Working Paper Series - 108

ALTERNATIVE EXPLANATIONS OF UNION WAGE CONCESSIONS: Deregulation and Foreign Trade or Prior Wage Trends?

by

Daniel J.B. Mitchell*

*Daniel J.B. Mitchell
Director
Institute of Industrial Relations
U.C.L.A.
Los Angeles, California 90024
(213) 825-4339

University. Institute of Industrial Relations (Los Angeles)

and

Professor
Graduate School of Management
U.C.L.A.

Draft: March 1986

ALTERNATIVE EXPLANATIONS OF UNION WAGE CONCESSIONS:

Deregulation and Foreign Trade or Prior Wage Trends?

Daniel J.B. Mitchell
Director
Institute of Industrial Relations
U.C.L.A.
Los Angeles, California 90024
(213) 825-4339

and

Professor
Graduate School of Management
U.C.L.A.

March 1986

SUMMARY

A common explanation for the wave of union wage concessions and the shrinkage of union employment during the 1980s is that these developments reflected the impacts of deregulation and foreign trade on the U.S. economy. Examination of a data set on union concessions, however, suggests that this explanation is at best half right: Deregulation did have a profound impact on wage bargaining, although in a limited sector. However, industries most exposed to foreign competition showed a lower than average propensity to negotiate concessions, and the concessions which were negotiated were less severe than elsewhere. Indeed, much of the concession bargaining which occurred during 1981-85 took place in industries which were NOT exposed to foreign competition and which were NOT deregulated.

Similarly, most of the shrinkage in union employment cannot be attributed to employment trends in particular sectors. Concession-prone industries showed larger rates of job loss for union workers than other industries. But these losses were largely due to forces other than general employment trends in those industries. It appears that union wage trends in the pre-concession era, and associated industrial relations developments, are better candidates to explain union job losses and wage concessions.

CONTENTS

The phenomenon of union pay concessions was the most dramatic development to occur in wage determination in the 1980s. It was sufficiently widespread to influence the aggregate indexes of wage change, even though union workers are a minority of the labor force. Pay concessions had major implications for the immediate parties to their negotiation. For unions, they required a painful readjustment after a long period in the 1960s and 1970s in which a new contract typically meant improved pay and benefits. For management, concessions meant a shift from a defensive to an offensive stance in collective bargaining. Apart from its significance to the immediate parties involved, concession bargaining had important implications for the inflation outlook.

What explains the concessions? Why did they occur in the 1980s? What implications do they have, or could they have, for the future of collective bargaining? Much has been written on these questions._1_/ But a clear consensus on any of them has not emerged. Particularly with regard to the first two questions -- cause and timing -- there has been a tendency to look to specific conditions affecting certain industrial sectors, rather than to search for a unifying theme which crosses sector lines. In particular, it is often argued that two forces -- deregulation and foreign competition -- have been the key determinants of the concession movement. Superficially, at least, these two forces seem to fit the facts in terms of timing as well as causality.

Accompanying the wage concessions made by unions in the 1980s was a decline in the number of workers represented by unions. Again the tendency has been to turn toward deregulation and foreign trade (especially the latter) as an explanation for this loss. Perhaps --

so the argument goes -- the decline is the result of a corresponding decline in the employment levels of unionized industries brought about by these exogenous changes in the economic climate.

Deregulation was both a legislative and a judicial event which opened up competition in previously insulated sectors in the late 1970s and early 1980s. Foreign trade competition intensified in the early 1980s when the U.S. dollar appreciated substantially relative to currencies of other countries. Obviously, for certain industries -- airlines in the case of deregulation, steel in the case of foreign trade -- the story of wage concessions and union employment trends could not be told without reference to these special influences. But in many other cases, the explanation is more general.

Examination of data on concession contracts presented below reveals that many such agreements do not fit the deregulation - foreign trade mold. Data on the number of unionized workers by industry also do not support a simple deregulation - foreign trade explanation. Of the two forces, deregulation will be seen to have had the greater impact -- although for a limited number of industries. A third factor, namely wage developments in the union sector in the decade and a half preceding the concession movement, is a better candidate for a unifying theme. These earlier wage developments are essential to an understanding of both the concession movement and the union membership losses of the 1980s.

I. Deregulation and Foreign Trade.

Deregulation is primarily a phenomenon of transportation and communications industries. Airlines, trucking firms, and railroads had long operated in an environment of government regulation of price setting and entry._2_/ Legislative changes in the late 1970s opened up transportation to price cutting and new entry. Similar developments occurred in communications, although the mechanism was principally a court decision breaking up the Bell telephone system._3_/ With a shift to a competitive environment, wage increases could no longer be passed along to consumers without severe product market consequences. Indeed, cost control (including labor costs) became a key element of success in holding on to, or expanding, market share.

Foreign trade competition has always been present for much of the manufacturing and mining sectors of the U.S. economy on the import and/or export side. During the late 1970s, however, dollar depreciation -- combined with a long-term trend toward higher real wages in other industrialized countries -- made U.S. goods especially competitive on international markets. Indeed, measured in dollars, foreign wage costs in several European countries substantially exceeded U.S. levels by the late 1970s._4_/ In this advantageous environment, U.S. wage levels could be increased without fear of loss of market share to foreign competitors.

But in the 1980s, a substantial appreciation of the dollar -- which many economists associated with high American interest rates and increased federal budget deficits -- reversed the U.S. competitive situation._5_/ Foreign wage levels, when translated into American dollars, fell dramatically for many key currencies. The U.S. labor cost advantage quickly became a competitive disadvantage on world markets.

The proposition that deregulation and foreign trade explain the union wage concession movement and the decline of union employment is based on the industrial distribution of union members, as compared with the workforce as a whole. For example, Table 1 shows a breakdown of nonagricultural employment of production and nonsupervisory workers as compared with the distribution of employees covered by "major" union contracts (those covering 1,000 or more workers). While less than one third of nonsupervisory employment was in the deregulated and foreign trade sectors of the workforce in 1979, about two thirds of major union employment fell into those sectors.

Certainly, the fact that so much of union employment is "exposed" to deregulation and foreign competition helps explain why, by the mid 1980s, average union wages were rising more slowly than nonunion._6_/ Many union workers were simply in the wrong place at the wrong time. But, as will be seen below, the distribution of union WORKERS does not accurately mirror the distribution of union wage DECISIONS. Many small bargaining units are located outside the deregulation - foreign trade sectors.

II. The Distribution of Concessions.

A data file of union wage settlements is maintained on a biweekly basis by the Bureau of National Affairs, Inc. This file began to pick up significant union wage concessions -- defined from this point on as settlements providing for a basic wage freeze or cut in the first year of the contract -- in 1981, when 3% of the contracts reported fell into the concession category._7_/ Thereafter, the proportion rose to 12% in 1982, 28% in 1983, and then began to taper off to 27% in 1984 and 25% in 1985. The BNA data can be classified by industry and thus assigned to the deregulated, foreign trade, and "other" sectors._8_/ Table 1 shows the summary results of this classification for the period 1981-1985.

The deregulated sector accounted for only 4% of the union contracts negotiated in 1981-85. But about 5% of the concession agreements fell into this sector. Thus, there WAS some overrepresentation of concession contracts in the deregulated sector, although the absolute number of such contracts was small. Forty-three percent of all union contracts in the BNA survey fell into the foreign trade sector. By that standard, the foreign trade sector was UNDERrepresented among union wage concessions. More than half of all union contracts and union wage concessions fell into the "other" sector in which the impact of deregulation and foreign trade was indirect at best.

i. Concession Severity.

Union wage concessions can be classified by their degree of severity. The most severe concessions were those which resulted in absolute cuts in the nominal wage. If deregulation and foreign trade were the root causes of concessions, it might be expected that wage cuts would be most common in those sectors. As shown on Table 1, for the deregulated sector, this prediction "works"; almost a third of concessions in that sector involved wage cuts. But in the much larger foreign trade sector, only 11% of the concessions made were cuts. Wage cuts in the "other" sector fell into an intermediate range of about one fourth of all concessions.

There are other aspects of wage concession severity which are not captured by simply looking at wage cuts. Some union concession

Table 1: Employment, Union Contracts, and Concession Characteristics by Sector

	Sector			
	Deregu-lation	Foreign Trade	Other	Total
Nonagricultural Employment Distribution, 1979:				
Production and non-supervisory employment	5%	25%	70%	100%
Workers covered by major union agreements	20%	46%	34%	100%
Union Contract Distribution, 1981-85:				
All contracts	4%	43%	53%	100%
Concession contracts	5%	37%	58%	100%
Concession Severity Measures, 1981-85:				
Wage decreases as percent of concessions	32%	11%	26%	21%
Concession severity index	3.2	2.5	3.1	2.9
Incidence of 2-tier wage plans_a_/	10%	10%	19%	13%
Incidence of fixed bonus plans_a_/	7%	23%	16%	16%
Wage Flexibility Indicators in Concession Contracts, 1981-85:				
Mean contract duration (months)	27	33	27 (32_a_/)	29
Incidence of profit sharing_a_/	23%	5%	7%	7%
"Unexplained" Loss of Unionized Workers, 1979-85:				
Erosion rate	11%	20%	27%	21%

_a_/ Excludes the construction industry.

contracts contained cost-of-living adjustment clauses (COLAs) which provided for wage increases if the Consumer Price Index rose. Concession agreements sometimes limited the operation of these clauses to permit less money for a given price increase than the unchecked COLA formula would otherwise have provided. Thus, there were really four levels of concessions. By increasing severity these levels are: 1) wage freezes but with unlimited COLA, 2) wage freezes but with limited COLA, 3) wage freezes with no COLA, and 4) wage cuts. Table 1 provides an index of concession severity based on these levels of severity, weighting each type of concession, respectively, on a scale of 1 to 4.

As can be readily seen, the foreign trade sector again emerges as featuring the mildest average level of concession severity. The index reported on Table 1 suggests that the deregulated sector and the "other" sector had about the same level of concession severity. As before, these data do not neatly fit into an across-the-board deregulation - foreign trade explanation of the concession movement. The explanation works for deregulation, but not for foreign trade.

ii. Two-Tier Pay Plans.

Two-tier pay plans have become a prominent feature of collective bargaining. In 1985, for example, 11% of all nonconstruction contracts included a two-tier pay feature. Two-tier plans were especially common in concession agreements; 45% of all two-tier plans (excluding construction) involved basic wage settlements of zero or less in 1985._9_/ Under a two-tier plan, the wage schedule is lowered for new hires, while existing workers remain on the standard scale. In effect, two-tier plans represent a compromise wage cut, since the AVERAGE wage will fall as new workers are hired, even though existing workers are spared a pay reduction._10_/

The incidence of two-tier plans in concession contracts in the deregulated sector is somewhat below the all-sector average. However, since wage cuts were more frequent in the deregulated sector than elsewhere, the lower incidence of two-tier arrangements is not surprising. If the basic wage is cut for all workers, there is no need for a compromise wage cut affecting only new hires. The severity of the basic wage concession lessens pressure for two tier.

In the case of the foreign trade sector, however -- where basic wage cuts were rare -- this explanation does not apply. Despite what might seem to be STRONGER pressure for a compromise two-tier pay cut in the foreign trade sector, their incidence is no greater than in the deregulated industries. Part of the reason for the reduced incidence of two-tier pay plans in the foreign trade sector is employment stagnation or shrinkage; a wage cut applicable to new hires has no effect if there are no new hires. Nevertheless, the lower than average frequency of two-tier plans in the foreign trade sector reinforces the impression from the data presented earlier: the overall level of concession severity is consistently lower in that sector than elsewhere.

Two-tier pay plans were most frequently negotiated in the "other" sector, where the deregulation - foreign trade story does not apply. Within that sector, they were especially common in the retail foodstores, an industry characterized by relatively high employee turnover. This turnover ensures that with a two-tier plan, average wages will quickly be reduced as workers hired after the plan is adopted become a larger and larger fraction of the workforce. In the "other" sector, not only was concession severity -- as measured above -- high, but adoption of two-tier plans reinforced that severity.

iii. Fixed Bonus Plans.

By the mid 1980s, fixed bonus pay plans came to be even more commonplace for union workers than two-tier plans. Such plans substitute a specified, lump-sum annual bonus, say $1000, for some or all of a basic wage increase. In 1985, for example, over a third of all workers under major union settlements in the private, nonconstruction sector were covered by a fixed bonus pay plan._11_/

Although fixed bonuses substitute for wage rate increases, they do provide added income to workers. This feature is especially important to workers who would otherwise be subject to a basic wage freeze. Indeed, in the first year of the contract, there is little difference between a bonus and a pay increase; a worker receiving a 3% bonus in the first year in lieu of a 3% wage hike will receive the dollar equivalent of the wage hike. It is only in subsequent years that the lack of wage compounding produces reduced income._12_/

Viewed in this way, fixed bonus plans can be seen to be "sweeteners" which lessen the impact of a given wage concession. And as Table 1 shows, these sweeteners have been most commonly included in the foreign trade sector where the concession severity is least, and where concession frequency is lowest. Thus, the data on bonus plans suggest that the foreign trade sector has shown the least reaction on the wage side to the forces creating pressure for concessions. Those concessions which did occur were partially "offset" by fixed bonus payments.

iv. Wage Flexibility Arrangements.

Since the late 1940s, collective bargaining agreements have typically been of multiyear duration. During the life of the contract, wage increases are periodically provided, either specifically or under a COLA clause. Employers usually preferred the multiyear feature, since it reduced the frequency of negotiations and, hence, the frequency of exposure to potential strikes._13_/ But multiyear contracts had a downside; they locked in a series of guaranteed wage adjustments which might prove difficult for the employer to provide if business conditions unexpectedly deteriorated. In effect, workers (at least those senior enough to be insulated from layoffs) were given income security while the employer assumed added risk.

Employers might have been able to shift some of this risk back to employees, had multiyear contracts provided for wage increases which were contingent on business conditions. There are such contingent compensation arrangements, with profit sharing being the most common. Under profit sharing, a deterioration in business conditions (and, therefore, profits) results in a reduced profit sharing bonus to workers, thus lowering the employer's labor cost outlay._14_/ But until the 1980s, profit sharing was extremely rare in the union sector. Unions and their members did not want to assume the risk of a variable income contingent on employer circumstance.

Contract duration and the incidence of profit sharing can thus be used as an index of the degree to which a potential for wage flexibility was introduced into concession agreements. In a period of changing product market conditions -- and particularly during an era such as the first half of the 1980s when the risk of a strike was very low_15_/ -- having a short duration contract avoided locking the employer into a long term commitment to compensation improvements. Similarly, introducing profit sharing into concession agreements allowed variations in employer "ability to pay" to be reflected directly in labor costs.

In keeping with earlier findings that unions in the deregulated sector were prone to make large sacrifices during the concession movement, Table 1 shows that deregulated concessions were accompanied by shorter than average contract durations. Concession contracts in the deregulated sector were considerably shorter than those in the foreign trade sector. In the "other" sector, mean duration fell to the level of the deregulated sector, but only because of a sharp drop in the average length of contruction concession contracts (to an average of 24 months). Excluding construction, contract duration in the "other" sector showed little impact of the concession movement.

With regard to profit sharing, it is necessary to exclude construction from the comparisons, since the casual nature of the worker-employer attachment in that industry precludes such a contingent pay system. Again, the deregulated sector shows the greatest impact of the concession movement by exhibiting the highest propensity of the three sectors to adopt profit sharing. It is true that the largest number of union workers (as opposed to contracts) with profit sharing is in the foreign trade sector, due to two concession contracts negotiated in 1982 at General Motors and Ford. But profit sharing has not spread widely to other unionized firms in that sector.

v. Conclusions on Concessions and Severity.

Available data suggest that the deregulation - foreign trade explanation for concessions is at best half right (on the deregulation side) and incomplete. Unions in the deregulated sector (chiefly in airlines) made the most far-reaching concessions according to the various indicators reviewed above. In contrast, unions in the foreign trade sector had a lower propensity to make concessions and made the least severe concessions of the three sectors considered. And, finally, many concessions occurred in industries outside the deregulation and foreign trade sectors, such as construction and retail foodstores.

III. The Erosion of Union Representation.

During the 1980s, the number of union-represented workers declined substantially. In the private, major union sector, union employment declined by 2.4 million from 1979 to 1985, according to the U.S. Bureau of Labor Statistics._16_/ Yet, for the economy as a whole, employment of production and nonsupervisory workers rose by over 5 million during the same period. Thus, unionization of the workforce was eroding in both a relative and absolute sense.

As in the case of wage concessions, an obvious -- but superficial -- explanation of the erosion of unionization is that deregulation and foreign trade adversely affected employment in those industries in which unionized workers were most numerous. But again, a straight-forward sectoral story is not supported by the empirical evidence. If unions had simply retained the proportion of production and nonsupervisory workers they represented in 1979 on a detailed industry basis, during the period of erosion (1979-85) they would have lost only about one sixth of the 2.4 million workers who actually disappeared from coverage by major union agreements._17_/ Employment shifts in particular industries do not come close to explaining the union erosion phenomenon.

Table 1 shows the rate of erosion by sector. The erosion rate reported is the proportion of UNEXPLAINED loss of union representation as a percentage of 1979 union employment. For all sectors, the erosion rate during 1979-85 was a little over one fifth. It was least severe in the deregulated sector and most severe in the "other" sector, with the foreign trade industries exhibiting an average rate of erosion.

Erosion occurs when either (a) nonunion firms take a growing share of the product market or (b) previously unionized firms open nonunion facilities, convert to nonunion status, or subcontract work to nonunion enterprises. It is easy to cite anecdotal examples of both types of erosion._18_/ But the critical factor in both cases is a competitive edge accruing to, or at least perceived to accrue to, nonunion firms and facilities.

Many studies indicate that the union wage premium rose during the general inflation which afflicted the U.S. economy from the late 1960s until the early 1980s._19_/ Precise explanations for this tendency vary. COLA clauses (which are rare among nonunion employers) geared union wage increases to increases in the Consumer Price Index during a period when for a variety of of reasons the index overstated both actual inflation and the nominal increase of employer "ability to pay."_20_/ Also, a slowdown in the rate of U.S. productivity growth invalidated the assumption of a 3% annual improvement factor in real wages that had characterized union bargaining for many years. Whatever its cause, the widening union/nonunion wage premium created an incentive to substitute nonunion for union workers.

But the wage story of concessions is more complex than a simple widening of the union/nonunion pay premium. Although it is not possible to be precise, it appears that union wages for private sector production and nonsupervisory workers rose at about 8% per annum during the 1970s, and that nonunion wages for that group rose about 7% per year._21_/ Some of this differential -- not all -- is explained by relative slippage of the union wage premium in the mid 1960s, when unanticipated price inflation caught union negotiators by surprise. However, the wage catch up period produced a relative increase in union-related costs, since it was characterized by a wave of strikes and other forms of industrial unrest.

From the employer perspective, then, there was first a marked deterioration in the labor relations climate (compared with the tranquil early 1960s) and later a direct increase in relative union wages. Existing employers, if they could, initiated policies which expanded their nonunion operations relative to their (usually older) union plants. New entrants undertook union avoidance policies.

In the deregulated sector, the nonunion alternative was not readily available until deregulation became effective. The shock of deregulation was obvious and irreversible. Table 1 suggests that unions in that sector recognized the inevitable and made sweeping concessions to preserve jobs. As a result, the erosion rate for union jobs in the deregulated sector is the lowest of the three sectors shown. In airlines in particular, major union employment did not decline during 1979-85, although some erosion was reported due to nonunion employment expansion.

For the foreign trade sector, the shock of dollar appreciation was obvious. But it was not clearly irreversible. Indeed, as the dollar rose, there were steady predictions -- including repeated hints from the President's Council of Economic Advisors -- that it would eventually decline._22_/ Uncertainty over the course of the U.S. dollar, and the tendency of the dollar issue to obscure the domestic union/nonunion wage problem, may have contributed to the relatively low concession propensity and low concession severity in the foreign trade sector. On the other hand, the fact that competitors from abroad were taking market share would have held down the rate of unexplained domestic erosion of union jobs, since the loss of jobs was to foreigners more than to American nonunion sources.

Finally, in the "other" sector, there was no obvious shock to trigger concessions, other than the general economic slump of 1979-82 and its aftermath. Concessions were made, as Table 1 shows. But the potential for erosion was greater than in the foreign trade sector since there were no foreign suppliers to compete with domestic, nonunion sources. Thus, the erosion rate was highest in the "other" sector, with the loss concentrated in construction and retail foodstores.

Table 2 divides industries into those with above-average and below-average concession rates._23_/ The table clearly shows that the distribution of union wage concessions among the deregulated, foreign trade, and "other" sectors is about the same for industries most prone, and least prone, to concessions. Examining industries by concession propensity, therefore, rather than dividing them among the three sectors, is more likely to provide evidence of underlying cause.

It is, unfortunately, not possible to obtain data on union versus nonunion wage adjustments prior to the concession movement for industries with high and low concession propensities. However, Table 2 indicates that the concession prone sector had the larger concentration of union workers and higher rates of unionization. This tendency suggests the possibility that union/nonunion wage differentials were more likely to have risen in the concession prone sector (or have risen more) than in other industries, during the pre-concession period._24_/

Concession prone industries experienced a sharper decline in major union employment during 1979-85 than others (-32% versus -11%). But this employment shrinkage by itself does not explain their greater concession propensity. Table 2 shows that had unions merely hung on to their 1979 unionization rates on a detailed industry basis during 1979-85, union job loss rates would have been about the same in two sectors (-6% versus -4%). The bulk of the difference is in the "unexplained" erosion factor (-26% versus -6%).

The most reasonable interpretation of these data is that industries which were most prone to exhibit high rates of concession behavior in the 1980s were those whose wages had become most out of

Table 2: Characteristics of Industries by Concession Propensity

	Most Concession Prone	Least Concession Prone	All Industries
Distribution of Concession Contracts, 1981-85:			
Deregulated	5%	6%	5%
Foreign trade	36%	40%	37%
Other	59%	55%	58%
Total	100%	100%	100%
Distribution of Union Employment, 1979:			
Workers covered by major union agreements	72%	28%	100%
Major unionization rate_a_/	20%	10%	15%
Percentage Loss of Unionized Workers, 1979-85:			
"Explained" by change in industry employment pattern_b_/	6%	4%	5%
"Unexplained" erosion rate	26%	6%	21%
Total	32%	11%	26%

_a_/ Workers covered by major union agreements as percent of production and nonsupervisory workers.
_b_/ Based on production and nonsupervisory employment.

Note: Details need not sum to totals due to rounding.

line with the nonunion alternative during the 1970s and before. Unions made concessions when faced with heavy job losses. But those losses themselves were largely reflections of prior movements of relative wage levels (and related industrial relations developments). The losses reflected deregulation, foreign trade, and general economic trends to a lesser degree.

IV. Conclusions.

Two lessons emerge from the preceding examination of the union wage concession movement. First, although each industry -- indeed, each company and union -- has a unique tale to tell, it is easy to become lost in details and miss the most general causal factor behind the concessions. That factor is relative labor costs. Deregulation, foreign trade, the economic slump of the early 1980s, and changes in the political and legal climate certainly played a role in the timing of the concessions. But even before the 1980s, union job erosion was in evidence._25_/ At some point, pressures would have developed to stop the widening of the union/nonunion wage gap, even if the special conditions of the 1980s had not arrived when they did.

Second, there are important lessons for unions and firms in the union sector, and especially for unions. Collective bargaining is a complex process. At the time of negotiations, short term interests of both parties focus on avoiding or minimizing short run costs, namely the costs of a strike. It is easy to lose sight of the more fundamental question of what impact a given settlement -- or a string of such settlements -- will have on job security, and, as a result, on the union as an institution.

After World War II, a sharp distinction developed between the appropriate roles for unions and managements. Firms were to worry about such matters as market shares, product development, and investments. The union role was simply to demand improved compensation and conditions, and leave it to management to deal with the resulting costs. But when faced with concessions and declining membership in the 1980s, unions began to take on a more "managerial" perspective with regard to such matters. Despite charges that such an approach is a "sell out" to the rank and file, this shift in emphasis is a healthy sign, and -- in fact -- the only path to union survival as a significant voice at the workplace and in society.

FOOTNOTES

1. The airline wage concessions have become the topic of recent articles. See Cappelli (1985a); Northrup (1983). See also Cappelli (1985b) on tires and meatpacking. For general studies of concession bargaining, see Flanagan (1984); Freedman (1982); Freedman and Fulmer (1982); Gay (1984); Mitchell (1982); Mitchell (1983); Mitchell (1985). Two symposia on concession bargaining appear in Dennis (1983). An early review of concession developments appears in Bureau of National Affairs (1982). The concession movement has provoked opposition in the labor movement. See Slaughter (1983).

2. Airlines were deregulated by the Airline Deregulation Act of 1978, trucking firms by the Motor Carrier Act of 1980, and railroads by the Staggers Rail Act of 1980.

3. Under a consent decree in 1982, settling an antitrust suit against AT&T, the company divested its local operating companies, which remain heavily unionized in their core telephone service. However, they have been able to enter new fields of communications, often using nonunion personnel. Various regulatory relaxations have permitted new entry into the long distance field. While AT&T's long distance service is unionized, most of the new entrants (Western Union is an exception) are nonunion.

4. See Mitchell (1984) for data.

5. For example, the trade-weighted U.S. dollar exchange rate index prepared by the Federal Reserve peaked at 177% of its 1979 value (173% in "real" terms, i.e., adjusted for changes in international consumer prices) during the first quarter of 1985. After the first quarter, the dollar declined rapidly. See U.S. President (1986, p. 373).

6. In 1984 and 1985, the Employment Cost Index for private sector union pay (wages and benefits) rose by 4.3% and 2.6%, respectively. The counterpart figures for the nonunion sector were 5.1% and 4.6%.

7. Data and listings of settlements appear regularly in the DAILY LABOR REPORT. There is no precise and rigorous definition of a wage concession that can be given. However, settlements of zero or less are easy to identify and seem to capture most settlements that can be reasonably termed concessions. Obviously, settlements where the concession element involved nonwage items such as workrules will be omitted from such a classification if wage concessions were not also included. There is also a problem of using the zero or less criterion in a period of varying price inflation. Obviously, a wage freeze during a period when consumer prices (CPI-U) were rising at a rate of 8.9% (as in 1981) meant a larger real wage loss than a freeze during 1985 when the price inflation rate was only 3.8%. Note, however, that the vast bulk of concession settlements in the survey discussed occurred during 1982-85, when the price inflation rate was quite steady, falling in a range of 3.8% to 4.0%, on a December to December basis.

8. Settlements were grouped by industry using the employer and union names as a guide. In some cases, where industry determination could not be made from the information provided in the DAILY LABOR REPORT

listings, the employer was telephoned and asked for industry information. The following sectoral definitions were applied:

The deregulated sector was defined as airlines, trucking and warehousing, railroads, and communications.

The foreign trade sector was defined as metals, motor vehicles (and parts), rubber, machinery (electrical and nonelectrical), aerospace, paper and lumber, textiles, food manufacturing (except meatpacking), instruments, chemicals, furniture, cement, mining, transportation equipment (except motor vehicles and aerospace), brick-stone-clay (except cement), glass, leather, petroleum, ordnance, apparel, tobacco, and shipping.

The "other" sector was defined as construction, retail foodstores (including associated wholesale operations), meatpacking, printing and publishing, health care, business services, unions (as employers), entertainment, hotels and restaurants, education, finance-insurance-real estate, retail trade (except foodstores), utilities, and public transit.

Obviously, these definitions cannot be precisely drawn since some settlements cross industry lines and since the influence of forces such as foreign trade can also cross industry designations. However, the results presented below would not be sensitive to reasonable redefinitions.

9. See Bureau of National Affairs (1986), pp. 49-51.

10. Discussion of two-tier pay plans can be found in Jacoby and Mitchell (forthcoming). The data on Table 1 with regard to two-tier plans, fixed bonus plans, and profit sharing plans exclude the construction industry where such plans are not generally feasible due to the casual nature of the worker-employer attachment.

11. This estimate assumes that the fixed bonus plans were not found in the construction industry for reasons cited in footnote 10. See Bureau of National Affairs (1986), p. 20.

12. A worker earning $10 per hour prior to negotiations and receiving three 3% annual bonuses in a 3-year contract will receive the equivalent of $10.30 per hour each year. The same worker receiving three annual 3% wage hikes would receive $10.30 the first year, $10.61 the second year, and $10.93 the third year.

13. See Jacoby and Mitchell (1984).

14. Other arguments have recently been put forward for profit sharing. Weitzman (1984) argues that employers with profit sharing have an incentive to hire more workers and to hold on to them during recessions.

15. Due to budget cuts, strike data from the U.S. Bureau of Labor Statistics are available only for larger disputes covering 1,000 or more workers. The frequency of such strikes was at a post-World War II low for the years 1981-85. See U.S. Bureau of Labor Statistics, "Major Work Stoppages: 1985," press release USDL: 86-74 (February 26, 1986).

16. The data on major union coverage were drawn from Schlein, Brown, and Sleemi (1986) and from Wasilewski (1980).

17. The following industry classifications were used for the calculation: meatpacking, airlines, construction, metals, trucking, transportation equipment, retail and wholesale trade, paper and lumber, machinery, apparel, rubber, maritime, leather, miscellaneous manufacturing, tobacco, transit, food except meatpacking, mining, furniture, instruments, finance-insurance-real estate, communications, services, textiles, railroads, printing and publishing, stone-clay-glass, petroleum, chemicals, and utilities.

18. The entry of the nonunion Michelin firm into the U.S. tire market is an example of type (a) erosion. The conversion of Continental Airlines to effective nonunion status in 1983 after declaration of bankruptcy is an example of type (b).

19. Freeman and Medoff (1984), pp. 52-54; Mitchell (1982, pp. 166-167).

20. The housing component of the index included current mortgage interest rates which were generally rising during the 1970s. In addition, "imported" inflation from oil price hikes tended to reduce the ability to pay of U.S. employers (other than energy producers) rather than increase it.

21. The average rate of wage increase under private, major union contracts during the 1970s was 8.2%. Average hourly earnings rose at a 7.4% annual rate. The union weight in average hourly earnings is not known, but a reasonable estimate of the union payroll as a percentage of the total payroll included in the average hourly earnings estimates would probably fall in the 30% to 50% range. (Recall that average hourly earnings exclude groups of workers with low unionization rates such as supervisors). If the union wage increase is discounted to 8% (since union settlements for smaller units may not have kept pace with those for larger units), the nonunion rate of wage would have been 6.8% to 7.1%, depending on the weights assumed.

22. The Council's discussion focused on the real exchange rate (adjusted for relative international inflation rates) and concluded that the existing dollar exchange rate was not in line with expected price relationships. It did not specifically forecast a decline in the dollar but suggested that in the long run the price relationships are the dominant forces in determining exchange rates. See U.S. President (1983, p. 62; 1984, p. 51; 1985, p. 104).

23. The simple average of industry concession rates for the period 1981-85 was about 14%. Industries with concession rates above 14% were designated as most concession prone on Table 2, and others as least concession prone. The industries used were those listed in footnote 8. In addition, two industries -- transportation services and pipelines -- which were not used for the sectoral classifications, but which appear in some tables in the DAILY LABOR REPORT, were placed in the least concession prone group.

24. Unfortunately, there are no detailed time series for union wage rates by industry. It is well known that in the pre-concession

period, the overall union/nonunion wage differential was rising. This tendency can also be confirmed within such broad classifications as manufacturing and construction. Presumably, unions are stronger in industries in which they represent a higher fraction of the workforce. There is a correlation between the proportion of the workforce organized and the rate of average (union plus nonunion) wage increase across industries. For example, if the industries listed in footnote 17 are ranked by unionization rates (of the type shown on Table 2), those with above average unionization exhibited a simple average rate of increase of compensation per full-time equivalent employee of 8.2% per annum during 1965-80. Those with below-average unionization (including transportation services and pipelines, for which unionization data were not available) exhibited a 7.2% increase. However, it is impossible from these data to separate out the impact of higher unionization on the rate of union wage increase from the impact of the higher weight union wages have in average wage increases in highly unionized industries.

25. See Mitchell (1981, pp. 15-19).

REFERENCES

Bureau of National Affairs, Inc., LABOR RELATIONS IN AN ECONOMIC RECESSION: JOB LOSSES AND CONCESSION BARGAINING, special report supplement to the DAILY LABOR REPORT of July 16, 1982 (Washington: BNA, 1982).

Bureau of National Affairs, Inc., 1986 BRIEFING SESSIONS ON EMPLOYEE RELATIONS: WORKBOOK (Washington: BNA, 1986).

Cappelli, Peter, "Competitive Pressures and Labor Relations in the Airline Industry," INDUSTRIAL RELATIONS, vol.24, Fall 1985a, pp. 316-338.

Cappelli, Peter, "Plant-Level Concession Bargaining," INDUSTRIAL AND LABOR RELATIONS REVIEW, vol. 39, October 1985, pp. 90-104.

Dennis, Barbara D., ed., PROCEEDINGS OF THE THIRTY-FIFTH ANNUAL MEETING, Industrial Relations Research Association, December 28-30, 1982 (Madison, Wic.: IRRA, 1983).

Flanagan, Robert J., "Wage Concessions and Long-Term Union Wage Flexibility," BROOKINGS PAPERS ON ECONOMIC ACTIVITY (1:1984), pp. 183-216.

Freedman, Audrey, "A Fundamental Change in Wage Bargaining," CHALLENGE, vol. 25 (July/August 1982), pp. 14-17.

Freedman, Audrey, and Fulmer, William E., "Last Rites for Pattern Bargaining," HARVARD BUSINESS REVIEW, vol. 60 (March/April 1982), pp. 30-48.

Freeman, Richard B., and Medoff, James L., WHAT DO UNIONS DO? (New York: Basic Books, 1984).

Gay, Robert S., "Union Contract Concessions and Their Implications for Union Wage Determination," working paper series, Board of Governors of the Federal Reserve System, August 1984.

Jacoby, Sanford M., and Mitchell, Daniel J.B., "Employer Preferences for Long-Term Contracts," JOURNAL OF LABOR RESEARCH, vol. 5 (Summer 1984), pp. 215-228.

Jacoby, Sanford M., and Mitchell, Daniel J.B., "Management Attitudes Toward Two-Tier Pay Plans: An Analysis," JOURNAL OF LABOR RESEARCH, forthcoming.

Mitchell, Daniel J.B., "Collective Bargaining and the Economy" in Stieber, Jack, McKersie, Robert B., and Mills, D. Quinn, eds., U.S. INDUSTRIAL RELATIONS 1960-1980: A CRITICAL ASSESSMENT (Madison, Wisc.: IRRA, 1981), pp. 1-46.

Mitchell, Daniel J.B., "International Convergence with U.S. Wage Levels," in Barbara D. Dennis, ed., PROCEEDINGS OF THE THIRTY-SIXTH ANNUAL MEETING, Industrial Relations Research Association, December 28-30, 1983 (Madison, Wisc.: IRRA, 1984), pp. 247-255.

Mitchell, Daniel J.B., "The 1982 Union Wage Concessions: A Turning Point for Collective Bargaining?," CALIFORNIA MANAGEMENT REVIEW, vol. 25 (Summer 1983), pp. 78-92.

Mitchell, Daniel J.B., "Recent Union Wage Concessions," BROOKINGS PAPERS ON ECONOMIC ACTIVITY (1:1982), pp. 165-201.

Mitchell, Daniel J.B., "Shifting Norms in Wage Determination," BROOKINGS PAPERS ON ECONOMIC ACTIVITY (2:1985), pp. 575-599.

Northrup, Herbert R., "The New Employee-Relations Climate in Airlines," INDUSTRIAL AND LABOR RELATIONS REVIEW, vol. 36 (January 1983), pp. 167-181.

Schlein, David J., Brown, Phyllis I., and Sleemi, Fehmida, "Collective Bargaining During 1986: Pressures to Curb Costs Remain," MONTHLY LABOR REVIEW, vol. 109 (January 1986), pp. 16-33.

Slaughter, Jane, CONCESSIONS AND HOW TO BEAT THEM (Detroit: Labor Education and Research Project, 1983).

U.S. President, ECONOMIC REPORT OF THE PRESIDENT (Washington: GPO, 1983, 1984, 1985, 1986).

Wasilewski, Edward, "Scheduled Wage Increases and Escalator Provisions in 1980," MONTHLY LABOR REVIEW, vol. 103 (January 1980), pp. 9-13.

Weitzman, Martin L., THE SHARE ECONOMY: CONQUERING STAGFLATION (Cambridge, Mass.: Harvard University Press, 1984).