Labor Costs in Urban Mass Transit: A Case for Regulatory Reform

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ABSTRACT

When U.S. airlines, railroads, and motor carriers were deregulated, the incentives for organized labor in collective bargaining changed, causing more active participation in the containment of labor costs. Industrywide improvements in labor utilization and productivity resulted and much of the subsequent savings passed directly to the consumer. In the transit industry, regulatory reform has been largely overlooked as a mechanism to facilitate progress in collective bargaining. However, a unique sequence of events in Chicago--the growth of private transit--provides a clear demonstration of the potential of the private sector in an environment free from regulatory entry barriers. State and local regulatory bodies have not enforced applicable transit regulation and have permitted the private entrepreneurs to enter into direct competition with public transit operators. The implications of regulatory reform for organized labor in the transit industry are explored, focusing on the situation in Chicago. A case study example is provided of how the removal of regulatory entry barriers can alter the incentives of the public transit operator's labor force. The impact of the new low-cost services on the elasticity of demand and ridership levels of the city's public transit services is measured, and how these changes might affect the position of the labor force at the bargaining table is debated. The findings have important implications for assessing the potential benefits of regulatory reform in the urban transit industry.

The deregulation of U.S. airlines, railroads, and motor carriers has radically altered the course of collective bargaining in intercity transportation. Organized labor is participating more actively in the containment of operating costs, industrywide improvements in labor utilization are being made, and unions are relying less heavily on the strike-threat system to help settle contract disputes.

In the transit industry, regulatory reform has received little consideration as a mechanism to facilitate progress in collective bargaining. Research in this area has not adequately addressed the implications of regulation on the incentives of management and organized labor at the bargaining table. Many studies enthusiastically call for "innovation" or "cooperation" between labor and management in containing labor costs but few consider the potential contributions of an open, deregulated environment in achieving these objectives.

The implications of regulatory reform for collective bargaining in the transit industry are explored. Previous research that provides an effective outline of transit deregulation (1,2) is expanded by considering the issue from a more quantitative perspective. This analytical approach incorporates important economic variables that other studies, because of their qualitative orientation, have been unable to consider.

The organization of the paper is as follows. First, an overview of labor costs in the transportation industry is presented to provide the reader with an appreciation of the problem of rising labor costs under regulation. Evidence is cited to show how deregulation is fostering improvement in per-unit labor costs in air, rail, and motor carrier transportation. In the second section the issue of whether similar benefits could be realized through deregulation of the transit industry is explored. A case study of the emergence of low-cost private transit operators in the Chicago metropolitan area is presented to illustrate the extent to which the removal of regulatory entry barriers can alter the incentives of the public transit operator's labor force. By measuring the impact of the new entrants on the elasticity of demand and ridership levels of the Regional Transportation Authority (RTA), the city's public operator, an analysis is made of how these changes might facilitate progress in future transit collective bargaining.

OVERVIEW OF LABOR COSTS

Efforts to contain labor costs in the regulated transit industry have met with limited success. Despite continual attempts by public agencies to step up labor negotiations and rectify the adverse relationship between labor and management, labor costs continue to rise. The wages of municipal transit workers rose by 70 percent between 1950 and 1978, after adjustment for inflation (3), and many of the most extreme examples of featherbedding, which have long disappeared from other sectors of the transportation industry, remain intact in the U.S. transit industry. The dramatic rise in labor costs in proportion to other factor costs is shown in Figure 1. Wages, benefits, and salaries account for 50 percent of constant-dollar cost escalation in the industry since 1964, and they have risen 30 percent faster than the consumer price index (CPI) in the past 20 years (4).

Since 1973, labor costs have risen at almost twice the rate of transit supplies and materials, and public workers now earn over 30 percent more than their private-sector counterparts (4). Much of this increase is attributable to the steady decline in worker productivity that has occurred despite the introduction of labor-saving technology (5).

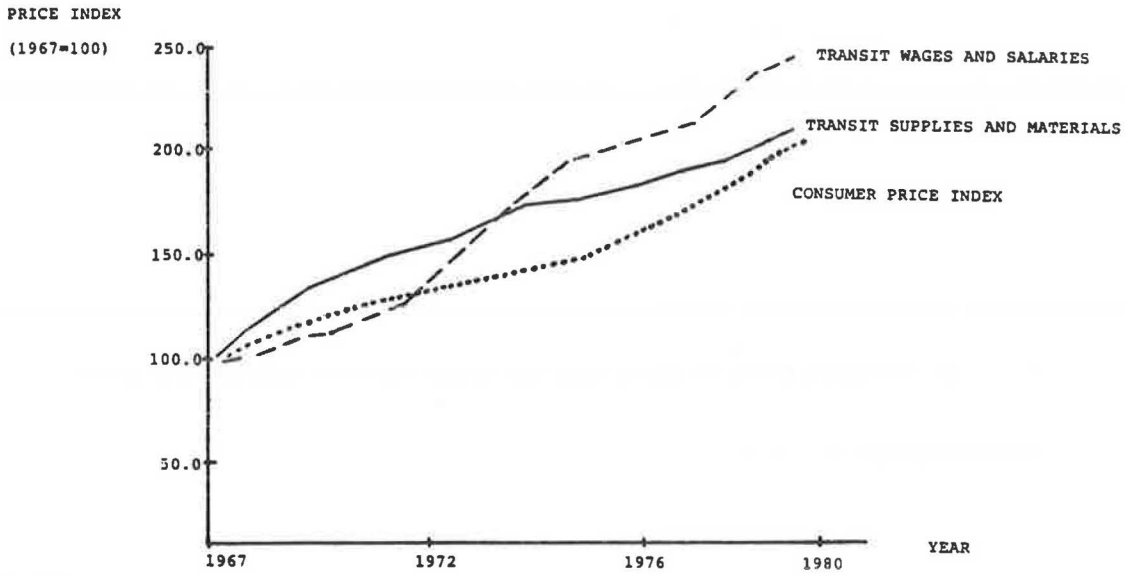


FIGURE 1 Trends in public transit costs *(4)*.

To blame rising transit labor costs on the intentions of organized labor is to miss the central question (6). Why are labor's demands satisfied so much more in the transit industry than in other industries? As suggested in the following sections, the experience of related industries indicates that the incentives and constraints of regulation are an important part of the answer.

The Airline Industry

Consider briefly the effects of regulatory reform on labor costs in domestic air travel. Between 1955 and 1975, labor costs in the airline industry rose in manner similar to that in the transit industry, with employee compensation rising from 138 percent to 161 percent of the average for American industrial firms. Salaries of in-flight personnel, such as pilots, mechanics, and flight attendants, rose at an even faster rate for most firms (4).

The Airline Deregulation Act of 1978 has brought a steady reversal of this trend. In the 5 years following its enactment, the competitive environment led to a decline in labor compensation rates for the industry from 161 percent of the all-industry average in 1978 to 158 percent in 1982 (4). These reductions have come in the form of salary "givebacks," work rule changes, and more efficient labor utilization procedures. Eight of the 11 largest airlines have successfully negotiated dual wage scales for in-flight personnel that allow compensation rates for new hires to more closely reflect their free-market value (7). Similar arrangements are rapidly being negotiated for pilots and mechanics of even the most profitable carriers.

Roland Wilder, Airline Officer of the Teamsters Union, summarized the impact of the Airline Deregulation Act on organized labor: "Economic pressures forced the unions to shift their principal focus to job security and retention. At the same time, airlines became far more conscious of controlling their labor costs as a means of countering the inroads of new, low-cost airlines." As long as a new entrant can "pressure existing carriers into reducing their own labor costs to be competitive, unions will continue to hear management requests for cost reductions" (7).

The Motor Carrier Industry

Deregulation has had similar effects on the unionized labor sector of the motor carrier industry. In an Iowa State University study of regulatory effects in the industry (8), it is concluded that regulation encouraged motor carriers to operate with less-than-optimal cost structures, route structures, and labor agreements. Within the 3 years following passage of the Motor Carrier Act of 1980, competitive pressure led to a decline in motor carrier industry wages from 119 to 114 percent of industry averages, and four of the five largest firms have negotiated work rule changes to substantially improve worker productivity (4). The influential Teamsters Union agreed to allow over-the-road drivers to make local deliveries, which significantly improved labor utilization on smaller shipments. Other studies provide similar findings and suggest that because of the rapid expansion of the nonunionized sector of the industry, the foregoing estimates probably understate the actual impact of deregulation on unit labor costs (9).

The Railroad Industry

Railroads and transit operators have historically been governed by similar work rules and operating procedures and often by the same labor organizations. The protection of the Railroad Labor Act of 1928 has led to compensation rates among the highest in all of industry. Railroad employees earned 20 percent more than their counterparts in comparable industries in 1955 and 61 percent more in 1980 (4). Other surveys report even greater wage and salary increases (3).

The effects of the Staggers Railroad Act in 1980 illustrate vividly the potential benefits of regulatory reform on collective bargaining. The liberalized branch-line procedures under the act, for example, provide organized labor with greater incentive to allow less restrictive operating procedures on marginal routes. This act enabled Consolidated Rail Corporation (Conrail), Milwaukee Road, and Chicago and Northwestern to negotiate union provisions to reduce labor costs on branch lines by using smaller crews and less rigid scheduling rules (10). Railroads are also reducing labor costs by negotiating

productivity improvements and wage givebacks. The Illinois Central Gulf, Delaware and Hudson, Conrail, and Milwaukee Road have secured provisions that are expected to save millions annually through reduced crew requirements on express freight services. Several major western railroads have negotiated special crew arrangements for intramodal services. U.S. Class I railroads have reduced labor expenses per employee from 161 percent of the industry average in 1980 to 159 percent in 1982 (4), and these arrangements have led some observers to anticipate a drop to less than 145 percent by 1986 (10).

The dramatic progress in collective bargaining that deregulation has sparked in the 10 largest U.S. air, motor carrier, and rail operators is summarized in Table 1 (4,10,11; miscellaneous annual reports of airline, motor carrier, and railroad operations,

TABLE 1 Trends in Transportation Industry Collective Bargaining Since Deregulation *(4,10,11)*

Trend	No. of Firms[a]
Airline Industry	
Reduced salaries and wages for existing employees	4
Reduced salaries and wages for new hires	6
Increased on-duty time for flight attendants	5
Changes in overtime pay provisions	4
Reduced fringe benefits and retirement compensation	4
Railroad Industry	
Elimination of locomotive crew member on certain services	3
Elimination of caboose or conductor on certain services	2
Special branch-line labor arrangements	4
Reduced applicability of overtime compensation	3
Elimination of 100-mile day	3
Wage and salary freezes	3
Wage and salary givebacks	2
Motor Carrier Industry	
Increased flexibility in scheduling and routings	3
Wage and salary freezes	2
Reduced fringe benefits	4
Provisions for increased worker productivity through elimination of certain work rules	3
Lower salaries to new hires	2

Note: Data also from miscellaneous annual reports of airline, motor carrier, and railroad operations, 1980-1983.

[a]Ten largest firms in each sector.

1980-1983). Regulatory reform has affected the three modes in vastly different ways, but the result has been a reduction in labor costs to a level more closely paralleling those in other industries. The success in these industries highlights the need to consider regulatory reform for the transit industry. The following section, by focusing on the elimination of regulatory entry barriers in Chicago's transit system, provides insight into this important issue.

A CASE STUDY OF CHICAGO'S EMERGING PRIVATE TRANSIT OPERATORS

The effects of Chicago's new transit entrants on the incentives of the public transit operators' labor force are evaluated in this section. A graphical model is constructed to illustrate the shift in demand brought about by these new private operators and how this shift affects the consequences of various labor union positions at the bargaining table. Hypothetical bargaining scenarios are considered to show how this competitive environment might alter the course of future labor negotiations.

Chicago's private transit operators initiated service following a government-mandated fare increase of nearly 100 percent on publicly operated RTA rail services in 1981. Many questioned the need for such a dramatic fare increase, but few anticipated the rapid shift in market share that was to follow. Within weeks a fleet of more than 100 privately operated buses--nicknamed "subscription buses"--was in service to more than two dozen suburban communities. The private buses currently handle more than 5,000 passengers daily, mostly from lower-income groups, and have captured a market share of 30 percent or more from many suburbs (12). Able to provide service for as little as 4.3 cents per passenger mile--a full 7.3 cents below comparable RTA rail costs--the buses save many consumers more than $100 per month in transit expenses.

The great dependence of lower-income groups immediately led to a favorable public opinion of the private services and placed substantial pressure on regulatory bodies not to enforce applicable regulation under the Illinois Public Utilities Act. Many operators claim that compliance with such regulation would force discontinuance of the services and create financial hardship for those unable to afford RTA services.

The service hardest hit by these private operators is the Illinois Central Gulf (ICG) electrified commuter line operated by the RTA. The ICG corridor, linking the central business district with the city's southern suburbs, is the principal focus of this case study because it has experienced more than 60 percent of the total ridership loss.

As the marketplace became more competitive, demand shifted to the less expensive form of transit and has placed strong pressure on the RTA to better control wage and salary expense. In addition, because government subsidies do not fully cover public transit expenses, the RTA is forced to consider productivity improvements as a cost-cutting measure. The significance of each of these four factors in collective bargaining (demand shifts, labor costs, subsidization, and productivity improvements) is discussed in detail in the following sections.

Shifts in Demand

By providing consumers with a low-cost transit alternative, the emergence of privately operated bus services has increased the elasticity of demand for public transit services. The magnitude of the demand changes is difficult to measure, but a general estimate can be made by evaluating how marginal changes in RTA fares have affected its market share. (Analysis of the shift in demand for the public transit operator is conducted under the assumption that the only change occurring, and being evaluated, is the introduction of private-sector transit service.)

The RTA's average fare in the ICG corridor in December 1979, for example, was $1.17 (measured in constant 1982 dollars). At this fare, there was no ridership on private buses. When the average fare was increased to $1.41 in February 1981, private entrepreneurs entered the market and captured a market share of 400,000 passengers per year. The dramatic fare increase in July 1981 brought the average fare to $2.30, and 1,400,000 passengers rode the private buses. Inflation brought down the real cost of RTA fares in October 1983 and January 1984 to $2.15 and $2.08, respectively. The result was a successive decline in subscription bus ridership

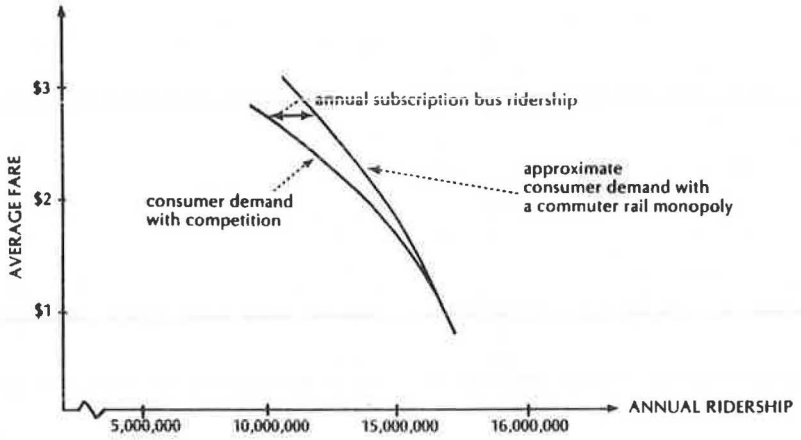


FIGURE 2 Effects of competition on the demand for ICG commuter rail service.

(11). By using these estimates and a simple regression analysis technique, a demand curve for RTA rail service can be constructed and the shift in demand brought about by low-cost private competitors estimated.

In Figure 2, the horizontal distance between the two curves can be interpreted as the annual ridership on subscription buses at a given price level. In the fall of 1982, for example, the average rail fare was $2.20, resulting in the use of private bus services in the corridor (45 buses in each direction daily) by about 1 million passengers.

The new curve has a more elastic slope; competition has magnified the consequences of fare increases on ridership. Because the slope of this curve determines the ability of the RTA to pass cost increases on to the consumer, it will be shown to greatly affect the incentives of the operator to contain costs.

Rising Labor Costs

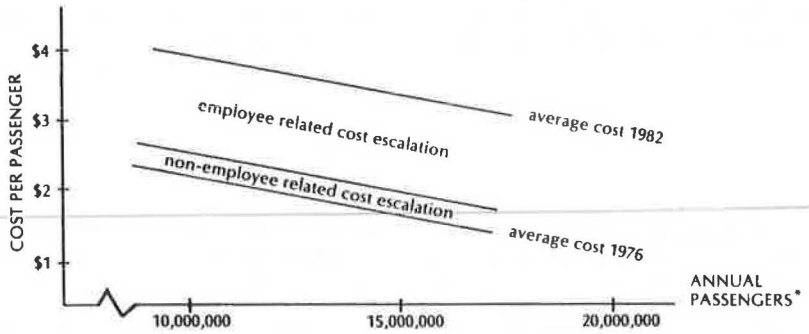
Since 1981, more than 66 percent of the ICG corridor's real escalation in cost has come in the form of labor expense. A survey of the expense account reported in the R-1 Report to the Interstate Commerce Commission (13) reveals that nearly 70 percent of the constant-dollar cost escalation is due to increased staff size, salaries, wages, benefits, and other employee-related costs. Some of the most significant cost increases in recent years, for example, have been incurred in the following areas:

1. Train crews,
2. Switch crews,
3. Engine crews,
4. Clerical and accounting,
5. Train operations administration,
6. Operations control,
7. Car maintenance administration, and
8. Fringe benefits.

Only about 30 percent of the real cost increases can be attributed to increased material and capital expenses (electric power, supplies, right-of-way maintenance, etc.).

The effects of this rapid rise in labor costs on the RTA's ability to provide cost-effective service can be best shown graphically. By using a cost model developed by Simpson and Curtin (11) for the RTA system and official cost data published in the R-1 Report, an approximation of the slope of the carrier's long-run average cost curve can be calculated to illustrate the effects of rising labor expense. [A more detailed description of the estimation process is presented elsewhere (11).]

Figure 3 shows how rising labor costs (in constant 1982 dollars) have shifted the carrier's average cost curve between 1976 and 1982 (11). This shift is divided into two components, employee-related cost escalation and non-employee-related cost escalation, which make up the supply curve of the public transit operator. This curve plays an important role in this analysis by indicating the level of service that the transit operator can provide with a given operating budget. If, for example, rising labor costs lead to a situation in which total costs exceed total revenues, the curve shows the amount of service that must be eliminated to rectify this shortfall.



*Based on level of service ICG must provide to retain its current system load factor; 1,000,000 passengers represent approximately 700, 000 annual train miles of service.

FIGURE 3 Cost escalation in the ICG Corridor *(11)*.

Subsidization Arrangements

A third factor that must be considered is subsidization. The degree to which this shift in demand affects the incentive structure for public transit employees depends on how the government's position toward increased subsidies is perceived. If, for example, it is believed that public institutions will systematically bail public transit out of financial hardship with larger subsidies, the presence of private competition obviously will not provide much incentive for cost containment. On the other hand, if it is perceived that the public sector is unwilling to increase subsidies, competition from the private sector will serve as a stimulus for reform in collective bargaining. In the latter case, cost escalation necessitates fare increases, service cutbacks, furloughs, reduced hiring, and other actions contrary to the interests of labor.

The following four scenarios depict likely real-world subsidization arrangements:

- Scenario 1: The public sector will effectively bail out the operator by financing 80 percent of the real cost increase. The remaining 20 percent will be financed through higher fares and service cutbacks.
- Scenario 2: The public sector will be willing to increase subsidies at 50 percent of the rate at which costs escalate. The remaining 50 percent must be financed through higher fares and service cutbacks.
- Scenario 3: The public sector will be unwilling to increase subsidies because of cost escalation.
- Scenario 4: The public sector will subsidize the operator only to the extent that the operator covers at least 60 percent of its costs. Deficits above this amount must be financed through higher fares and service cutbacks.

There is a whole assortment of other conceivable deficit-reimbursement scenarios, but these four are sufficient for illustrative purposes. On the basis of these scenarios, the average cost curve shown in Figure 3, and the demand information shown in Figure 2, the following discussion illustrates how the removal of regulatory entry barriers is likely to alter the collective bargaining process.

Consider a case in which organized labor seeks a 15 percent across-the-board increase in wages through collective bargaining. This shifts the average cost of transit upward and increases the discrepancy between the amount consumers are willing to pay (shown in the demand curve) and the cost of providing service (shown in the average cost curve). The situation (simplified for illustrative purposes) is graphically shown in Figure 4. How must the RTA respond to this upward shift in cost to remain financially viable? This depends on which deficit-reimbursement scenario is considered.

Consider Scenario 2, a situation in which the public sector is willing to increase subsidies at only half the rate of the cost escalation (roughly $2 million per year). The remaining half would necessarily be financed through fare increases and service cutbacks. Assume that the RTA selects a combination of fare increases and service cutbacks that keeps load factors roughly the same (i.e., it will not select an alternative that leads to more or less crowding on its trains).

If the RTA is protected from competition through regulation, the supply and demand information shown in Figure 4 indicates that the authority could cover costs by raising the average fare $0.36 to $2.46 and reducing service by roughly 40,000 train miles per year. This would result in the elimination of approximately four trains daily and the furlough of roughly 24 employees (11). With a total work force of 700, it is not difficult to see that such a small cutback would probably not induce organized labor to reconsider its request for a wage increase. The benefits of a 15 percent wage increase to the labor force appear to far outweigh the loss in job security.

It might be argued that the foregoing estimates overstate the need for service cuts because the public transit operator could choose simply to raise fares more dramatically rather than reduce service. This is plausible, but it overlooks the fact that price increases greatly supress ridership and quickly render major fare increases an unattractive alternative; with high elasticities of demand, service cuts are an essential component of any deficit-reduction plan.

In an environment free from regulatory entry barriers and open to private transit operators, the consequences of a wage increase are much more dramatic. Under the same deficit-reimbursement scenario, a 15 percent increase in wages (because of the higher elasticity of demand) requires the curtailment of 110,000 train miles of service per year (roughly 10 trains) and raising fares from an average of $2.10 to $2.45 per passenger. This would result in a ridership loss of approximately 1.6

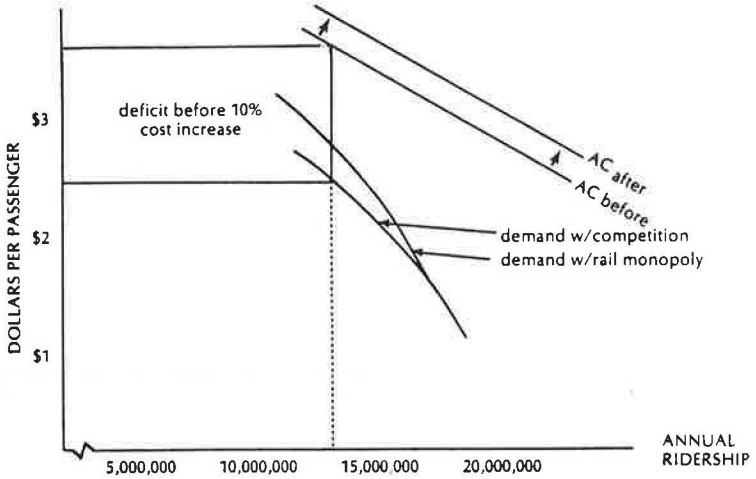


FIGURE 4 Effects of 15 percent increase in union wages *(11)*.

million passengers per year and the furlough of 60 employees, 2.5 times as many as if regulation inhibited private operators from serving the market. With a reduced ability for management to raise fares to cover the cost increase, it is easily seen how the removal of entry barriers might influence the behavior of organized labor at the bargaining table.

The results are much the same under each of the four hypothetical subsidization scenarios (Table 2). Note that even when the public sector is willing to effectively bail out the carrier by financing 80 percent of the increase in cost (Scenario 1), the new entrants will have a measurable effect on the need for employee furloughs. The 15 percent wage increase would require the furlough of 24 employees under competition compared with 12 under a regulated monopoly.

In the most dramatic case--Scenario 4--competition increases sixfold the need for furloughs following the wage hike. Organized labor would have a strong incentive to reconsider its request for the wage increase in such a situation. A similar conclusion can be drawn in Scenario 3.

The union, of course, is not likely to have this type of detailed information on the consequences of their wage increase request. There is little question, however, that this threat of job loss will exert a powerful, persuasive pressure for organized labor to moderate their demands at the bargaining table.

Productivity Improvements

The removal of entry barriers for private competitors has created an incentive for public transit unions to agree to eliminate certain work rules that inhibit efficiency. A good example is the issue of split shifts. In Chicago's RTA system, unions have historically opposed efforts to employ labor on split shifts. However, management has sought split shifts to handle the highly peaked demand conditions that occur during the morning and evening rush hours more effectively. These conditions make it possible to schedule many train crews for only one inbound trip (during the morning rush hour) and one outbound trip (during the evening rush hour). Because the total work day often exceeds 8 hr, substantial overtime pay often must be given to these employees even though their total time on board the train may not exceed 2.5 hr per day.

Consider a situation in which management attempts to offset a 5 percent general rise in operating cost by utilizing labor on split shifts. Assume that only those train crews with more than 5 hr idle time at midday are subject to the change (about 30 percent) and that such a measure could reduce the costs of these crews by 25 percent (roughly equal to the amount of overtime pay that they are currently receiving). The public sector is assumed to be willing to finance only half of the increase in deficits through increased subsidies (Scenario 2).

If the public transit operator is protected from competition and there are no provisions to allow split shifts, the supply and demand information presented earlier indicates that the public transit operator would be required to raise fares $0.32 to an average of $2.42 per passenger and reduce 35,000 train miles of service per year to remain operative. If the carrier is able to secure provisions to utilize labor on split shifts, these figures drop to $2.39 and 18,000 train miles per year. In a regulated environment, a split-shift provision would essentially create about 10 jobs by enabling 12,000 train miles of service to remain operative (11). This is not likely to provide a great deal of incentive for a work force of 700 employees to agree to the change. One might expect that, to the union, the costs of split shifts in this situation would outweigh the resulting benefits of increased job security.

When regulatory barriers are removed and private operators are permitted to enter the market, the elasticity of demand and the benefits of split shifts are intensified. Without a split-shift clause, the public carrier would be forced to respond to the same 5 percent general rise in costs by raising fares to $2.40 and reducing 85,000 train miles of service. A split-shift agreement in this situation would reduce the necessary price increase to $0.10 to $2.32 and service curtailments to 31,000 train miles. It would, in essence, create about 30 jobs by preventing the elimination of 54,000 annual train miles of service. The benefits to the work force by allowing split shifts are more than doubled in a marketplace free from regulatory entry barriers. This relationship becomes apparent by inspecting the slope of the supply and demand curves described earlier [a more detailed explanation of the mathematical derivation of the foregoing estimates has been given by Schwieterman (11)]. Again, it is management's inability to pass on cost increases to the consumer that causes this dramatic change.

The important conclusion that can be drawn is that the private sector has created a powerful stimulus for the labor force to cooperate in efforts to revise work rules that hamper productivity in addition to reducing upward wage pressure. Subsidization arrangements, of course, will play an important role in the costs and benefits resisting work-rule reform. The data in Table 3 demonstrate that even under relatively generous subsidization arrangements the presence of the private sector greatly intensifies the consequences of such resistance.

If the public sector is willing to finance as much as 80 percent of the increase in cost, for example, the benefits to the union from split shifts are increased more than 50 percent in a competitive environment. When the public sector is less willing to finance cost escalation, the presence of private-sector operators magnifies the benefits of a split-

TABLE 2 Effects of 15 Percent Real Increase in Wages on Job Security *(11)*

Condition	New Fare ($)	Necessary Service Cutbacks (daily round trips)	Approximate No. of Jobs Lost
Scenario 1			
Monopoly	2.40	1	12
With competition	2.40	2	24
Scenario 2			
Monopoly	2.46	2	24
With competition	2.45	5	60
Scenario 3			
Monopoly	2.45	3	36
With competition	2.50	6	72
Scenario 4			
Monopoly	2.40	1	12
With competition	2.70	7	84

Note: Scenario 1 = the public sector is willing to subsidize 80 percent of the cost increase; Scenario 2 = the public sector is willing to subsidize 50 percent of the cost increase; Scenario 3 = the public sector is unwilling to increase subsidies; Scenario 4 = the public sector requires the RTA to cover 60 percent of its costs.

TABLE 3 Effects of Revision in Work Rules to Allow Split Shifts *(11)*

Condition	Necessary Service Cutbacks (daily round trips)		Approximate No. of Jobs Retained
	Without Provisions for Split Shifts	With Provisions for Split Shifts	
Scenario 1			
Monopoly	1	0	8
With competition	2	1	12
Scenario 2			
Monopoly	2	1	10
With competition	4	2	30
Scenario 3			
Monopoly	3	2	12
With competition	5	2	36
Scenario 4			
Monopoly	2	1	10
With competition	5	2	40

Note: Scenario 1 = the public sector is willing to subsidize 80 percent of the cost increase; Scenario 2 = the public sector is willing to subsidize 50 percent of the cost increase; Scenario 3 = the public is unwilling to increase subsidies; Scenario 4 = the public sector requires the RTA to cover 60 percent of its costs.

shift agreement by as much as 400 percent (Scenario 4). Thus, the benefits of regulatory reform are not likely to be undermined by an overly generous public sector.

CONCLUSION

A case study of Chicago's emerging private-sector public transit operators demonstrates that the elimination of regulatory entry barriers in the transit industry could greatly facilitate progress in the collective bargaining process. Many of the same benefits that deregulation has brought forth in air, rail, and motor carrier collective bargaining might also be realized in a deregulated transit marketplace.

The model used in this analysis, though a simplification of the incentives and constraints of labor negotiations, illustrates the general consequences of deregulation for organized labor at the bargaining table. The failure of labor to participate more actively in efforts to contain spiralling labor costs can seriously reduce job security, even when the public sector fosters such escalation with generous subsidization arrangements.

An important conclusion is that some of the same market forces that have led to beneficial change in other sectors of the deregulated transportation industry also apply to the transit sector. The elimination of regulatory barriers in Chicago's ICG Corridor has exerted a subtle, persuasive pressure on the public transit system's labor force to help contain costs. It encourages the following types of changes:

1. Reductions in on-board crew requirements;
2. Provisions for split shifts;
3. Elimination of the 100-mile work day;
4. Revisions in existing work rules that prohibit train crews from engaging in certain switching and yard work;
5. Restraints on salaries, wages, and benefits in collective bargaining; and
6. General productivity improvement.

Because this paper provides only one case-study example, it cannot be concluded that regulatory reform will foster similar developments in other cities. But the analytical process set forth in this study may serve as a useful guideline for additional research. The model is useful in considering some of the important economic variables that cannot be adequately addressed in a more qualitative approach.

The goal of this paper has been to focus attention on these long-overlooked consequences of regulation in the transit industry; its conclusions are not intended to suggest that regulatory reform will provide a clear-cut solution to the problem of labor cost escalation. Although the factors that affect labor costs are many, complex, and deeply rooted, the elimination of regulatory barriers to entry is likely to provide a step in the right direction.

Unlike other labor cost containment programs, which all too often treat only the symptoms of the problem, increased competition addresses the problem itself by systematically altering the incentives that govern the behavior of management and organized labor in the transit industry. Through the use of proven market mechanisms, it bypasses bureaucratic and political inefficiencies that have inhibited collective bargaining in the past.

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