bargaining power at their disposal. The productivity story, if it is more than a transitory tale, depends implicitly on employer ascendancy and weak unions.

Second, there are a variety of measurement issues related to reported U.S. productivity gains. Productivity data require on price data for their calculation since real output is determined by deflating nominal flows by price indexes. And prices indexes were generally shifted towards capturing computer-related “quality” enhancements during the 1990s. As these methodological measurement shifts took place - justified or not - they automatically produced a slower rate of measured price inflation and, therefore, a more rapid pace of measured productivity growth, than the earlier methodology would have recorded. Given constant methodology in measuring wages, a slower measured rate of price inflation would in turn contribute to a measured improvement in real wages that would seem to be associated with greater productivity growth. But all of this effect is simply arithmetic.

One could tell a story that growth in measured real wages made satisfied workers less likely to “demand” higher nominal wages. However, the actual rate of real wage change is not affected by methodology at government statistical agencies. So workers should not have been any more or less satisfied by any productivity gains that resulted from statistical methodology. Asserting that they were more satisfied is analogous to asserting that a car is actually going faster because someone has reset the speedometer to show a greater speed. Of course, if the methodology was more accurate and there were real productivity gains, we are back to the implicit assumption of weak unions noted above.

Third, even assuming there was a burst of actual productivity growth - as opposed to a change in accounting methodology - the burst might well have manifested itself in reduced labor demand. That is, if growth in output per labor hour accelerates, there could be worker displacement. Labor surpluses, not labor shortages, might well occur. And clearly labor surpluses were not the story of the late 1990s.

The Internet might have produced a lower NAIRU if it increased the efficiency with which the labor market matched vacancies and job seekers. Use of the web could in principle shifted the “Beveridge curve” down. And the 1990s did see the development of job search services such as Monster.com. Help-wanted newspaper advertising seemed to decline in the face of Internet competition, suggesting that the newer web-based technology was supplying a superior job-matching service. However, the fall in the NAIRU began to show itself in the 1980s, well before the Internet was a factor in job search. Thus, while the “new economy,” along with globalization may have played some role in changing macroeconomic performance, the proposed linkages are at best incomplete and in some ways contradictory.

Finally, one possible aspect of the “new economy” - ever increasing occupational specialization - could help to explain some of the labor shortages. If jobs are becoming ever more specialized - for example, requiring in-depth knowledge of a particular computer application - one might expect shortages to be more likely than if occupational requirements are more general. Note,
however, that this explanation would not account for shortages among less-skilled occupations.

Alternative Pay Systems

Yet another possible explanation for the improved macro performance in the 1990s could be a move toward “alternative” pay systems. As noted earlier, in the mid-1980s, Martin L. Weitzman proposed that tax incentives should be provided to move pay practices away from the traditional wage system and towards a “share economy.” (Weitzman 1983; 1984; 1985; 1987) Practices such as profit sharing, revenue sharing, and gain sharing were to be encouraged under the Weitzman plan through a tax subsidy. Weitzman assumed that micro incentives were insufficient to produce widespread share economy pay systems. Firms would not internalize macro-level gains in selecting pay practices and, therefore, a tax incentive was needed to change the pay system.

The Weitzman proposal attracted considerable media attention including a labeling by the New York Times as the “best idea since Keynes.” The idea also had resonance because some highly visible union concession settlements had already incorporated profit sharing, notably in the auto industry. Unions, which had traditionally been hostile to profit sharing prior to the 1980s, were being induced to accept such plans as an offset to concessions. The promise was that if the concessions paid off and made the employer more competitive, workers would eventually share in the resulting future profitability.

In Weitzman’s model, share economy pay systems tend to expand labor demand by reducing the marginal cost of labor. If all or most employers were induced to shift to a share system, a chronic labor shortage would be created, thus lowering the NAIRU and lessening the impact of recession. In effect, modest negative demand shocks would result in “layoffs” of vacancies rather than of real workers. Only if the shock were sufficiently severe would employers resort to actual layoffs. Thus, the macroeconomy would tend to be more stable since it would have a built-in anti-layoff cushion.

Put another way, the Weitzman plan of the mid-1980s proposed that a hypothetical share economy would behave in a manner similar to what actually was observed in the 1990s and beyond. While there was dispute in the economic literature as to whether a Weitzman share economy would work as advertised (Nordhaus 1988; Weitzman 1988), there remains the possibility that the U.S. compensation system moved towards a share economy even without Weitzman’s proposed tax incentive. Perhaps the U.S. economy had adopted the Weitzman plan despite the lack of special government assistance.

It is important to note that not every alternative to simple time-based wages constitutes a Weitzman share system. In particular, grants of stock – as through an Employee Stock Ownership Plan (ESOP) or through stock options – do not necessarily lower the marginal cost of labor. Much depends on the plan’s detailed provisions through which such assets are allocated. Moreover, many “pay for performance” arrangements, such as piece rates or merit bonuses, do not have Weitzman-type properties (and have been part of standard pay practices for many decades).

Generally, journalistic reports have tended to exaggerate the incidence of “new” pay practices. Contrary to the media hype concerning stock options, for example, a U.S. Bureau of Labor Statistics (BLS) survey in the late 1990s found that very few workers were covered by such plans. Those employees who were covered tended to be highly-paid managers and professionals. Similarly, BLS
surveys suggest that ESOP coverage was very limited as well. Union negotiators began reluctantly accepting lump-sum bonuses in lieu of base pay increases in the 1980s and there was some potential for these bonuses to evolve into de facto profit sharing plans. But in fact such evolution did not seem to occur. (Bell and Neumark 1993) Thus, while the American pay system will undoubtedly change over time, it is hard to tell a share economy story sufficient to explain the macro performance surprises of the 1990s and beyond.

Nervous Workers

American employers seemed to become more willing to dismiss long-service workers in the 1990s as part of corporate restructuring. The shift toward less paternalism for senior employees extended from blue-collar workers to managers and professionals. Sad profiles appeared in the New York Times of older workers who were dismissed after years of loyal service and who were having trouble finding new employment.

Appendix Chart A3 shows that the measured duration of unemployment rose in the 1990s to surprisingly high levels, given the low rates of unemployment then prevailing. Combined with low layoff rates, the evidence could be taken to suggest that the probability of falling into unemployment was reduced during the boom of the 1990s. Further, measured duration suggested that those unlucky enough to be displaced had an unusually hard time adjusting. One interpretation is, therefore, that as the labor market moved towards employer ascendency, firms rid themselves of those employees who might have been carried under the old regime and who were not in high demand by other employers.

While this interpretation is plausible on its face, analysis by Abraham and Shimer (2001) suggests that some of the unemployment duration increase is due to changes in survey methodology and some is attributable to changing demographics. The aging of the baby boom and the move of women to more solid labor force attachments could be expected to lift duration. Nonetheless, the labor-market duration measure, combined with anecdotes concerning job displacement, may have given birth to a “nervous worker” theory.

As noted earlier, the nervous worker theory of the reduced NAIRU, like the productivity theory, was said to be favored by Fed chair Greenspan. (Woodward 2000, pp. 168-169) Essentially, the argument was that workers who were nervous about job insecurity would not “demand” higher wages. But there are various difficulties with the nervous workers story, even apart from the fact that the duration measure increase may have been due to factors other than changing employer policy.

First, most nonunion workers are not in a position to “demand” higher wages. Unions, of course, do make demands but they were representing a smaller and smaller fraction of the workforce and no longer had much influence on nonunion pay. Second, given the low layoffs, the probability of job displacement was in fact low in the 1990s. Third, there were labor shortages. While some workers who were displaced apparently were structurally mismatched to employer demands, many others could count on finding new jobs quickly. We argue that the fact that workers didn’t make inflationary demands had to do with the absence of an instrument through which to make such demands, i.e., lack of unions.

Other Stories
Apart from alternative pay systems, globalization, technology, nervousness, and the new economy, numerous other explanations have been put forward for the decline in the NAIRU. Just as the entrance of the baby boomers was said to raise the NAIRU in the 1970s, so the aging of the boomers has been said to lower it more recently. (Stiglitz 1997, pp. 6-7) High rates of criminal incarceration have been said to take unemployment-prone persons out of the labor force. (Western and Beckett 1999) More generous disability insurance may have also pulled unemployment-prone individuals from the official counts. (Autor and Duggan 2002)

The falling relative and real value of the minimum wage has been credited with the drop in the NAIRU, as has the rising use of temps. (Tulip 2000; Otoo 1999) So, too, has a change in inflationary expectations. (Neumark and Leonard 1993) Yet another suggestion is that so-called high performance work organizations create general skills among workers that erode individual worker bargaining power. (Cohen, Dickens, and Posen 2001) That story loosely parallels tales of de-skilling of the workforce through scientific management in the early 20th century. The modern version assumes, implausibly, that the broad mass of workers had substantial individual bargaining power before high-performance work organizations came along. And, of course, if added together, the numerous explanations would more than account for the NAIRU’s decline.

Union Decline, Monopsony, and Employer Ascendancy

Although the various theories about the decline in the NAIRU may have some validity, the most dramatic change in the U.S. labor market beginning in the 1980s was the decline of unionization. Union wage settlements in the 1960s and 1970s were a major target of macro policy. By the mid-1990s in contrast, the U.S. Bureau of Labor Statistics stopped keeping track of union settlements altogether. Apparently, economic policy makers no longer were sufficiently concerned about such settlements to warrant the cost of monitoring them. As mentioned earlier, such data had long been dropped by Fed staff from FOMC Chart Shows. Yet despite this disinterest by many policy makers, and despite the tendency of researchers to overlook union decline as a source of economic change, it seems reasonable to examine the possibility that union erosion had important macro consequences.

Unions have often been modeled by economists as analogous to product market monopolies. Monopolists in the product market set their price above the competitive level and then sell the corresponding quantity. Similarly, the academic literature has tended to view collective bargaining as determining a wage, followed by employers autonomously setting employment. In what follows, we take that approach when union wage determination is represented.

It might be assumed that the decline in unions should have made the U.S. labor market more “competitive.” The question is what being competitive implies in the context of a nonunion labor market. Truly competitive markets are highly sensitive to shortages and surpluses and quickly eradicate both through price adjustments. Thus, one might have expected that if U.S. labor markets were highly competitive by the 1990s, the labor shortages that developed during the last half of that decade should have produced dramatic wage increases.

The fact that there was no wage explosion in the late 1990s, suggests that if indeed labor markets are now more competitive, the expected characteristics of such “competitive” (i.e., nonunion) markets needs further elaboration. They clearly do not work the way competitive markets for Treasury bonds or wheat
futures do. We argue below that a reasonable model of such markets of employer ascendancy is monopsony, not perfect competition.

Monopsony/Employer Ascendancy in the Labor Market

Traditionally, labor-market monopsony models were confined to special cases such as company coal mining towns or employer collusion in specialized occupations. These cases were put forward as an exception to the notion that unions inevitably faced a wage-employment trade-off in bargaining, i.e., a negatively-sloped demand curve. In the monopsony case, a counteracting union monopoly effect could raise wages without necessarily decreasing employment. The monopoly vs. monopsony idea, however, typically was depicted as a curiosity. It was seen as pedagogically useful in helping students learn the microeconomics of the labor market and, perhaps, helpful in explaining unionization of certain odd groups such as nurses and professional athletes.23

During the 1990s, however, the monopsony model was applied more generally to low-wage labor markets by Card and Krueger (1997, pp. 355-386) as an explanation of the seeming lack of disemployment effects when minimum wages were boosted. Although the empirical findings of Card and Krueger led to considerable professional and policy debate, labor-market monopsony began receiving more general attention in micro analysis. (Boal and Ransom 1997, Manning 2001) In our view, however, the monopsony model can be usefully extended to the macro arena to explain the puzzles that became evident as unions declined. Union decline has been cited by others as a factor in the drop of the NAIRU. (Stiglitz 1997, p. 7) As noted, the Fed seemed to think that union strength or weakness was an important indicator of the inflation process. But a formal explanation of why the union decline - and therefore employer ascendancy - would have such an effect on the NAIRU has not been provided.

In the Treasury bond market, to take an example, the product involved is homogeneous. Buyers do not need to evaluate the particular T-bonds they are acquiring; for a given issue, all T-bonds are the same. Sellers do not care about the attributes of the buyer so that questions of "matching" do not arise. No ongoing relationship between buyer and seller needs to be established. The T-bond market is sufficiently broad so that there are no significant costs of searching. Finally, there are no issues of fairness that might constrain price movements in the impersonal T-bond market. Sellers of T-bonds may be disappointed if the price of what they are offering falls. But they do not believe that buyers have a moral obligation to maintain a particular price. And since they have no ongoing relationship with the buyers, sellers would have no means to enforce such beliefs, even if they held them.

The labor market is very different. Labor is not homogeneous. Both workers and jobs have unique characteristics so that issues of matching clearly do arise. In most cases, some form of ongoing buyer-seller relationship is established. Job searches by workers and recruitment and screening costs of employers can be considerable in terms of time and money. Because employment takes place in a social context, issues of fairness arise. These characteristics of the market give rise to an upward-sloping labor supply curve as seen by the employer, regardless of the slope of the aggregate labor supply curve. And buyers that face upward-sloping supply curves are inherently monopsonistic. They set the wage they are willing to pay, based on that curve. Wages are not set by some auction market.

Labor Flows and the Labor Supply Curve
It does not take much analysis to generate an upward-sloping labor supply curve to the firm. A simple flow model suffices. Let employment at a firm at time \( i \) be designated by \( L_i \). Let the number of workers hired in a given period (after recruitment and screening) be \( H \). Finally, let \( t \) represent the turnover (quit) rate during that period. Then \( L_2 = (H-tL_1) + L_1 \).

If the firm is in a steady state (with no employment change), then \( L_2 = L_1 \) and therefore \( H = tL \). The turnover rate function can be assumed to be a negative function of the firm’s wage decision. A smaller percentage of workers in any given period will quit if the wage is raised, since the perceived opportunity cost of quitting is thereby increased. Figure 1 depicts the turnover rate function. For any given level of employment, the turnover rate function can be translated into the corresponding turnover number function by multiplying \( t \) by the level of employment \( L \). Figure 2 depicts two such turnover number functions corresponding to employment levels \( L^* \) and \( L' \), where \( L^* > L' \).

Figure 3 illustrates a typical hiring function. The number of workers recruited and who successfully pass whatever screening hurdles the firm applies will increase with the wage offer. Note that the turnover number function depends on the employment size of the firm while the hiring function is independent of firm size. (It effectively depends on the size of the much broader external labor market.)

The labor supply function perceived by the firm can be derived from the turnover number function and the hiring function. Consider Figure 4 in which the firm is assumed to set a wage so that the number hired in just equals the number quitting in a period. Let the corresponding steady-state wage be denoted as \( W^* \) and the steady-state employment level be denoted \( L^* \). The steady-state wage and employment combination can be found at the intersection of the \( H \) and \( T=tL^* \) functions.

Suppose now that the firm, for some reason, cuts the wage to \( W' \). Fewer workers will be hired into the firm per period and more workers will quit. Employment will begin to decline as the worker outflow exceeds the inflow. The turnover number function will begin to shift down and to the left. Even with a higher turnover rate, the number of quitting workers will tend to diminish over time as the base \( L \) to which it applies falls. Eventually, a new steady state will be reached with employment at \( L' \), depicted on Figure 4 as the intersection of the \( H \) function and \( T=tL' \). Thus, a lower wage is associated with a lower level of firm employment, i.e., the labor supply curve seen by the firm is upward sloping. Worker inflows and outflows (the vertical axis of Figure 4) are also lower at the lower wage.

Firm Behavior in the Face of Demand Declines

Figure 5 presents the standard monopsony model of the employer. The labor supply curve perceived by the firm is the upward-sloping line \( W \). Labor demand in the short run is the marginal revenue product of labor \( MRP_L \). Due to the upward-sloping nature of the supply curve, the marginal cost of hiring is shown by line \( MW \) which is greater than \( W \) except on the vertical axis. The firm’s optimal employment-wage decision is to set the wage at \( w_1 \), producing an employment level \( L_1 \).

Note that at this employment-wage decision, the firm has a labor shortage since the marginal revenue product of labor \( m_1 \) is greater than \( w_1 \). If the firm could somehow find a marginal worker willing to work and stay in employment at \( w_1 \), it would make the added hire. But it will not choose to raise the wage to
attract such a worker, even though the marginal revenue that would be obtained exceeds the wage. The firm thus operates with a chronic labor shortage of the type associated with monopsony (and which characterized the late 1990s).

Suppose now this firm experiences a demand decline to \( \text{MRP}_L' \). If completely unconstrained, it will adjust to the lower demand by reducing its wage to \( w_2 \) and its employment level to \( L_2 \). That is, some of the drop in demand will be absorbed by the wage and some by employment. However, the firm can be reasonably assumed to be constrained by some degree of nominal wage rigidity of the type reported in the 1990s by Bewley (1999, pp. 208-209, 432-433) and by many others. (Fehr and Tryan 2001; Levine et al 2002; Mitchell 1993; Howitt 2002, p. 130) Indeed, even if wages were more flexible before the Great Depression than after, empirical evidence suggests that nominal wage rigidity or at least resistance characterized that pre-union era. (Bordo, Erceg, and Evans 2000) Nominal wage rigidity, in summary, is an appropriate addition to the dynamic monopsony model since it is a longstanding labor-market characteristic.

If the nominal wage cannot fall and remains at \( w_1 \), the employer must “eat” the demand decline. Wages do not absorb the decline (by assumption). And with the wage rigid, there is no incentive for the firm to reduce employment! Since \( m_3 > w_1 \), there remains a labor shortage, albeit a lesser labor shortage than before.27 Effectively, the firm has “laid off” vacancies rather than real employees. Wage rigidity acts as a monopolistic force, offsetting (some of) the firm’s monopsony power.

Readers will note the similarity between this analysis and that associated with Weitzman’s share economy firms. Weitzman firms, too, operate with chronic shortages and in the face of moderate negative demand shocks lay off vacancies rather than workers. And like Weitzman firms, nonunion monopsony firms with downward-rigid nominal wages are not completely immune to layoffs. A sufficiently large negative demand shock will cause the firm to layoff real workers rather than just vacancies. Thus, a fall in demand to \( \text{MRP}_L' \) on Figure 5 will cause employment to drop from \( L_1 \) to \( L_3 \). Layoffs occur because \( w_1 \) is greater than the marginal revenue product of labor at \( L_1 \).

In short, monopsony firms will experience chronic labor shortages and thus will have a cushion of vacancies to “lay off” in the face of declining demand. Eventually, however, if the decline in demand is sufficiently severe, they will reduce employment levels. Note that writ large, the model suggests that rather mild recessions can be expected in a labor market characterized by monopsony due to the anti-layoff cushion.

General Demand Declines and Labor Supply Increases

The analysis so far has considered a demand decline experienced by a single firm. Such declines could occur as the result of particular circumstances related to that firm’s product. If only that firm, or a small number of firms, were involved, overall labor supply conditions would not be much affected. However, a more general negative demand shock – a recession – could increase labor supply to the typical firm as well as decrease demand. Such a labor supply increase could occur if a significant number of firms were sufficiently adversely affected so that actual layoffs occurred.

The impact of a labor supply increase (of displaced workers) would be mitigated if some firms remained in the monopsony range and experienced continued labor shortages. Such firms would tend to absorb the displaced workers, helping to maintain the overall level of employment. In short, even if
some firms were pushed into the layoff range, a monopsony economy would tend to be stabilized by other firms. Of course, a very severe negative shock might tip almost all firms into layoffs. But generally, only mild swings in unemployment could be expected.

Labor supply could also increase due to exogenous factors. Foreign immigration into the U.S. ran at high levels in the 1980s and 1990s. The 1990s also saw an increase in the supply of low-skilled labor, primarily women, due to federal and state welfare reforms. (Lerman and Ratcliffe 2001) Despite supply increase, the labor market absorbed the newcomers and yet continued to exhibit worker shortages. The monopsony model, with its chronic labor shortage, accords with that result.

Contrast with a Union Labor Market

What if a union were to come into existence when the firm was operating at its initial \( w_1 \) and \( L_1 \) combination on Figure 6 and bargained with the firm to raise pay? How would wage setting differ? Presumably, if it could, the union would at least raise the wage to \( m_4 \). There is no employment loss entailed in going to \( m_4 \) — indeed there is a job gain due to the offset of the monopsony effect. Employment increases anywhere between a wage at \( m_4 \) and \( m_1 \). Note, however, that nominal wage rigidity at \( m_4 \) or above has a dramatically different effect in the face of a demand decline than it does below \( m_1 \). At \( m_4 \) or above, there is no monopsony effect to offset. Thus, a demand decline at a fixed nominal wage translates into a job loss.

Consider, for example, a union that bargained wage \( m_4 \), the maximum wage that entails no job loss starting from the nonunion wage \( w_1 \). If demand falls to \( MRP' \), employment declines to \( L_U \) on Figure 6 in the union wage case, in contrast to no loss of employment in the nonunion case. Nominal wage rigidity matters a great deal to employment dynamics in the event of negative demand shocks, depending on whether there is monopsony in the labor market or not.

Patterns vs. Coordination

We have shown that a nonunion employer will typically have monopsony power, once the dynamics of labor flows are considered. Monopsony does not depend on there being a single employer in the labor market, e.g., the old coal mining company town example. However, the inherent monopsony in nonunion wage setting could be reinforced by employer coordination of wage policies, a de facto buyers’ cartel. The longstanding stories of monopsony in the nursing labor market have involved explicit coordination by health provider/employers in urban areas, for example.

Notions of wage imitation in the union sector (pattern bargaining) are a traditional fixture of the industrial relations literature. (Ross 1948; see also Erickson 1996 for a discussion of change and continuity in patterns in the “post-concession” era). The idea that pay should be set in comparison with relevant groups has also long been held by arbitrators called in to settle “interest” disputes. (Bernstein 1954, pp. 51-71) But it has also been found that in the nonunion sector, setting wages through comparisons is widespread.

In fact, formally or informally, an almost-universal element of wage setting involves finding out what someone else is paying for similar workers. The information might be gathered through trade associations, government surveys, or simply a phone call to the firm down the street. (Bewley 1999, pp.
"Benchmarking" is a common management practice for evaluation and decision making of all internal policies including pay.

The line between innocent information gathering and cartel-like collusion is a fine one. But the existence of tacit agreements not to compete for labor has long been noted in the research literature. (Myers and Maclaurin 1943, pp. 40-43) It need not be the case that all firms pay the same wage – they clearly do not – or that all provide the same percentage wage increase. As long as pay at one firm "influences" pay at others, a certain level of coordination is occurring.

In a labor market in which unions represent a significant fraction of the workforce and in which the threat of organization is real to nonunion employers, union wage setting will have a more general influence than just in bargaining units in which it occurs. Nonunion firms in the 1970s reportedly watched union settlements "very carefully" - and made pay decisions based on their observations - to avoid being unionized. (Foulkes 1980, p. 166) Under such conditions, firms - union or not - are likely to operate in the wage range at or above $m_1$ in Figure 6, either because they are forced to do so through bargaining or because they think it prudent to do so as a defensive measure.

However, such labor markets can be "tipped" into the below-$m_1$ monopsony range if the union sector declines sufficiently and the threat of new organizing recedes. Such decline and threat reduction characterized the 1980s and 1990s. Thus, it is likely that the U.S. labor market went from monopoly to monopsony wage determination in that period. Labor textbooks that present monopsony as a curiosity and demand=supply as the competitive norm need to be rewritten. Monopsony and employer ascendancy is the competitive norm.

Monopsony in Place and Time

Union decline has not been confined to the U.S. by any means. In most developed countries, similar declines occurred beginning in the 1980s, albeit at different paces and starting from different levels. (OECD 1994, p. 184; ILO 1997, pp. 239-240) In some countries, however, direct union pay determination is more detached from actual union representation by various forms of wage "extension" through which bargained wages are applied more broadly. (OECD 1997, pp. 71-72) The extension phenomenon may be part of the explanation of why the U.S. NAIRU has declined relative to those of other countries in Europe and elsewhere in the developed world. (Bertola, Blau, and Kahn 2001)

Similarly, the predominantly nonunion labor markets in Asia may explain why some of those countries were able to operate with very low unemployment and chronic labor shortages until the Asian financial crisis of the late 1990s. In many Asian countries, independent unions - particularly militant ones - are discouraged by law or informal public policies (Kuruvilla and Erickson 2002). Officially-sponsored unions - where they exist - do not push up wages. The Asian financial crisis was sufficiently large to prevent monopsonistic labor markets from completely absorbing the employment impact. But monopsony may explain why the Asian financial crisis was comparatively short-lived and why reports of labor shortages resumed after the crisis receded. (See Erickson and Kuruvilla 1998b for a preliminary discussion of industrial relations implications of the crisis).

Just as the monopsony model can be helpful in understanding employment and wage dynamics across countries, so - too - can it help us interpret events over time. There is a widespread perception, for example, that American labor
markets had much higher rates of employee turnover before the Great Depression than after World War II. Commentators of the postwar era noted a substantial decline in turnover by the 1950s. (Ross 1958; Jacoby 1983)

One would expect the pre-Depression regime of nonunion monopsony and resultant wage repression to exhibit higher quit rates than the postwar regime of high union or union-influenced wages. A popular theme during the Great Depression was that wage repression had led to worker underconsumption and caused the economic decline. Indeed, this theme appears in the preamble to the 1935 Wagner Act as a policy justification for promoting unions. The idea was also a factor in the design of the earlier National Industrial Recovery Act of 1933 and the later Fair Labor Standards Act of 1938. (Kaufman 1996; 1993, p. 61)

Monopsony and Mandated Employment Costs

Negative demand shocks need not come exclusively from business cycle effects or even from the conditions in the product market facing a particular firm or industry. Consider, for example, an increase in payroll taxes or in employer costs due to mandated benefits or conditions of work. For example, there has been much concern about whether highly-regulated European labor markets were a causal factor for high unemployment in the 1980s and beyond.

During the 1980s, there began to be calls in Western Europe for more labor-market “flexibility” along American lines. According to this view, more flexibility – particularly removal of constraints on layoffs – would reduce chronic unemployment. It has been pointed out that the incidence of such regulatory costs, including the implicit costs of mandated job security, could in principle fall on the wage, thus minimizing any disemployment effects. Only if wage setting is downward-rigid, can the cost of increased mandates not be passed on to labor. (Erickson and Mitchell 1995)

Much research into European labor markets suggests that the contrast between growing wage inequality in the U.S. and wage compression in Europe reflects differences in labor market institutions. (Bertola, Blau, and Kahn 2001) Indeed, it has been argued that the compression fosters increased labor-saving technology, further lowering the labor demand curve at the bottom end of the pay scale. (Acemoglu 2002) European wage rigidity can be viewed as leading to a wage on the labor demand curve analogous to a position such as m₄ or above.

In that case, absent U.S.-style monopsony wage setting, disemployment would result from any negative demand shock (such as increased mandates or more foreign competition). Had there been U.S.-style monopsony in Europe, however, influences that effectively lowered the demand for labor might not have produced disemployment. Put another way, the call for more flexibility in Europe is an implicit call for a shift to a monopsonistic nonunion labor market (employer ascendancy), even if advocates do not conceive of their position in that way.

Can We Have Good Macro Performance Without Losing Employee Voice?

The de-unionization of the American labor market accompanied improved macroeconomic performance. But the linkage we have made raises a disturbing implication. The old Phillips curve suggested a trade-off between inflation and unemployment. Do we now replace it with a new curve that trades off employee voice for low unemployment? And in the American context, more than voice is at stake. De-unionization, as noted above, has played at least some role in widening wage inequality and in the decline of health insurance and defined-benefit pension coverage, among other losses for working people.
Given the erosion that has already occurred, unions might consider changing their functions to survive in the private sector, apart from any macroeconomic considerations. Where collective bargaining continues, unions will need to be sophisticated analysts of firm-level economic conditions and to avoid bargaining objectives that threaten their institutional survival. Use of share economy pay plans, which reduce marginal labor costs and which allow a trade off of pay for job security in Hard Times, would likely be part of the bargaining mix.

Recent research has suggested a latent employee demand in the U.S. and the U.K. among nonunion employees for greater voice at the workplace. (Freeman and Rogers 1999; Belfield and Heywood 2002) In some cases this latent demand involves traditional unions; in other cases something more like a European-style works council. Share economy schemes, although not put forward that way by Weitzman, lend themselves to some form of formal employee representation. If workers are to be de facto investors in their enterprises, presumably they should have some voice in management decisions. For that matter, workers need some sort of independent agent that can assure that bonuses based on firm performance are being honestly distributed. Note, however, that union and worker involvement in firm strategic decision-making would very much go against the tradition of job-control unionism, and would represent a major change (and perhaps even a “transformation”) of the New Deal system of industrial relations (Piore and Sabel 1984; Kochan, Katz, and McKersie 1986; Erickson and Kuruvilla 1998a)

At this point, de-unionization in the U.S. has gone so far that a return to the kinds of unionization rates that prevailed in the 1950s or even the 1970s is not likely to be in the cards in the near future. But unions can play a role in lobbying and representing the employee interest in legislative and legal forums. And it is likely that employment issues will increasingly be settled through law and litigation rather than workplace bargaining.

Perhaps it should not be surprising that the legal forum intercedes where union bargaining once played a major role. If one starts with the proposition – as many economists do – that perfect competition (demand=supply) is the model for the nonunion sector, then it can be argued that whatever emerges in the employment relationship is as much the product of employee desires as employer policies. Workers want to be contingent because of the flexibility it provides. They prefer defined-contribution plans to defined-benefit pensions because they can invest their own funds. They prefer to manage their careers because they don’t want to be dependent on employers. If, however, the employment relationship is the result of monopsony and employer ascendancy, all of these propositions that became popular in the 1990s are open to question. The notion of an inherent imbalance of bargaining power, not only with regard to wages but also for the entire range of employment conditions, revives. The U.S., and others countries that are experiencing de-unionization, need to find a better balance between employee voice and macro performance.
Chart 1: New Weekly State Claims for UI as Percent of Covered Employment

Note: Arrows indicate recession troughs.
uiclaims.xls
Chart 2: Index Ratios: Union Wage to Average Wage and Union Membership to Production and Nonsupervisory Employment: Private Nonfarm Sector

Union Membership Ratio: 1990 = 100 (Right Scale)
Union Wage Ratio: Dec. 1990 = 100 (Left Scale)

ratio.xls
Chart 3: Work Stoppages Involving 1,000 or More Workers
Chart 4: First-Year Union Wage Settlements (Percent Change) and Percent of Contracts with Freezes or Cuts in the First Year

Note: Data on wage freezes and cuts are not available before 1982.
inflation.xls

Note: Core CPI-U excludes food and energy prices.
Note: Data on a total compensation basis are not available before 1980.
Appendix Chart A3: Unemployment Rate (Percent) and Average Duration of Unemployment (Weeks)

Inflation.xls

Note: Duration data are interrupted spells.
Appendix Chart A4: Federal Funds Rate

fedfunds.xls
Figure 5: Monopsony With Demand Decline
Figure 6: Union Wage Setting With Demand Decline
References


Footnotes

1Treasury Secretary Donald T. Regan was reported as putting the rate at 6-6.5%. See William J. Eaton. “Jobless Level of 6.5% is Defined by Regan as ‘Full Employment,’” Los Angeles Times, September 30, 1982, p. 5; Incoming chair of the Council of Economic Advisors Martin S. Feldstein put the rate at 6-7%. See also “Regan Says Joblessness Won’t Drop Below 6%,” New York Times, September 30, 1982, p. D1.

2Member Lyle Gramley at the Federal Open Market Committee meeting of Feb. 2-3, 1981 (from the transcript for that date). See below for web source of FOMC transcripts.

3The share of corporate national income going to labor is highly cyclical. Figures for the postwar period at rough business cycle peaks are 1949 76.6%; 1959 78.1%; 1969 80.3%; 1979 82.3%; 1989 81.8%. 2000 79.6%.

4There is unfortunately no consistent union wage index that goes back as far as the mid-1950s. The chart therefore uses median effective wage change in major union contracts – converted to an absolute index – and spliced on to the Employment Cost Index for union wages and salaries in 1976, as the union wage measure. Prior to 1959, a 3-year moving average of major union settlements is used, since the effective union wage change measure was not available. The denominator of the ratio is average hourly earnings of production and nonsupervisory workers in the private nonfarm sector. Note that since union wages are a larger fraction of total wages in the earlier period, the scope for ratio variation is reduced in the earlier periods relative to the later periods. All data are from the U.S. Bureau of Labor Statistics.

5The director of the Council of Wage and Price Stability stated that if the administration “could get the Teamsters to agree to 20% for three years, the United Auto Workers would sign a contract for the same thing. So would steel. Each of these unions wants what the other one got.” Cited in Mitchell 1980, p. 191.


7AFL-CIO officials met with Reagan in late 1981 and asked him to reconsider his permanent ban on future federal hiring of the controllers in any position. The president of the Pilots wrote to Reagan thanking him for the meeting and pointedly noted that his union had supported Reagan’s action against PATCO. Earlier, a White House official reported to Labor Secretary Elizabeth Dole that the AFL-CIO realized they had gotten “too far out” on the PATCO issue and wanted to put it behind them. This communication may have been referring to an AFL-CIO complaint at the International Labour Organisation about the firing of the controllers. The Teamsters president similarly asked Reagan to do something for the fired controllers. Eventually, Reagan revised the hiring ban to three years for jobs outside the Federal Aviation Administration. Relevant documents appear in Reagan library, OA6850. No internal Reagan documents in this collection refer to inflation or economic policy in connection with PATCO, although there are newspaper columns purporting to see a domino effect in the presidential files.


9Weidenbaum (1988, pp. 139-140) argued that union wage and workrule concessions were sparked by “the new competitive reality,” as was the drop in strike incidence. Thus, he tended to see the outcomes in the union sector as responding to broad economic forces such as import competition. He seemed less inclined to view union outcomes as contributing to macroeconomic performance in any short-run sense.


11There are seven members of the Board of Governors, all of whom are nominated by the President and confirmed by the Senate. Members serve terms of 14 years. A new term begins every two years on even-numbered years. Members who serve a full term may not be re-appointed. The Chair and the Vice Chair of the Board are named by the President from among the Board members and are confirmed by the Senate. They serve terms of four years. Only one member of the Board may be selected from any one of the twelve Federal Reserve Districts. The seven Board members constitute a majority of the 12-member Federal Open Market Committee. The other five members of the FOMC are Reserve Bank presidents, one of whom is the president of the Federal Reserve Bank of New York. The other Bank presidents serve one-year terms on a rotating basis. By statute the FOMC determines its own organization, and by tradition it elects the Chairman of the Board of Governors as its Chairman and the President of the New York Bank as its Vice Chairman. (Source: Federal Reserve website, www.federalreserve.gov).

12In some cases, portions of the script in which confidential information was discussed are omitted. Some conference all meetings also are incomplete. Some editing has been done on the transcript. Participants therefore appear to speak with amazingly few grammatical errors for oral conversation! Transcripts of meetings along with staff presentations and chart shows are available on the Internet at www.federalreserve.gov. Green books are not available on the web but were made available in paper format through the Federal Reserve’s Washington office.
In what follows below, we identify those FOMC members who are members of the Board of Governors of the Federal Reserve as “governors” with the exception of the chair (Volcker or Greenspan) and vice chair of the FOMC. The vice chair of the FOMC, as noted above, is always the president of the Federal Reserve Bank of New York. We identify the other members of the FOMC by their bank affiliation.

Eisenmenger was apparently sitting in for Frank Morris, the Boston Bank President.

Corrigan had moved from the presidency of the Minneapolis bank to the New York bank in 1984.

FOMC meetings are not without levity, even in the midst of serious policy deliberations:

Mr. Lee Hoskins: …And you’re probably all waiting for my stainless steel strip index, but I’m not going to give it to you because I’ve latched on to a new one: the Smuckers Index! I had a chance to talk with Paul Smucker, an elderly gentleman who has been through many business cycles and he told me that apple butter sales remain relatively soft. And that’s a good sign because during deep recessions apple butter sales soar. [Laughter] So, I’ll be reporting to you on apple butter.

Chairman Greenspan: It sounds to me as though business is in a jam! [Laughter/hoots]

At this writing, transcripts of the Federal Open Market Committee are not available after 1996, so less information is available about Fed decision making beginning in 1997 than for earlier years.

Note, however, that recent evidence suggests a return to patterns, albeit in a somewhat modified form (Erickson 1996, Erickson 2001).

The Beveridge curve is the inverse relationship between the vacancy rate and the unemployment rate.


Two percent of private sector employees (5% in publicly traded companies) had stock options in 1999. Higher paid managers and professionals were much more likely to receive such options than low-paid workers. (Crimmel and Schildkraut 2001, p 10). Four percent of full-time employees in medium to large private establishments had ESOPs in 1997; 13 percent had deferred profit sharing. (U.S. Bureau of Labor Statistics 1999, p. 5)

It has been pointed out that such wage-setting represents “inefficient” bargaining. The union should in theory bargain over both the wage and the employment level. However, the notion that the employer sets employment seems to correspond broadly to reality, with some notable provisos about workrules and manning requirements in certain cases.

Freeman and Medoff (1984) put forward a model of unions with a monopoly “face” and a voice face. However, they do not focus on the notion that the monopoly side of unions might be a response to monopsony on the employer side. Implicitly, they assume that the alternative to union monopoly power is a labor market characterized by demand=supply set by classical competition.

The intersection of the two axes of Figures 3 and 4 is not at the 0,0 point. In particular, the wage at the intersection point is > 0 since H>0.

Although we do not pursue the matter here, it might be noted that the same model could be applied to product markets in which product are heterogeneous and matching and searching are issues. A firm might be depicted as having a customer base and drawing orders from that base. Raising prices will tend to erode the customer base, as fewer new customers are gained per period and a higher rate of attrition for old customers is experienced. Thus, high prices will lead to reduced demand and low prices to increased demand. The firm thus faces a downward-sloping demand curve, i.e., it operates in a form of imperfect competition. Note also that the rise of Internet technology might affect the H and T functions by reducing information costs. Both H and T could become steeper as information costs diminish, thus flattening the labor supply curve and reducing monopsony power.

The degree of the labor shortage can be measured by the amount by which the marginal revenue product of labor exceeds the wage.

A Nexis/Lexis article count for “labor shortage” and each of the “four-tiger” countries (Singapore, Hong Kong, South Korea, Taiwan) produced the following results:

<table>
<thead>
<tr>
<th>Year</th>
<th>Singapore</th>
<th>Hong Kong</th>
<th>South Korea</th>
<th>Taiwan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>538</td>
<td>506</td>
<td>548</td>
<td>537</td>
</tr>
<tr>
<td>1996</td>
<td>566</td>
<td>539</td>
<td>573</td>
<td>575</td>
</tr>
<tr>
<td>1997</td>
<td>608</td>
<td>594</td>
<td>597</td>
<td>598</td>
</tr>
<tr>
<td>1998</td>
<td>376</td>
<td>351</td>
<td>369</td>
<td>377</td>
</tr>
</tbody>
</table>

Thus, while there is a dip in labor shortage citations during the Asian financial crisis and the U.S. recession of 2001, shortages continued to be reported, even during those periods.


Kremer and Olken (2001) propose a “biological” model of union survival of the fittest. In their model, internal procedures that contribute to long-term incumbency of union officers lead those officers to pursue more “moderate”
bargaining strategies. However, unions that educate their members about what can realistically be obtained might achieve a similar advantage.