The ways collective bargaining affects the operation of public schools are identified. Teachers covered by bargaining agreements, compared with teachers not covered, receive higher salaries and teach smaller classes. They also spend slightly less time instructing students but more time preparing for classes. The major difference detected in the study is that educational cost per pupil is 15 percent higher for union than for nonunion districts, while the average student in union districts scores 5 percent higher than students in nonunion districts. Union and nonunion districts also differ significantly in the way students are taught. Union districts make greater use of traditional classroom instruction and less use of specialists, aides, tutors, and independent programmed study. These differences may account for the fact that union districts appear to work best for average students but less well for students well above and well below average. (Author/GJ)
The Effects of Teachers Unions on American Education

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Abstract

The authors identify a number of ways that collective bargaining affects the operation of public schools. Teachers covered by bargaining agreements, compared with teachers not covered, receive higher salaries, teach smaller classes, and spend slightly less time instructing students, but more time preparing for classes. The major difference detected in the study is that the cost per pupil of education is 15 percent higher for union than nonunion districts, while the average student in union districts scores 5 percent higher than students in nonunion districts. Union and nonunion districts also differ significantly in the way students are taught. Union districts make greater use of traditional classroom instruction and less use of specialists, aides, tutors, and independent programmed study. The authors speculate that these differences may account for their finding that union districts appear to work best for average students, and to work less well for students well-above and well-below average.
I. Introduction

One need look no further than the headlines or editorial pages of local newspapers to see concern over what unions are supposedly doing to public education. Aside from obvious concerns over the disruptions caused by teacher strikes, there is growing public concern that teacher unions increase the costs and decrease the quality of education, not only by demanding what many taxpayers believe to be unwarranted salary increases, but also by increasing nonsalary compensation and by diverting the attention of teachers and administrators away from the classroom and into the bargaining room. Indeed, in the relatively short period of time that public-sector bargaining has been recognized as a legal counterpart to private-sector bargaining, teacher unions appear to have made major strides in advancing the interests of their members. At the same time, as reported by the Wall Street Journal, "teachers unions have become crucial forces in deciding how public education should be run in the U.S." (January 6, 1983).

Along with the expansion of their influence into what were once administrative perogatives, however, teachers have raised the ire of the public. For every advocate of teacher collective bargaining, whether it be a teacher union member or a sympathetic parent, there appears to be a staunch opponent of teacher unionism declaring that teachers have abandoned their sense of duty and professionalism and have lost sight of the goals of education. The debate can be wild and furious at times with rhetoric shouted across the chasm separating the opposing views.

However, after more than two decades of experience with unions in public schools, very little is known about their effects, except that they
increase salaries (Baugh and Stone, 1982). McDonnel and Pascal (1979), for example, acknowledge the absence of systematic research on this question, arguing that "What is available is a collection of untested assertions and anecdotal evidence." Cresswell and Spargo (1980) draw similar conclusions in a survey of recent research on public school unions.

In this paper, we want to bring together some of the research we have been conducting as well as research of others to address the basic question: what effect do public school teacher unions have on public education? More specifically, we want to trace the effect of teacher unions to the most important element of education—the student. Research on the influence of teacher collective bargaining in public schools has been primarily anecdotal. Studies of the bargaining process and its effect on the operation of schools typically look at as few as six or seven school districts and rarely more than twelve. The picture that researchers construct of the way teacher unions influence the operation of schools has been sketchy. In reading accounts of how a handful of districts of teachers respond to collective bargaining, one may come across descriptions of behavior that are familiar from personal experience, but one must ask whether such behavior is the rule or the exception.

Our research, conducted over the last 7 years with funding from the National Institute of Education, attempts to provide a more comprehensive assessment of collective bargaining by amassing and analyzing data for a representative sample of elementary and secondary students and teachers. With these data, we can trace the influence of collective bargaining to
its effects on student performance on standardized tests, and to its effects on the cost of providing educational services. While tracing the effects of collective bargaining from the bargaining table into the classroom, we consider the effects of teacher collective bargaining on the mobility of teachers, the allocation of district resources, wage differentials, working conditions, teacher attitudes and job satisfaction, teacher-administrator interactions, administrative discretion, educational policy and practice, the determinants of student achievement, and district operating costs.

There are many aspects of collective bargaining we do not purport to examine. Indeed, we claim only one niche in the literature on teacher unionism: the measurement of the actual effects of collective bargaining on education. We do not ask if public-sector bargaining is consistent with democratic institutions; we simply accept the quite obvious fact that collective bargaining is well established and that it appears to play a significant role in public education. We also do not consider the bargaining process in any detail. We have analyzed the determinants of bargaining outcomes, but only to provide a brief background of the negotiation process and to test if bargaining activity can be considered independently of its effect on the behavior of teachers and administrators. Furthermore, we seek to examine the long-run effects of collective bargaining as an institutional change, not the effects of collective bargaining when negotiations lead to strikes.

This paper will attempt only to report the findings, not describe in any detail the methodologies used to produce the results. Such information can be found in our book Unions and Public Schools, upon which
much of this paper is based. Before discussing the effects of bargaining, a short description of the teacher union movement is provided in Section II. Section III will present a synopsis of the effects of collective bargaining. Section IV will contain a brief summary and conclusion.

II. Teacher Collective Bargaining and Unionism

The establishment of teachers organizations as recognized bargaining units is a relatively recent phenomenon in the history of American education. While public education experienced general enrollment declines during the 1970s, organizations representing public-school teachers experienced phenomenal growth. Spearheading the growth of public-sector bargaining, the two major teacher unions, National Education Association (NEA) and the American Federal of Teachers (AFT), increased their ranks from 770,000 members in 1960 to over 2 million by 1985, representing about 86 percent of the nation's public school teachers.

Four general reasons for the growth of collective bargaining are cited in the literature (Cooper 1982; Goldschmidt 1982). The first is the passage of state laws that protect the rights of teachers to seek bargaining recognition. One of the most important changes in the legal structure to accommodate public-sector bargaining was modification of the doctrine of sovereign immunity. The second reason is concern by teachers for their own economic and professional well-being. In addition to their concern about their economic position, teachers also are concerned about their access to and influence over educational policy and their ability to maintain a sense of professionalism. Declining enrollments, skyrocketing inflation in the 1970s, and general public discontent with public schools
threatened teachers' job security, eroded their purchasing power, and diminished their self-esteem. "Belt-tightening" is a continued phenomenon of the 1980s. The third reason often cited for teacher bargaining is changes in social conditions and workforce demographics. By the mid-1970s, the teaching force was younger, with a greater proportion of males, and with teachers who had grown up during a decade of protest. The increased militancy and the awareness of change provided a fertile ground for the growth of unionism. The fourth reason is related to the labor movement in general. Unionism in the private sector has been declining, partly because industrial work is becoming increasingly capital-intensive. Education, on the other hand, is highly labor-intensive. As teachers became less resistant to the idea of unionizing, the unions were ready to move. Rivalry between the AFT and the NEA increased their militancy and their fervor to organize.

**Legal Structure of Teacher Collective Bargaining**

Legal provisions for the conduct of public-sector collective bargaining have come almost exclusively from state governments. Although Congress has considered possible federal legislation to regulate negotiations of public employees, states have assumed the leadership in this matter. Meaningful legislation giving public employees a voice in determining the conditions of their employment was enacted first in the 1960s. Before that time only two states, New Hampshire and Alaska, had statutes that allowed local governments to negotiate with groups representing public employees. Neither state extended to public employees the same rights granted to private employees, however.
The National Labor Relations Act (NRLA) of 1935, later amended in 1947, requires employers to meet and confer in good faith with respect to wages, hours, and other terms and conditions of employment. New Hampshire's law of 1955 and Alaska's law of 1959 did not require or ensure bargaining; local governments were allowed to negotiate only under specified conditions. Permitting private and public employees to bargain, nonetheless, was a major step in treating private and public employees equally in the bargaining arena. Before this time contracts between school boards and teacher unions were seen as an illegal delegation to school boards of local citizens' sovereign constitutional powers.

Wisconsin was the first state to pass legislation for public employee bargaining that resembled in any way the language found in the NLRA. In 1962 a statute was enacted requiring local governments to bargain in good faith with employee groups. This statute also created administrative machinery to enforce the law. The Wisconsin Public Employee Relations Board was charged with determination of appropriate bargaining units, prevention of prohibited practices, fact-finding, and mediation of disputes.

The enabling legislation passed in Wisconsin marked the beginning of widespread recognition of the rights of public employees to bargain collectively. New York and Michigan passed similar laws within the next five years. By 1974, thirty-seven states had passed some legislation regulating the bargaining of public employees, although statutes varied considerably. Altogether, twenty-seven states provided for exclusive representation of nonsupervisory personnel by an employee group, and mediation or factfinding were mandatory in twenty-three states. Strong
administrative agencies oversaw negotiations of public employees in twenty-one states, while the same number of states prohibited unfair labor practices and provided some means of enforcement. In addition to such provisions, seven states had impasse procedures that allowed teachers' organizations to go on strike or force compulsory binding arbitration. Four years later, an additional seven states had legislation permitting explicit bargaining; seven more states had assigned roles to public-employee-relations boards and permitted strikes by teachers. Thus by 1978, 61 percent of classroom teachers resided in states that permitted formal collective bargaining in education (Ross 1978).

Attitudes and Needs of Teachers

Teachers long have carried the banner of professionalism and have resisted the idea of organizing as a bargaining unit. In the early years of the NEA, members felt that the organization's role should be one of promoting the professional side of teaching. Although NEA members were sensitive to their financial needs, the official posture of NEA was one of debate, not collective action (Cooper 1982:22).

The metamorphosis of teachers from passive professionals to union activists can be understood partially by considering how they see themselves as teachers. A number of studies have been conducted to assess the attitudes of teachers toward their jobs. The picture that emerges shows teachers wanting both respect from the public for their dedication to their profession (Herndon 1976; Strom 1979; Lortie 1977) and the financial rewards they feel should come to skilled professionals (Steele 1976; Donley 1976; McDornell and Pascal 1979).
Teachers' self-concept on both these counts reached a low point during the 1960s. Educators came to realize that they were underpaid and that their lagging prestige as professionals had suffered even more because of their low wages and limited control over conditions of employment. In addition, as school districts became larger and the number of teacher and administrative personnel increased, teachers felt they were left with little control over their teaching activities.

Thus, teachers saw bargaining as a way to increase their professional discretion through rules to insulate them from external control (Kerchner and others 1980). Some of the rules embodied in contracts, however, have produced a somewhat undesirable by-product. Bargaining leads to greater participation by teachers in decision-making in school affairs (Belasco and Alluto 1969). Yet participation may not be all that it would appear. In fact, Belasco and Alluto found that too much participation can lead to dissatisfaction, and Eberts (1982) showed that it takes away from instructional time. Nonetheless, the means to greater autonomy, regardless of the increased participation, appears to be a goal of most bargaining units.

The Labor Movement and the NEA and AFT

Since its inception in the early part of this century, the AFT had tried to bring teachers into the mainstream of organized labor. Unlike their considerably more powerful rival, the NEA, the AFT advocated collective action as the best way to promote the interests of teachers. NEA, on the other hand, preferred what they called a "professional" approach to employee relations, avoiding the strike and supporting devices
such as blacklisting schools that failed to treat teachers properly (Cooper 1982).

Since NEA membership dwarfed AFT membership during the 1950s by thirteen to one, a general union posture of teachers prevailed. In 1961, however, a major victory for the AFT in organizing New York City teachers changed the course of teacher collective bargaining. Donley describes the AFT victory in New York City as "probably the biggest single success in the history of teacher organizing in the United States" (1976:46). Indeed the victory in New York City had a profound effect on NEA's attitude toward collective bargaining. Feeling threatened by the sudden popularity of AFT-style labor relations, NEA officially urged bargaining but tempered its support within the bounds of professionalism.

Today, the AFT once again has taken the lead in labor relations. Sensing the nation's concern about teacher competency, the AFT has softened its strong activist and militant stand on bargaining. Instead of pushing for hard line stands on wage demands and bargaining provisions, the AFT has urged its affiliates to establish higher standards--to police its ranks, hold teachers accountable to union standards, and bargain cooperatively rather than contentiously with management. The NEA has also come out recently for increased teacher accountability and a strengthening of professionalism. It is still too early to see how this new stance will be accepted by the rank and file members, especially the old guard members who have fought to make unions a dominant force in education.
Scope of Bargaining

Teacher contracts have matured very quickly in the two decades of recognized bargaining. From the simple beginnings of negotiating only salary and certain working conditions, the scope of bargaining agreements has expanded into areas that traditionally have been administrative perogatives. Teachers now set educational policy; control, to various degrees, personnel matters, including layoffs and promotions; participate in decisions regarding student assignment; and negotiate teacher/student ratios.

Although most of these provisions address teachers' concerns about working conditions, empirical analysis reveals very little significant relationship between district conditions and the presence of contract provisions. In fact, most studies, including on our work, show that factors exogenous to district decision-making are the best predictors of bargaining outcomes. Our analysis also reveals that gains in contract provisions are not achieved without costs to the unions. In both Michigan and New York, for example, districts that gained reduction-in-force provisions are more likely to lose class-size limitation provisions than are districts that have not recently gained such provisions. Nonetheless, teachers have acquired a number of noncompensation items that have the potential to limit the flexibility of school management and to increase the costs of public education.

III. The Educational Process and Collective Bargaining

Collective bargaining takes place basically at the school district level; the student's education takes place in the classroom. For
collective bargaining to affect student achievement, its effects must enter the classroom. The obvious primary carrier of these effects is the teacher. The educational process is sufficiently complex that concentrating only upon the teacher, or aspects of the interaction between teacher and student, is not sufficient to assess the overall effect of collective bargaining. Hence we posit a simple model of the educational process that identifies five basic groups of determinants of student outcomes: (1) student characteristics, (2) teacher characteristics, (3) time spent by teachers and students performing various tasks, (4) modes of instruction, and (5) administrator characteristics. Figure 1 depicts the paths of influence between major inputs and student achievement.

By affecting a variety of these inputs into the educational process, collective bargaining can influence student achievement through a number of channels. Table 1 provides a more detailed breakdown of the basic ingredients for the educational process and provides some preliminary hypotheses about how these factors may be affected by collective bargaining.

**Student achievement.** It is well documented that the abilities and motivation that students bring to the classroom are important determinants of academic success. Many of these are related to home environment, as measured by childhood experience, parental involvement, economic status, and the importance parents place on education. We assume that collective bargaining has no influence on these factors, although the reverse may be true. There may be some instances in which families who have strong preferences about teacher unionism or who have experience an especially disruptive teacher strike, may send their children to a different district
Figure 1-1. Path Diagram of Factors Determining Student Achievement
Table 1-1
Determinants of Student Achievement and the Hypothesized Effects of Collective Bargaining

<table>
<thead>
<tr>
<th>Determinants of student achievement</th>
<th>Student Characteristics</th>
<th>Time</th>
<th>Mode of Instruction</th>
<th>Teacher Characteristics</th>
<th>Administrative Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Instruction</td>
<td>Individualized</td>
<td>Experience (inside and outside school and district)</td>
<td>Maintenance of order</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>(interaction of time in instruction with characteristics and modes)</td>
<td>21+</td>
<td></td>
<td>Introducing change</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td>14-21</td>
<td></td>
<td>Setting clear objectives</td>
<td></td>
</tr>
<tr>
<td>Childhood experience</td>
<td></td>
<td>7-13</td>
<td></td>
<td>Supporting teachers</td>
<td></td>
</tr>
<tr>
<td>Parental involvement</td>
<td>Preparation</td>
<td>2-6</td>
<td></td>
<td>Providing rewards and incentives</td>
<td></td>
</tr>
<tr>
<td>Exact grade level</td>
<td>Administration</td>
<td>Other</td>
<td></td>
<td>Observing classrooms</td>
<td></td>
</tr>
<tr>
<td>Economic status</td>
<td>Parents</td>
<td></td>
<td></td>
<td>Allocating resources</td>
<td></td>
</tr>
<tr>
<td>Pretest score</td>
<td></td>
<td></td>
<td></td>
<td>Hypothesized constraints on flexibility and on formality of interactions with teachers</td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
<td>Possible &quot;voice&quot; effect</td>
<td></td>
</tr>
<tr>
<td>Attendance</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Effects of collective bargaining</td>
<td>No hypothesized effect</td>
<td>Has been shown to affect all items except degree of participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Has been shown to affect all items</td>
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<td></td>
<td></td>
<td>Now must show the influence on the effectiveness of time</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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or to private schools, but for our interest we consider the composition of the student body attending a particular school district to be unaffected by the level of bargaining activity.

**Teacher characteristics.** Collective bargaining can influence teachers' characteristics in several ways. The first is through mobility. Teachers, either by their own preference or administrative action, may enter or leave a district and, in so doing, change the composition of the teaching staff. A second avenue of influence is through the structure of salary schedules. Since experience and education are given a premium, teachers have some salary incentives to remain with the district and to obtain additional education.

The collective bargaining environment may also influence the attitudes of teachers, especially those attitudes related to working conditions and to their relationship with principals. The formation of certain attitudes may be related to the degree of participation given teachers on policy matters, such as class assignment, student assignment, and curriculum development. Collective bargaining may provide teachers with a greater level of participation but at the same time may cast the administration in an adversarial role.

**Teacher and student time.** The time teachers and students spend on various tasks is an important determinant of student achievement. Collective bargaining may influence the allocation of time by requiring teachers to spend time with union-related business and with coordinating activities.
Methodology

The primary tool of analysis used to examine these relationships is multivariate regression, applied both to cross-sectional and time-series data. The data come from three basic sources. The first is a nationwide sample of 14,000 fourth-graders in 328 elementary schools collected under the Sustaining Effects Study (SES) conducted during the late 1970s under a grant from the Office of Education (now the Department of Education). This dataset is used to look at the effects of collective bargaining on student achievement and district costs. The other two data sets include extensive information about school districts and collective bargaining contracts for every district in Michigan and New York.

Detailed Effects of Collective Bargaining

We maintain that one of the most important, if not the most important, measure of the impact of teacher unions on public education is their effect on student achievement. In pursuing this end, we have considered a host of effects on teachers, administrators, and taxpayers as well as students.Probably the single most important finding of our work is that union schools are more productive than nonunion schools for the average elementary student. For extremely above or below average students, however, nonunion schools are more productive by about the same margin.

The union productivity advantage arises from two major factors. First, union districts rely to a greater degree than nonunion districts on standard classroom instructional techniques, which work best for the majority of students. Significantly below or above average students, however, appear to perform better in nonunion districts, where their
exposure to specialized programs and instructional techniques is significantly greater. This standardization of instructional techniques is similar to union behavior in many private sector industries. A second major source of union advantage is the greater effectiveness of instructional leadership activities by school principals in union districts. In organized districts, for example, instructional leadership by school principals may be much more effective both because specific principal actions are conditioned by teacher opinion and because the effectiveness of particular actions is enhanced by improved communication and coordination.

The higher average productivity of teacher unions is not without cost. We find that organized districts spend on average 12 percent more per pupil than unorganized districts. What accounts for the higher costs in unionized districts and who bears the costs? There are three general classes of effects: compensation effects, productivity effects, and factor-use effects. We have found, for example, that unionization increased salaries of unionized teachers by 7 to 15 percent by the late 1970s, as compared to otherwise similar nonunionized teachers. If teacher unions are similar to other unions, the effect on fringe benefits would be at least as large.

As mentioned earlier, union districts are more productive than nonunion districts, up to 7 percent more productive for the average student, partially due to differences in instructional leadership by principals. With respect to factor-use effects of unionization, we find that class-size restrictions, reduction-in-force limitations, and other contract provisions significantly affect the use of resources in unionized
districts. For example, the teacher-student ratio in unionized districts is significantly higher than in nonunionized districts. This factor-use effect, however, does not appear to exceed the positive productivity effect.

Of the three unionization effects considered, the productivity effects and factor-use effects appear to be roughly offsetting. That is, the slightly higher productivity of unionized districts is roughly the same magnitude as the cost associated with higher teacher-student ratios in unionized districts. Because the productivity and factor-use effects tend to cancel, the union-induced teacher compensation premium dominates the estimated cost differential. This conclusion is further supported by the fact that multiplying the midrange estimate of the union salary premium (17 percent) by the typical ratio of teacher personnel costs to total costs (about .7) yields an estimate of the union cost differential (12 percent) consistent with the midrange of our own estimates (12 percent). Since the union productivity and factor-use differentials are roughly offsetting, the union cost differential primarily represents a transfer of benefits from taxpayers to teachers, with little detrimental change in average student achievement.

On a more speculative note, over a much longer period of time the higher compensation in unionized districts could enable such districts to attract and retain more productive teachers, partially offsetting the union cost differential.

Other union effects were also found. Turning to the issue of teacher attitudes and collective bargaining, we found union teachers to be less concerned about personnel policy than nonunion teachers, but more
concerned about class size. This concern with class size tends to confirm
the large implicit price, or compensating wage differential, found for the
teacher/student ratio. Union teachers also appear to be less satisfied in
general about their workplace than nonunion teachers, although this
dissatisfaction may be an explanation of, rather than a consequence of,
collective bargaining.

For administrators we investigated the separate and interactive
effects of contract provisions in two broad areas of administrative
behavior and discretion—resource allocation and educational policy and
practice. Significantly, we found that contract provisions follow a clear
hierarchy: the presence of particular contract provisions tends to be
clearly ordered within major categories, but the provisions remain
independent between categories. Our evaluations of the effects of
individual provisions indicated that employers and employees tend to
disagree more about responses to external events than about events
associated with the daily routine of the district. We found significant
effects for a number of individual contract provisions on the allocation
of district expenditures across various budget categories, with the total
magnitude of the effects varying from about 0 to 30 percent. As indicated
indicated above, this range is consistent with our estimates of the
effects of collective bargaining on overall costs and teachers' salaries.

For our second broad topic area for administrators, educational policy
and practice, we found significant links between contract provisions and
modes of instruction (the traditional classroom mode, for example, is more
likely to be used in the presence of class-size contract provisions). No
significant differences were found, however, between union and nonunion
teachers in either the desired level, or the actual level, of teacher participation in a wide range of administrative decisions. What we did find was a persistently positive relationship between the desire for participation and actual participation, whether or not the district is organized. Finally, both union and nonunion teachers generally prefer a greater degree of teacher participation in administrative decisions than actually occurs.

IV. Conclusion

Teacher unions have indeed become a crucial force in deciding how public schools are run in the U.S. In brief, unionized teachers receive higher salaries, teacher smaller classes, spend less time in instructing students, and have more time for classroom preparation. The net effect of teacher unions on these important factors in the educational process is to make unionized districts slightly more effective than nonunionized districts in educating the average student. The higher costs associated with union districts, particularly in the form of higher teacher salaries and benefits, far exceeds the productivity advantage, however.

Admittedly, we have taken a somewhat simplistic view of the educational process and have glossed over many interesting and important aspects of the bargaining process. Although one can undoubtedly find anecdotal evidence to contradict our results reported here, we believe that what we have presented reflect long-run adjustments by teachers, administrators, and taxpayers to the bargaining environment. Unlike strikes or contract negotiations, these adjustments generally do not make headlines, but they do make lasting changes in American education.
References


