

**THE IMPACT OF LABOR-MANAGEMENT
RELATIONS ON PRODUCTIVITY
AND EFFICIENCY IN URBAN
MASS TRANSIT**



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16. Abstract This study investigates associations between the labor-management relationship and selected indicators of urban mass transit performance. Four components of performance are analyzed: service efficiency; service effectiveness; employee withdrawal (i.e. turnover, absenteeism and tardiness); and adaptability. Measures of these four dependent variables are related to several controllable aspects of the labor-management relationships: the legal framework that constrains labor-management interaction; labor and management organization; the relationship climate between labor and management (i.e. containment-aggression, accommodation, or cooperation); and the makeup of the collective agreement. The focus of the empirical research is on fixed-route bus systems, and on the bargaining unit that represents the transit operators in those systems. Data was collected from organizational archives, personal interviews, questionnaires, and on-site observations at 28 transit properties. The results provide a number of insights to associations between labor-management relations and transit performance. The legal framework for labor relations had less impact upon transit performance than anticipated. Organizational variables, such as size and operating policies, were found to moderate organization structure relationships. Sweeping generalizations about the impact of work rules on performance were found to be unwarranted. However, it appears that high relative wages and increasingly favorable sick leave policies may be a disincentive for employees to consistently report to work.					
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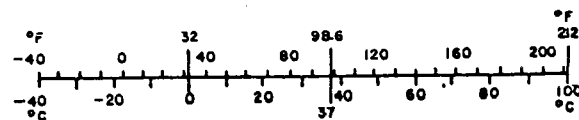
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³
TEMPERATURE (exact)				
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price \$2.25, SD Catalog No. C13.10:286.

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
AREA				
cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
km ²	square kilometers	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.6	acres	
MASS (weight)				
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
VOLUME				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	35	cubic feet	ft ³
m ³	cubic meters	1.3	cubic yards	yd ³
TEMPERATURE (exact)				
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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EXECUTIVE SUMMARY

Productivity and efficiency are issues of concern in the mass transit industry. The need to maintain a fare structure capable of attracting riders in large numbers and to service a diverse ridership requires stable or improving levels of performance. Labor-management relations are central to achieving performance goals because they govern so many decisions which impinge upon transit performance.

This report summarizes the objectives and results of research designed to assess the impacts of labor-management relations on the performance of public mass transit organizations.

PROBLEM STUDIED

The study investigated associations between the labor-management relationship and twelve specific indicators of transit property performance. A systems model relating aspects of the labor-management situation with the performance indicators was used to guide the research. The performance indicators encompassed four basic dimensions of transit performance: service efficiency; service effectiveness; employee withdrawal (i.e. turnover, absenteeism and tardiness); and organizational adaptability. The performance components were related to variables drawn from several controllable aspects of the labor-management relationship: the legal framework; labor and management organization for collective bargaining; the content of the collective agreement; and the labor-management relationship pattern.

The focus of the study was on fixed-route bus systems. The sample for the study was comprised of twenty-eight organizations from the Western United States. The sample was quite diverse with respect to organizational size, organizational form, and bargaining unit structure. Visits were conducted to each of the participating sites. Statistical and qualitative comparisons were made among the participating organizations.

Six different data collection instruments were used in the research. Transit employees, labor leaders, and managers were surveyed through self-administered questionnaires to obtain data on relevant attitudinal, organizational, and performance variables. A structured interview was also

conducted with the labor relations manager at each transit property to obtain information on legal policies and recent labor-management negotiations. Most of the performance and historical data on a property were recorded on an archival checklist. Finally, information on collective bargaining agreements was obtained using a content analysis instrument to score the agreements.

RESULTS ACHIEVED

Summarized below are conclusions drawn from the research results. They are organized around the five components of the systems model used in the study.

Transit Performance Indicators

1. Performance or effectiveness is a multidimensional concept. No single summary measure can serve as "the" criterion of transit organization performance. The four criteria (service efficiency, service effectiveness, employee withdrawal, and adaptability) selected for this study, however, appear to be valid measures of variations in the labor-management situation.

2. Although the three withdrawal variables (i.e., absenteeism, turnover, and tardiness) all represent a withholding by employees of organizational participation, they do not appear simply to be different points on a single continuum. Instead, absenteeism and turnover in transit organizations are inversely related, indicating some form of interdependence between the two behaviors.

3. Data collected for the study included (but were not limited to) operational statistics, budgetary data, scheduling data, employee pay data and attendance records, and demographic data. Although dozens of separate data elements were collected, most were of the type necessary for normal management information or for reporting to state and federal agencies. Thus, we expected that the information would be readily available and highly standardized. As it turned out, this was not the case. Data elements often had different meanings in different organizations. The most surprising discovery was the extent to which information that would presumably be needed for ongoing management was not readily available (e.g.,

absenteeism rates, which would appear to be necessary for establishing employee schedules).

Labor Relations Legal Framework

1. The legal rules governing labor-management relations, though somewhat influential, had less impact upon transit performance than we had anticipated. With a few notable exceptions, management officials who presumably should have been knowledgeable about the legal constraints were not fully cognizant of key provisions in the statutes. This lack of familiarity with the legal framework for labor relations often resulted in significant differences between objective legal constraints and operative constraints. While this variation between the statute and the "rules" at the property appeared to be the result of lack of familiarity with the statutes, these differences had no apparent influence on performance.

2. Any significant adverse impacts of Section 13(c) upon transit performance appear to be more of a potential, rather than a real, problem. No instances were encountered in our sample in which protections guaranteed by a 13(c) agreement were granted an employee because of an adverse impact of federal funding. Considerable uncertainty did exist, however, about the best way to respond to the constraints created by 13(c) and the circumstances which might lead to a 13(c) judgment.

3. The scope of bargaining and the availability of arbitration had no association with the transit performance indicators. Of the different aspects of formal collective bargaining legal policy which we investigated, only bargaining rights variations had some association with transit performance. Even for this variable the associations were limited. Strikes, on the other hand, were associated with the performance indicators, suggesting that actual behavior is more clearly and directly related to performance than formal policy.

Labor and Management Organizational Structure

1. Several characteristics of transit labor organizations are related to the incidence of strikes. These characteristics are: (1) the absence of a functioning intermediate labor organization between the national

and local organizations; (2) low levels of negotiating expertise among labor officials at the local level; and (3) high levels of participation by national and international officials in local bargaining. While national officials most often bring to the local organization skills unavailable at the local level, their presence also has certain liabilities. Foremost among these liabilities is that, because of demands upon their time created by their role in assisting many organizations, national representatives cannot be fully responsive to the unique demands of the local membership or particular problems of local management. National officials must, therefore, react to local issues according to routine response patterns they develop over time. Part of the problem associated with national representatives participating in local negotiations is also the tendency of management to "over react" to their presence.

2. Centralization of decision-making authority in negotiations may be a necessary condition, but it is not a sufficient condition, for achieving preferred organizational outcomes. Centralization of bargaining authority alone produces few net benefits for transit organization performance. The relationship between centralization of management decision-making authority in negotiations and transit performance is probably moderated by the particular policies management pursues in negotiations.

3. External influences in bargaining are probably a normal feature of public transit negotiations, particularly in larger properties. The effects of external influences in bargaining upon transit performance, however, are minimal. A linkage which was suggested by the results is that change, particularly through the bargaining process, is more difficult to achieve when multiple interests become involved in negotiations and the scope of conflict extends beyond the bilateral relationship.

Labor-Management Relationship Patterns

1. Labor leaders and transit managers at each property essentially agreed on their characteristics of the relationship pattern along a conflict-cooperation continuum. Their agreement suggests that the relationship pattern concept is a unitary and stable organizational attribute which can be used to predict organizational outcomes.

2. The linkages between the relationship pattern concept and transit performance were more complex than we had originally anticipated. More cooperative relationship patterns were associated with lower personnel turnover and greater perceived ability of the transit property to adapt to changing conditions. Absenteeism, however, was higher as the relationship pattern became more cooperative. Although a cooperative relationship pattern is usually considered to be the most desirable, these results do not clearly identify an optimal relationship pattern for urban mass transit.

The Collective Agreement

1. Sweeping generalizations about the relationship of work rules to transit performance do not appear to be warranted. Work rule restrictions on scheduling and assignment of runs were associated with more efficient utilization of human resources. In contrast, provisions covering minimum hours guarantees and scheduling of days-off were related to higher unit operating expenses.

2. The amount of absenteeism at a property is a direct function of the number of sick days granted to employees. We expected the tendency of employees to use sick days, merely because they were available, to be diminished in those organizations where the collective agreement contained a "proof of illness" requirement. The results did not support this expectation. We did find that as wage levels improve with respect to an absolute or relative standard of living, employees are less inclined to work the full amount of their scheduled time. Thus, high relative wages can be a disincentive for employees to consistently report to work.

3. Grievance procedures which employees perceive as facilitating communication generally tend to reduce employee withdrawal behaviors. We observed during our site visits, however, that the grievance procedure available in some transit properties is inadequately administered.

4. Clauses in the collective agreement related to contracting out and the obligations of the parties to the public interest and toward improving efficiency were not associated with variations in organizational adaptability. Adaptability was associated with the labor-management relationship pattern and might, therefore, more probably be a function of general attitudes rather than specific policies.

5. If they are to improve performance, changes in transit property policy must produce changes in existing inducements/contributions ratios of individual employees. Negotiated changes in organizational policy must also involve more than merely "buying-out" bad practices if such changes are to improve transit performance. Distributive issues must increasingly be redefined by labor and management as joint problems, where gains are potentially shared by both parties, in order for transit performance to improve.

UTILIZATION OF RESULTS

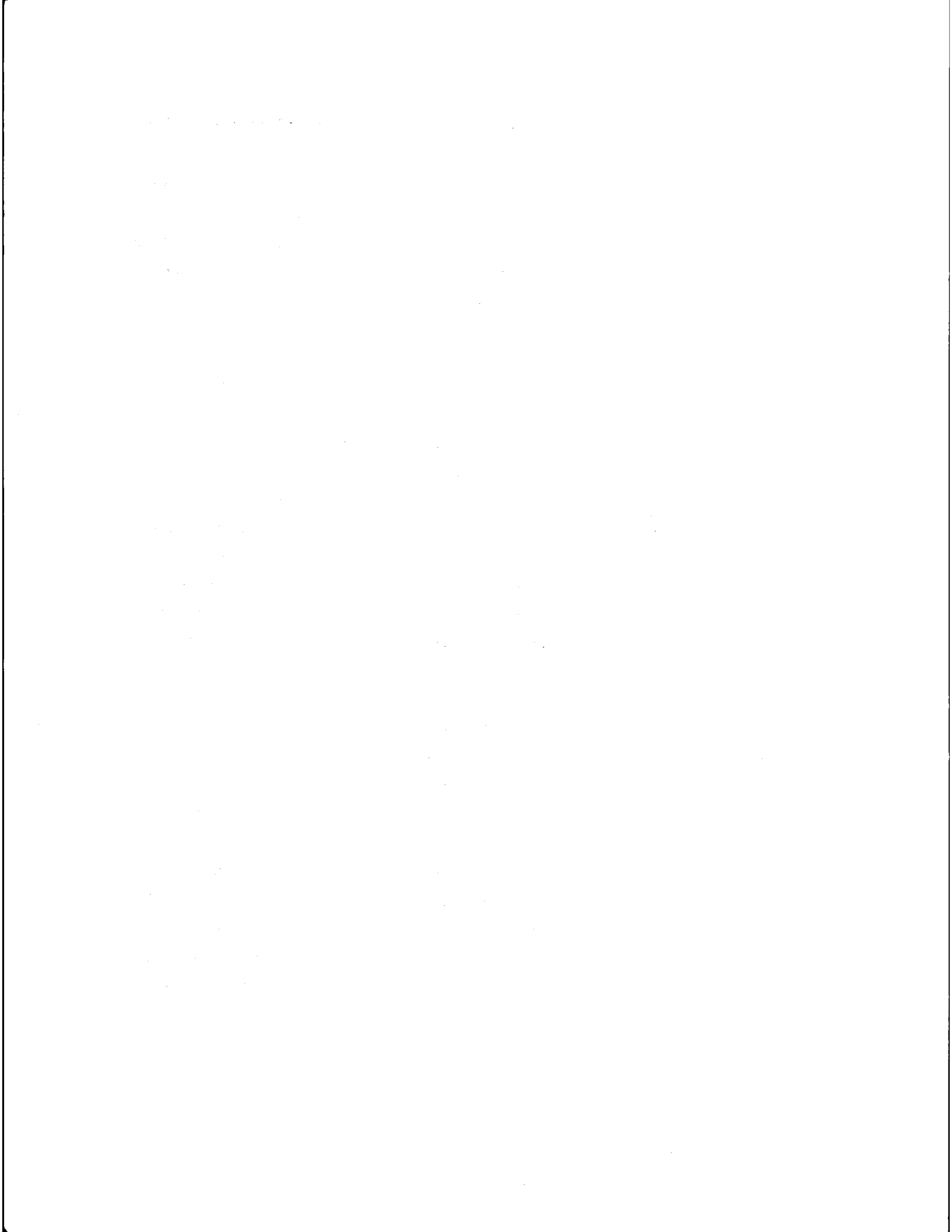
The principal users of this research will be labor-management representatives, transit district governing boards and transit organization managers. In addition, the analysis of legal policy impacts will be of use to state and federal policy makers. The standardized measures of transit performance will also be useful to managers and policy makers.

During the course of the research, specific feedback was provided to each participating transit organization and its labor counterpart, regarding findings relevant to that specific organization. It is expected that this information will help to effect specific changes in these organizations.

CONCLUSION

Transit performance was found to be multidimensional, precluding the development of any simple "figure of merit" by which transit organizations might be compared. The study did identify, however, a variety of relationships between aspects of the labor-management situation and transit property performance. Foremost among these relationships were associations between national union structure and strikes, work rules and labor productivity and operating expenses, sick leave and wage policies and absenteeism, and inducements/contributions ratios and overall performance. Among the changes which might improve the contribution of labor-management relations to transit performance are the

development of larger roles for local labor leaders in national unions, the relaxation of specific scheduling and minimum guarantee work rules, the design of work attendance incentives, and improved administration of grievance procedures.



ACKNOWLEDGMENTS

The research presented in this report began long before our visits to mass transit organizations during the Summer and Fall of 1977. In mid-1976, Jim Perry and his research assistant, Carder Hunt, began exploring the literature on transit labor relations, conceptualizing the research, and seeking financial support for it. Although Carder graduated and joined the ranks of local government practitioners shortly before data collection began, we are indebted to him for his initial creative efforts and the energies he devoted to the development and achievement of our research goals. His contributions were substantial.

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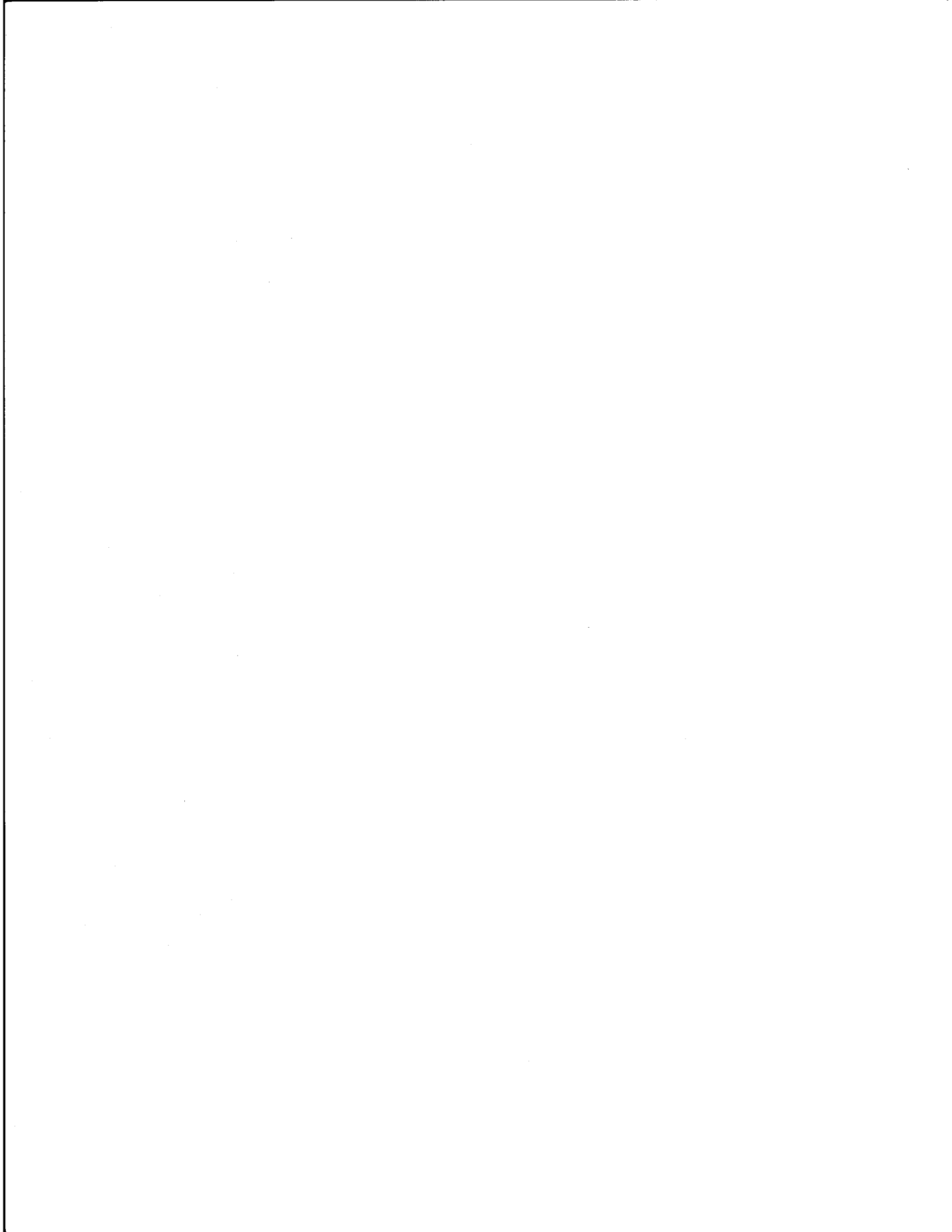
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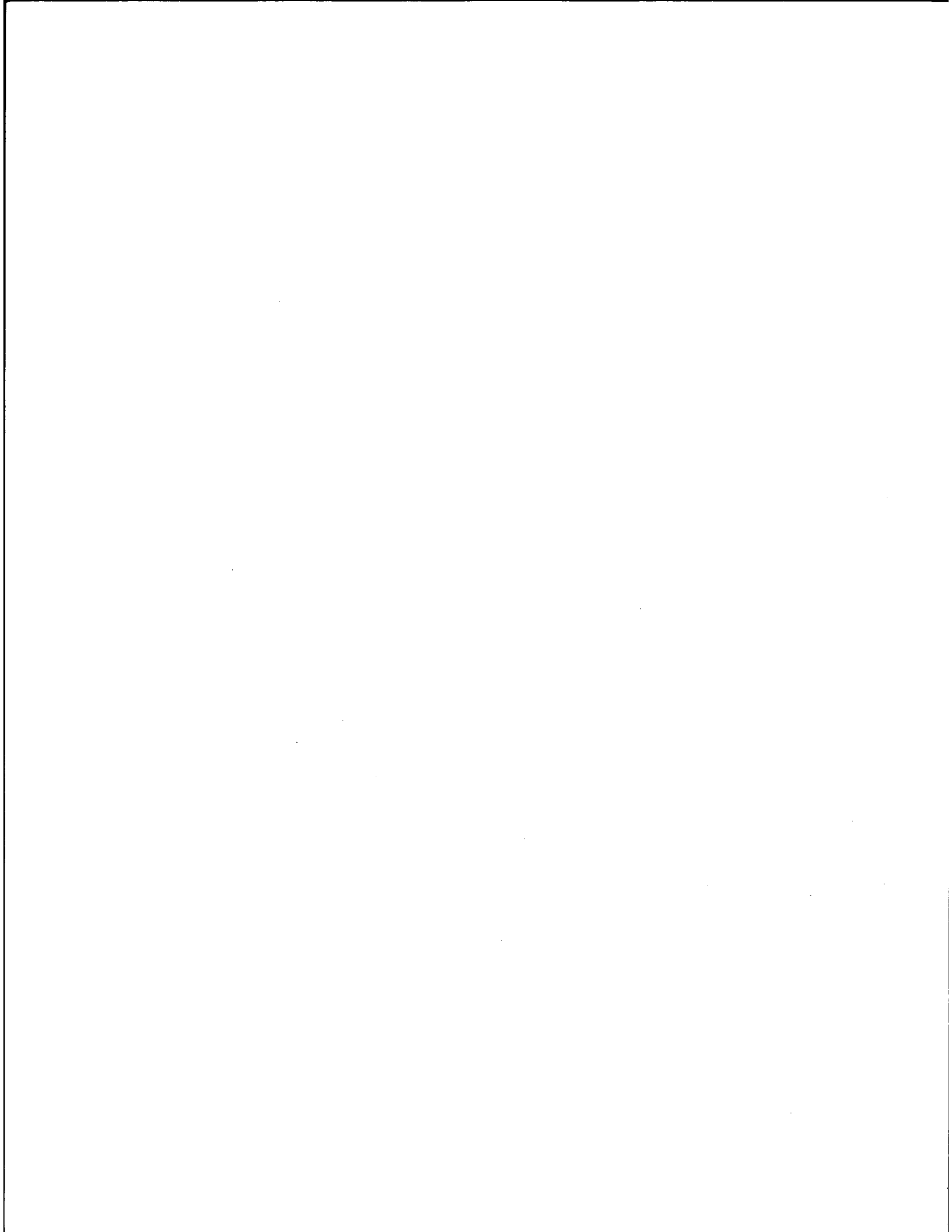
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PART I

METHODOLOGY



INTRODUCTION

THE IMPACT OF LABOR-MANAGEMENT RELATIONS ON PRODUCTIVITY AND EFFICIENCY IN URBAN MASS TRANSIT

Many indicators of the performance and efficiency of urban mass transit have demonstrated disappointing trends throughout much of the post-World War II period. Expenditures for urban mass transit have risen more rapidly than gains in the efficiency of service delivery and the industry has become increasingly dependent upon governmental subsidies for both capital and operating expenditures.

Some analysts suggest that these trends might be reversed by improving, among other activities, the management of individual transit properties.¹ A critical component of the management of urban mass transit organizations, like organizations in many other sectors of the economy, is the conduct of labor relations. The importance of labor-management relations to transit property is supported by a number of recent investigations of labor-management relations in urban transit.² Participants at an Urban Mass Transportation Administration (UMTA)-sponsored conference, for example, concluded:

¹John R. Meyer and Jose A. Gomez-Ibanez, Improving Urban Mass Transportation Productivity (Washington, D.C.: Urban Mass Transportation Administration, 1977).

²See, for example, Kenneth M. Jennings, Jay A. Smith, and Earle C. Traynham, Jr., Study of Unions, Management Rights, and the Public Interest in Mass Transit (Washington, D.C.: U.S. Department of Transportation, Office of University Research, 1976); Meyer and Gomez-Ibanez, Improving Urban Mass Transportation Productivity.

"Labor-management relations are obviously a key ingredient... both because labor costs are a major element in transit operating budgets and because the implementation of transit programs, however well conceived on paper, finally comes down to the day-to-day performance of the operating manager and the bus driver, the dispatcher and the maintenance mechanic.³

Labor and management decision-making through the collective bargaining process covers a wide variety of topics: wages, fringe benefits, working conditions, job security, work rules, and grievance procedures, among others. However, our understanding of the impact of labor-management decision-making on transit property performance remains essentially conjectural. Assessments of the positive and negative influences of labor-management relations on transit property performance vary widely.

This study evaluates the impact of the labor-management relationship on four sets of measures of urban mass transit performance: (1) service efficiency (e.g., labor productivity); (2) service effectiveness (e.g., utilization); (3) employee withdrawal (turnover, absenteeism and tardiness); and (4) organizational adaptability. These performance indicators are related to four aspects of labor-management relations: (1) the legal framework for collective bargaining; (2) labor and management organizational structures; (3) the pattern of relationships between representatives of labor and management (e.g., conflict, accommodation, cooperation); and (4) the content of the collective agreement.

The remainder of this chapter is devoted to setting the stage for the main body of the report. We begin by mapping the context of current concerns about labor-management relations in transit. Next,

³U.S. Department of Transportation, Urban Mass Transportation Administration, Office of Transit Management, UTM Transit Industry Labor-Management Relations Research Conference and Symposium: Summary Conclusions, and Recommendations (Washington, D.C.: U.S. Department of Transportation, November 20, 1975). Mimeo.

we introduce the analytic model which is the organizing framework for our research. The chapter concludes with a review of the contents of the report.

THE CONTEXT OF THE STUDY

Associations between labor-management relations and transit performance have long been recognized. Until recently, however, few have expressed concern about the impacts of labor-management relations on the long-term viability and survival of urban mass transit. What developments have contributed to these concerns? What accounts for the renewed efforts to develop more "constructive" labor-management relations in urban mass transit? This section briefly discusses some of the contextual factors that contribute to the importance of this study.

Labor Productivity Trends in Urban Mass Transit

From a World War II peak of 20 billion passengers per year, transit ridership has plummeted to about 6 billion riders per year who are subsidized at an average of 30 cents each.⁴ Best estimates of transit industry productivity place the annual percentage change at between plus or minus one percent per year from 1948 to 1970. While these estimates are encouraging in light of significant ridership declines between 1946 and 1973, productivity in the private sector economy increased between 2 to 3 percent during the same period.

These productivity trends have created pressures upon transit fares and costs, in the absence of subsidies, to increase more rapidly than the prices of other goods and services in the economy. While the slow growth in total factor productivity is alarming, equally alarming is the longevity of the trend. If this post-World War II productivity trend continues, the long-term viability of urban mass

⁴The data on transit productivity presented in this subsection is drawn from Meyer and Gomez-Ibanez, Improving Urban Mass Transportation Productivity, Chapters 1 and 2.

transit will be seriously jeopardized. One requirement for attracting riders back to urban mass transit (and thereby maintain transit's long-term viability) is for transit productivity to equal or exceed the rate of productivity growth in the rest of the economy.⁵ Only by improving relative productivity can the transit industry improve the relative attractiveness of transit fares.

Transition from Private to Public Ownership

Along with the relative decline of productivity in transit during the postwar period came declining profitability. The ownership consequences of the worsening financial picture in transit are chronicled by Barnum:

The shift to public ownership began in earnest in the second half of the 1960's, and is still continuing in 1975. Between 1883 and 1939, less than one system per year became publicly owned. From 1940 through 1954 the annual average shift increased to 2.3. After 1955 the annual changes began to accelerate: 5.2 per year in the last half of the 1950's; 9.0 in the first half of the 1960's; 14.2 in the second half of the 1960's; and over 22.0 in the first half of the 1970's.⁶

Most of the major transit systems are now publicly owned.

The shift from private to public ownership has brought with it a number of other important changes: large amounts of governmental subsidy and demands for public accountability. In fiscal year 1976, state and local governments provided \$800 million in operating and capital assistance to urban mass transit; UMTA expended \$1.8 billion for capital and operating subsidies.⁷

⁵Meyer and Gomez-Ibanez, Improving Urban Mass Transportation Productivity.

⁶Darold T. Barnum, From Private to Public: Labor Relations in Urban Mass Transit (Lubbock, TX: College of Business Administration, 1977), p. 11.

⁷Meyer and Gomez-Ibanez, Improving Urban Mass Transportation Productivity, p. 4.

With these large subsidies have come increased public scrutiny of the transit industry and increased expectations about the services which urban transit can and should deliver. Furthermore, as a requirement for the receipt of federal aid, transit operators must consent to protect the interests of employees as specified in Section 13(c) of the Urban Mass Transportation Act of 1964 as amended:

Such protective arrangements shall include, without being limited to, such provisions as may be necessary for (1) the preservation of rights, privileges, and benefits (including continuation of pension rights and benefits), under existing collective bargaining agreements or otherwise; (2) the continuation of collective bargaining rights; (3) the protection of individual worsening of their positions with respect to their employment; (4) assurance of employment to employees of acquired mass transportation systems and priority of reemployment of employees terminated or laid off; and (5) paid training or retraining programs.⁸

The large public subsidy and the actual and potential impacts of Section 13(c) arrangements have contributed to increased public demands for the accountability of transit operators.

Service Innovations

The 1960's brought with them a major new idea for the delivery of transit services--paratransit. Paratransit is organized ride-sharing which provides flexible routing, unlike conventional fixed route services.⁹ Paratransit presents both threats and opportunities

⁸Urban Mass Transportation Act of 1964, as amended, SS 13(c), 49 U.S.C.A., SS 1609 (1974).

⁹This definition is based upon one contained in Alan Altshuler, "The Federal Government and Paratransit," Paper prepared for the Conference on Paratransit, Williamsburg, Virginia, November 9-12, 1975.

for labor and management interests which have stimulated concerns over existing labor-management relations in urban transit.

Paratransit is an obvious opportunity for transit organizations either to reach new clientele groups (e.g., vanpools serving more affluent suburbanites who ordinarily would use their private automobile for work trips) or to improve service to existing clientele (e.g., handicapped individuals). One advocate of paratransit has argued, however, that "there is a general unwillingness on the part of labor to accept the changes which are necessary if management wishes to innovate in the transit service."¹⁰ This perspective is counterbalanced by an equally legitimate view expressed by the President of the Amalgamated Transit Union:

Thus, we face still another threat from those who would use the new paratransit modes--dial-a-ride, vanpools, shared-ride taxis, etc.--to destroy transit jobs by using volunteer "para" operators, or part-time employees at the minimum wage, and no other benefits, to siphon off peak hour ridership and fares from the mainline system....The Amalgamated Transit Union will not support paratransit if it is used as a weapon to destroy our members' jobs, or to reduce their wages, or to worsen their working conditions.¹¹

Although the debate over labor's role in paratransit has been ignited, it is far from being vanquished. The paratransit controversy continues to focus attention on work rules in transit organizations and the willingness of labor, management, and clientele groups, to accommodate one another's interests. It also serves as a gauge of labor and management's commitment to the viability of

¹⁰Gordon J. Fielding, "Labor Impediments to Innovations in Public Transit," Paper presented at the Fifty-Fifth Annual Meeting of the Transportation Research Board, Washington, D.C., January, 1976.

¹¹Remarks of Daniel V. Maroney, Jr. cited in Kenneth M. Jennings, Jay A. Smith, Jr. and Earle C. Traynham, Jr., Study of Unions, Management Rights, and the Public Interest in Mass Transit (Washington, D.C.: U.S. Department of Transportation, Office of University Research, 1976), p. 119.

public mass transit.

Service Continuity

Another development which has focused increasing attention on transit labor relations has been a growing incidence of strikes within the industry.¹² Discontinuations of transit services due to strikes or lockouts can have a number of serious repercussions. Since many who have no other means of mobility rely upon public transit service, transit "dependents" are left without an essential service. Work and shopping trips may be similarly affected leading to a significant temporary reduction in local economic activity.

The long-run consequences of work stoppages in transit may indeed be more serious than the immediate consequences discussed above. Among other conclusions in a recent study of bus transit strikes were these:

- (1) Average adult fare increases immediately after a strike, with a greater increase over the long-term.
- (2) Average daily ridership decreases immediately after a strike, with a smaller but still significant strike-induced decrease over the long-term.
- (3) It appears that pre-strike captive riders return to the system much faster than pre-strike choice riders, who may not return at all.¹³

The drama and, more important, the potential effects of transit strikes have generated a great deal of interest among practitioners and policy makers. The general issues raised by transit strikes are probably not amenable to easy solution. Nonetheless, like labor productivity trends, the transition from private to public ownership, and recent service innovations, transit strikes have contributed to the visibility and significance of labor-management relations in transit.

¹²For a discussion of recent strike activity in bus transit see Mitchell E. Brachman, Kumares C. Sinha, and Michael W. Pustay, The Effects of Labor Strikes on Bus Transit Use (West Lafayette, Indiana: Purdue University, 1976), especially Chapter 5.

¹³Ibid. p. x

A SYSTEMS MODEL OF LABOR-MANAGEMENT RELATIONS

In undertaking the study of something as complex as labor-management relations in urban mass transit, identifying assumptions and developing a map of the terrain are necessary preliminaries. Labor-management relations are composed of both idiosyncratic and systematic laws, ideologies, personalities, and behaviors. An assumption of most applied research is that, despite idiosyncracies associated with a particular phenomenon, systematic relationships may be identified and studied and their study may lead to information relevant to practitioners. This study accepts that premise and focuses on aspects of varying labor-management relationships which can be systematically investigated and may lead to useful generalizations.

To identify key components of labor-management relations we draw upon previous research on labor relations systems. The most well-known model of labor relations systems is that developed by Dunlop.¹⁴ He suggests that the labor relations system can be divided into four basic components - actors, rules, ideology, and the environmental context. Dunlop's model provides a framework within which to compare each of the components across different labor-management relationships.

The systems model we employ as the analytic framework for this research is illustrated in Figure 1. Each block in the Figure represents an aspect of the labor-management relationship around which comparisons of transit properties may be made. The terms within the blocks denote key concepts. We elaborate this model in subsequent chapters of this report.

The implications of the systems model are relatively straightforward. Variations in relevant indicators of organizational performance are associated with a complex set of determinants, each of which is an aspect of the labor-management situation (i.e. the legal framework, labor and management's organization for bargaining, relationship patterns, and the collective agreement). These determinants

¹⁴John Dunlop, Industrial Relations Systems (New York: Henry Holt, 1958). For an additional systems view see A. Dale Allen, Jr., "A Systems View of Labor Negotiations," Personnel Journal, 50 (1971), 103-114.

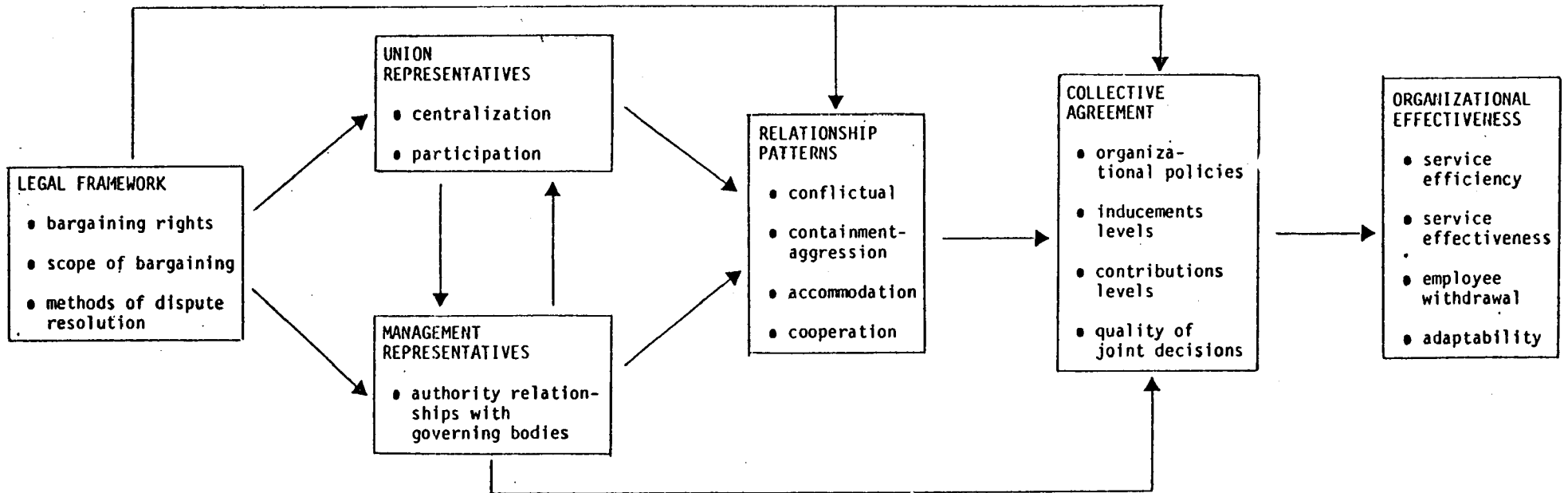


FIGURE 1. A SYSTEMS MODEL FOR ANALYSIS OF LABOR-MANAGEMENT RELATIONS

comprise either operating parameters or constraints, which influence overall transit organization performance. Organizational performance, in turn, is conceptualized as a combination of four key factors: service efficiency, service effectiveness, employee withdrawal, and adaptability.

A primary difference between the systems model in Figure 1 and other models of labor relations systems are the outputs upon which we focus. Most models of the labor-management relationship focus on the collective agreement, the relationship pattern between the parties, or the achievement of broad social goals (e.g., industrial democracy) as the major outputs.¹⁵ We expand the scope of these models by including the ultimate impacts of the labor-management relationship on transit performance as the output component of our model.

OVERVIEW OF THE REPORT

This report is divided into three parts. Part I (Chapters 1 and 2) focuses on the study methodology, including the selection of performance indicators. Chapter 1 discusses sample selection and data collection procedures. Descriptive information about the organizational and employee samples used in empirical study is presented in this chapter. In Chapter 2 we provide a detailed description of the performance indicators, the rationale for their selection, and a partial assessment of their reliability and validity.

Part II investigates the influences of components of the labor-management situation on transit property performance. The impact of the formal rule structure created by federal, state, and local statutes

¹⁵See, for example, Milton Derber, W.E. Chalmers, and Ross Stagner, The Local Union-Management Relationship (Urbana, IL: University of Illinois Press, 1960.); William F. Whyte, Pattern for Industrial Peace (New York: Harper & Row, 1951); Dale Yoder, Herbert G. Heneman, and Earl F. Cheit, Triple Audit of Industrial Relations (Minneapolis, MN: Minneapolis Industrial Relations Center, 1951); and Frederick H. Harbison and James R. Coleman, Goals and Strategy in Collective Bargaining (New York: Harper and Row, 1951).

is analyzed in Chapter 3. Among the issues considered in Chapter 3 is the probable impact of Section 13(c) on organizational performance. Chapter 4 looks at the organizational structure of labor and management representatives as an influence upon organizational performance. The attitudinal climate of the labor-management relationship is the focus of Chapter 5. This chapter attempts to define systematic associations between relationship patterns and transit property performance. The final chapter in Part II investigates linkages between the contents and makeup of the collective agreement and performance. The collective bargaining agreement is analyzed from several perspectives to identify the ways in which it influences transit property performance.

The results, conclusions, and implications of the research are assimilated in Part III. Chapter 7 synthesizes the findings associated with the systems model in Figure 1. Its primary purpose is to review the segmented findings in the context of the complete model. Some of the practical implications of the research are also discussed.

CHAPTER 1

SAMPLING AND DATA COLLECTION PROCEDURES

The objective of assessing labor-management relations and transit performance necessitated a rigorous data collection process. Four types of data were collected: attitudinal data concerning participant perceptions of transit labor relations; organizational performance data; interview data regarding the legal framework of collective bargaining; and information from labor contracts. This chapter discusses the survey procedures and data collection instruments used in the study.

SURVEY OF TRANSIT PROPERTIES

Recognizing the sensitivity of the research topic, the research team adopted from the beginning of its investigation a policy of labor and management approval of data collection instruments and methods. As part of this policy, labor leaders and transit managers at each property were usually contacted in advance to obtain their cooperation in the study. On the labor side, the highest ranking labor official was contacted to obtain his or her approval. On the management side, general managers were contacted directly to make arrangements for the study. This "mutual approval" research approach was used to enhance the accuracy, credibility, and impact of the study. Above all, it was consistent with our perceptions of what was required for an objective, but unobtrusive, assessment of the research topic.

Selection of the Research Sites

In 1976, a large number of urban mass transit operations in the Western United States were contacted by the Institute of Transportation Studies to determine their interest in participating in a series of studies on transit efficiency, labor relations, and organizational size

and structure. At that time several properties declined to participate. The most frequent reason for refusal was the instability of the labor relations situation due to the proximity of contract negotiations.

The properties which indicated a willingness to participate in the series of studies were recontacted in June 1977 to determine their continued interest in the studies and to establish specific dates for site visits. Simultaneously, labor officials associated with the transit properties were contacted to inform them of the study, to obtain their approval, and to elicit their cooperation during site visits. This was part of the policy to maintain communication and feedback concerning all phases of the study.

A total of 28 properties agreed to participate in the study. Some descriptive information about these organizations is provided in Table 1-1.

Site Visits

The site visits to participating transit properties were conducted by teams of at least two members. Site visits usually began with, a short meeting between officials of the transit property and members of the research team. The meeting was used to introduce the research team and to explain the data collection procedures in detail. In some cases, labor officials participated in these meetings.

Following the introductory meeting, the members of the site visit team split into two groups. One member completed the archival checklist, interviewed the chief labor relations manager, and distributed the manager and labor leader questionnaires. The other member of the team distributed the employee questionnaires. On occasion this member would also assist in collecting archival data and in distributing the other questionnaires. In most cases, the visits lasted two days. This allowed sufficient time to collect all the performance data and distribute employee questionnaires during all coach operator shifts.

Two types of problems were encountered in the field. First, the lack of cooperation of labor leaders at two sites prevented the collection of data on employee attitudes. The second problem, encountered

TABLE 1-1. CHARACTERISTICS OF THE SAMPLE OF TRANSIT PROPERTIES

VARIABLE	MEAN	MEDIAN	STANDARD DEVIATION
Service area population, July 1977 (in thousands)	755.9	250.3	1,828.33
Population served, July 1977 (in thousands)	423.87	227.0	464.70
Operating expenses, 1976-77 (actual)	\$16,631,807.50	2,291,519.00	38,129,315.30
Operating expenses, 1977-78 (estimated)	\$17,431,256.00	2,750,688.00	35,733,034.50
Number of revenue vehicles	207.5	37.5	488.9
Number of coach operators	368.86	57.25	946.1
Number of maintenance personnel	51.5	11.0	122.9
Number of service routes, July 1977	30.73	14.50	42.83

at one site, was an impending strike. Both labor and management requested that the site visit be discontinued. In each of these instances, the requests of the parties were honored and all or part of the survey was cancelled.

DESCRIPTION OF THE DATA COLLECTION INSTRUMENTS

The information upon which the analyses in this report are based originates from a wide variety of sources. Operational, historical, and attitudinal data were collected at each site and managers, labor leaders, and coach operators were surveyed. The information was obtained using six different data collection instruments: three attitude surveys, an interview, an archival data checklist, and a contract coding instrument.

In constructing these data collection instruments, we relied as much as possible on existing measures of relevant variables. Such measures tend to be highly reliable and require less development than start-from-scratch approaches. In certain instances, no existing measures precisely fit the research. In these cases, new questionnaire or interview items were developed.

Transit Manager Questionnaire

The survey of transit managers was divided into six parts. The first part requested background information concerning age, race, sex, and education. Managers were also asked about their occupational background, including length of time in their current job and their labor relations education and experience. The second section concerned the manager's perception of the organization's ability to meet challenges to effective performance. The third section addressed relationships with other organizations. The remaining three sections concerned management attitudes toward the labor organization, external influences in bargaining, and the current labor agreement. The questions in these three sections were designed to provide information on manager perceptions about both general and specific aspects of the labor-management relationship.

Labor Leader Questionnaire

Labor leaders were surveyed on four different subjects. Background information was requested on personal characteristics and involvement in negotiations and grievance administration. A second section of the questionnaire contained items on structural characteristics of the labor organization, including the national organization with which the labor leader might be affiliated. The final two sections of the labor leader questionnaire paralleled those of the manager questionnaire. These sections solicited labor leader attitudes about the labor-management relationship and the collective agreement.

Employee Questionnaire

The most extensive of the three attitude surveys was administered to employees. This survey instrument was divided into three parts: (1) background information; (2) current job attitudes; and (3) attitudes about the union or employee association. Background information was obtained on personal characteristics, job characteristics, absenteeism, and likelihood the employee would leave his or her job. The current job attitudes section of the questionnaire contained items on job satisfaction, commitment, and organizational adaptability. The items in the third part of the questionnaire solicited employee responses about their attitudes toward the efforts of the labor organization on their behalf, the union's influence with management, labor leader effectiveness, and union solidarity.

Interview Schedule

The person responsible for labor relations was interviewed at each property. The interview obtained information about applicable collective bargaining statutes, the obligations created by these statutes, and whether the property had received certification under Section 13(c) of the Urban Mass Transportation Act of 1964. Questions were also asked about the most recent contract negotiations, management structure for labor relations, and the amount of latitude granted negotiators.

Archival Checklist

To aid in the collection of operational data, a checklist was prepared for data which could be obtained from transit property records. The data covered by checklist included: general background and historical data about the property, performance indicators, employee relations data, and aggregate characteristics of the workforce.

Contract Coding Instrument

An existing coding instrument for comparing labor agreements was extensively revised for use in the present study.¹ The revised instrument contained 92 items which rated individual contract clauses on their relative labor or management favorability. This instrument is presented in Appendix 2. The revised scheme was tested for inter-rater reliability. The results showed acceptable levels of reliability.²

¹The original coding instrument is discussed in Kenneth M. Jennings, Jay A. Smith, Jr., and Earle C. Traynham, Jr., Study of Unions, Management Rights, and The Public Interest in Mass Transit (Washington, D.C.: U.S. Department of Transportation, Office of University Research, 1976).

²Most research requiring the coding of labor agreements relies upon the judgment of a single rater to accurately score the agreement. See, for example, Thomas A. Kochan and Hoyt N. Wheeler, "Municipal Collective Bargaining: A Model and Analysis of Bargaining Outcomes," Industrial and Labor Relations Review, 29 (October 1975), 46-66; Paul F. Gerhart, "Determinants of Bargaining Outcomes in Local Government Labor Negotiations," Industrial and Labor Relations Review, 29 (April 1976), 331-351; and James L. Perry and Charles H. Levine, "An Interorganizational Analysis of Power, Conflict and Settlements in Public Sector Collective Bargaining," American Political Science Review, 70 (December 1976), 1185-1201. To assess the accuracy of our coding, which often involved relatively complex agreements, we employed a sampling technique to determine the level of inter-rater agreement on the scored contract provisions. First, each contract was scored in its entirety by a single rater. Second, approximately 350 of a total of 2500 provisions within all the labor agreements were randomly sampled and scored by a second rater. Finally, the scores of the two raters for the 350 items were compared to find the rate of disagreement between the raters for the sampled provisions and then to calculate the rate for the population. Based upon the results for the sampled provisions, we estimated between a 1.7% to 5.0% incidence of

SAMPLE SELECTION FOR THE ATTITUDE SURVEYS

Prior to the distribution of questionnaires at each transit property a procedure had to be developed for identifying individuals who would be surveyed. The general rule which was developed for selecting the sample of managers and labor leaders was that the respondent be involved in some aspect of labor relations. Typical titles of the management officials surveyed included: general manager, personnel director, labor relations director, and administrative assistant. In some cases, management consultants were retained for negotiations. Although these individuals were not technically employees of the transit property, they were nevertheless surveyed because of their involvement with labor relations. Labor leaders surveyed included stewards, business agents, local presidents and local trustees. All managers and labor leaders meeting the requirement set forth above were selected as respondents. This represented a census of qualifying individuals at the properties participating in the study. Since participation in the survey was entirely voluntary, however, responses were not received from everyone contacted at each property.

The population of employees who potentially could be surveyed was quite large, especially since the only criterion for eligibility was that the employee be a member of the bargaining unit representing coach operators. Therefore, a sample of employees was selected at each property.³

disagreement between raters, with a confidence level of 95%. For a general discussion of the sampling technique and reliability procedure used here, see Henry P. Hill, Joseph L. Roth, and Herbert Arkin, Sampling in Auditing (New York: Ronald Press, 1962).

³In order to minimize sampling error, the size of the target sample at each organization varied according to the population of employee eligible to be surveyed. The schedule for calculating the target sample at each organization is presented below.

At some properties the bargaining unit covering coach operators also included mechanics and clerical employees. In such cases, these members were also surveyed.

Since participation was voluntary, true random sample could not be obtained. This constraint required using judgmental sampling. Judgmental sampling involves matching respondents with the larger population to assess the representativeness of the sample. The criteria selected to match the sample to the population were: age, race, sex, and tenure. By comparing the criteria distributions of the population and the sample, conclusions can be drawn about the representativeness of the sample.

Table 1-2 presents comparison information on the criteria. Noticeable differences are observed on the race criterion for the percentages of whites and blacks in the population and the percentages responding. While blacks represent approximately 31% of the driver population, only 14% of the sample is black. Also, while 54% of the population is white, 74% of the sample indicated they were white. One reason for the discrepancy

Number of employees within the focal bargaining unit	Target sample (% of total)	Minimum number of employees
1 - 30	100%	
31 - 150	50%	28
151 - 1,000	25%	75
greater than 1,000	10%	162

Thus, for organizations with less than 30 employees we attempted to sample all eligible employees. In organizations with over 1,000 employees, our objective was to sample 10% of the eligible employees. Minimum targets were established for each population category to assure that the number of returned questionnaires from an organization exceeded the maximum number returned for an organization in a lower category in which a larger percentage of the employees were sampled. In most cases we were able to achieve the targeted objective for returned questionnaires. We encountered the most difficulty in reaching the target in small organizations where the voluntary nature of participation and practical problems in reaching all employees prevented achieving the targets.

TABLE 1-2. COMPARISON OF EMPLOYEE SAMPLE WITH POPULATION CHARACTERISTICS

VARIABLE	EMPLOYEE SAMPLE CHARACTERISTICS		EMPLOYEE POPULATION CHARACTERISTICS	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
<u>Category</u>				
<u>Race</u>				
Black	164	14.0	2566	30.9
Oriental	12	1.0	83	1.0
Spanish	124	10.6	1159	13.9
White	<u>871</u>	<u>74.4</u>	<u>4501</u>	<u>54.2</u>
	1171	100.0	8309	100.0
<u>Sex</u>				
Male	1006	81.9	7542	88.9
Female	<u>222</u>	<u>18.1</u>	<u>945</u>	<u>11.1</u>
	1228	100.0	8487	100.0
<u>Age (yrs.)</u>				
<20	5	.4	3	.2
20-29	337	27.8	542	35.9
30-39	399	32.9	531	35.2
40-49	255	21.0	346	22.9
>50	<u>216</u>	<u>17.8</u>	<u>87</u>	<u>5.8</u>
	1212	99.9	1509	100.0
<u>Tenure (yrs.)</u>				
<1	167	13.9	1118	14.5
1-2	218	18.2	1442	18.7
2-3	182	15.2	1139	14.8
3-4	183	15.3	550	7.1
4-5	91	7.6	539	7.0
>5	<u>358</u>	<u>29.8</u>	<u>2928</u>	<u>37.9</u>
	1199	100.0	7716	100.0

may have been that whites, who tended to have greater seniority, might have been present in higher proportions than blacks during the weekday site visits. Night shifts were surveyed to offset partially this tendency toward sampling higher seniority day shift workers.

A relatively higher tendency for females to respond to survey questionnaires and a relative lower tendency for males to respond may account for differences between the population and sample distributions. The sample also underrepresents employees in the 20-29 year age group, and overrepresents employees over 50. The remaining age groups match the population proportions.

The first three criteria could be expected to be influenced by researcher bias because they are observable characteristics of employees. Employee tenure, since it was not readily observable, should not reflect any selection bias on the part of individuals distributing the survey. The distribution of sample and population tenure match for most of the categories. A notable exception is the more than 5 years category where about 8% fewer individuals responded than were in the population. About 8% more individuals with 3-4 years tenure responded to the survey than were present in the population.

Questionnaire Return Procedures

Three methods of questionnaire distribution were used to maximize return rates. The first method involved personal delivery and personal return of the survey instrument. The second method involved personal delivery and mail return. This option was granted a respondent only if he or she could not finish the questionnaire during site visit. The third method of distribution involved mail-out and mail-return. This option was used for managers and labor leaders who could not be reached during the site visits. For managers and labor leaders, a series of two "prompt" mailouts were conducted for non-respondents. Basically, this involved a letter urging their response and a new copy of the survey. The return rates were quite good for each of the three role types surveyed. Return rates for different methods of questionnaire distribution, however, varied substantially. Table 1-3 summarizes the return rates by distribution method and role type.

TABLE 1-3. QUESTIONNAIRE RETURN RATES BY
DISTRIBUTION METHOD AND
ROLE TYPE

	Personal Delivery/ Personal Return	Personal Delivery/ Mail Return	Mail Delivery/ Mail Return	Cumulative Return Rate
Employees	71%	32%	--	64%
Managers	96	79%	72	84%
Labor Leaders	96	61%	68	73%

CHAPTER 2

TRANSIT PERFORMANCE INDICATORS

The systems model of labor-management relations, presented in the Introduction, includes four specific effectiveness criteria: service efficiency; service effectiveness; employee withdrawal; and adaptability. According to this model, the level of performance of a public mass transit organization, as measured in terms of these four criteria, is a function of certain aspects of labor-management relations, including the legal environment, structural factors, the emergent labor-management relationship pattern, and the content of the collective bargaining agreement.

The use of four separate criteria reflects a conviction that there is no such thing as the criterion of organizational performance.¹ Rather, a set of critical dimensions or components of effectiveness should be identifiable, which combine in some way to comprise overall performance. Ideally, these components should be a parsimonious set. While the multidimensionality of transit performance needs to be recognized, it is also necessary to impose limits on the number of criterion dimensions selected.

¹John P. Campbell, David A. Bownas, Norman G. Peterson and Marvin D. Dunnette. The Measurement of Organizational Effectiveness: A Review of Relevant Research and Opinion (San Diego, CA: Navy Personnel Research and Development Center, TR 75-1, July, 1974).

The four components that have been incorporated in the present model appear to represent four conceptually distinct aspects of transit organization performance. Furthermore, means are available by which to specify and measure concrete organizational features which serve as proxy-indicators for the four classes of variable. In this respect, the present research profits from earlier work by Fielding, Glauthier and Lave² who developed a set of quantitative indicators for the evaluation of transit performance.

SELECTION OF TRANSIT PERFORMANCE COMPONENTS RELATED TO LABOR-MANAGEMENT RELATIONS

Fielding, et al. postulated that transit performance = efficiency + effectiveness (i.e. two of the four performance components of the present model). Whereas efficiency was defined as "doing things right," effectiveness was defined as "doing the right things."³ Thus the two components, together, were seen to comprise the "two sides of the performance 'coin'."⁴ These two components of performance were viewed by Fielding, et al. as the minimum set needed for calculation of transit performance. The present research extends that view by adding measures of employee withdrawal and adaptability to the two basic components, service efficiency and service effectiveness.

It would have been possible to add even more performance components to the model. Campbell, et al.⁵ performed an exhaustive review of research

²Gordon J. Fielding, Roy E. Glauthier and Charles A. Lave. Development of Performance Indicators for Transit. Final report prepared for U.S. Department of Transportation, Urban Mass Transportation Administration (Contract No. CA-11-0014), Institute of Transportation Studies and School of Social Sciences, University of California, Irvine, Irvine, California, December 1977.

³Ibid., p. 73.

⁴Ibid., p. 73.

⁵Campbell, et al., The Measurement of Organizational Effectiveness: A Review of Research and Opinion.

and theory dealing with the elusive concept of organizational effectiveness and attempted to catalog the different types of variable that have been included in various studies. They arrived, judgmentally, at a taxonomy of 26 different aspects (which subsumed, among others, the four components included in the present model). It was decided for the present study, however, that to expand the number of performance components beyond the four selected would unnecessarily complicate the research, as well as the presentation and interpretation of results. The four components selected for analysis appear to "capture" the essence of transit organization performance, without needless complication--and they appear to be reasonably sensitive to the impact of labor-management interaction, which is the research focus of this study.

Perry and Hunt⁶ employed two rules for selecting specific criteria of organizational effectiveness when the labor-management interaction is taken as the focal determinant. The first rule essentially involves the notion of content representation. Both task performance and systems maintenance activities directed at meeting the organization's transitive and reflexive goals should be included.⁷ The second rule is that the measures selected should all be amenable to influence by labor-management interactions or by decisions impacted by the collective agreement. Employing these criteria, Perry and Hunt listed six indicators having utility for evaluating the labor-management relationship: member withdrawal, labor productivity, adaptability/flexibility, job satisfaction, employee commitment and user satisfaction.

This set of variables can be compared to other sets derived in other research settings. Price⁸ listed productivity, morale, adaptation and

⁶James L. Perry and Carder W. Hunt, "Evaluating the Union-Management Relationship in Government," Public Administration Review, 38 (September/October 1978), 431-436.

⁷See Lawrence B. Mohr, "The Concept of Organizational Goal," American Political Science Review, 67 (June 1973), 470-481.

⁸James L. Price, Organizational Effectiveness: An Inventory of Propositions (Homewood, IL: Irwin, 1968).

innovation as measures derived from studies across a variety of organizations. Ansoff and Brandenburg⁹ offered four broad categories of criteria: steady state efficiency, operating responsiveness, strategic responsiveness and structural responsiveness. Mott¹⁰ derived productivity, adaptability and flexibility from studies of hospitals and government agencies. Integration and comparison of these various schemes, as well as the previously cited Fielding, et al.¹¹ report, led to development of the four transit performance components included in this study.

Service Efficiency

A general notion of "efficiency" seems to be a common thread running through all of the previously cited lists. The general efficiency concept involves the computation of ratios of inputs to outputs, or of costs to benefits. Efficiency can be viewed as the extent to which the transit organization is able to maximize or minimize certain of these ratios.

In public mass transit, the key operation involves the provision of passenger service through the deployment of revenue vehicles over a network of service routes. One measure of efficiency then would be the extent to which this output is accomplished, relative to labor inputs to the system. The ratio of labor inputs to produced transit service could be approximated by comparing the number of hours worked by transit operators to the number of revenue vehicle hours accumulated.

⁹H.I. Ansoff and R.G. Brandenburg. "A Language for Organizational Design, Management Science," 17 (1971), 705-731.

¹⁰Paul E. Mott. The Characteristics of Effective Organizations (New York: Harper and Row, 1972).

¹¹Fielding et al., Development of Performance Indicators for Transit.

In addition to the maximization of transit service relative to inputs, service efficiency can be viewed in terms of the minimization of operating expense, relative to transit service provided and to the overall scope of the operation.

Three concrete indicators of service efficiency were selected:

(1) *Revenue Vehicle Hours per Driver Hour*. As indicated by Fielding, et al.,¹² many potentially valuable statistics related to transit service produced or consumed are not collected or computed on a regular basis.¹³ One statistic that is currently available is "revenue vehicle hours"-- the number of hours in which vehicles are actually in service. This indicator was considered by Fielding, et al.¹⁴ to be a much better indicator than vehicle miles, or produced transit service, because the confounding effects of inter-property differences in such factors as system speed are automatically removed. Furthermore, the use of revenue vehicle hours, rather than total vehicle hours, was justified on the rationale that the objective of performance evaluation is to examine costs of actual service (i.e. productive utilization, as opposed to total utilization). Reliance on revenue vehicle hours, as an index of service provided, would avoid inclusion of such non-productive activities as "deadhead" and "layover," in computation of a transit property's service output.

Fielding, et al. reported that "employee hours" would be a valuable statistic, but that these figures are ordinarily unavailable. "Hours

¹²Fielding, et al., Development of Performance Indicators for Transit.

¹³Included among such statistics would be "passenger miles," which is seldom currently available but which will be a required reporting element under UMTA Section 15. When available, this should prove a better index of service provided than the currently available "total passengers carried" or "total vehicle miles."

¹⁴Fielding et al. Development of Performance Indicators for Transit.

worked" statistics would be a more accurate measure of labor input than such statistics as "total employees," because the latter statistic obscures inter-property variation in such operating policies as length of shifts, overtime hours, and the proportion of part-time workers.

The current research was able to incorporate the normally unavailable statistics on employee hours and on driver hours, and was able to collect these statistics for overtime as well as regular time worked. This was possible because archival data were collected from each participating transit organization, on-site, which enabled the research teams to compute totals for hours worked from individual pay records.

"Driver hours" is considered a better indicator than total "employee hours," because the transit properties in the current sample tended to differ with respect to the extent to which maintenance and administrative functions were performed by members of the transit organization. While some properties were essentially "self-contained," others relied on pooled services (e.g., municipal maintenance garages) to a considerable extent. Thus the number of driver hours appears to provide the better statistic for purposes of interproperty comparison.

(2) *Operating Expense per Revenue Vehicle Hour.* Operating expense figures were computed for each participating transit property from Fiscal Year 1976-1977 financial records. Ratios were then calculated between operating expense and revenue vehicle hours for the same fiscal period. This input-output ratio comprises a basic measure of efficiency.

(3) *Operating Expense per Employee.* This indicator provides an alternate way of looking at operating efficiency, using total number of employees as a proxy for the structural variable "organization size." Computation of this statistic for each participating transit property provides a means whereby cross-property comparisons can be made, holding size constant.

Service Effectiveness

According to Fielding, et al., "Measures of effectiveness are concerned with the extent to which the service provided--in terms of quantity, location, and character--corresponds to the goals and objectives established for it by government and to the needs of the people."¹⁵ Thus the evaluation of effectiveness requires an assessment of the "goodness of fit" of provided service to travel demands.

Accessibility of service to an area's residents could be evaluated using the indicator "percent population served." This statistic measures the proportion of the total service area population residing within 1/4 mile of a regularly scheduled transit route. In practice it was found that this statistic was seldom readily available in the transit organizations' records. During site visits, several of the transit organizations were willing to provide estimates of percent population served, but it was apparent that the estimation was usually performed in an offhand manner that diminished the reliability of the data provided. Seventeen percent of the participating transit organizations were unwilling to provide even an estimate of this statistic.

Accordingly, the present research was forced to utilize the less definitive measure, "total population of service area as of July 1977." This statistic was available for each participating property and figures collected are considered highly reliable. However, it must be recognized that varying shapes of population density distributions around service routes may considerably reduce the cross-property comparability of such a statistic.

Two measures of service effectiveness were incorporated in the present research: (1) Passengers per Service Area Population; and (2) Passengers per Revenue Vehicle Hour. While these two statistics are ratios, and might ostensibly appear to be measures of efficiency rather than effectiveness, they are classified as effectiveness indicators because their focus is on consumed-service rather than produced-

¹⁵Fielding, et al., Development of Performance Indicators for Transit, p. 6.

service.¹⁶

Employee Withdrawal

Transit performance will be reduced by high levels of withdrawal behavior, since voluntary absenteeism and tardiness will increase labor hours required to produce a given level of service, and employee turnover will increase the need to commit scarce organizational resources to training.¹⁷ Although the three withdrawal variables (i.e. absenteeism, turnover and tardiness) all represent a withholding, by employees, of organizational participation, they do not appear simply to be different points on a single continuum. Available evidence shows no necessary pattern or relationship among these variables.¹⁸

Circumstances can easily be foreseen where, for example, absenteeism and turnover would not covary. If an organization penalizes absenteeism in the extreme, persons who remain in the organization would probably comprise a self-selected group whose attendance rate is high. On the other hand, a high rate of exit from the job would probably result from the organization's "tight" attendance policies. Other circumstances whereby low turnover accompanies high absenteeism, or alternately where the two factors might covary are similarly easy to imagine. Steers and Porter¹⁹ reviewed 22 studies in which data were available on both absenteeism and turnover, and found significant relationships where both tended in the same direction in only 6 of the studies. It appears

¹⁶Fielding, et al., Development of Performance Indicators for Transit.

¹⁷Barry A. Macy and Philip H. Mirvis, "A Methodology for Assessment of Quality of Work Life and Organizational Effectiveness in Economic Terms," Administrative Science Quarterly, 21 (June 1976), 212-226.

¹⁸James G. March and Herbert A. Simon. Organizations. (New York: Wiley, 1958).

¹⁹Lyman W. Porter and Richard M. Steers, "Organizational, Work and Personal Factors in Employee Turnover and Absenteeism," Psychological Bulletin, 80 (1973), 151-176.

clear that absenteeism and turnover measure different aspects of employee withdrawal.

The third aspect of employee withdrawal, tardiness, is not commonly encountered in the research literature. In attempting to collect tardiness data at the transit organizations participating in the present study, the reason for this variable's infrequent use in research became painfully apparent. Organizational data concerning tardiness were reconstructed from individual employee records with considerable difficulty. It was initially intended to collect tardiness data in terms of elapsed time of tardiness incidents. As this turned out to be infeasible, the collection effort turned to counting the number of tardiness incidents. Even so, the quality of the data collected is uncertain. Nevertheless, tardiness represents dysfunctional employee behavior that results in non-availability of the employee's services to the transit organization. It was therefore decided to include tardiness statistics in the present study, in an exploratory manner, to ascertain its relationship to other withdrawal indices, as well as to various components of the systems model.

The following measures of employee withdrawal behavior have been utilized in this study.

Turnover. Three indicators have been adopted:

(1) Intent to Leave. This variable reflects transit employees' (non-managerial) responses to a single questionnaire item, with employee responses (aggregated, by transit property); i.e.:

What are your plans for staying with this organization?

1. I intend to stay until I retire.
2. I will leave only if an exceptional opportunity turns up.
3. I will leave if something better turns up.
4. I intend to leave as soon as possible.

The feasibility of estimating actual personnel turnover from self-report measures of intent has been well substantiated.²⁰ Kraut²¹ also

²⁰William E. Alley and R. Bruce Gould. The Feasibility of Estimating Personnel Turnover from Survey Data - A Longitudinal Study. AFHRL-TR-75-54. Lackland Air Force Base, Texas: Personnel Research Branch, Occupational and Manpower Research Division, Air Force Human Resources Laboratory, October 1975.

²¹Allen I. Kraut, "Predicting Turnover of Employees from Measured Job Attitudes," Organizational Behavior and Human Performance, 13 (1975), 233-243.

found strong correlations between expressed intent to stay and subsequent employee participation. It can be argued that expressed intent to leave is the next logical step in the withdrawal process, after the onset of whatever organizational circumstance leads to turnover. Because of the intervening-variable nature of such intent, it should be closer to turnover's antecedent conditions than is actual turnover. Thus, current turnover may more accurately reflect prior organizational conditions, while present intent to leave relates to present conditions.

(2) Separation Rate. This statistic augmented the "intent to leave" data. Actual turnover figures were extracted from transit organization records for Fiscal Year 1976-77. Employees who retired or were laid off or fired were not counted. "Separation rate" for each organization was then computed by dividing voluntary turnover by the mean number of employees on board during the period.²² It is acknowledged, however, that the distinction between voluntary and involuntary turnover is not always a clear one. It is possible that, were the circumstances known surrounding some of the "voluntary turnover" recorded, it would be seen as tantamount to dismissal.

(3) Stability Rate. This measure was also obtained from transit organization archives. The number of employees having tenure of 5 years or longer were divided by the total number of employees in the organization (non-managerial, only). Thus, "stability rate" provides a comparative measure, across organizations, of the "age" of the workforce. Of the three measures of turnover used in the study, stability rate should be the least influenced by short-term conditions, reflecting instead the relative propensity toward turnover (across organizations) over an extended period. It should also be recognized that no differentiation as to cause of turnover is provided by this statistic. Involuntary as well as voluntary turnover tends to lower the stability

²²James L. Price, The Study of Turnover (Ames, IA: Iowa State University Press, 1977).

rate.²³

At any rate, in keeping with Price's admonition, multiple measures have been adopted for turnover. As discussed, these measures differ conceptually in terms of relevant time frame and in the relative extent to which voluntary and involuntary turnover are discriminated. As might be expected, correlations among the three measures are only moderate (See Table 2-1). Except as noted, all coefficients shown in Table 2-1 are Spearman rank-order correlations. In most instances data departure from normality precluded the use of Pearson product-moment correlations.

Absenteeism. Absenteeism estimates were collected both by self-report and by extraction of absence figures from transit organization archives. Spearman rank-order correlation²⁴ between the two statistics, however, was a surprisingly low .40. In attempting to find a rationale for the apparent disparity between the two measures, it was recalled that several of the participating transit properties had not maintained absence figures in any systematic manner. In fact it almost appeared as if there was a tacit plan to obscure unauthorized absences by categorizing all absence as "sick leave" in several participating organizations. At any rate, the absence figures at several properties had to be reconstituted from fragmentary records--and with considerable difficulty. In many instances, categorization of absences into types was arbitrary. In essence, the reliability of the archival absenteeism data is doubtful. Inspection of the correlations between the two absenteeism statistics (self-report; archival) shows a more consistent pattern of

²³It should be noted that the present use of the term "stability rate" is entirely different from that used by Price, The Study of Turnover, in his discussion of measurement methods relative to turnover. Price used the term to denote the ratio between the number of members at the beginning of the measurement period and the number who remain throughout the period.

²⁴The Pearson product-moment coefficient of correlation would have been even lower (.28), however the data did not meet the assumption of normality requisite to the use of the Pearson correlation.

TABLE 2-1. INTER-CORRELATIONS AMONG EMPLOYEE WITHDRAWAL INDICATORS

	Self-reported Absence	Intent to Leave	Separation Rate	Stability Rate	Tardiness
Self-reported Absence	1	-.25	-.28	.48	.37
Intent to Leave		1	.64	-.31	.48*
Separation Rate			1	-.44	.05
Stability Rate				1	.26
Tardiness					1

*Pearson correlation

relationships between the self-report figures and other relevant variables, than between the archival figures and these same variables. Accordingly, the self-reported absence figures were used for the variable "absenteeism" in this study.

Tardiness. This statistic was extracted from transit organization archives as the ratio of the number of tardiness incidents to the mean number of employees on board during Fiscal Year 1976-77. These data were on hand for only 15 of the 28 participating transit properties. Furthermore, the comparability of different properties' decision rules for categorizing an incident as "tardiness" is somewhat suspect. However, as there was no self-report measure collected, the archival data were used.

Adaptability

Perry and Hunt²⁵ conceptualized adaptability as an organization's ability to solve problems and to react to changes in its environment. This reflects a readiness to deal with unusual problems, initiate needed improvement in operations and try out new ideas and suggestions. It was proposed that, with respect to the labor-management relationship, adaptability will be reflected in the extent to which collaborative decision making between the parties occurs.²⁶

Georgopoulos and Tannenbaum²⁷ considered one of the most important common objectives of all organizations (in addition to high output and

²⁵Perry and Hunt, "Evaluating the Union-Management Relationship in Government."

²⁶Thus adaptability is reflected in what Walton and McKersie would term integrative bargaining or problem solving. Richard E. Walton and Robert B. McKersie, A Behavioral Theory of Labor Negotiations (New York: McGraw-Hill, 1965).

²⁷Basil S. Georgopoulos and Arnold S. Tannenbaum, "A Study of Organizational Effectiveness," American Sociological Review, 22 (1957), 534-40.

preservation of organizational resources) to be the ability to adjust to internally induced change and to adapt to externally induced change. Their measure of organizational flexibility combined an evaluation of the extent to which management-induced changes lead to operational improvement, with an assessment of ability to handle sharp changes in volume during peak periods. Mott²⁸ and Wieland and Ullrich²⁹ adopted a similar two-faceted approach, in distinguishing between adaptability (synonymous with problem-solving ability) and flexibility (i.e. the ability to cope with temporary unpredictable overloads). Ansoff and Brandenburg³⁰ treated an organization's responsiveness to change as if varying in terms of time perspective. Operating responsiveness, which is close to the notion of "flexibility" noted above, is the organization's ability to make quick and efficient changes in its level of outputs, in response to changes in demand levels. Strategic responsiveness relates to the organization's ability to respond to changes in the nature, rather than the volume, of its outputs. This notion is conceptually closer to Wieland and Ullrich's notion of adaptability. Finally, structural responsiveness concerns the organization's ability to re-design itself so that new organizational structures may be better capable of coping with future requirements.

These views of adaptability all assume that organizations that adapt to their environment are more likely to survive in the long run than those that do not adapt. Mott³¹ treated adaptability as a process whereby organizations (1) become aware of problems, (2) formulate solutions, and (3) implement changes. Proposed behavioral criteria of adaptability were the proportion of relevant members who accept the

²⁸Mott, The Characteristics of Effective Organizations.

²⁹G.F. Wieland and R.A. Ullrich, Organizations: Behavior, Design, and Change. (Homewood, IL: Irwin, 1976).

³⁰Ansoff and Brandenburg, A Language for Organizational Design.

³¹Mott, The Characteristics of Effective Organizations.

changes, and the rapidity with which they accept them.

Thus, adaptability is an organization's ability to adjust, either on a systematic, long-term basis or on an "emergency" basis, to its environment. Although several scholars have distinguished conceptually between adaptability and flexibility, their principal distinction is one of degree-- that is, the extent to which adaptation can be planned and methodically implemented, or must be accomplished as a rapid reaction to change.

The operationalization of adaptability poses something of a dilemma. Unobtrusive measures have been used by scholars such as Aiken and Hage,³² who counted the number of innovations actually introduced. Several of the indicators discussed by Fielding, et al.³³ could be inferred as proxy measures of adaptability. Percentage of population served and revenue passengers per service area population might be considered indicative of adaptation to consumer needs (Ansoff and Brandenburg's strategic responsiveness). The major problem with using such indicators as inferential measures of adaptability is that they are only as good as the inferences involved, and can be significantly affected by factors unrelated to adaptability. Therefore, for the present study, questionnaire measures were used to develop organizational adaptability ratings.

A modified version of Mott's³⁴ questionnaire was used. Four questions were asked. (Identical questions appeared in the employee question-

³²Michael Aiken and Jerald Hage, "The Organic Organization and Innovation," Sociology, 5 (1971), 63-82.

³³Fielding, et al., Development of Performance Indicators for Transit.

³⁴Mott, The Characteristics of Effective Organizations.

naire and in the transit manager questionnaire).³⁵ Extent of agreement/disagreement with the following statements was requested:

1. People in this organization do a good job anticipating problems.
2. People in this organization do a good job in keeping up with changes in new equipment and new ways of doing things.
3. When changes are made in routines and equipment, people adjust to these changes quickly.
4. People in this organization do a good job coping with emergency situations brought on by accidents, equipment and labor problems, or other factors that might cause temporary work overloads.

Linear combinations of responses of rank-and-file employees and of relevant transit managers to these four questions were aggregated for each transit organization. Thus, two adaptability scores were obtained for each property where both transit manager questionnaires and employee questionnaires were administered. Pearson product-moment correlation coefficients between manager- and employee-rated adaptability was only .23, indicating that the two groups had differing perspectives on their organization's adaptability.

SUMMARY

No single summary measure can serve as "the" criterion of transit organization performance. Instead it is prudent to devise a set of criteria which, in combination, capture the important dimensions of effectiveness. The number of separate dimensions deemed important for inclusion is largely a matter of judgement, ranging from a few as two (i.e. efficiency and effectiveness) to as many as several dozen.

In the present study, four sets of factors were incorporated; each having from two to five specific measurable indicators. The four aspects were: service efficiency; service effectiveness; employee withdrawal;

³⁵ Many of the labor leaders we intended to sample were full-time union employees and were not employees of a transit property. We did not, therefore, include the adaptability items in the labor leader questionnaires because they might not be sufficiently familiar with conditions at the property to respond to these items. Thus, we limited our administration of the adaptability items to transit property members at different levels of the organizational hierarchy.

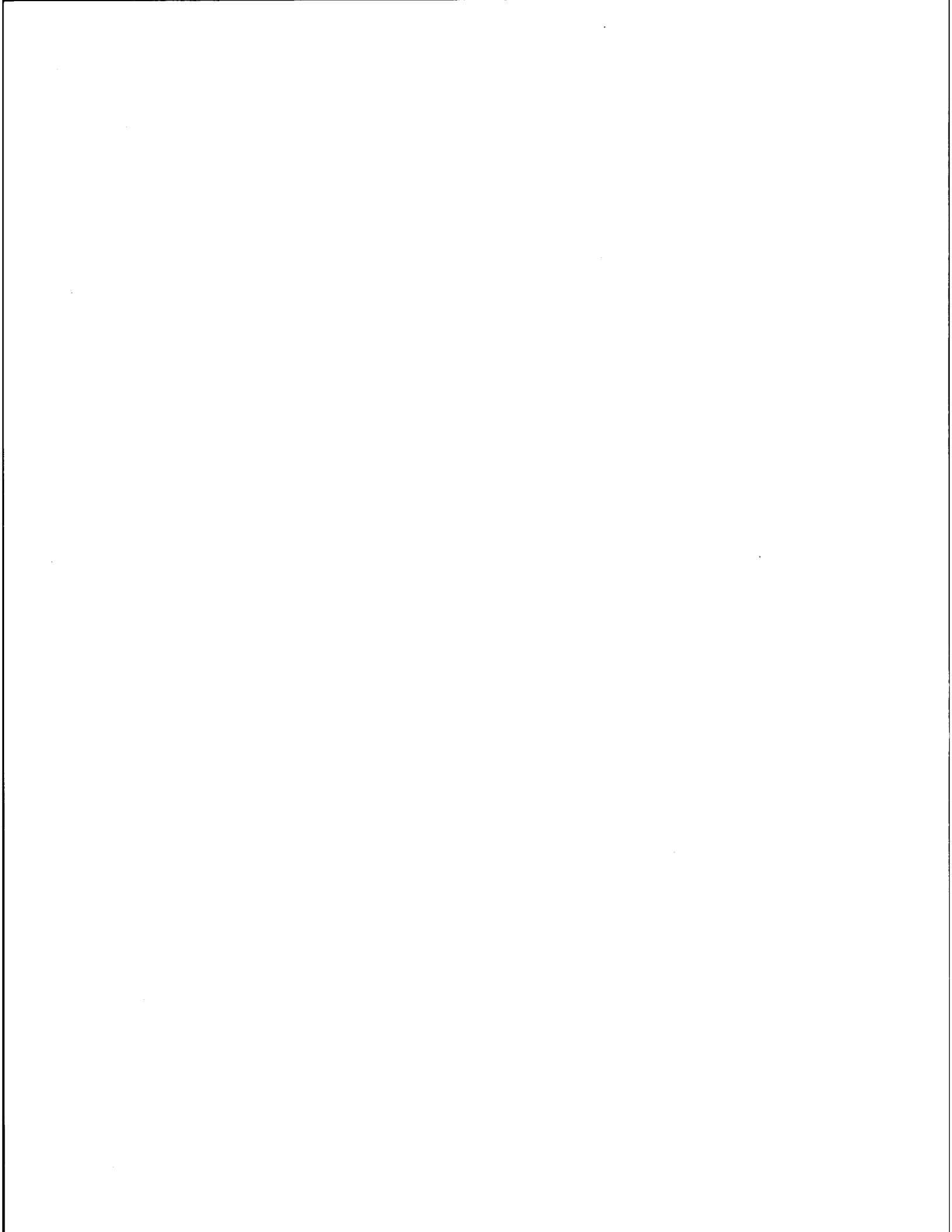
and adaptability. Table 2-2 recapitulates the indicators that relate to each of the four components.

TABLE 2-2. RECAPITULATION OF TRANSIT PERFORMANCE INDICATORS

Performance Dimension	Indicators
<u>Service Efficiency</u>	Revenue Vehicle Hours per Driver Hour Operating Expense per Employee Operating Expense per Revenue Vehicle Hour
<u>Service Effectiveness</u>	Passengers per Service Area Population Passengers per Revenue Vehicle Hour
<u>Employee Withdrawal</u>	
Absenteeism	Self-reported Absence
Turnover	Stability Rate (% of employees with at least 5 years tenure) Separation Rate (% of employee total turning over in one year) Intent to Leave (self-report)
Tardiness	Number of Tardiness Incidents in One Year, Divided by Workforce
<u>Adaptability</u>	Adaptability Rating from Employee Questionnaires Adaptability Rating from Transit Manager Questionnaires

PART II

THE LABOR-MANAGEMENT RELATIONSHIP
AND TRANSIT PERFORMANCE



CHAPTER 3

THE LABOR RELATIONS LEGAL FRAMEWORK

Part I focused on general methodological and indicator selection issues. With this chapter we initiate the substantive investigation of each of the components of the systems model presented in the introduction. In this chapter we consider the legal policy component of the model. The ways in which specific legal policy variables influence transit effectiveness are assessed.

CONCEPTUAL FRAMEWORK

Theodore Lowi's notion that "policies determine politics" is an appropriate starting point for understanding the ways in which the legal framework for labor relations influences transit property effectiveness.¹ Labor relations legal policies, among them collective bargaining statutes, define a rule structure. This rule structure establishes constraints and opportunities for labor and management in any given situation. The legal framework may be viewed generally as "(1) embodying a set of rules about the legitimacy of joint decision-making, and the instrumentalities of the process...; (2) creating rules which systematically influence the distribution of power to various parties; and (3) establishing the boundaries of acceptable behaviors and outcomes."²

¹See Theodore Lowi, "Four Systems of Policy, Politics and Choice," Public Administration Review, 32 (September/October 1972), 298-310.

²Charles H. Levine, James L. Perry and John J. DeMarco, "Collective Bargaining in Municipal Governments: An Interorganizational Perspective" in Charles H. Levine (ed.), Managing Human Resources (Beverly Hills, CA: Sage Publications, 1977), pp. 159-199 at p. 166.

In effect, the legal framework determines the issues which legitimately fall within the scope of labor-management decision making processes, and the formal power and authority of labor and management. It is through the allocation of these important resources in labor-management relations-- issues, power, authority--that the legal framework influences transit property effectiveness.

Of course, not all legal policies are equally important or affect the balance of power between labor and management in the same way. Although an array of legal policies have some influence on transit labor relations, we limit our assessment to two policy areas which have received a great deal of attention in the transit industry: (1) collective bargaining legal policy and (2) Section 13(c) of the Urban Mass Transportation Act of 1964 (as amended). Each of these policy areas is discussed next.

Collective Bargaining Legal Policy

State statutes and special district legislation often specify in great detail the rules governing the labor-management relationship in transit properties. A review of these statutes and ordinances reveals a number of consistently recognizable areas of regulatory activity. These areas of statutory control over the local labor-management relationship are identified in Table 3-1.³ As the Table indicates, statutory regulation of transit collective bargaining may involve basic issues such as the bargaining rights of employees as well as issues of lesser importance such as the requirements for grievance procedures.

³Table 3-1 is drawn from Levine, Perry, and DeMarco, "Collective Bargaining in Municipal Governments: An Interorganizational Perspective." The provisions in the Table are based upon those developed in an ongoing review of legislation, attorney's general opinions, and court decisions conducted by the Labor-Management Services Administration of the Department of Labor. For a comprehensive discussion of current legal policy for transit see James L. Stern, Richard Miller, S.A. Rubinfeld, C.A. Olson, Bruce P. Heshizer, The Legal Framework for Collective Bargaining in the Urban Transit Industry (Madison, WI: Industrial Relations Research Institute, University of Wisconsin-Madison, 1976).

TABLE 3-1. PROVISIONS OF COLLECTIVE BARGAINING LEGAL POLICY

Administrative Body	Designates an existing agency or creates a new agency to administer statutory provisions and develop policy. Examples: Public Employment Relations Board, State Department of Labor.
Bargaining Rights	Defines the extent to which the labor-management relationship is a joint or mutual relationship. This provision may require a "mutual duty to bargain" or may require an employer to "meet and confer" with an employee organization.
Recognition	Establishes the type of recognition accorded an employee organization (e.g., exclusive, proportional) and the procedures for designating an employee representative.
Unit Determination	Specifies the criteria and procedures for selecting the appropriate unit of employees for bargaining.
Scope of Bargaining	Specifies the items, i.e., wages, hours, terms and conditions of employment, which may be bargained.
Impasse Procedures	Designates the procedures to be followed to achieve a settlement in the event of an impasse between the parties.
Strike Policy	Establishes the legality of and penalties for strikes and work stoppages.
Management Rights	Clause which may specify the general prerogatives of the public employer.
Unfair Labor Practices	Defines actions which violate basic requirements of the labor-management relationship, including failure to bargain or participate in impasse procedures in good faith, refusal to comply with an arbitration award, and violation of representation election provisions.
Grievance Procedure	Defines the requirements for submission and arbitration of employee grievances.
Union Security	Spells out policy on the bargainability of dues check off, maintenance of membership, agency shop, and union shop clauses in the collective bargaining agreement.

Three areas of collective bargaining legal policy deserve special attention because of their possible effects on property performance: (1) bargaining rights, (2) scope of bargaining, and (3) methods of dispute resolution.

Bargaining Rights. This is perhaps the most significant area of policy variability. The rights of employees can vary from minimal informal rights in jurisdictions where no laws control transit bargaining to the full-fledged rights of employees in situations governed by statutes equivalent to those in the private sector. For example, California municipalities are required to "meet and confer" with employee representatives. In some jurisdictions, the mandate of this statutory language is interpreted to mean merely communicating with employee representatives; it does not require that labor and management achieve consensus before an employee relations ordinance can be approved by the local legislative body. On the other hand, many public jurisdictions have adopted statutes granting their employees bargaining rights essentially similar to those of employees in the private sector.

The effect of statutory variations in employee bargaining rights is to confer differing amounts of legitimate control of labor relations on employee representatives in these different situations. Of course, since employee rights are a central aspect of collective bargaining policy, these variations may account for dramatic differences in the character and outcomes of interactions between labor and management.

Scope of Bargaining. This legal provision refers to the range of issues which can legitimately be negotiated by labor and management representatives. Some statutes, for example, reflect an effort by legislators to restrict the scope of bargaining to wage and benefit issues or to exclude various areas of public policy which might be infringed by collective bargaining.

A variety of rationales exist for restricting the scope of bargaining.⁴ First, it is looked upon as a way of assuring retention of

⁴For a sampling of the arguments surrounding the scope of bargaining controversy in public sector bargaining see Ralph T. Jones, Public Sector Labor Relations: An Evaluation of Policy-related Research (Washington, D.C.: National Science Foundation, 1975).

specific prerogatives by management and the public. If certain topics can be excluded from bargaining, then encroachment of employee organizations into issues properly in the public domain can be prevented. Second, restrictions on the scope of bargaining may be used to differentiate between decisions which may be made through bargaining from those may be made by civil service systems. Thus, limitations on the scope of bargaining may be designed to assist in perpetuating the authority of civil service systems. Third, restrictions on bargaining scope may coincide with the need to distinguish among the functions of different governmental jurisdictions. For example, some states regulate local employee pensions and therefore pre-empt considering them in local bargaining.

Methods of Dispute Resolution. The resolution of disputes during contract negotiations is frequently influenced by the availability of particular dispute resolution mechanisms. Two areas of statutory regulation come into play when considering dispute resolution techniques: the legality of the strike and the nature of impasse procedures. These two policies are considered together because impasse procedures are usually viewed as strike alternatives. Practices in each of these areas of statutory regulation vary considerably. In some jurisdictions the strike is an acceptable means of achieving "closure" or "finality" to the collective bargaining process. Other jurisdictions prohibit the strike but provide for binding third-party resolution of interest disputes. Still others delegate the final resolution of disputes to the legislative body of one of the parties--the public employer.

The availability of dispute resolution mechanisms, whether the strike or strike alternatives, is pivotal for transit effectiveness because of the behaviors and attitudes these public policies potentially control. Among the objectives of dispute resolution methods is the minimization of strikes, the continuation of essential services, and the assurance that the level of collective bargaining settlements is not affected by third party intervention. The ability of available dispute resolution mechanisms to facilitate these objectives may have important consequences for transit property effectiveness.

Section 13(c)

The legal framework for collective bargaining in urban transit and Section 13(c) are closely related. Stern, et al., note that one of the purposes of 13(c) is the protection of collective bargaining rights for employees in transit systems affected by a transition from private to public ownership.⁵ In practice, Section 13(c) requires the Secretary of Labor to certify that the interests of employees will not be harmed before federal funds may be obtained by transit operators for capital equipment or operating expenses. In many cases, a requirement for certification under Section 13(c) is the retention of private sector collective bargaining practices.⁶

Although this outgrowth of Section 13(c) appears reasonable, and the intent of 13(c) is to assure equity for employees of transit systems, transit industry officials have widely criticized it. Some argue that the protections of negotiated 13(c) agreements extend beyond the minimum requirements of the legislation. Rokow writes:

In more general terms, 13(c) protects employees from harm as a result of Federal aid. Specific protections which have been negotiated into many agreements include six years salary and fringe benefits in the event an employee is displaced or dismissed, moving allowances, paid re-training, protection of pension rights, etc. Many 13(c) agreements include some 30 clauses of itemized protections....Section 13(c) protects labor's bargaining rights and workers' compensations, and offers a certain amount of security. Management says that by doing this 13(c) limits the possibilities of cost savings and productivity opportunities.⁷

⁵Stern, Miller, Rubinfeld, Olson, and Heshizer, The Legal Framework for Collective Bargaining in the Urban Transit Industry, pp. 1-2.

⁶Ibid.

⁷Nan Rokow, Transit Labor-Management Relationships (Washington, D.C.: Public Technology, Inc. 1977). Mimeo, p. 4.

No doubt some of the criticisms of Section 13(c) hinge on misperceptions of actual 13(c) agreements and dissatisfaction surrounding its implementation. A common criticism of 13(c), as evidenced by the previous citation, is the perceived generosity of employee protections. As Barnum notes, however, the protections, of 13(c) agreements vary because employee job rights vary among systems.⁸ Therefore, what may appear to be generous protections for employees of some systems actually reflect the application of fairly consistent employee protection standards from transit property to transit property.

Some of the problems surrounding 13(c)'s implementation appear to have more substance. Section 13(c) protections must be negotiated by labor and management and the agreement resulting from negotiations must be approved by the Secretary of Labor. The potentially deleterious, unintended consequences of this procedure are summarized by Barnum:

Some management representatives have contended that this situation has allowed the unions to receive unduly favorable 13(c) settlements, because they can effectively "veto" a grant until management meets their demands. Furthermore, management spokesmen have said that unions have threatened to withhold approval of 13(c) agreements during regular labor negotiations, in attempts to make management increase the benefits provided in the regular labor contract. Because managements are often under great pressure to obtain federal assistance, some contend that they have been forced to meet union demands, and hence have had to give much more in 13(c) agreements and regular contracts than they felt was justified.⁹

⁸Darold T. Barnum, From Private to Public: Labor Relations in Urban Mass Transit (Lubbock, Texas: College of Business Administration, 1977), p. 144.

⁹Ibid., p. 150.

RELATIONSHIPS BETWEEN LEGAL POLICY
AND TRANSIT PERFORMANCE

This section discusses the relationships expected between variations in legal policy and transit property performance. In making predictions we draw upon the results of recent research in the public sector generally as well as research in urban transit. Most recent empirical research on the legal framework for public sector labor-management relations has focused on collective bargaining policy and its effects on various bargaining outcomes, for example, wages and work stoppages. Ashenfelter, Ehrenberg, and others have analyzed the general influence of unionization on wage levels within the public sector.¹⁰ While these studies did not directly assess the legal framework's influence on wage levels, a strong association exists between collective bargaining legal policy and unionization. Kochan, Wheeler, and Gerhart have investigated the relationships between legal policy and a global measure of contract negotiation outcomes.¹¹ The effects of collective bargaining legal

¹⁰Orley Ashenfelter, "The Effects of Unionization on Wages in the Public Sector: The Case of Fire Fighters," Industrial and Labor Relations Review, 24 (January 1971), 191-202; Ronald G. Ehrenberg, "Municipal Government Structure, Unionization, and the Wages of Fire Fighters," Industrial and Labor Relations Review, 27 (October 1973), 36-48; James L. Freund, "Market and Union Influences on Municipal Employee Wages," Industrial and Labor Relations Review, 27 (April 1974), 391-404; and W. Clayton Hall and Norman E. Carroll, "The Effects of Teachers' Organizations on Salaries and Class Size," Industrial and Labor Relations Review, 26 (June 1973), 834-841.

¹¹See Thomas A. Kochan and Hoyt N. Wheeler, "Municipal Collective Bargaining: A Model and Analysis of Bargaining Outcomes," Industrial and Labor Relations Review, 25 (October 1975), 46-66 and Paul F. Gerhart, "Determinants of Bargaining Outcomes in Local Government Labor Negotiations," Industrial and Labor Relations Review, 29 (April 1976), 331-351.

policy on strikes by public employees has also been the subject of several empirical studies.¹² Barnum has also considered the broad implications of legal policies for bargaining outcomes in his studies of collective bargaining in urban mass transit.¹³

Since the bargaining outcomes referred to above are intermediate determinants of organizational effectiveness, the results of these studies cannot be directly used in assessing the relationships between the labor-management legal framework and transit property effectiveness. However, these studies help to identify relationships in two ways. First, if we assume that some bargaining outcomes are not offset by changes in other variables, we can make a clear prediction about the relationships between the legal framework and effectiveness. For example, if the impact of collective bargaining policies on wages is not offset by productivity changes, then we could make a prediction about the relationship between legal policy and labor productivity. Second, in cases where the association between legal policy and intermediate bargaining outcomes is known, asking questions about the probable relationships between intermediate bargaining outcomes and transit property effectiveness can be helpful.

Collective Bargaining Policy and Transit Performance

Bargaining Rights. We indicated earlier that it is reasonable to expect that providing employee representatives with joint control of

¹²John T. Burton and Charles E. Krider, "The Incidence of Strikes in Public Employment" in Daniel S. Hammermesh (ed.), Labor in the Public and Nonprofit Sectors (Princeton, NJ: Princeton University Press, 1975), pp. 135-177; James L. Perry, "Strikes in State Government Employment," State Government, 49 (Autumn 1976), 257-262; James L. Perry, "Public Policy and Public Employee Strikes," Industrial Relations, 16 (October 1977), 273-282; and James L. Perry and Leslie J. Berkes, "Predicting Local Government Strike Activity: An Exploratory Analysis," Western Political Quarterly, 30 (December 1977), 513-527.

¹³See Darold T. Barnum, "Collective Bargaining and Manpower in Urban Mass Transit Systems," unpublished doctoral dissertation, University of Pennsylvania, 1972, and Darold T. Barnum, From Private to Public: Labor Relations in Urban Mass Transit.

certain decisions will limit management authority and require tradeoffs between efficiency goals and employee interests. Thus, productivity and efficiency might be lower in transit systems which are required to bargain collectively than in systems where management is given greater latitude in selecting the form of its relationship with labor. However, whether management has unilateral control in the workplace or whether they must share control with employees, organizational effectiveness can still vary a great deal. Our systems model suggests that independent variations in the organization of the parties, relationship patterns, or the collective agreement will moderate the influences of bargaining rights on transit property effectiveness. For example, we expect that cooperative labor-management relations under full-fledged collective bargaining will produce transit effectiveness outcomes similar to situations in which employees have lesser bargaining rights. Cooperative relations should minimize the importance of legal "rights" distinctions and should facilitate high performance regardless of legal environment. Based upon these observations, we predict,

Hypothesis 3.1: Transit properties will be generally less effective under legal frameworks that require the employer to bargain collectively than under alternative legal provisions. Where cooperative relationships exist, however, there will be no differences in transit performance attributable to the legal policy governing bargaining rights.

Scope of Bargaining. Restrictions on the scope of bargaining notwithstanding, several behavioral dynamics of public sector bargaining suggest that the scope of bargaining will have little influence on transit effectiveness. First, as an outgrowth of restrictions on the scope of bargaining, employee organizations may redefine the strength of their preferences for issues which remain within the scope of bargaining. Such a redefinition of priorities may result in "harder" bargaining on items within the scope of bargaining and, possibly larger concessions by management on these items. Thus, the gains expected from limiting the scope of bargaining may result in tradeoffs on other issues.

Perhaps more serious than the first consequence is the second behavioral outgrowth of a restricted scope of bargaining. Limiting the

scope of bargaining may encourage employee organizations to pursue their goals associated with prohibited issues through alternative channels. Employee organizations may use lobbying, political campaigns and other means to realize their objectives. This type of multilateralism produces undesirable consequences for continued bilateral decisionmaking and may result in bargaining outcomes similar to those achieved where the scope of bargaining is not restricted.

Finally, although statutory restrictions may be imposed upon the scope of bargaining, the actual scope of bargaining may not coincide with the formal requirements.¹⁴ Local interpretations of broad statutory language may not be related to legislative intent. Furthermore, management negotiators interested in conflict resolution may opt to discuss restricted items. Wollett argues, that union demands which present problems "are not usually insoluble if they are dealt with on their merits rather than avoided on conceptualistic grounds."¹⁵ He contends that dealing with any union proposal on its merits is the tactic least likely to exacerbate conflict.

Although a restriction on the scope of bargaining may achieve its primary purpose, it appears that such a policy will also bring with it significant risks of unintended and counterproductive consequences. Therefore, we suggest the following hypothesis,

Hypothesis 3.2: The legal policy governing the scope of bargaining will have no significant impact on transit property performance.

¹⁴For two useful discussions of the distinctions between the formal and actual scope of bargaining see Paul F. Gerhart, "The Scope of Bargaining in Local Government Labor Negotiations," Labor Law Journal, 20 (August 1969), 545-552 and Don Vial, "The Scope of Bargaining Controversy: Substantive Issues vs. Procedural Hangups," California Public Employee Relations, No. 15 (November 1972), 2-26.

¹⁵Donald H. Wollett, "The Bargaining Process in the Public Sector: What is Bargainable?", Oregon Law Review, 51 (1971), p. 177.

Methods of Dispute Resolution. The availability and/or use of particular dispute resolution mechanisms should have some predictable influences upon transit effectiveness.¹⁶ The "license" of the employer who can resolve labor-management interest disputes unilaterally may be counterproductive if it is not exercised with some notion of just reward for employee effort. However, unilateral management control over the final agreement in labor-management disputes should potentially facilitate greater transit effectiveness than joint or third-party dispute resolution methods. Similarly, bilateral or nonbinding third-party dispute resolution methods should lead to more desirable bargaining outcomes, and therefore greater transit effectiveness, than binding arbitration.

In contrast, the availability or use of the strike to settle disputes should be associated with lower levels of transit effectiveness than alternative dispute resolution methods. Even binding arbitration, which many view as less desirable than strikes, ultimately is more advantageous than the strike for transit effectiveness. While an arbitrator might grant certain concessions to labor representatives that management would not consent to in bargaining, the arbitrator might also serve to redress unproductive or inefficient practices. Furthermore, since binding arbitration guarantees the continuation of services in the event of an impasse, it should be associated with higher transit

¹⁶We do not distinguish between situations in which dispute resolution mechanisms are actually used and situations in which they are available but are not used. There are two reasons for not making such a distinction. First, since we are interested in assessing the impacts of formal legal policy on transit performance, our focus is upon the dispute resolution mechanisms provided by law and not their use. The use of dispute resolution mechanisms may be associated with many factors independent of the formal legal policy. Second, because the availability of dispute resolution mechanisms may influence the bargaining behavior of the parties without being used, it would not be appropriate to consider only those mechanisms which have been used in a particular situation.

effectiveness than the strike because of the negative effects of a strike on transit ridership.¹⁷ Consistent with these probable impacts of dispute resolution methods on transit performance, we offer the following hypothesis,

Hypothesis 3.3: Transit properties which have available or use dispute resolution mechanisms other than binding arbitration to resolve labor-management disputes will be more effective than those properties which use binding arbitration. Transit properties which rely upon the strike to resolve disputes will be less effective than those in which disputes are resolved by other means.

Section 13(c)

Despite the problems of implementing 13(c) which we discussed earlier, two circumstances associated with its implementation in some transit systems are likely to mitigate its effects on transit performance. First, there may well be instances in which it is expedient for both labor and management to enter into a 13(c) agreement even when prior bargaining rights are not fully maintained.

Stern, et al. comment:

"It should be noted, however, that in most situations, the need for federal funding to maintain nearly bankrupt private systems under public ownership leads both unions and managements jointly to maintain that their arrangements do in fact meet the 13(c) requirements."¹⁸

This type of compromise might contribute to long-run improvement in the performance of a transit property from what it would have been under private ownership. Second, Stern, et al. suggest that

¹⁷For an analysis of the impacts of strikes upon transit ridership and fares see Mitchell E. Brachman, Kumares C. Sinha, and Michael W. Pustay, The Effects of Labor Strikes on Bus Transit Use (West Lafayette, Indiana: Purdue University, 1976).

¹⁸Stern, Miller, Rubinfeld, Olson, and Heshizer, The Legal Framework for Collective Bargaining in the Urban Transit Industry, p. 4.

there is no continued assurance of the enforceability of 13(c) in all organizational settings and that certain procedural functions of the NRLA may already be unobtainable.

In any event, the present situation is potentially an unstable one. It has not assumed major proportions, however, because of the long history of established and relatively sophisticated bargaining patterns voluntarily pursued by unions and management in the transit industry. But if bargaining relationships deteriorate and the need for NLRB-type services arises, it appears that they will not be forthcoming.¹⁹

Considering the conflicting interpretations of the impact of 13(c), how should its impact on transit effectiveness be judged? While it appears that in some situations labor has gained some leverage, it seems clear that in other situations the advantage shifts in favor of management. Some negative consequences have obviously been attributed to 13(c) by management partisans who believe urban mass transit is better served without collective bargaining. Setting aside this normative argument, however, the important question is whether 13(c) has led to any consequences for transit properties beyond its original intent. All in all, it seems doubtful that the protection of individual employees against a worsening of their positions has itself significantly limited opportunities for improved efficiency. Therefore, we suggest the following relationship,

Hypothesis 3.4: Aside from differences in performance attributable to variations in bargaining rights, there will be no significant difference between the performance of transit properties in which 13(c) has had a perceived impact and those in which it has not.

¹⁹ Ibid., p. 52.

²⁰ This assessment is supported by a recently completed Department of Labor study. See Frederic B. Siskind and Ernst W. Stromsdorfer, The Economic Cost Impact of the Labor Protection Provisions of Section 13(c) of the Urban Mass Transportation Act of 1964, Parts One and Two (Washington, D.C.: Office of the Assistant Secretary for Policy, Evaluation and Research, U.S. Department of Labor, 1978).

RESEARCH FINDINGS

Descriptive Statistics

Frequency distribution for the primary independent variables explored in this chapter are presented in Table 3-2 and 3-3. As indicated in Table 3.2, the distributions for bargaining rights legal policy and scope of bargaining legal policy are bimodal. With one exception, the transit organizations in the sample are required by law either to "meet and confer" or "bargain collectively." In practice these two types of provisions represent substantial differences in employee bargaining rights. Although the scope of bargaining frequency distribution is also bimodal, the real differences between the "broad, but some limitation" category and the "no limitation" category are, in practice, small.

The statutory impasse procedures available to each transit property in the sample exhibit more variability than the bargaining rights or scope provisions. Fact finding was the most widely available (69%) dispute resolution method followed by mediation (59%). Compulsory arbitration was permitted for the resolution of interest disputes in six properties.

Statutory policy regarding the right to strike was also highly variable. In about one-third of the cases the statute was silent with respect to strikes by employees. An equal number of situations permitted strikes. A plurality of statutes prohibited employee strikes, but only two provided penalties for violating no strike statutes.

Manager responses to an open-ended interview question on the impacts of 13(c) were a good reflection of opinions to this question. A majority of the respondents indicated that 13(c)'s impact is, at worst, potential; forty-four percent of the respondents believed 13(c) had no impact at all. The remainder of the responses reflected common criticisms of 13(c). Probably the most surprising criticism was that 13(c) was an intrusion on local autonomy.

TABLE 3-2. FREQUENCY DISTRIBUTIONS FOR THE COLLECTIVE BARGAINING
LEGAL POLICY VARIABLES

VARIABLE	FREQUENCY (N=29)	%
Bargaining Rights		
No provision	1	3
Employer required to meet and confer	17	59
Employer required to bargain collectively	11	38
Scope of Bargaining		
No provision	2	7
Broad scope, but some limitations	12	41
No limitations on scope	15	52
Impasse Procedures^a		
No provision	3	10
Mediation	17	59
Fact finding	20	69
Voluntary binding arbitration	4	14
Compulsory arbitration	6	21
Strike Policy		
No provision	9	31
Strikes Prohibited, penalty for violation	2	7
Strikes prohibited, no penalty for violation	9	31
No limitation on strikes	9	31

^a Multiple responses were permitted so N > 29 and percentages do not sum to 100.

TABLE 3-3. MANAGER RESPONSES TO OPEN-ENDED INTERVIEW QUESTION ON
THE IMPACT OF 13(c)

IMPACT	FREQUENCY ^a (N=25)	%
No Impact At All	14	56
No Impact to Date, but Could Potentially Have an Impact	6	24
Intrusion on Local Autonomy	2	8
Creates Significant Administrative Costs	3	12
Gives Leverage to the Union in Negotiations	4	16
Hold Harmless Provisions Limit Efficiency Gains	2	8
Some Impact (unspecified)	1	4

^aMultiple responses were permitted. Percentages, therefore, do not sum to 100.

Tests of the Hypotheses

Statistical tests were used to assess the significance of the association between the measures of collective bargaining legal policy and transit property effectiveness. The four components of transit effectiveness, as measured by the eleven indicators discussed in Chapter 2, were the dependent variables.

Bargaining Rights. Table 3-4 presents the results of the statistical tests of Hypothesis 3.1. The results of a t-test and rank order correlations provide partial support for Hypothesis 3.1. Three of the eleven rank order correlations (for operating expense per revenue vehicle hour, self-reported absenteeism, and tardiness) are significant and in the direction expected. The major deviation from the hypothesis occurs among the service effectiveness indicators. On each service effectiveness indicator the mean for the "required to bargain collectively" group is greater than the mean for the other group. Thus, the service utilization relationship is opposite the direction expected, but the association is non-significant.

As Table 3-4 indicates, there is also no significant relationship between bargaining rights policy and adaptability. Employee perceptions of adaptability, which we consider to be the better of the two measures, is associated with bargaining rights policy in the expected direction. On the other hand, the direction of the relationship between management perceptions of adaptability and bargaining rights policy is opposite than hypothesized. The measures of turnover are also generally related to bargaining rights policy in directions opposite our expectations.

Scope of Bargaining. The results of the test of Hypothesis 3.2 are presented in Table 3-5. Since we predicted no relationship between scope of bargaining and transit effectiveness, the results of the t-tests tend to confirm the hypothesis. For most of the indicators the probability that the group means are the same ranges above 30% and in several cases more than 75%. The separation rate relationship deviates from our prediction, just as it did in Hypothesis 3.1.

Dispute Resolution Methods. Three sets of t-tests were performed to test Hypothesis 3.3. First, the cases were divided into two groups depending

TABLE 3-4. ASSOCIATIONS BETWEEN STATUTORY BARGAINING RIGHTS REQUIREMENTS AND TRANSIT PERFORMANCE INDICATORS

	T-TEST		t-Statistic	1-tail Probability	RANK ORDER CORRELATION
	Group Mean: Not Required to Bargain Collectively	Group Mean: Required to Bargain Collectively			Kendall's tau
SERVICE EFFICIENCY					
Revenue vehicle hours per driver hour	.78	.79	- .16	.43	.01
Operating expense per employee	26,165.90	26,561.48	- .14	.44	.11
Operating expense per revenue vehicle hour	20.71	26.54	-1.43	.09	.39**
SERVICE EFFECTIVENESS					
Revenue passengers per ser- vice area population	15.67	31.62	-1.33	.10	.12
Revenue passengers per revenue vehicle hour	22.06	24.17	- .66	.26	-.01
EMPLOYEE WITHDRAWAL					
Self-reported absenteeism	5.76	12.28	-2.10	.02	.37**
Separation rate	.18	.07	1.89	.04	-.17
Intent to leave	1.81	1.87	- .46	.33	.12
Stability rate	.26	.28	- .22	.42	.08
Tardiness	.76	1.60	-2.14	.03	.45**
ADAPTABILITY					
Employee perceptions	4.14	3.93	.79	.22	-.23
Management perceptions	4.99	5.27	- .87	.20	.07

** p < .025

TABLE 3-5. ASSOCIATIONS BETWEEN SCOPE OF BARGAINING AND THE TRANSIT PERFORMANCE INDICATORS

	<u>T-TEST</u>			
	Group Mean: Broad Scope of Bargaining, but Some Limitations	Group Mean: No Restrictions on the Scope of Bargaining	t-Statistic	2-tail Probability
SERVICE EFFICIENCY				
Revenue vehicle hours per driver hour	.74	.80	- .98	.34
Operating expense per employee	27,391.96	26,803.52	.21	.84
Operating expense per revenue vehicle hour	21.40	23.46	- .70	.49
SERVICE EFFECTIVENESS				
Revenue passengers per service area population	16.37	27.18	- .83	.41
Revenue passengers per revenue vehicle hour	20.81	24.07	-1.00	.33
EMPLOYEE WITHDRAWAL				
Self-reported absenteeism	6.35	9.58	- .99	.33
Separation rate	.21	.09	2.19	.04
Intent to leave	1.81	1.89	- .69	.50
Stability rate	.25	.30	- .55	.59
Tardiness	1.31	1.16	.33	.75
ADAPTABILITY				
Employee perceptions	4.06	4.05	.04	.97
Management perceptions	5.17	5.02	.45	.66

on whether binding arbitration was available or unavailable for resolving interest disputes. A second split in the cases was made according to whether strikes were legally prohibited or permitted. Finally, cases were also grouped on the basis of whether or not a strike had occurred at the property since 1970. This final categorization provided an opportunity to assess relevant behavioral differences in addition to policy differences.

The results of the t-tests for the groups created from differences in binding arbitration provisions are presented in Table 3-6. Except for two relationships the associations are non-significant and they strongly indicate there is no association between arbitration and transit property performance. Of the two significant relationships, one is in the predicted direction and the second is not.

The results for the strike policy t-tests, as shown in Table 3-7, are quite similar to those for arbitration policy. Only two relationships are significant, one in the direction opposite than predicted. The relationship between strike policy and self-reported absenteeism is quite strong. This result is consistent with the results for bargaining rights and arbitration policy. Although the mean for management perceptions of adaptability is greater (i.e., higher adaptability) for the "strikes permitted" group, no relationship is exhibited by the employee perceptions variable.

In contrast with the previous two sets of t-tests for Hypothesis 3.3 are the results exhibited in Table 3-8. Seven of the eleven relationships are significant at better than the .10 level. The service efficiency and absenteeism relationships are each significant and in the direction predicted. Higher service effectiveness and, to a lesser extent, lower turnover appear to be associated with the occurrence of one or more strikes since 1970. Adaptability is the only effectiveness component which does not exhibit a significant association.

Section 13(c). Analysis of variance and t-tests were used to test Hypothesis 3.4. Bargaining rights was used as a covariate in the ANOVA to extract variance attributable to it rather than the impact of 13(c). The results of these analyses are presented in Table 3-9 and 3-10. The covariate reduces the variance attributable to 13(c) less than might have been

TABLE 3-6. ASSOCIATIONS BETWEEN AVAILABILITY AND NON-AVAILABILITY OF ARBITRATION AND THE TRANSIT PERFORMANCE INDICATORS

	<u>T-TEST</u>			
	Group Mean: No Provision for Arbitration of Interest Disputes	Group Mean: Provision for Arbitration of Interest Disputes	t-Statistic	1-tail Probability
SERVICE EFFICIENCY				
Revenue vehicle hours per driver hour	.76	.88	-1.66	.06
Operating expense per employee	26,536.74	25,374.79	.34	.37
Operating expense per revenue vehicle hour	21.93	24.08	- .67	.26
SERVICE EFFECTIVENESS				
Revenue passengers per service area population	15.69	44.83	-2.14	.02
Revenue passengers per revenue vehicle hour	22.59	24.27	- .45	.33
EMPLOYEE WITHDRAWAL				
Self-reported absenteeism	6.41	16.42	-2.41	.01
Separation rate	.16	.06	1.30	.10
Intent to leave	1.85	1.74	.68	.25
Stability rate	.27	.26	.11	.46
Tardiness	1.09	0.0	1.30	.11
ADAPTABILITY				
Employee perceptions	4.06	4.22	- .42	.34
Management perceptions	5.05	5.33	- .66	.26

TABLE 3-7. ASSOCIATIONS BETWEEN STRIKE POLICY
AND THE TRANSIT PERFORMANCE INDICATORS

	<u>T-TEST</u>		t-Statistic	1-tail Probability
	Group Mean: Legal Policy Prohibit Strikes	Group Mean: Legal Policy Permits Strikes		
SERVICE EFFICIENCY				
Revenue vehicle hours per driver hour	.77	.79	- .25	.41
Operating expense per employee	26,586.54	25,645.93	.31	.38
Operating expense per revenue vehicle hour	21.96	23.30	- .47	.33
SERVICE EFFECTIVENESS				
Revenue passengers per service area population	25.43	14.55	.85	.20
Revenue passengers per revenue vehicle hour	23.11	22.78	.10	.46
EMPLOYEE WITHDRAWAL				
Self-reported absenteeism	5.99	11.73	-1.81	.04
Separation rate	.16	.08	1.32	.10
Intent to leave	1.82	1.86	- .30	.36
Stability rate	.27	.27	- .06	.43
Tardiness	.90	1.46	-1.22	.13
ADAPTABILITY				
Employee perceptions	4.09	4.05	.12	.46
Management perceptions	4.85	5.63	-2.59	.01

TABLE 3-8. ASSOCIATIONS BETWEEN THE RECENT OCCURRENCE OF A STRIKE AND THE TRANSIT PERFORMANCE INDICATORS

	<u>T-TEST</u>			
	Group Mean: No Strikes Since 1970	Group Mean: One or More Strikes Since 1970	t-Statistic	1-tail Probability
SERVICE EFFICIENCY				
Revenue vehicle hours per driver hour	.81	.71	1.59	.07
Operating expense per employee	25,096.22	31,136.90	-1.91	.04
Operating expense per revenue vehicle hour	19.36	27.48	-3.73	.001
SERVICE EFFECTIVENESS				
Revenue passengers per service area population	13.13	45.58	-2.48	.01
Revenue passengers per revenue vehicle hour	21.19	27.85	-1.97	.03
EMPLOYEE WITHDRAWAL				
Self-reported absenteeism	5.41	18.89	-4.50	.001
Separation rate	.17	.04	2.02	.03
Intent to leave	1.83	1.83	.04	.49
Stability rate	.22	.47	-2.70	.01
Tardiness	.90	1.46	-1.22	.12
ADAPTABILITY				
Employee perceptions	4.13	3.84	.88	.20
Management perceptions	5.06	5.18	- .32	.37

TABLE 3 -9. RELATIONSHIPS OF PERCEIVED IMPACT OF 13(c)
WITH THE TRANSIT PERFORMANCE INDICATORS

	<u>T-TEST</u>		t-Statistic	2-tail Probability
	Group Mean: 13(c) Has No Perceived Impact	Group Mean: 13(c) Has Had a Per- ceived Impact		
SERVICE EFFICIENCY				
Revenue vehicle hours per driver hour	.80	.72	1.36	.19
Operating expense per employee	25,935.84	26,857.13	- .33	.75
Operating expense per revenue vehicle hour	20.69	23.78	-1.10	.28
SERVICE EFFECTIVENESS				
Revenue passengers per service area population	23.59	14.67	.66	.52
Revenue passengers per revenue vehicle hour	23.71	21.09	.70	.49
EMPLOYEE WITHDRAWAL				
Self-reported absenteeism	9.16	5.97	.99	.33
Separation rate	.12	.19	-1.14	.27
Intent to leave	1.78	2.00	-2.77	.01
Stability rate	.27	.26	.12	.91
Tardiness	.95	1.32	- .77	.46
ADAPTABILITY				
Employee perceptions	4.19	3.83	1.48	.15
Management perceptions	5.06	5.12	- .18	.86

TABLE 3-10. ANOVA BETWEEN 13(c) IMPACT AND PERFORMANCE INDICATORS CONTROLLING FOR BARGAINING RIGHTS

	MAIN EFFECTS: IMPACT OF 13(c) ^a			COVARIATE: BARGAINING RIGHTS		
	Mean Square	F	Significance of F	Mean Square	F	Significance of F
SERVICE EFFICIENCY						
Revenue vehicle hours per driver hour	.05	2.57	.12	.00	.00	.99
Operating expense per employee	27,042,150.50	.78	.99	487,730.12	.01	.99
Operating expense per revenue vehicle hour	50.43	1.24	.28	15.98	.39	.99
SERVICE EFFECTIVENESS						
Revenue passengers per service area population	1,162.12	.86	.99	1,241.68	.92	.99
Revenue passengers per revenue vehicle hour	59.18	.98	.99	6.36	.10	.99
EMPLOYEE WITHDRAWAL						
Self-reported absenteeism	79.51	1.62	.22	167.93	3.42	.08
Separation Rate	.01	.97	.99	.01	.67	.99
Intent to leave	.25	7.03	.02	.02	.57	.99
Stability rate	.06	1.21	.32	.01	.19	.99
Tardiness	.08	.25	.99	3.34	10.37	.02
ADAPTABILITY						
Employee perceptions	.58	1.83	.19	.54	1.72	.20
Management perceptions	.03	.05	.99	.67	1.02	.33

^aThis variable is the dichotomized responses of managers to the interview question on the impact of 13(c). All those who responded either "no impact" or "no impact, but potential" were placed in one group and the remainder were placed in a second group.

expected. Comparing the t-test probabilities with the significance of F for the main effects of the ANOVA gives a crude guide to the confounding variance attributable to differences in bargaining rights. The relationships between service effectiveness and separation rate and 13(c) disappear when bargaining rights is a control variable. Interestingly, management perceptions of adaptability are unaffected by 13(c). The only significant association between 13(c) and the indicators is with the intent to leave variable. Despite this significant relationship, Hypothesis 3.4 receives a moderate to high amount of support.

DISCUSSION

It appears that the legal rules governing labor-management relations, though somewhat influential, have less impact upon transit performance than we had anticipated. One reason for the lack of association is apparent from our site visits. Although the statutes and ordinances regulating collective bargaining were generally unambiguous, we encountered only moderate levels of managerial familiarity with the laws. With a few notable exceptions, management officials who presumably, given their position, should have been knowledgeable about the legal constraints were unfamiliar with key provisions of the statutes.

This lack of familiarity with the legal framework for labor relations often resulted in significant differences between objective legal constraints and operative constraints. For example, negotiated union security provisions in several instances extended beyond the boundaries allowed by law. While this variation between the statute and the "rules" at the property appeared to be the result of lack of familiarity with the statute, the differences had no apparent influence on performance.

Perhaps more important than the observed differences between formal and actual policies was the fact that the legal provisions and the processes controlled by them (unit determination, unfair labor practices) did not become significant points of conflict between the parties. A great deal more attention was paid by labor and management to the immediate rules of the relationship (the collective agreement) than to

the more general state and local legal framework. This lack of attention to the statutory framework was, in part, probably a function of the age of some of the relationships and a lack of any cases of extreme conflict in our sample. It may also indicate that in the public sector the legal framework is much less important as a rule-setting mechanism than in the private sector.

Interviews with a wide range of labor-relations officials yielded widespread consensus that the adverse impact of 13(c) is more a potential problem than a reality. Our statistical analysis serves to confirm this view. No instances were encountered in which payments guaranteed by a 13(c) agreement was accorded an employee because of the adverse impact of federal funding. Several management officials suggested that (claims for) 13(c) payments would probably not be invoked in the future since management was fully aware of 13(c) protections and could "manage its way around them."

Considerable ambiguity appears to exist over the circumstances which might lead to a 13(c) judgment. Many of the individuals we interviewed associated the avoidance of any 13(c) difficulties with the fact that their organizations had experienced continuing growth. Most did not distinguish between the implications of reductions in employee welfare attributable to 13(c) and reductions attributable to circumstances other than federal funding, such as layoffs due to a contracting market for transit. It appeared that some managers equated any reductions in employment or employee welfare with the protections contained in their 13(c) agreement.

While 13(c) did not have a "statistically significant" impact on transit effectiveness among the properties in our sample, it has had some impacts. In several instances the general reluctance of transit property officials to accede to the provisions of the standard 13(c) agreement resulted in substantial delays in signing an agreement. The resulting delay in certification caused the loss of substantial interest on federal monies. We also uncovered a substantial wave of opinion that the ramifications of some 13(c) requirements are so ambiguous that any actual confrontation may result in years of litigation before the specific intent of various provisions has been sorted out. This issue of uncertainty is highlighted in another recent

study:

Uncertainty costs have several characteristics. First, they have a time dimension. How long after the receipt of a capital (or operating) grant is a firm liable for 13(c) payments? Second, they have a spatial dimension. Can cab drivers file 13(c) claims if increased mass transit service cuts the demand for their services? ... Third, according to management, increased ambiguity is interjected into industrial relations problems to the extent that the jurisdiction of Section 13(c) becomes unclear when operating grants, which are not project specific, are given to a transit operation (emphasis in the original).²¹

Given these types of uncertainties, it may be some time before the full impact of Section 13(c) upon organizational effectiveness can be assessed.

CONCLUSIONS

The assessment of four hypotheses about relationships between the labor relations legal framework and urban mass transit performance produced mixed results. Hypotheses concerning bargaining rights and dispute resolution methods received moderate amounts of support, but were only partially confirmed. Hypotheses concerning 13(c) and the scope of bargaining were confirmed.

Two "unqualified" conclusions are warranted at this stage in the analysis. First, formal legal policy appears to be only a limited constraint on the nature of labor-management relations and the effectiveness outcomes achieved by transit properties. If formal legal policy were a stronger constraint we would have observed greater uniformity in the statistical relationship. The finding that strikes were consistently associated with the effectiveness indicators also suggests that actual behavior is more strongly related to effectiveness than formal (but per-

²¹Frederic B. Siskind and Ernst W. Stormsdorfer, The Economic Cost Impact of the Labor Protection Provisions of Section 13(c) of the Urban Mass Transportation Act of 1964, Parts One and Two (Washington, D.C.: Office of the Assistant Secretary for Policy, Evaluation and Research, U.S. Department of Labor, 1978).

haps less influential) legal policies.

A second conclusion concerns one of the effectiveness components. Among all the performance indicators, only absenteeism was consistently and significantly associated with the legal policy variables. Since legal policy does not directly influence absenteeism, legal policy obviously has effects upon relationship patterns and the collective agreement which encourage absenteeism. In any event, higher than necessary absenteeism may be an unintended consequence of legal policies that facilitate collective bargaining.

CHAPTER 4

THE INFLUENCES OF LABOR AND MANAGEMENT
ORGANIZATION ON TRANSIT PERFORMANCE

The second component of our systems model, and one of the more popular focuses of current research in public sector labor relations, involves the influences of labor and management organization upon the negotiation process and transit property performance. Central to the organizational influences theme are issues of centralization/decentralization, locus of power, and authority relationships. All of these structure-related variables may affect the process and, in turn, the outcomes of negotiations.

This chapter explores the relationships of a number of labor and management organization variables to transit performance and performance-related variables. Among the labor organization variables investigated are bargaining unit size and union structure. A similar assessment is made for management bargaining centralization and multilateralism.

CONCEPTUAL FRAMEWORK

Investigating the influences of the organizational structures of labor and management upon their joint relationship can be approached in two ways. One approach looks at interorganizational characteristics, such as the "balance" of power, and attempts to ascertain how it influences outcomes of interest. A second approach emphasizes characteristics of the focal organizations, labor and management, and attempts to understand how the internal structure and decision processes of the two focal organizations influence goal formation, bargaining behaviors, and other relevant outcomes.¹ This latter approach is the primary one used here.

¹For further discussion of these approaches to organizational analysis of public sector bargaining see Charles H. Levine, James L. Perry and John J. DeMarco, "Collective Bargaining in Municipal Governments: An Interorganizational Perspective," in Charles H. Levine (ed.), Managing Human Resources (Beverly Hills, CA: Sage Publications, 1977). Pp. 159-199.

While many characteristics of the focal organizations could be selected for analysis, we have chosen a small number of policy relevant variables for consideration. Much of the advice which has been given to policy makers on public transit bargaining, and public sector bargaining generally, has been provided by practitioners with private sector experience. Public employers have been encouraged to emulate the bilateral paradigm which prevails in the private sector. An issue to which we shall return is whether this conventional wisdom is appropriate for bargaining in public transit.

Labor Organizational Structure

We turn now to an examination of several dimensions of labor organization structure and their relationships to transit performance. Of particular interest are variables which (1) describe the structure of the union or employee association and (2) describe the employee bargaining unit.

Union Structure. Many studies have attempted to deal with the issue of the structural characteristics of unions and their respective collective bargaining behaviors.² One of the objectives of these studies has been to relate the internal structure of national unions to the collective bargaining activities of their local unions. According to Roomkin, the linkage between the internal structure of national unions and the bargaining behavior of union locals involves the distribution of collective bargaining authority among levels of the union.³

²For summaries and reviews of these studies, see Arnold S. Tannenbaum, "Unions" in James G. March (ed.), Handbook of Organizations (Chicago: Rand McNally, 1965), pp. 710-763; Woodrow L. Ginsburg, "Union Growth, Government and Structure" in Woodrow L. Ginsburg, E. Robert Livernash, Herbert S. Parnes, and George Strauss (eds.), A Review of Industrial Relations Research (Madison, WI: Industrial Relations Research Association, 1970), pp. 207-258; Myron Roomkin, "Union Structure, Internal Control, and Strike Activity," Industrial and Labor Relations Review, 29 (January 1976), 198-210; and George Strauss, "Union Government in the U.S.: Research Past and Future," Industrial Relations, 16 (May 1977), 215-242.

³Roomkin, "Union Structure, Internal Control, and Strike Activity."

In his review of research, Tannenbaum concluded that "'autocratic' union government is more likely to be associated with industrial peace than 'democratic'."⁴ "Autocratic" and "democratic" essentially imply different distributions of control within the union organizational structure. The available evidence suggests that more accommodative relations, fewer strikes, and lower conflict as associated with more centralized (autocratic) control of affiliated subordinate bodies.⁵

The rationales for why greater centralization of control in national unions contributes to more harmonious labor-management relations can be summarized from Roomkin's study of union structure and strike activity.⁶ Among the rationales he posited are:

1. Power shared among levels within a union produces internal tension and conflict among leaders of the respective units. Disruptions in the negotiation process result from local/national conflicts of interest.
2. The national union prefers to control and limit strike activity by affiliates. Strikes are sanctioned selectively by the national on the behalf of the entire union's drive for better conditions.
3. To obtain settlements consistent with the desires of the local rank-and-file, subordinate bodies are usually more interested in using the strike.
4. In seeking to establish comparable conditions throughout an industry, a national may rely on pattern-setting tactics for which control of subunits is an important precondition. Centralized internal control also lends credibility to the national's arguments at the bargaining table.
5. An intermediate union body might serve as a buffer against complete national control. Local affiliates of the national are thus more likely to use tactics consistent with their goals.

⁴Tannenbaum, "Unions", p. 733.

⁵Ibid. and Roomkin, "Union Structure, Internal Control, and Strike Activity."

⁶Ibid.

Bargaining Unit Structure. Because the term bargaining unit has various meanings in the literature, it will be helpful to define how we will use it. Bargaining unit refers to the election district created from selection of an employee representative.⁷ The election district will be considered to be coterminous with the negotiation unit⁸, i.e. the group of employees which negotiates directly with the employer.

The importance of unit determination to the collective bargaining relationship is highlighted by many observers of public sector labor relations.⁹ Wellington and Winter suggest the potentially far reaching consequences of bargaining unit structure:

Unit determination plays a large role in both the private and public sectors in influencing which, if any, union will be chosen as a bargaining representative, the power structure of bargaining, the ability of various groups of employees to affect directly the terms and the peacefulness and effectiveness of the bargaining relationship.¹⁰

Given this multiplicity of impacts, variations in bargaining unit structure could be expected to have performance related consequences.

⁷ For additional definitions associated with the bargaining unit concept see Arnold Weber (ed.), The Structure of Collective Bargaining: Problems and Perspectives (New York: The Free Press of Glencoe, 1961) and Harry Wellington and Ralph K. Winter, The Unions and the Cities (Washington, D.C.: The Brookings Institution, 1971).

⁸ Ibid.

⁹ Thomas P. Gilroy and Anthony C. Russo, Bargaining Unit Issues: Problems, Criteria, Tactics, Public Employee Relations Library, No. 43 (Chicago: International Personnel Management Association, 1973); Eli Rock, "The Appropriate Unit Question in the Public Service: The Problem of Proliferation," Michigan Law Review, 67 (March 1969), 1001-1016; Lee C. Shaw and R. Theodore Clark, Jr., "Determination of Appropriate Bargaining Units in the Public Sector," Oregon Law Review, 51 (1971), 151-176; and Wellington and Winter, The Unions and the Cities.

¹⁰ Ibid., p. 98.

The literature on the structure of bargaining units in the public sector is quite specific about what features of bargaining units are likely to be performance related. Three dimensions are most frequently discussed: size, number, and type of unit. Size involves a relatively straightforward consideration of how many employees should be included within a given bargaining unit. The number of bargaining units is a jurisdiction-wide issue and focuses on the problem of fragmentation or proliferation of units. Finally, the type of unit involves whether the unit is organized on an industrial or vertical basis or on an occupational or horizontal basis.¹¹ Because bargaining unit size and fragmentation have received by far the most attention in the literature, we will confine our discussion to these two dimensions.

Self-determination by employees is the most compelling reason for a large number of small bargaining units. Although employee organizations usually advocate unit structures which are consistent with pragmatic considerations, small units are generally viewed as better facilitating workplace democracy than large units because of the greater control accorded employers. The tendency for public employers and regulatory agencies to give great deference to employee freedom of choice has, however, substantive merits beyond its contribution to workplace democracy. Rock and Wellington and Winter point out that some employees may constitute a small minority of a large unit in which their interests are likely to receive inadequate attention.¹² Greater attention can be given the special needs of employees in small units thus creating greater employee satisfaction.¹³ Wellington and Winter also emphasize that failure to recognize the interests of minorities

¹¹Gilroy and Russo, Bargaining Unit Issues: Problems, Criteria, Tactics.

¹²Rock, "The Appropriate Unit Question in the Public Service: The Problem of Proliferation" and Wellington and Winter, The Unions and the Cities.

¹³Gilroy and Russo, Bargaining Unit Issues: Problems, Criteria, Tactics.

in unit determination may contribute to strife in the bargaining relationship. They note: "A dissident group that feels excluded from the bargaining process will not be inhibited by the legal structure regulating bargaining."¹⁴

The primary counterargument against a large number of small units is that fewer units improve employer efficiency. Gilroy and Russo suggest that the proliferation of bargaining units has been recognized as a "major evil" which must be avoided in the public sector.¹⁵ A major benefit of a limited number of bargaining units is ease of administration.¹⁶ Among the purported advantages of a few large units is the reduced negotiations workload and decreased need for a large administrative bureaucracy.¹⁷ Since employees are affected by uniform policies and procedures, a few large units should also enhance contract administration activities.¹⁸

Management Structure

Just as disagreements exist about appropriate bargaining unit structure, so too are there debates about public management's organization for bargaining. Two issues associated with management structure for bargaining are discussed next: (1) decision-making authority in negotiations and (2) external influences in bargaining.

¹⁴Wellington and Winter, The Unions and the Cities, pp. 111-112.

¹⁵Gilroy and Russo, Bargaining Unit Issues: Problems, Criteria, Tactics.

¹⁶Andrew W. J. Thompson, Unit Determination in Public Employment, Public Employee Relations Report No. 1 (Ithaca, N.Y.: New York State School of Industrial and Labor Relations, 1968).

¹⁷Ibid.; Gilroy and Russo, Bargaining Unit Issues: Problems, Criteria, Tactics; Shaw and Clark, "Determination of Appropriate Bargaining Units in the Public Sector"; and Wellington and Winter, The Unions and the Cities.

¹⁸Gilroy and Russo, Bargaining Unit Issues: Problems, Criteria, Tactics.

Decision-making Authority in Negotiations. According to Jones and Shaw and Clark one of the evident differences between public and private sectors lies in the area of fragmentation of decision-making authority.¹⁹ Burton has investigated the influence of the collective bargaining process on municipal management structures and his research provides some insights to the nature of the fragmentation.²⁰ He demonstrates that a common initial response of local governments is to impose a system of collective bargaining upon existing patterns of authority. Responsibility for negotiations might be assigned to either the legislature or executive. No changes are made, however, in any previously established authority or influence relationships which may impinge upon the newly created bargaining process.

As might be expected, this dual authority system created by the transition to collective bargaining is inherently unstable. Burton suggests several reasons for the instability.²¹ One reason is that the official to whom responsibility for collective bargaining is first delegated is usually not a professional negotiator and thus he or she is unable to cope with experienced union adversaries. A second reason for the instability is that labor negotiations usually demand a greater amount of time than a budget director or similar official is able to devote to them. The most serious problem in Burton's view, however, is fragmentation of authority. Fragmentation forces labor officials to negotiate with numerous municipal officials.

When management recognizes the inadequacies of its initial structural response to collective bargaining, Burton notes that authority for labor relations is likely to be centralized in the executive branch.²² Full-time

¹⁹Ralph T. Jones, Public Sector Labor Relations: An Evaluation of Policy-Related Research (Washington, D.C.: National Science Foundation, 1975) and Lee C. Shaw and R. Theodore Clark, Jr., "The Practical Differences Between Public and Private Sector Collective Bargaining." UCLA Law Review, 19 (1972), 867-886.

²⁰John F. Burton, "Local Government Bargaining and Management Structure," Industrial Relations 11 (May 1972), 123-139.

²¹Ibid.

²²Ibid.

labor relations specialists are then likely to be delegated bargaining authority. Burton expects this centralization of authority to improve the coordination of management policy on all issues. His reasoning and conclusions are echoed by Shaw and Clark in their comparisons of public and private bargaining:

All too often the responsibility for collective bargaining has not been fixed with any degree of certainty, a circumstance which promotes at least two unsatisfactory results. First, because responsibility for collective bargaining is not explicitly assigned, no individuals are ascribed the specific obligation to promote and protect management's interests. Second, since labor relations is not recognized as a distinct function, the individual upon whom this responsibility is thrust is still expected to perform their normal duties, a situation which is often less than satisfactory. The need to establish labor relations as a separate function and to develop the competence of the individuals who staff this function must have a high priority if public employers expect to meet the challenge of militant unionism.²³

External Influences in Bargaining. While the problem of dispersion of authority within the formal management structure might be resolved by specialization and centralization, the decision-making process may remain fragmented because of the intervention of non-labor relations officials into bargaining. Several studies indicate that fragmentation is as much an outgrowth of the municipal political system interest group activity as it is a result of management structure.²⁴ Even stable management coalitions may break down in

²³Shaw and Clark, "The Practical Differences Between Public and Private Sector Collective Bargaining," pp. 870-871.

²⁴See, for example, Kenneth McLennan and Michael H. Moskow, "Multilateral Bargaining in the Public Sector," in McLennan and Moskow (eds.), Collective Bargaining in Government (Englewood Cliffs, N.J.: Prentice-Hall 1972). Pp. 227-234; Hervey Juris and Peter Feuille, Police Unionism (Lexington, MA: D.C. Heath, 1973); Thomas A. Kochan, "A Theory of Multilateral Bargaining in City Government," Industrial and Labor Relations Review, 24 (July 1974), 525-542; and Charles H. Levine, James L. Perry and John J. De Marco, "Collective Bargaining in Municipal Governments: An Interorganizational Perspective," in Charles H. Levine (ed.), Managing Human Resources (Beverly Hills, CA: Sage Publications, 1977). Pp 159-199.

the face of direct political pressure. One study suggests that multilateralism is associated with more favorable bargaining outcomes from the unions standpoint.²⁵

RELATIONSHIPS BETWEEN LABOR AND MANAGEMENT STRUCTURE AND TRANSIT PERFORMANCE

To test some of the assertions in the literature about labor and management structures, we measured a number of key variables and assessed their association with various outcome measures. Based upon the foregoing discussion, we developed the hypotheses below.

Hypothesis 4.1: The likelihood of the local of a national union participating in a strike should be associated negatively with national union control of local union activities, negatively with local union attachment to the national union, and positively with intermediate body control of local activities.

National control of local union activities is reflected in national approval of strikes, ratification of contracts, and participation of national representatives in local bargaining. The incidence of strikes is expected to decrease as national control increases. Similarly, strikes should decrease as local attachment to the national increases. Whereas national control is primarily associated with requirements of the union constitution, local attachment represents less formal and more discretionary local-national interaction. Intermediate body control of local activities is anticipated to be associated with a greater incidence of strikes because intermediate union bodies diminish the restraining influences of the national union.

Hypothesis 4.2: As the number of bargaining units representing employees increases, the efficiency of labor negotiations and labor relations administration will decrease, thereby decreasing transit performance.

²⁵Thomas A. Kochan and Hoyt N. Wheeler, "Municipal Collective Bargaining: A Model and Analysis of Bargaining Outcomes," Industrial and Labor Relations Review, 25 (April 1975), 46-66.

This hypothesis essentially accepts the arguments of the proponents of bargaining unit consolidation. Fewer units should contribute to consistent application and development of personnel policies and the reduction of unnecessary administrative costs.

Hypothesis 4.3: The decision-making authority of the management negotiator should be positively associated with transit performance.

The negotiator's decision-making authority should be reflected in whether or not he has the latitude to determine meeting times, concessions, and the size of the settlement package. Centralization of authority with the negotiator should reduce management's fragmentation and improve the coordination of management's position. This improvement in management's negotiating stance should, in turn, improve the long-run organizational outcomes.

Hypothesis 4.4: External influences in bargaining should be negatively associated with transit performance.

Just as the centralization of decision-making authority reduces fragmentation, the proliferation of external influences in bargaining increases fragmentation. Since this fragmentation contributes to more favorable outcomes from the union's standpoint, it ultimately can be expected to reduce transit property performance.

The operational definitions of the union and management structure variables are discussed in Appendix 1. The next section discusses the results of the tests of the four hypotheses.

RESEARCH FINDINGS

Correlation analysis was the primary statistical technique used to test the hypotheses. The results of these tests are summarized in Tables 4-1 through 4-3 and discussed below.

Union Structure

As Table 4-1 indicates, only one of the three relationships between union structure and strikes corresponds to our expectations. The relationship between intermediate body control and strikes is negative, but small and non-significant. For unions representing public mass transit employees

TABLE 4-1. CORRELATIONS BETWEEN UNION STRUCTURE AND STRIKES

UNION STRUCTURE VARIABLES	Number of Strikes at the Transit Property Since 1970	PEARSON r
National control of local activities		.43**
Local attachments to the national union		-.33*
Intermediate body control		-.09

* p < .10

** p < .05

there does not appear to be significant influence of intermediate bodies upon local union behavior, specially strikes. If intermediate bodies do serve as buffers between the national organization and local organization, they might reduce rather than increase the likelihood of strikes.

Contrary to our expectations, national control of local union activities is positively and significantly associated with strikes. Evidently there appears to be a tendency as national control increases for local unions to more frequently, rather than less frequently, engage in strikes. Local attachments to the national union is correlated in the direction we predicted, but it is significant at only the .10 level. Thus, less formal and discretionary local attachments to the national union are negatively associated with strikes whereas control by the national is positively related to strike activity.

Bargaining Unit Structure

The relationships between the number of bargaining units and the transit performance indicators are more consistently supportive of our predictions than were the union structure relationships. Table 4-2 shows that the rank order correlations are generally in the appropriate directions for the service efficiency, employee withdrawal, and adaptability relationships. These relationships are also quite strong, with four significant beyond the .05 level. Continuing a pattern begun in Chapter 3 with the analysis of the legal framework relationships, the correlations for the service effectiveness variables are opposite those expected.

Since the issue of bargaining unit proliferation/consolidation in transit organizations is necessarily related to size (i.e., the fewer the bargaining units, the larger the remaining units become), bargaining unit size was used as a control variable for the relationships between number of units as a control variable for the relationships between number of units and the performance indicators. The results are presented in Table 4-2. These partial correlations must be interpreted cautiously because of non-normal distribution of some of the performance indicators and the differences between the rank order and product-moment correlation. With these shortcomings in mind, it is useful to compare the two sets of correlations. Although the significance levels of many of the relationships decline when bargaining unit size is

TABLE 4-2. CORRELATIONS BETWEEN NUMBER OF BARGAINING UNITS AND THE TRANSIT PERFORMANCE INDICATORS

	<u>Number of Bargaining Units</u>	<u>Number of Bargaining Units Control- ling for Bargaining Unit Size</u>
	Kendall's rank order correlation	Partial Correlation
SERVICE EFFICIENCY		
Revenue vehicle hours per driver hour	-.33*	.002
Operating expense per employee	.24	.28
Operating expense per revenue vehicle hour	.42***	.33
SERVICE EFFECTIVENESS		
Revenue passengers per service area population	.29*	.82***
Revenue passengers per revenue vehicle hour	.25	.45**
EMPLOYEE WITHDRAWAL		
Self-reported absenteeism	.38***	.19
Separation rate	-.05	.03
Intent to leave	.11	.13
Stability rate	.13	.47**
Tardiness	.40*	.43
ADAPTABILITY		
Employee perceptions	-.22	-.19
Manager perceptions	-.04	-.29

* p < .05
 ** p < .025
 *** p < .01

controlled, most of the correlation coefficients do not decline appreciably from their original levels. In fact, the service effectiveness correlations increase, but this increase is primarily attributable to the skewness of the distribution of the three variables. The relationship between revenue vehicle hours per driver hour and number of bargaining units declines most appreciably when it is controlled for bargaining unit size. Overall, even when the size of bargaining units is controlled, there appears to be a relationship between the number of bargaining units at a property and the performance of the transit property. This relationship, however, is weak.

Management Structure

The results of the statistical tests for Hypotheses 4.3 and 4.4 are shown in Table 4-3. Kendall's rank order correlations were used to test the relationships between decision-making centralization and the performance indicators because of the number of ties on the independent variable. Fewer ties on the external influences variable permitted the use of Spearman rank order correlations to test the hypothesis. Since external influences in bargaining may also be a product of system size, a set of partial correlations were computed using the number of revenue vehicles as the control variable.

Hypothesis 4.3 receives some support from the statistical analysis. Although most of the correlations are weak, one of the service effectiveness and several of the employee withdrawal relationships attain significance. The separation rate tends to be significantly lower and the stability (retention) rate tends to be significantly higher at properties where the decision-making authority in negotiations is centralized with the chief negotiator. This may be the results of better coordination of turnover-related policies at those properties where decision-making authority in negotiations is centralized. The results also suggest, however, that a wide-ranging improvement in transit effectiveness does not materialize from the centralization of decision-making authority in negotiations.

The results for Hypothesis 4.4 are in several cases similar to those for the previous hypothesis. However, only three of the five relationships which attain significance are in the predicted directions. The relationship

TABLE 4-3 RELATIONSHIPS BETWEEN THE MANAGEMENT STRUCTURE VARIABLES AND THE TRANSIT PERFORMANCE INDICATORS

	<u>Decision-making Authority of the Management Negotiator</u>	<u>External Influences in Bargaining</u>	<u>External Influences in Bar- gaining Controlling for Number of Revenue Vehicles</u>
	Kendall's rank order correlation	Spearman rank order correlation	Partial Correlations
SERVICE EFFICIENCY			
Revenue vehicle hours per driver hour	.16	-.19	.05
Operating expense per employee	.06	.09	.03
Operating expense per revenue vehicle hour	.03	.44***	.11
SERVICE EFFECTIVENESS			
Revenue passengers per service area population	.27**	.27*	.10
Revenue passengers per revenue vehicle hour	.02	.15	-.13
EMPLOYEE WITHDRAWAL			
Self-reported absenteeism	.08	.07	-.14
Separation rate	-.27**	-.31*	-.18
Intent to leave	-.12	.07	.09
Stability rate	.26*	.18	.12
Tardiness	.14	.40*	.38
ADAPTABILITY			
Employee perceptions	.17	-.33*	-.20
Manager perceptions	.02	-.21	-.18

* p < .10
 ** p < .05
 *** p < .025

between revenue passengers per service area population and the independent variable is again significant in the direction opposite that predicted. The relationship between separation rate and external influences also deviates from the prediction. The most consistent and strongest relationships are found between adaptability and external influences in bargaining. Both employee and management perceptions of adaptability are negatively associated with external influences. This finding suggests that change, particularly through the bargaining process, is more difficult to achieve when multiple interests become involved in negotiations and the scope of conflict extends beyond the bilateral relationship.

The relationships between external influences and the performance indicators are substantially moderated when size of the transit system is controlled. Large systems are apparently more susceptible to multilateral bargaining than smaller systems. This might be due to the higher stakes associated with negotiations in larger systems or merely with an increase in the number of interested observers to negotiations in larger communities. In any event, the significant relationships between external influences and operating expense per revenue vehicle hour and revenue passengers per service area population disappear when size is controlled. The adaptability correlations, however, remain moderately negative though non-significant.

DISCUSSION

The results of the statistical analyses are reasonably consistent with our expectations, but several of the relationships are, at best, weak. Of course, the linkages between labor and management organizational structures and transit effectiveness are quite frequently indirect and remote. Therefore, the strength of some of the relationships is not surprising. The relationships between union structure and strikes are intriguing; generalizations about transit union structure and strikes derived from the present study differ in important ways from generalizations derived from non-transit research. Similarly, normative arguments about appropriate bargaining unit structures and management structures are not as dramatically supported by the results as one might expect upon assessing the literature. The reasons for some of these findings and their implications are considered next.

As we noted, the results of our test of Hypothesis 4.1 deviate markedly from generalizations contained in the generic literature on union structure and strike behavior. Several features of the structure of the majority of labor organizations which we surveyed seem to account for the relationships we found.²⁶ These characteristics of labor organizations serving transit employees can be summarized as: (1) the absence of a functioning intermediate union organization; (2) low levels of negotiating expertise among labor officials at the local level; and, due to the first two characteristics, (3) high levels of participation by national and international officers in local bargaining.²⁷ With regard to labor-management conflict, the influence of these characteristics may be independently reinforced by a relatively high degree of pattern-setting activity.

Intermediate union organizations in urban transit may not be a particularly important factor in reducing strikes or other conflict behavior since we found only a small negative, but non-significant, relationship between intermediate body control and local strike activity. However, the current absence of functioning intermediate union bodies makes it difficult to ascertain if this finding would differ if authority within national transit

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The makeup of our sample of labor organizations does not differ appreciably from the industry-wide distribution reported by Barnum in his 1977 study. The Amalgamated Transit Union, (ATU) was the bargaining agent at approximately half of the organizations we surveyed. The Teamsters, American Federation of State County and Municipal Employees (AFSCME), United Transportation Union (UTU), and Service Employees International Union (SEIU) were also among the labor organizations represented in the sample. The only major transit labor organization not sampled was the Transport Workers Union (TWU). For a general discussion of labor organizations in the urban transit industry see Darold T. Barnum, From Private to Public: Labor Relations in Urban Mass Transit (Lubbock, Texas: College of Business Administration, 1977), especially Chapter 2.

27 Although the identification of these characteristics is based upon our independent observations, they essentially agree with those identified by Barnum, Ibid.

labor organizations were to be distributed among a greater number of organizational levels.

Low levels of negotiating expertise among local labor officials and concomitantly high levels of participation by national and international officials contribute more visibly to local labor conflict. Local labor officials are most familiar with local problems and, because they must live with the results, are more inclined to use negotiations to solve problems. On the other hand, because they often lack the expertise and experience, they are unable to adequately represent their members in collective bargaining negotiations without substantial assistance from officials of the national organization.

While national officials most often bring to the local organization skills unavailable at the local level, their presence in negotiations also has certain liabilities. Foremost among these liabilities is that, because of demand upon their time created by the need to assist many organizations, national representatives cannot be fully responsive to the unique demands of local membership but they must react to issues according to previously established response patterns. Part of the problem associated with national representatives participating in local negotiations is also the tendency of management to "over react" to their presence. Furthermore, the "temporariness" of a national representative's local affiliation may also contribute to discontinuities between contract negotiations and contract administration. Such discontinuities only exacerbate difficulties in the next round of negotiations.

The creation of stronger intermediate bodies might reduce the need for participation of national officials, thereby reducing the general level of conflict in the urban transit industry. Perhaps a more viable solution to the problem would be for national officials to place greater emphasis on training and preparing their local counterparts to assume a larger role in negotiations.

With regard to management structure, the results of our analyses indicate that centralization of decision-making authority in negotiations may be a necessary condition, but it is not a sufficient condition, for achieving preferred organizational outcomes. Despite all that has been written about the problems associated with management fragmentation, little has been written about the importance of the labor relations policies which management pursues.

Our findings indicate that management structure cannot be divorced from management policy. The weak relationships we discovered between centralization and transit effectiveness suggest that centralization alone produces few net benefits for transit organization effectiveness. The influence of the complement of management structure, organization policies, is investigated in Chapter 6.

The results also showed that multilateralism may be a normal feature of the management of larger transit organizations. In any event, the statistical findings indicate that the effects, if any, of external influences in bargaining upon transit effectiveness are marginal.

CONCLUSION

Although tentative linkages between labor and management organizational structure and transit effectiveness were uncovered in this chapter, several of the findings stripped away some of the mystique associated with assertions about the number of bargaining units and the centralization of management decision-making authority in negotiations. The importance of management labor relations structure to transit property effectiveness appears to be more highly contingent than generally asserted. System size and organizational policies are probable moderators of the structure-effectiveness relationships. On the other hand, if one assumes the net effect of strikes upon transit effectiveness is negative, then the linkages of certain characteristics of national labor organizations to transit effectiveness can be quite readily drawn. Labor-management strikes and conflict, however, are the result of a mutual process. Changes in labor organization structure will only lessen, and not eliminate, the changes of serious conflicts occurring.

CHAPTER 5

LABOR-MANAGEMENT RELATIONSHIP PATTERNS

Any two individuals or groups who interact on a repeated basis can be expected to develop, over time, a characteristic interaction climate or relationship pattern. This quasi-stable state of affairs serves as a frame of reference within which future interactions may be evaluated for their meaning to the actors. To a certain extent, an established relationship pattern may tend to lead toward self-fulfilling prophecies, since relatively neutral or ambiguous events are interpreted in the context of the prevailing pattern of relationships. Thus, meanings become attributed to these events, consistent with the perceived relationship pattern. This contributes to the self-perpetuating nature of established relationship patterns.

Only those events that are clearly at variance with the established pattern will evoke a re-evaluation, by the actors, of the underlying nature of the relationship. Since most social interactions are complex events which contain the potential for multiple interpretations, and because human perception tends to be selective,¹ most instances of interaction between the parties are probably interpreted in a manner consistent with the prevailing pattern.

Several typologies have been proposed, categorizing the relationship patterns that might exist between interacting groups in general, and between labor and management in particular. Although some of the proposed typologies have been multidimensional, a consistent theme seems to recur throughout. The essential dimension along which the characteristic

¹The idea of perceptual readiness or "set" is well-established in the study of human behavior. People tend to perceive in accordance with their needs or expectations, in any complex or ambiguous situation. See, for example, Jerome S. Bruner, Beyond the Information Given: Studies in the Psychology of Knowing (selected, edited and introduced by J.M. Anglin) (New York: Norton, 1973).

relationship pattern varies could be considered a conflict-cooperation continuum. At one extreme of this continuum, the basic character of labor-management relations would be adversarial. The goals of the two groups would be seen by the parties as opposed and incompatible. In effect, goal attainment by one party would preclude goal attainment by the other. The very legitimacy of either party, as seen by the other, would be denied. The two groups interact, if at all, only to the extent necessary to exploit one another.

At the opposite extreme of the continuum, the relationship would be totally collaborative. Separate interests would tend either to be submerged or to be seen by the parties as wholly congruent. Rather than treating points of dispute as issues having a zero-sum outcome,² they would be treated as matters for mutual problem solving. The parties would tend to cooperate fully in the joint resolution of problems. Whereas the relationship at the competitive end of the continuum is that of adversaries, the relationship at the cooperative end is that of partners.

Since the relationship pattern between labor and management is expected to become at least quasi-stable, over time, it should be possible to develop and apply measures enabling a direct comparison among transit

²The term "zero sum" stems from game theory. A zero sum (or, alternatively, "fixed sum") game is one in which the gains of one opponent are exactly offset by the losses of the other. This is in contrast to nonzero sum games, in which it is possible to find at least one joint action which results in some gain by both parties. This is not to say that a nonzero sum game is devoid of potential conflict. In the classical Prisoners Dilemma (PD) paradigm, although there is an alternative whereby both parties can realize a modest gain, neither party can maximize its gain except at the expense of the other. The PD paradigm is important to the field of labor-management relationships because it approximates several of the real-world considerations impacting on those relationships. For original sources on the theory of games and prisoners dilemma, respectively, see Anatol Rapoport, Fights, Games and Debates (Ann Arbor, MI: University of Michigan Press, 1960) R. Duncan Luce & Howard Raiffa, Games and Decisions: Introduction and Critical Survey (New York: Wiley, 1957).

organizations with respect to their relative positions along the relationship pattern continuum. In effect the relationship pattern plotted would be tantamount to a persistent frame of reference within which all labor-management interaction takes place. This frame of reference would have both cognitive and affective components. That is, both the belief systems within which labor and management perceive each other, and the feelings and emotions that intrude upon the relationship would be moderated by this frame of reference. It would then be anticipated that this characteristic relationship pattern would have an effect on the behavior of the parties concerned, with an ultimate impact falling upon performance of the transit organization. Such impact may have both direct and indirect aspects. Not only would a transit organization's relationship pattern be expected to affect the level of transit performance as measured by the indicators in Chapter 2, but the relationship pattern would probably moderate the effect of other factors on those same performance indicators.

REVIEW OF RELEVANT RESEARCH

Rather than treating the relationship pattern continuum as a continuous scale, it might be more practical to develop a typology of discrete characteristic patterns into which labor-management relationships could be classified. Several such categorization schemes have appeared in the literatures of conflict resolution and labor-management relations.

Harbison and Coleman suggested such a set of categories: *armed truce, working harmony and cooperation*.³ Yet another scheme was advanced by Kerr.⁴ He proposed a four-part typology of the ways in which groups or organizations can relate to one another: *conflict, competition, isolation and cooperation*. In one sense, the isolation category can be seen as a sort of midpoint on the continuum. In the isolation category,

³Frederick H. Harbison and James R. Coleman, Goals and Strategy in Collective Bargaining (New York: Harper and Row, 1951).

⁴Clark Kerr, "Industrial Conflict and its Mediation," American Journal of Sociology, 60 (1954), 230-245.

however, there is neither collaborative effort nor conflict. Rather there is a total lack of interaction, either positive or negative. Thus, isolation may not actually belong on a conflict-cooperation continuum. A more credible neutral point would be one in which there is active interaction, but in which neither competition nor cooperation dominates.

Kerr⁵ held that the interaction pattern between labor and management must necessarily be one of conflict. His other three categories were to be applicable only to relationships outside the labor-management realm, as he considered conflict to be intrinsic to the labor-management interface.

Kerr's view that all labor-management interaction is concentrated at the conflictual end of the continuum was reiterated by Patten⁶ who stated that, in labor-management negotiations, an adversary relationship is taken for granted at the outset. If labor and management representatives perceive their role expectations to be those of antagonists, any typology of union-management relationships might take on the appearance of "varying shades of black." Indeed, Kerr⁷ observed that the labor-management negotiating process tends to be a series of stylized, ritualized moves and counter-moves. Dunlop and Healy⁸ alluded to the "eleventh hour effect" wherein serious negotiations are delayed until just before the deadline. This, too, is apparently so common that it has taken on an

⁵Ibid.

⁶ Thomas H. Patten, Jr. "Collective Bargaining and Consensus: The Potential of a Laboratory Training Input," Management of Personnel Quarterly, 9 (1970), 29-37.

⁷ Clark Kerr, "Industrial Conflict and its Mediation."

⁸ John T. Dunlop and James J. Healy, Collective Bargaining: Principles and Cases (Homewood, IL: Irwin, 1955).

almost script-like character.⁹ Such a choreographed set of transactions would be antithetical to a reasoned consideration of negotiation topics on their own merits.

One of the more systematically formulated approaches to the analysis of labor-management relations was that presented by Walton and McKersie.¹⁰ Their theory of labor negotiations includes a five-category typology of labor management relationship patterns. It would be feasible to order these categories along the relationship-pattern continuum in the following order:

COLLUSION	Dysfunctional cooperation. Cooperation between the two parties is so complete that the legitimate interests of third parties to the relationship are violated.
COOPERATION	A relationship founded on harmony, mutual trust and a sense of community. Attempts are made to satisfy both one's own goals and those of the other party.
ACCOMMODATION	An essentially neutral relationship. While there is no antagonism, neither is there friendliness. The orientation toward the other party is essentially <i>laissez faire</i> .
CONTAINMENT-AGGRESSION	A relationship based on antagonism and distrust. Goals are not shared. Rather, each party tends to view the other's loss as its own gain.
CONFLICT	A polar extreme, characterized by hatred and extreme distrust. Each party denies the very legitimacy of the other. There would appear to be almost no basis upon which to begin to attempt to resolve differences.

⁹This is exemplified in Lincoln's classic case study of a major city's transit strike. Moves and countermoves by the parties tended to follow a predictable sequence as if each were behaving in accordance with a set of role expectations. The "sham meaning" of the posturing that takes place is apparently fully understood by participants who are well seasoned in the arena of labor-management negotiations. See Albert A. Lincoln, "The New York City Transit Strike: An Explanatory Approach," Public Policy, 16 (1967), 271-292.

¹⁰Richard E. Walton and Robert B. McKersie, A Behavioral Theory of Labor Negotiations (New York: McGraw-Hill, 1965).

Other categorical schemes, intended to portray either labor-management relations *per se* or generalized intergroup relations (which would of course include labor-management relations), have been proposed by Derber, Chalmers and Stagner, Donnelly, Rubin and Brown and Thomas.¹¹ Though not all provide sets of categories that can be ordered unambiguously along a single conflict-cooperation continuum, all are concerned with the extent to which the goals of the parties are or are not mutually exclusive.

In game-theory terms,¹² negotiations between two parties, such as labor and management, can proceed on one of two assumptions--either that the payoffs to the parties are fixed sum (one party's gain is the other's loss) or variable sum (gains of both parties could be increased simultaneously). Walton and McKersie¹³ characterized bargaining based on the former assumption as *distributive* and bargaining based on the latter assumption as *integrative*. While the function of distributive bargaining is to reconcile pure conflict-of-interest issues, integrative bargaining is aimed at solving problems, i.e. where there are common or at least complementary concerns. While the integrative-distributive bargaining distinction is not, by definition, identical to that of the competitive-cooperative relationship, a strong isomorphic relationship can be seen.

Thomas¹⁴ distinguished among *competitive issues*, *cooperative problems* and *mixed issues*. Regardless of the motivational orientation or

¹¹M. Derber, W.E. Chalmers and Ross Stagner, The Local Union-Management Relationship (Urbana, IL: University of Illinois Press, 1960); L. Donnelly, "Toward an Alliance Between Research and Practice in Collective Bargaining," Personnel Journal, (May 1971), 372-399; Jeffrey Z. Rubin and Bert R. Brown, The Social Psychology of Bargaining and Negotiation (New York: Academic Press, 1975); Kenneth Thomas, "Conflict and Conflict Management," in Marvin D. Dunnette (ed.) Handbook of Industrial-Organizational Psychology (Chicago: Rand McNally, 1976).

¹²Rapoport, Fights, Games and Debates.

¹³Walton and McKersie, A Behavioral Theory of Labor Negotiations.

¹⁴Thomas, "Conflict and Conflict Management."

historical relationship pattern of the parties, a clear-out competitive issue represents a conflict of interest--one in which there is a fixed-sum outcome. In a similar vein, a cooperative problem should be dealt with cooperatively, regardless of the overall pattern of relationships between the parties. However, while Thomas's competitive-issue and cooperative-problem categories virtually demand particular behaviors of the parties, his intermediate mixed-issue category does not elicit any particular behavior. Rather it allows treatment in either a distributive or integrative manner. Competitive or cooperative behavior is selected largely on the basis of prior existing relationships. "One tends to discuss issues with allies and to debate them with enemies."¹⁵ As Walton and McKersie¹⁶ have pointed out, a great many matters typically negotiated by labor and management are of a mixed nature.

While it would be tempting to assume that cooperation is "good" and conflict is "bad" in terms of organizational outcomes, support for such a simple pattern in the literature is equivocal, at best. Deutsch¹⁷ experimented with a prisoners' dilemma (PD) game format in which participants had one of three motivational orientations: *cooperative*, *competitive*, or *individualistic*. In the cooperative condition, joint gains were to be maximized. In the competitive condition, each participant was to maximize his own gain, while attempting to minimize that of his opponent. The individualistic condition was intermediate; each participant was to try to maximize his own payoff, but was not to attempt to interfere with his opponent's payoffs. Deutsch found the cooperative mode to result in greater mutual gain than the individualistic, which was in turn superior to the competitive motivational orientation. Several other laboratory results were summarized by Rubin and Brown,¹⁸ including

¹⁵Ibid, p. 28.

¹⁶Walton and McKersie, A Behavioral Theory of Labor Negotiations.

¹⁷Morton Deutsch, "The Effect of Motivational Orientation on Trust and Suspicion," Human Relations, 13 (1960), 123-129.

¹⁸Rubin and Brown, The Social Psychology of Bargaining and Negotiation.

studies based on research paradigms other than PD. These studies generally supported Deutsch's findings.

On the other hand, laboratory simulations frequently fail to capture the richness of actual conflict in organizations. It may be that the nature of the payoff schemes, as well as the kinds of experimental inductions used in the laboratory, are responsible for the apparent monotonic relationship between level of cooperation and amount of joint gain. Monotonic relationships are relatively uncommon, however, in nature. There is more frequently some optimal level of an independent variable, which is associated with the maximum effect on the dependent variable. The literature on activation theory¹⁹ provides some excellent examples of this phenomenon.

Several scholars working in diverse areas have attested to the potentially beneficial effect of conflict.²⁰ In an analogy to the

¹⁹ Many psychological phenomena appear to be describable by plotting an inverted U-shaped curve, to show the relationship between the amount of stimulation and the quality of the response. At very low or very high levels of activation, performance is poor. The reasons for poor performance are different, however, at the two extremes. At low levels, performance is handicapped by lack of alertness. At very high levels, the organism becomes "swamped" by incoming signals and performance again suffers. There is for most, if not all, input-output relationships some intermediate level for which performance will be optimized. See William E. Scott, Jr., "Activation Theory and Task Design," Organizational Behavior and Human Performance, 1 (1966), 3-30.

²⁰ See, for example, Lewis Coser, The Functions of Social Conflict, (Glencoe, IL: Free Press, 1956); Lewis Coser, Continuities in the Study of Social Conflict, (New York: Free Press, 1957); Jay Hall and Martha S. Williams, "A Comparison of Decision-Making Performance in Established and Ad Hoc Groups," Journal of Personality and Social Psychology, 3, (1966), 214-222; Irving L. Janis, Victims of Groupthink: A Psychological Study of Foreign-policy Decisions and Fiascoes, (New York: Houghton-Mifflin, 1972); Kerr, "Industrial Conflict and its Mediation," Donald Nightingale, "Conflict and Conflict Resolution," in George Strauss, Raymond E. Miles, Charles C. Snow and Arnold S. Tannenbaum (eds.) Organizational Behavior: Research and Issues, (Madison, WI: Industrial Relations Research Association, 1974).

activation-level paradigm, it is possible to have too little, as well as too much conflict. While intense conflict can be disruptive, at least a moderate amount may be necessary to foster the search for creative alternatives.

A conflictual relationship between labor and management may, at times, be instrumental. A group may, under some circumstances, have a motive to search for and maintain enemies.²¹ The efficacy of turning hostility outside the group, toward a common foe, is well-documented as a means of fostering in-group solidarity.²² It would follow logically that overt union hostility toward management would be a concomitant to solidarity within union ranks. Circumstances such as recent unionization would be a possible precursor to the adoption of a militant union stance. Alderfer²³ held that labor organizing, in its early phases, tends to be characterized by militancy and the election of leaders from the more deprived elements. Subsequently, more middle-of-the-road leadership emerges and the stance becomes less overtly militant, as union-management relationships move away from points of transition (stress). A group that does not perceive a serious external threat can permit more in-group conflict without serious risk to group integrity or survival. Such a group is therefore less apt to form inter-group relationships based on exaggerated in-group unanimity and distorted perception (i.e. devaluation) of the out-group.²⁴

²¹Coser, The Functions of Social Conflict.

²²This is a common element in the social-psychological phenomenon of ethnocentrism. For a full discussion see Robert A. Levine and Donald T. Campbell, Ethnocentrism: Theories of Conflict, Ethnic Attitudes and Group Behavior. A classic study of in-group solidarity (in a boy's camp) which was reinforced by manufactured hostility and the motivated distortion of perceptions of an out-group, was presented by Muzafer Sherif, "Superordinate Goals in the Reduction of Intergroup Conflict," The American Journal of Sociology, 63 (1958), 349-356.

²³Clayton P. Alderfer, "Group and Intergroup Relations," in J. Richard Hackman and J. Lloyd Suttle, Improving Life at Work: Behavioral Science Approaches to Organizational Change. (Santa Monica, CA: Goodyear, 1977).

²⁴Ibid. Coser, The Functions of Social Conflict.

The labor-management relationship, especially in the public sector, is a poor fit to the traditional dyadic intergroup paradigm that has characterized much of the research literature on intergroup conflict.²⁵ There are interested third parties involved in the relationship and this involvement can take place on two separate levels.

In the first place, much of the interaction between labor and management takes place through designated representatives, usually in the role of negotiators. The dyadic relationship between the labor and management negotiators can be viewed as a boundary transaction system,²⁶ which overlaps both the labor organizational system and the management organizational

²⁵Some of the special attributes of the labor management relationship in the public sector are discussed in Thomas Kochan, "A Theory of Multilateral Collective Bargaining in City Government," Industrial and Labor Relations Review, 24 (1974), 525-542; Charles H. Levine, James L. Perry and J.J. DeMarco, "Collective Bargaining in Municipal Governments: An Interorganizational Perspective," in The Human Resources of City Governments (Beverly Hills, CA: Sage Publications, 1978), pp. 159-199; James L. Perry and Carder W. Hunt, "A Framework for Evaluating the Union-Management Relationship in Government," Public Administration Review, 1978, in press; James L. Perry and Charles H. Levine, "An Interorganizational Analysis of Power, Conflict and Settlements in Public Sector Collective Bargaining," American Political Science Review, 70 (1976), 1185-1201.

²⁶The mechanism for interaction between any two groups in contact is seldom that of the total membership of one group interacting with the total membership of the other. Rather, intergroup relationships are frequently handled by designated representatives. Where intergroup relationships include an ongoing obligation on the two groups to interact with each other over an extended period, there tend to be created specialized roles in the two groups, for this purpose. These role incumbents were termed "boundary role persons" by Adams. See Herman Turk and Myron J. Lefcowitz, "Towards a Theory of Representation Between Groups," Social Forces, 40 (1962), 337-341; J. Stacy Adams, "The Structure and Dynamics of Behavior in Organizational Boundary Roles," in Marvin D. Dunnette (ed.), Handbook of Industrial-Organizational Psychology (Chicago: Rand McNally, 1976).

system. The boundary role person (BRP) for each side is a man caught in the middle, although this may be more true for the labor representative than for the management representative.²⁷ He endures conflicting role requirements as he receives role expectations simultaneously from his constituency and from his negotiations counterpart. The two constituencies are powerful third parties, with intense vested interests in the outcome of negotiations. The complex interaction of role conflict and situational/historical factors will have powerful effects on the intergroup relationship, as manifest in the boundary transaction system.

On a second level, there are many interested and affected external third parties to the overall relationship between the union and management systems. At various levels of abstraction, these include the labor movement, the public at large, stockholders, the news media, mediators and government. Each of these has the potential to impinge on the labor-management relationship. The influence of external third parties not only complicates role expectations and perceptions, but also raises the possibility of disturbing power relationships through coalition formation.²⁸ Whether or not the actual formation of alliances upsets the initial balance of power between labor and management, both the perceived expectations of these influential third parties and the incentives for attempting to enlist their moral or tangible support may be more severe complicating factors in public transportation than in private industry.

When third parties are physically as well as psychologically present, as is the case with mediators or arbitrators, their effect may be per-

²⁷Walton and McKersie discuss several aspects of the double-bind in which the negotiator for labor is apt to find himself/herself. Whereas management is apt to have a relatively homogeneous and coherent set of objectives for bargaining, labor's position is less simple. There are apt to be factional disputes within the body of labor, so that "the" goal may become rather ambiguous. This can lead to serious role conflicts (through "role ambiguity") for the labor negotiator. See Walton and McKersie, A Behavioral Theory of Labor Negotiations. For a full discussion of role ambiguity and conflict, see Robert L. Kahn, Donald M. Wolfe, Robert P. Quinn, J. Diedrick Snoek and Robert A. Rosenthal, Organizational Stress: Studies in Role Conflict and Ambiguity. (New York: Wiley, 1964).

²⁸Walton and McKersie, A Behavioral Theory of Labor Negotiations.

vasive. Rubin and Brown²⁹ saw the overall influence of mediators as conciliatory. External observers tend to generate pressures toward agreement for two main reasons. In the first place, when third parties appear genuinely neutral, there may be pressure generated for each side to examine honestly the fairness of its position and to search honestly for viable alternatives to dysfunctional conflict. Secondly, the actual presence of an involved third party can make concessions acceptable, without the loss of face. Rubin and Brown cited several research reports that have indicated negotiators will sometimes intentionally create a breakdown in negotiations, in order to bring a third party into the impasse and clear the way for problem solving.

On the other hand, the mere presence of third party arbitration could be viewed as *prima facie* evidence that a non-collaborative relationship exists. Whether ritualized or actual, the need to call in a third party may be evidence of a high level of disruptive conflict. Furthermore, the resort to either arbitration or to other modes of surrender of negotiating prerogatives (eg. resorting to preestablished rules), while possibly ameliorating the immediate situation, has a tendency to result in a 'win/lose' interpretation of outcomes.³⁰ Lines become more tightly drawn, and further interaction must occur against a history of fixed-sum outcomes. Thus it becomes even more difficult in the future to break out of the mold of distributive interaction in order to seek more integrative solutions.

The relationship pattern between labor and management is a social-perceptual phenomenon. As such it is accessible only through the eyes of the parties to the relationship. Thus an understanding of industrial relations cannot be gained simply by an analysis of objective "facts." These "facts" are seen differently by different observers having different

²⁹Rubin and Brown, The Social Psychology of Bargaining and Negotiation.

³⁰Ibid.

expectations and different motivations.³¹

Once a set of perceptions has been established by labor regarding management, or vice-versa, these perceptions are expected to stabilize, for at least two reasons. First, the social context affects the development of attitudes both directly and indirectly.³² Co-workers provide a standard of comparison whereby the "correctness" of one's own attitudes can be repeatedly measured.³³ Because of the consensual nature of these socially validated, shared belief systems, they should be resistant to the impact of local disturbances (i.e. individual cognitions of bits of evidence that appear counter to the prevailing interpretation).

The second reason behind perceptual stability lies in the well-known psychological principle of primacy.³⁴ Early information appears to dominate many judgment processes. Once ideas are formulated they are rather resistant to subsequent re-evaluation. Thus an established labor manage-

³¹Ross Stagner, Psychology of Industrial Conflict (New York: Wiley, 1956). Stagner's observations regarding the idiosyncratic nature of labor's and management's perceptions of each other are as valid today as they were two decades ago. He highlighted, in particular the way past experiences and group influences shape expectancies which, in turn, determine what we shall perceive and what we shall ignore.

³²See Gerald R. Salancik and Jeffrey Pfeffer, "A Social Information Processing Approach to Job Attitudes and Task Design," Administrative Science Quarterly, 23 (1978), 224-253. Overt statements of co-workers provide direct value-laden interpretations of events. In addition certain aspects of a complex situation may be made salient by one's associates who repeatedly single them out for attention, from among a complex of competing stimuli.

³³People's propensity to turn to others for social validation of their beliefs was expounded by Leon Festinger, "A Theory of Social Comparison Processes," Human Relations, 7 (1954), 117-140.

³⁴Ross Stagner, The Psychology of Industrial Conflict, p. 23.

ment relationship pattern may become self-perpetuating.³⁵

In view of the forgoing, it should be feasible to obtain perceptual measures of a characteristic labor-management relationship pattern, for each transit organization, having some stability over time, and in which the perceptions of individual parties to the relationship tend to be shared.

HYPOTHESES

The pattern of relationships between labor and management at each transit property is expected to be a complex resultant of: (1) labor and management representatives' role perceptions and their beliefs as to the basic nature of labor-management relations; (2) antecedent conditions, i.e. the historical development of labor-management interaction at the specific transit property; and (3) the impact of significant third parties to the relationship.

For purposes of the analysis, the framework of five categories provided by Walton and McKersie³⁶ appears to be the most useful. However, the extreme pair of categories (conflict and collusion) probably are of little interest for the purposes of the present investigation. These two extremes represent total lack of constructive contact at one end and illegality at the other. Primarily because of their infrequent occurrence in nature, neither extreme is expected to be encountered in the present

³⁵Abelson proposed a theory of the development of human judgment frameworks (script processing), in which early, concrete experiences doggedly "color" later judgment, in new situations that are seen as similar. The decision maker, in effect, seizes upon a concrete (adequate or otherwise) analogy, based on a specific earlier experience, and tends to distort his/her perception of the present situation in order to make it fit the analogy. In a different, but related context, Tversky and Kahneman reported a series of laboratory studies that illustrated people's reluctance to revise earlier estimates, even in the face of persuasive new information. See Robert Abelson, "Script Processing in Attitude Formation and Decision Making," in John S. Carroll and John W. Payne (eds.), Cognition and Social Behavior, (Hillsdale, NJ: Lawrence Erlbaum, Associates, 1976); Amos Tversky and Daniel Kahneman, "Judgment under Uncertainty: Heuristics and Biases" Science, (Sept. 27, 1974), 1124-1131.

³⁶Walton and McKersie, A Behavioral Theory of Labor Negotiations.

research. The three remaining categories (containment-aggression, accommodation and cooperation) represent useful anchor points for the characterization of normal labor-management relationships.

A nonlinear relationship is proposed between level of conflict and organizational effectiveness. Transit organizations at either extreme of the competitive-cooperative continuum should be less effective than organizations at some intermediate level. At the competitive end, a frame of reference is established so that the integrative potential of mixed issues is ignored. They tend to be perceived as zero-sum issues and are dealt with distributively.

At the cooperative extreme there is a propensity to treat mixed³⁷ agenda items as mutual problems, rather than win-lose confrontations, with a concomitant increase in overall solution quality. It is possible, however, to have too much of a good thing. There are two independent pitfalls in excessive cooperation. In the first place, labor and management negotiators represent constituencies whose legitimate interests require faithful advocacy. Too extreme a cooperative climate within the boundary system can result in a set of arrangements beneficial to the boundary-role persons, but not in the best interests of their constituency systems. At its worst, this arrangement defines collusion.

The absence of conflict can be detrimental in another sense. If the cooperative norm is so firmly established that the legitimate conflicts of interest between the parties become obscured, there may be a diminution of motivation to actively seek creative alternatives to the status quo. As alluded to earlier in this paper, a reasonable amount of conflict, as an arousal mechanism, can be

³⁷A "mixed" item is one which is neither clearly integrative nor clearly distributive in nature, but which can be perceived either way, depending upon the perceiver's assumptions. There are both significant issue aspects and significant problem aspects. A mixed item is one that contains a trading point, in the sense that it maximizes joint gain (i.e. other solutions could be found that would benefit one of the parties, but only with disproportionate losses to the other). Walton and McKersie, A Behavioral Theory of Labor Negotiations.

beneficial. Properly managed, conflict can activate creative search processes in problem-solving groups. If conflict is thoroughly suppressed, there may be insufficient activation.

In summary, although organizational effectiveness is expected to increase as conflict is reduced - primarily through an increase in integrative problem solving - there may be a concomitant counter-influence associated with reduced motivation. The sum of these two effects would result in organizational effectiveness increasing as cooperation increases, but at a non-linear rate.

Because of the diminishing marginal return on increased cooperation, it would be expected that an organization having a labor-management relationship pattern at the cooperative end of the competitive-cooperative continuum (i.e. "collusion") would show a decrement in performance. In effect, the functional relationship between the labor-management relationship pattern and transit performance would take the form of an inverted "U." However, the current study is not expected to find any instances of a collusive pattern, this being outside the normal range of relationships within the transit industry. Within the range defined by the three relationship-pattern categories anticipated (i.e. containment-aggression, accommodation and cooperation), the functional relationship should be convex, but monotonic, with performance rising toward the cooperative end.

Hypothesis 5.1: The nature of the labor-management relationship pattern will be agreed upon by labor and management interests.

Since the labor-management relationship pattern is essentially perceptual in nature, the question arises whether the pattern is an attribute of the organization or merely an individual phenomenon. If the latter, then the relationship pattern could not be reasonably expected to show any consistent pattern of relationships with other organizational phenomena such as the various transit performance indicators. That is, a convergence of perceptions seems to be a necessary, if not sufficient, condition for the establishment of other relationships.

There is good reason to expect that labor and management will have similar perceptions of the relationship pattern. In the first place, the

perceptions are not developed in vacuo, but rather stem from the interpretation of shared concrete observations. In addition, there are the previously discussed social validation processes whereby co-members of interacting groups come to help each other interpret the meaning of events. To the extent that individuals interact with each other, including interaction across labor-management boundaries, a socially imposed tendency toward convergence of perceptions should be expected. Accordingly high correlations should be found between labor's and management's perceptions of the relationship pattern at each transit organization.

Hypothesis 5.2: Service efficiency will be highest for a cooperative relationship pattern and lowest for a containment-aggression relationship pattern.

Hypothesis 5.3: Service effectiveness will be highest for a cooperative relationship pattern and lowest for a containment-aggression relationship pattern.

Hypothesis 5.4: Employee withdrawal (turnover; absenteeism; tardiness) will be highest for a containment-aggression relationship pattern and lowest for a cooperative relationship pattern.

Hypothesis 5.5: Adaptability will be highest for a cooperative relationship pattern and lowest for a containment-aggression relationship pattern.

Labor negotiations present few pure conflict issues and few problems which lend themselves to a purely integrative solution.³⁸ Thus the norm in the labor-management relationship is the "mixed" issue. Mixed items can be perceived, and thus dealt with, either as distributive or integrative, depending on the predispositions of the parties. It is the ambient relationship pattern between labor and management that establishes the frame of reference against which issues are evaluated. A relationship pattern located toward the conflict end of the continuum would predispose the parties to interpret issues as distributive, while a relationship pattern that has stabilized toward the cooperative end biases the parties to view mixed items as integrative. It is well

³⁸Ibid.

substantiated in the research literature that, in a variable-sum game (which typifies the "mixed" agenda item in the labor-management arena), outcomes are greater when both parties adopt an integrative bargaining stance.³⁹

Hypothesis 5.6: Where a transit property has been recently organized or is in the process of being organized, the ambient relationship pattern will be containment-aggression.

A recently organized local is considered to be in the militant phase of evaluation. There is concern for survival, and this engenders severe polarization. Furthermore, management may not yet have reconciled itself to unionization. There is expected to be an in-group/out-group perspective on both sides.⁴⁰

Hypothesis 5.7: A history of the employment of third-party intervention in contract negotiations is associated with a containment-aggression relationship pattern.

Resorting to third-party intervention may indicate that the two parties are otherwise unable to resolve their differences. On a more basic level, it may indicate that the parties believe that the basic relationship is one where the adversary system prevails. Assuming inability to reach agreement without the good offices of a third party, they seek mediation or arbitration. In either case, the employment of external intervention indicates a relationship pattern that tends away from the cooperative and toward the conflictual.

Hypothesis 5.8: Frequency of formal contract renegotiation is associated with the ambient relationship pattern; renegotiation is more frequent toward the conflictual end of the scale.

A long-term contractual agreement is seen as an indication of

³⁹See Walton and McKersie, *op. cit.*; Rubin and Brown, *The Social Psychology of Bargaining and Negotiation*; Thomas, "Conflict and Conflict Management."

⁴⁰An in-group is a closely knit membership group toward which there is a strong feeling of group solidarity. An out-group is any group other than one to which the designator belongs. Rather than simply judgments about the locations of group boundaries, there tends to be a strong evaluative component in the designation of in-group and out-group. The boundaries of membership are particularly salient when there is hostility between the groups.

trust between the parties. In essence, it is not considered necessary to set short limits on the effective duration of the contract, as a protective measure. Furthermore, the establishment of a long-term *formal* agreement may be evidence that the parties share confidence in the ability to renegotiate to modify aspects of the agreement on a contingency basis, without needing the impetus of an expiring contract. In a sense, the longer-term contract would be established as a "living document," in that problems are dealt with as they arise.

RESEARCH FINDINGS

Descriptive Statistics

The principal independent variable considered in this chapter was the relationship pattern between labor and management, as measured through questionnaire administration. Transit managers and key staff personnel with labor-relations responsibilities were administered a 23-item set of questions, each dealing with some specific aspect of the relationship with labor, as seen through management's eyes. Eleven questions dealt with general matters, eight with relations during negotiations, and four with the processing of grievances. A matched set of 23 questions containing the same items, but worded appropriately for labor responses, were administered to labor leaders. In the interest of balanced inputs from labor and management, only those labor leaders who actually had participated in negotiations were included in the pool of labor responses. The transit manager and labor leader scales are displayed in Appendix 1 (Measurement of the Variables).

Each participating transit organization was assigned two labor-management relationship (LMR) pattern scores; one (LMRTM) was computed by averaging the LMR scores for the transit managers at that property, and the other (LMRLNEG) was the average of labor leader scores for the

same property.⁴¹ Table 5-1 contains descriptive statistics regarding the two sets of scores.

In order to categorize the participating transit organizations into three characteristic relationship patterns (i.e. containment-aggression, accommodation, cooperation), properties were trichotomized, based on equal probability distributions,⁴² twice. The first trichotomization was based on transit manager scores; the second was based on labor leader scores.

A property was categorized in the middle group (accommodation) unless both the transit manager score and the labor leader score placed the property in the upper one-third (cooperation) or lower one third (containment-aggression).⁴³ This procedure resulted in 5 properties being categorized "cooperation;" 7 properties being categorized "containment-aggression;" and the remainder (12) "accommodation."

Post hoc comparison of the above procedure with the subjective impressions gained by the research teams during site visits yielded a very close correspondence with the subjective categorization of properties visited.

⁴¹There were three participating organizations for which only the transit manager scores were obtained. In addition, those organizations having neither a union nor a formal employee association had no input on the labor-management relationship pattern. Accordingly, the sample sizes for the two relationship-pattern scores were: Transit Manager, N=24; Labor Leader, N=21. In order to obtain a balanced set of labor and management responses, only those labor leaders who participated in negotiations were included in computation of each property's LMRLNEG score.

⁴²Equal (one-third) probability sequents were computed using a table of the normal curve. The two points which divide the distribution into three probabilistically equal segments are found by taking the mean, plus and minus .43 standard deviations.

⁴³Two exceptions were made to this rule. Two properties had transit manager scores in the lower one-third, but there were no labor leader scores, as a result of labor's refusal to participate. Because labor's reasons for refusal in both cases appeared to be based on distrust and hostility toward management, it was considered warranted to categorize both properties' relationship pattern as "containment-aggression."

TABLE 5-1. LABOR-MANAGEMENT RELATIONSHIP
PATTERN SCORE: DESCRIPTIVE STATISTICS

	<u>Transit Manager Scores (LMRTM)</u>	<u>Labor Leader Scores (LMRLNEG)</u>
Number of Properties Responding	N = 24	N = 21
Mean	4.58	4.52
Standard Deviation	.696	.952
Correlation	Pearson r = .84***	

*** p < .001

Tests of the Hypotheses

The dependent variables for the hypotheses relating to transit performance were the eleven performance indicators described in Chapter 3. Where the quality and measurement level of the data permitted, t-tests were used to test the significance of relationships. Because of the small N, certain relationships, although apparently quite powerful, did not meet the conventional criteria for statistical significance. However, because of the high practical significance of the relationships, descriptive statistics are reported where warranted, whether or not the conventional significance levels are reached.⁴⁴

Labor-Management Consensus on Perception of Relationship Climate. As Table 5.1 indicates, the Pearson product-moment coefficient of correlation between the transit manager and labor leader perceptions of relationship pattern was .84.⁴⁵ In addition: (1) five of the seven properties categorized as "cooperation" according to labor leader scores were also categorized as "cooperation" according to transit manager scores; (2) five of the six properties categorized as "containment-aggression" according to labor leader scores were also categorized as "containment-aggression" according to transit manager scores. These indicators provide substantial support for Hypothesis 5.1, when all participating transit properties are compared on transit manager versus labor

⁴⁴ Although it has been conventional in behavioral research to consider an alpha level (probability of a Type I error) of .05 to be the maximum allowable, in order for a result to be considered "significant," such a rule is actually rather arbitrary, and tends to lead to simplistic judgements. Actually, the size of the sample taken is a powerful determinant of "significance," even when "real" differences between measurements remain constant. Extremely large samples tend to make almost any measured difference "statistically significant." Conversely, very small samples handicap the quest for significance, making "statistically significant" results unlikely, even where measured differences are rather large. For further discussion of this point see William L. Hays, Statistics (New York: Holt, Rinehart and Winston, 1963).

⁴⁵ $p < .001$

leader questionnaire responses.

Transit Performance and the Labor-Management Relationship Pattern. Hypotheses 5.2, 5.3, 5.4 and 5.5 posit relationships between the ambient relationship pattern (containment-aggression, accommodation and cooperation) and transit performance, as measured by four sets of indicators (i.e. proxy variables for service efficiency, service effectiveness, employee withdrawal, and adaptability). These four hypotheses were tested by measuring the mean variable values for properties assigned to each of the three relationship-pattern categories and, where appropriate, computing t-tests of significance for the extreme groups' scores (containment-aggression vs. cooperation). Table 5-2 displays the data relevant to the four sets of indicators and the labor-management relationship pattern.

Service Efficiency. As indicated in Table 5-2, the differences across relationship-pattern categories for the three service efficiency indicators are essentially trivial. There does appear to be a modest trend, however, for the two extreme categories (containment-aggression and cooperation) to fare better than the intermediate "accommodation" group on all three measures. Proportionate operating expenses are higher and utilization of drivers is lower for the middle group. The practical significance of the magnitude of the differences shown is left to the judgment of the reader. It may be that service efficiency is enhanced by some optimal level of conflict. At any rate, Hypothesis 5.2 was not supported by the data of this study.

Service Effectiveness. Two concrete measures of service effectiveness were utilized: (1) passengers per service area population; and (2) passengers per revenue vehicle hour. Table 5-2 shows the applicable ratios. Although not statistically significant, the trend for both measures is in a direction opposite to that hypothesized in Hypothesis 5.3. It appears that nearly three times the population-proportionate number of passengers are carried by transit organizations having a containment-aggression relationship pattern, as by those having a cooperative pattern. This may well reflect the influence of one or more concomitant variables, such as the degree of urbanization or other geographic factors. For whatever reason, the data do not support Hypothesis 5.3, and suggest

TABLE 5-2. ASSOCIATIONS BETWEEN THE LABOR-MANAGEMENT RELATIONSHIP PATTERN AND THE TRANSIT PERFORMANCE INDICATORS

	Indicators Relationship Pattern			t-Statistic (Extreme Groups)	1-tail Probability
	Containment- Aggression	Accommodation	Cooperation		
SERVICE EFFICIENCY					
Revenue vehicle hours per driver hour	.84	.71	.83	-0.19	.425
Operating expense per employee	\$24,707	\$29,555	\$25,111	0.18	.431
Operating expense per revenue vehicle hour	\$20.83	\$23.43	\$19.34	-0.83	.213
SERVICE EFFECTIVENESS					
Revenue passengers per ser- vice area population	32.13	18.61	11.85	-0.88	.206
Revenue passengers per revenue vehicle hour	24.9	22.6	20.8	-0.95	.183
EMPLOYEE WITHDRAWAL					
Self-reported absenteeism	4.66	7.87	12.20	1.18	.017
Separation rate	.1414	.1829	.0822	-0.82	.215
Intent to leave	1.98	1.90	1.67	-4.01	.002
Stability rate	.1513	.3020	.2572	0.91	.198
Tardiness	1.34	1.49	.46	-1.26	.160
ADAPTABILITY					
Employee perceptions ^c	4.86	5.06	5.55	2.17	.031
Management perceptions ^c	3.78	3.98	4.57	1.75	.056

that its obverse may be true.

Employee Withdrawal. This variable is much more complex than may first meet the eye. Three aspects of withdrawal (absenteeism, turnover, and tardiness) were considered in testing Hypothesis 5.4. The single measure of absenteeism was based on self-report, i.e. "How many days were you absent from work in the last year (do not count vacation)?" Three measures of turnover were used; two derived from organizational records and one self-report measure.⁴⁶ Tardiness was determined through organizational records.

Table 5-2 shows that the five measures relate somewhat differently to the labor-management relationship pattern. In particular, note that the only two statistically significant results were obtained with the two self-report measures (self-reported absenteeism and intent to leave), but that these results are in opposite directions. While the self-report measure of turnover supports the hypothesis, the absenteeism results are in a direction opposite to that predicted.

This finding is consistent with the point of view that absenteeism and turnover are not two points on a continuum of withdrawal behavior but are compensatory.⁴⁷ That is, absenteeism and turnover may be alternatives to one another.

In general, Hypothesis 5.4 receives support from the turnover measures, and substantial support from the self-report measure. For reasons discussed in Chapter 2, this measure was considered the more theoretically meaningful of the two turnover measures. In addition, the measure of tardiness provides some suggestion of support for the hypothesis. However, as was elaborated in Chapter 2, the data on tardiness were available for fewer than half of the participating organizations, and the

⁴⁶See Chapter 3 for a full description of the turnover measures.

⁴⁷The view that absenteeism and turnover are two points on a continuum of various extremes of withdrawal behavior is attributed to Frederick Herzberg, B. Mausner, R. Peterson and D. Capwell, Job Attitudes: Review of Research. (Pittsburgh: Psychological Service of Pittsburgh, 1957). For the alternative viewpoint, see A.K. Rice and E.L. Trist, "Institutional and Subinstitutional Determinants of Change in Labor Turnover," Human Relations, 5 (1952), 347-372.

accuracy of the data in some of the available sets may be questionable. Accordingly, no conclusion about the relationship between the labor-management relationship pattern and employee tardiness can be drawn at this time.

Adaptability. Both employee-based and manager-based measures of adaptability supported Hypothesis 5.5, although only the former reached statistical significance beyond the traditional .05 level. Both measures, as displayed in Table 5-2, show a monotonic relationship to the labor-management relationship, with transit organizations having relatively more cooperative patterns showing higher levels of adaptability.

In the aggregate, the disparate results among the four hypotheses relating to transit organization performance lend support to the notion that organizational performance cannot be adequately measured by a single standard.

Recency of Organization. Hypothesis 5.6 proposed that organizations in the incipient stages of labor organization would be characterized by a containment-aggression relationship pattern. This hypothesis was tested two ways; once combining both forms of organization (i.e. unions and employee associations) and alternately by considering only those transit properties having labor unions, per se. The operational definition, in both cases, for a newly organized transit property was one in which the earliest recorded formal labor agreement was no earlier than January 1, 1976 (less than two years before the collection of data).

The statistical comparison was an analysis of crossbreaks by cross-categorizing newly organized/earlier organized properties vs. containment-aggression/all other relationship patterns. Table 5-3 organizes the results of the two comparisons. It is seen that Hypothesis 5.6 is supported by the data. In particular, when only those transit properties having labor unions are considered, the result is rather striking. While three-quarters of the "newly organized" properties are characterized by a containment-aggression pattern, nearly the reverse is true for the properties that have been organized longer. However, even this result fails to attain the conventionally established level of statistical significance. This is due not to the data, per se, so much as to the way

TABLE 5-3. REGENCY OF LABOR ORGANIZATION AND
LABOR-MANAGEMENT RELATIONSHIP PATTERN

TRANSIT PROPERTIES HAVING LABOR UNIONS OR EMPLOYEE ASSOCIATIONS

	Recently Organized	Organized Before 1976
Containment-Aggression	3	4
Accommodation or Cooperation	3	14

Chi Square = .605
p < .43

TRANSIT PROPERTIES HAVING UNIONS ONLY

	Recently Organized	Organized Before 1976
Containment-Aggression	3	4
Accommodation or Cooperation	1	13

Chi Square = 1.89
p < .169

chi-square is computed. The small number of transit properties included in this sample and therefore the small number in each of the four cells tends to force the value of chi square to a rather low value.⁴⁸

History of Third-Party Intervention. Participating transit properties were categorized as to whether third-party intervention, by way of either mediation or arbitration, had been employed during the most recent period of contract negotiation. The data provided weak support for Hypothesis 5.7. Table 5-4 provides a crossbreak table highlighting the relationship between third-party intervention and the relationship pattern. The rather small sample available hints that third-party intervention may be more likely under a containment-aggression relationship pattern. However, in view of the lack of anything approaching statistical significance, no firm conclusion is warranted.

Frequency of Contract Renegotiation. Frequency of renegotiation was measured by averaging the number of months between contract renewal dates, for the eight most recent contract periods (or for as many as applicable, for properties recording fewer than eight contracts). Extreme group (containment-aggression vs. cooperation) means were compared and tested by means of a t-test. Although the "cooperative" properties averaged 27.2 months between contract renewals, and the containment-aggression properties averaged only 22.5 months, the results failed to reach significance.⁴⁹ The effect, although in the direction predicted,

⁴⁸In fact, the legitimacy of using the chi square test of significance is questionable in this instance. As a rule of thumb, there should be at least five items in each theoretical frequency category, in order to ensure a good fit to the theoretical chi square distribution. Ya-Lun Chou, Statistical Analysis (New York: Holt, Rinehart and Winston, 1975).

⁴⁹ $t = 0.94$, $p < .185$ (one tailed)

TABLE 5-4. HISTORY OF THIRD-PARTY INTERVENTION AND
LABOR-MANAGEMENT RELATIONSHIP PATTERN

DURING MOST RECENT CONTRACT NEGOTIATION

	<u>Third Party</u>	
	Did Intervene	Did Not Intervene
Containment-Aggression	3	4
Accommodation or Cooperation	4	13

Chi Square = .205

p < .65

was too mild to permit generalization.

DISCUSSION

The high coefficients of internal consistency for the two labor-management relationship pattern scales, created for this project, plus the high correlations between labor leader and transit manager ratings for the same properties, bolster our confidence that we have measured a unitary and stable organizational attribute. The ambient relationship pattern is apparently something upon which different observers in an organization can reach relative agreement. This study appears to have demonstrated the feasibility of studying the labor-management relationship by the means we have employed.

On the other hand, the linkages between the relationship pattern and other organizational variables may be more complex than we had originally anticipated. A simple categorization of transit properties into three clusters, based on their measured relationship pattern scores, obscures the fact that within each category are potentially critical sub-groupings, based on organization structure variables, labor organization differences or environmental differences. These covariates, singly or in combination, can confound or even reverse the direction of relationships between relationship pattern and transit performance measures. However, the limited sample size in the present study precluded the cross-categorization of transit properties by the sort of concomitant variables that might make a difference. As it was, even without such further subdivision, where results tended strongly in the direction hypothesized, limited cell sizes in crossbreak tables severely hindered the search for statistical significance. Because the unit of analysis for this study was the transit organization, rather than individual members, this handicap "came with the territory."

CONCLUSIONS

The most pervasive general conclusion to emerge from the eight hypothesis tests addressed in this chapter is that very few simple relationships can be found between the labor-management relationship pattern

and various other organizational variables.

The hypothesis concerning the equivalence of labor and management perceptions of an ambient relationship climate was solidly confirmed. There was also solid support that this pattern of relationships is closely linked to personnel turnover and to the ability of a transit organization to adapt to changing conditions.

One other solid relationship was established--that of the relationship pattern and absenteeism. However, in this case the relationship was the inverse of what had been proposed. Absenteeism seems to rise with an "improving" relationship pattern. This relationship is quite possibly confounded by organizational reward and punishment policies regarding work attendance and this, in itself, may be related to management's willingness to agree to "soft" work rules. If so, then at least one instance may have been uncovered in which a little more conflict might have been organizationally beneficial.

Weak support was provided for the hypothesis that proposed that organizations having a relatively conflictual relationship (i.e. containment-aggression) would tend to re-negotiate contracts more frequently. Much stronger support was lent to the proposition that a containment-aggression relationship tends to go hand-in-hand with recency of labor organization. However, neither of these hypothesis can be substantiated by the usual tests of statistical significance.

The other relationships hypothesized did not materialize. The labor-management relationship pattern was not found to be related neither to the measures of service efficiency nor to service effectiveness. Rather than concluding that the relationship pattern has no bearing on efficiency/effectiveness, however, it would be prudent to consider it a potential intervening variable between other factors (e.g. the scope and depth of union influence) and measures of efficiency/effectiveness.

CHAPTER 6

THE COLLECTIVE AGREEMENT

Viewed within the context of the systems model we have used in this study, the transit labor-management agreement is the product of a variety of influences. Contributing to the breadth and makeup of the agreement are the legal framework, the organizational structures of labor and management, and the history of the relationship between the parties. The collective agreement component differs from the other components of the labor relations systems model, however, in that it is more directly related to transit performance than the other components. To assess the relationships between the collective agreement and transit performance, this chapter looks at the collective agreement from three different perspectives. The labor-management agreement is analyzed from the perspective of: (1) a set of organizational policies; (2) a set of employee inducements and expected employee contributions; and (3) an outcome of distributive and problem-solving processes in negotiations.

CONCEPTUAL FRAMEWORK

The collective bargaining agreement negotiated by transit labor and management representatives performs a number of complementary functions. As a binding contract between two organizations, the agreement requires management during the life of the contract to administer various policies, procedures, and provisions. For the individual employee, the agreement spells out the "wage and effort" bargain. It specifies an employee's wage rate, fringe benefits, and working conditions. The agreement also communicates to the employee management's expectations about the amount of effort the employee should contribute to the organization. Finally, as the outcome of the collective bargaining process, the agreement represents solutions to issues which arise during negotiations. Each of these functions of the collective agreement is discussed next.

The Collective Agreement and Organizational Policies

The collective agreement usually contains rules designed to control, regulate or encourage certain types of behavior by employees or groups of employees. Some of these rules frequently come into play only when someone has violated an organizational norm or standard. Rules regarding the handling of grievances, for example, only become relevant when an employee or supervisor is accused of violating a contract provision. In other instances, such as employee illness, the rule comes into play when an employee is sick and cannot report to work. We term these types of rules, which exist to control or encourage certain types of behaviors within transit properties, organizational policies.

Among the provisions within the urban transit collective agreement which can be viewed as organizational policies are those covering human resource utilization, employee sick leave, and employee grievances. For instance, work rules reflect organizational policies regarding the use of labor resources and acceptable methods of performing work. Similarly, the sick leave policy in the collective agreement represents an incentive or disincentive for employee absenteeism.

The Collective Agreement and the Inducements/Contributions Contract

A consistent theme among organization theorists is that the establishment and maintenance of an organization rests on an equilibrium between member contributions and organizational inducements.¹ Thompson defines the inducements/contributions contract as "what is expected of individuals in terms of jobs needing to be done, and it defines the rewards which the organization pledges for the appropriate performance

¹The equilibrium approach to organizational analysis was first set forth by Chester I. Barnard in The Functions of the Executive (Cambridge, MA: Harvard University Press, 1938). It has been developed further in James G. March and Herbert A. Simon, Organizations (New York: John Wiley & Sons, 1958) and James D. Thompson, Organizations in Action (New York: McGraw-Hill, 1967).

of such jobs."² Collective bargaining is essentially a process by which two organizational coalitions negotiate the content of the inducement/contributions contract for a group of employees.³

The collective agreement between a transit organization and a labor organization contains employee inducements and employee contributions agreed to during the bargaining process. Employee inducements will include such items as wage levels, fringe benefits, and standards for the quality of the physical and health-related environment of the workplace. Contributions items frequently specified in the contract include the length of the workweek, the grounds for disciplinary actions, and descriptions of job duties. The contract may also be silent about many contributions expected from employees, but may reserve the right to specify them to management.

The Collective Agreement and Outcomes of the Negotiating Process

The organizational policy and inducements/contributions approaches to analyzing the collective agreement focus on relatively specific, concrete features of the agreement. Analyzing the collective agreement as an outcome of the negotiating process focuses more directly on the perceptions of the parties. Walton and McKersie distinguish between two different negotiation subprocesses and two types of bargaining items, distributive and integrative.⁴ The allocation of resources to labor and management is determined through the distributive and integrative subprocesses of negotiations. The distinction between distributive and integrative bargaining is essentially the same as the distinction made

²Ibid., p. 106.

³For an elaboration of this political perspective on the collective bargaining process see James L. Perry and Charles H. Levine, "An Interorganizational Analysis of Power, Conflict, and Settlements in Public Sector Collective Bargaining," American Political Science Review, 70 (December, 1976), 1185-1201.

⁴See Richard Walton and Robert McKersie, A Behavioral Theory of Labor Negotiations (New York: McGraw-Hill, 1965).

by game theorists between fixed sum and variable sum games. Distributive bargaining involves allocating a fixed share between the parties when their bargaining goals are in direct conflict. Therefore, distributive bargaining involves pure conflicts of interest between the parties. When the goals of the parties are not in conflict, integrative potential exists for bargaining over a common problem. Unlike distributive bargaining which involves "fixed" stakes, integrative bargaining presents an opportunity for both parties to improve their joint positions.

EXPECTED RELATIONSHIPS BETWEEN THE CONTENT OF THE COLLECTIVE AGREEMENT AND TRANSIT PERFORMANCE

The preceding discussion suggested several perspectives from which to assess the collective agreement. These perspectives are essentially complementary. This section presents six hypotheses about relationships between the content of the collective agreement and transit property effectiveness. The first four hypotheses relate various organizational policies contained in the collective agreement to single components of our performance concept. The fifth hypothesis focuses on relationships based upon the inducements/contributions perspective. The final hypothesis identifies relationships between the perceived quality of labor-management decisions and transit property effectiveness.

Organizational Policy

Among the organizational policies in transit labor agreements most frequently associated with transit effectiveness are those associated with work rules. Work rules connote some explicit constraints on the conduct of work and the uses of human resources. Several recent analyses of urban transit productivity suggest that restrictive work rules reduce management's flexibility in the use of labor and the implementation of new services.⁵ Work rules therefore limit improvements in labor

⁵John R. Meyer and Jose A. Gomez-Ibanez, Improving Urban Mass Transportation Productivity (Washington, D.C.: Urban Mass Transportation Administration, 1977) and Nan Rokaw, "Transit Labor-Management Relationships," unpublished paper, Washington, D.C.: Public Technology, Inc. 1977.

productivity. The arguments that restrictions on the conduct of work and use of labor reduce transit labor productivity and service efficiency suggest the following hypothesis:

Hypothesis 6.1: The fewer restrictions placed upon the conduct of work and the use of labor by the collective agreement, the greater the service efficiency of the transit property.

Organizational policies also have significant influences on employee absenteeism. The structure of sick leave and related policies in the collective agreement provides incentives and disincentives for employees to take days-off from work. Sick pay is a widely accepted and equitable organizational maintenance activity. However, depending upon the way in which sick leave and related policies are designed and implemented, absence rates will vary. Generally, the more attractive the opportunities to take excused absences with pay, the more likely are employees to take advantage of the opportunities. To the extent that sick leave and related organizational policies place penalties on absenteeism, and possibly even provide positive incentives for not using sick leave credits, absence rates will be reduced.

Hypothesis 6.2: The more that organizational policies specified in the collective agreement encourage reporting for work and discourage not reporting for work, the lower the absence rate among transit property employees.

Grievance procedures are important vehicles for employee communication of dissatisfactions with their supervision, work environment, and extrinsic rewards. Encouraging communications of dissatisfactions is a prerequisite for adjusting or modifying the conditions which cause employee dissatisfaction. In the absence of a communication and adjustment mechanism for alleviating employee dissatisfaction, employee work performance is likely to suffer. Employee dissatisfaction, for example, has been clearly linked with employee turnover and absenteeism.⁶ This relationship suggests the following hypothesis:

⁶Lyman W. Porter and Richard M. Steers, "Organizational, Work and Personal Factors in Employee Turnover and Absenteeism," Psychological Bulletin, 80 (1973), 151-176.

Hypothesis 6.3: *The less that organizational policies accord employees the opportunity to present grievances, the higher the turnover, absenteeism, and tardiness among transit property employees.*

Several recent analyses of innovation in local governments and in urban transit suggest important relationships between labor-management relations and the ability of transit organizations to adapt to the changing needs of their clients or to new methods of service delivery.⁷ Fielding notes that among the conditions labor groups have sought prior to the implementation of new technologies or services are: (1) "the opportunity to have union employees as operators of the system;" (2) "no degradation of earning levels;" and (3) "that established work rules must prevail in demand-responsive transit."⁸ To the extent that provisions in the collective agreement are consistent with these conditions, we would expect adaptations to changing technology and service demands to be constrained.

Hypothesis 6.4: *The more that organizational policies specified in the collective agreement constrain the implementation of new technologies or programs, the lower the adaptability of the transit property.*

⁷For general discussions see Irwin Feller and Donald C. Menzel, "Diffusion Milieux as a Focus of Research on Innovation in the Public Sector," Paper presented at the 1975 Annual Meeting of the American Political Science Association, San Francisco, CA, September 2-5, 1975 and Robert K. Yin, Karen A. Heald, Michael A. Vogel, Patricia D. Fleischauer, and Bruce C. Vladeck, A Review of Case Studies on Technological Innovations in State and Local Services (Washington, D.C.: The Rand Corporation, 1976). For examinations of labor-management relations and innovation in transit see Walter J. Bierwagen, "Labor's Response to Innovation in the Transit Industry," in Proceedings of a Series of Conferences on Organized Labor, Transportation Technology and Urban Mass Transit in the Chicago Metropolitan Area (Chicago: College of Engineering, University of Illinois, 1974) and Gordon J. Fielding, "Labor Impediments to Innovations in Public Transit," paper presented at the TRB Annual Meeting, Washington, D.C., January, 1976.

⁸Ibid., pp. 6-8.

Inducements/Contributions Contract

When the collective agreement reflects some balance between what is asked of members and what is given in return, the transit property is likely to be effective. If the collective agreement reflects an imbalance of either inducements or expected contributions, the transit property is likely to be less effective.

Because the labor-management agreement is a set of binding rules, it identifies the responsibilities of the parties. The rewards or contributions specified in the agreement are legally enforceable and establish parameters for the obligations of the parties to each other.

Hypothesis 6.5: The closer to equilibrium the inducements and contributions specified in the collective agreement, the greater the effectiveness of the transit property.

Negotiation Outcomes

Labor-management decisions are likely to positively influence transit property effectiveness to the extent that the parties are able to compromise their positions on distributive issues and integrate their positions in areas of common concern. The dominance of one of the parties on distributive issues will have serious negative consequences either for property finances or for employee welfare and work effort. These outcomes of joint decision making can be expected to seriously impede labor productivity and property efficiency. On the other hand, if the parties increase their joint satisfaction through identifying and solving common problems, labor-management decisions are likely to positively influence property effectiveness.

Hypothesis 6.6: The greater the extent to which distributive issues are resolved through compromise rather than unilateral concession, the greater the effectiveness of the transit property; the greater the extent to which labor-management decisions resolve common problems, the greater the effectiveness of the transit property.

RESEARCH FINDINGS

These hypotheses were tested using primarily rank order and product-moment correlation analysis. Most of the data used to test

Hypotheses 6.1 through 6.4 were taken directly from collective bargaining agreements gathered during site visits. The contracts were scored using the coding instrument in Appendix 2.⁹ The instrument reflects an ordinal ranking of the contents of possible contract provisions ranging from least to most favorable to the union or from least to most costly to management. The remaining hypotheses were tested with data from employee and manager questionnaires. Measurement scales associated with Hypotheses 6.5 and 6.6 are defined in Appendix 1.

Organizational Policy Perspective

The frequency distributions in Table 6-1 provide a description of some of the practices of transit properties in our sample. No simple characterizations can be applied to the range of organizational policies pursued within the sample. Generally, work rule practices and sick leave policies are widely dispersed. In only a few instances are practices among the sample highly homogeneous. With respect to "percent of runs required to be regularly scheduled," the contracts of 22 of 24 organizations are silent. Similarly, most of the contracts are silent about the obligation of the parties to the "public interest."

Hypothesis 6.1. The test of Hypothesis 6.1 entailed correlating the work rules in Table 6-1 with the three indicators of service efficiency. These results are presented in Table 6-2. Rank order and partial correlations were computed for each dependent variable. The partial correlations were used to identify the probable confounding influences of size and scale of operation on the relationships between work rules and service efficiency. In most instances, a simple bivariate relationship which is significant becomes stronger when the size of the property is controlled. This indicates that any positive or negative

⁹This contract analysis instrument is a substantially revised and shortened version of one contained in Kenneth M. Jennings, Jay A. Smith and Earle A. Traynham, Jr., Study of Unions, Management Rights, and the Public Interest in Mass Transit (Washington, D.C.: U.S. Department of Transportation, Office of University Research, 1976).

TABLE 6-1. FREQUENCY DISTRIBUTIONS OF SELECTED PROVISIONS
IN THE SAMPLE OF COLLECTIVE AGREEMENTS

CONTRACT PROVISION	FREQUENCY
<u>Work Rules</u>	
<i>Management Rights to Assign Split Shift</i>	
Management has unilateral right to assign split shift	3
No reference	7
Management right to assign split shifts but some limitation	13
Split shifts are prohibited	1
<i>Maximum Spread Before Payment of Overtime</i>	
No reference	6
Spread time not to exceed 15 hours	2
Spread time not to exceed 12 hours	2
Spread time not to exceed 11 hours	4
Spread time not to exceed 10 hours	8
Spread time not to exceed 9 hours or less	2
<i>Required Yearly Number of Bids on Regular Runs</i>	
No reference	4
At least one time	1
At least two times	2
At least three times	7
At least four times	10
<i>Bidding Requirements on Changes in Runs</i>	
Management can change or discontinue run without general pick occurring	1
No reference	8
Open to general bidding procedure only if change occurs specified number of days prior to scheduled rebidding of regular runs	1
Open to general bidding procedure anytime change occurs	14
<i>Management Latitude to Contract Out</i>	
Specific management prerogative to contract out	3
No reference	18
Contracting out restricted (effects, e.g., regular employees not to be laid off or discharged)	1
Contracting out prohibited	3

Percent of Runs Required to be Regularly Scheduled

No reference	22
Some reference	2

Part-time Employees

Some provision allowing part-time employees	6
No reference	17
Prohibited	2

Percent of Straight Runs Required

No reference	13
Some reference	11

Minimum Guarantee for a Regular Run

No reference	7
Less than 8 hours	1
8 hours or more, but less than 8-1/2	16

Restrictions on Scheduled Days Off

No reference	6
Work week consists of six days	1
Work week consists of five days	8
Work week must provide two consecutive days off or consist of five consecutive days	9

Minimum Guarantee for Charter or Special Service

No reference	15
8 hours guarantee for stipulated mileage	3
Minimum hour guarantee for all charters	6

Sick Leave Policies*Rate of Sick Leave Accumulation*

No reference	1
1/2 day per month or less	3
1/2+ to 1 day per month	19
1+ to 1 1/2 days per month	3
Over 1 1/2 days per month	1

Proof of Illness Requirement

Proof of illness required	17
No reference	7
Proof of illness not required	3

Miscellaneous*Peak Wage Rate*

Less than or equal to \$5 per hour	1
Greater than \$5 and less than or equal to \$6	4
Greater than \$6 and less than or equal to \$7	12
Greater than \$7 and less than or equal to \$8	7

Efficiency

Refers to <u>union obligation</u> to promote efficiency and other aims listed above	4
Refers to greater efficiency or better performance of service; adequate service to community	8
No references	12

Public Interest

Specific reference to <u>union obligation</u> with regard to public interest	1
Specifically referred to	4
No reference	19

Inequality of frequencies among contract provisions resulted from differential availability of data elements at various transit properties.

effects of the work rules upon service efficiency become less pronounced with increases in organizational size. Thus, the constraints work rules impose upon efficiency are, in part, counterbalanced by economies of scale as the size of transit organizations increases.

Several interesting patterns of relationships can be identified from Table 6-2. First, many of the associations between work rule practices and revenue vehicle hours per driver hour are positive rather than negative. Three of these relationships are significant when size is controlled, i.e., assignment of split shifts, number of bids required yearly, and percent of straight runs required. Three additional relationships (maximum spread time, bidding requirements on run changes, and use of part-time employees) are also positive and moderately strong when size is controlled. These anomalous relationships involve organizational policies primarily associated with scheduling and assignment of runs. They suggest that restrictions on run assignment and scheduling are associated with more efficient utilization of human resources.

A second pattern in Table 6-2 is the significant positive relationships between more restrictive work rules and higher operating expense per revenue vehicle hour. The significant associations tend to involve hours provisions, particularly minimum hours guarantees and scheduling of days off. These relationships are also representative of those for the third service efficiency indicator, operating expense per employee.

One final pattern is worth noting. There is very little similarity between the work rules significantly associated with the revenue vehicle hours per driver hour indicator and those associated with the other two indicators. This suggests that changes in a work rule which affect one indicator seldom entail corresponding increases or decreases in another indicator. However, four relationships tend to deviate from this generalization. Maximum spread before overtime and required number of bids yearly are positively and strongly related to both labor productivity and cost of produced output. Bidding requirements on run changes is inversely related across the indicators. Only restrictions on management latitude to contract out is both negatively associated with labor productivity and positively associated with operating expenses.

TABLE 6-2. RELATIONSHIPS BETWEEN WORK RULE PROVISIONS AND SERVICE EFFICIENCY INDICATORS

Work Rule Provisions	Service Efficiency Indicators					
	Revenue Vehicle Hours per Driver Hour (Kendall's rank order correlation)	Partial Correlation: Controlling for Number of Revenue Vehicles	Operating Expense per Revenue Vehicle Hour (Kendall's rank order correlation)	Partial Correlation: Controlling for Number of Revenue Vehicles	Operating Expense per Employee (Kendall's rank order correlation)	Partial Correlation: Controlling for Number of Revenue Vehicles
Management Rights to Assign Split Shift	.35*	.56***	.11	-.05	.14	.03
Maximum Spread Before Payment of Overtime	.02	.29	.34**	.28	.23	+.38*
Required Yearly Number of Bids on Regular Runs	.27*	.42*	-.05	.12	.25*	.47*
Bidding Requirements on Changes in Runs	.00	.27	.13	-.31*	-.01	-.22
Management Latitude to Contract Out	-.21	-.24	.24*	.48**	.05	.31
Percent of Runs Required to be Regularly Scheduled	-.11	-.14	.11	-.01	-.13	-.07
Part-time Employees	.08	.26	.25*	.12	-.05	-.03
Percent of Straight Runs Required	.25	.40*	.20	-.02	.08	-.02
Minimum Guarantee for a Regular Run	-.01	.10	.46***	.35*	.30*	.40*
Restrictions on Scheduled Days Off	-.11	-.11	.37**	.36*	.02	.21
Minimum Guarantee for a Charter Run or Special Service	.16	.13	.11	.42*	.40	.59***

* p < .10

** p < .025

*** p < .01

Hypothesis 6.2. The relationships of four variables with self-reported absenteeism and the absence rate derived from organizational records were examined in assessing Hypothesis 6.2. Three of the four relationships were significant and in the predicted direction. Mixed results were obtained for two sick leave policies, rate of sick leave accumulation and requirement for proof of illness. The amount of absenteeism at a property is a direct function of the number of sick days granted to employees. Thus, all other related organizational practices being the same, use of sick leave appears to be a function of paid sick leave available to employees rather than actual illness. We expected the tendency of employees to use sick days merely because they were available to be diminished in those organizations where the collective agreement contained a "proof of illness" requirement. This relationship, however, is not significant.

Table 6-3 shows very strong relationships between the peak wage rate and relative wages and the archival absence rate and somewhat weaker relationships between these independent variables and self-reported absenteeism. The relative wage measure is a ratio of coach operator wages to local police wages. This measure is intended to reflect the "adequacy" of transit wage levels in meeting the basic needs of employees within a particular geographic area. These results suggest that as wage levels improve with respect to an absolute or relative standard of living employees are less inclined to work the full amount of their scheduled time. Thus, high wages are a disincentive to consistently report for work.

Hypothesis 6.3. Our approach to examining the relationship between grievance procedures and employee withdrawal differed from the examination of the previous two hypotheses. We used measures of employee perceptions of the grievance procedure, rather than items from the collective agreement, as the independent variables. These questionnaire items are listed in Table 6-4.

The results of product-moment correlations, presented in Table 6-4, provide a good degree of support for Hypothesis 6.3. Separation rate, intent to leave, stability rate, and tardiness are correlated in the expected directions. The correlations for self-reported absenteeism are the only ones which deviate from our predictions.

TABLE 6-3. CORRELATIONS BETWEEN ORGANIZATIONAL
POLICIES AND ABSENCE RATE

<u>Organizational Policy</u>	<u>Absenteeism</u>	
	Self-reported absenteeism	Absence rate from organizational records
Rate of Accumulation of Sick Leave ^a	.33*	.67***
Proof of Illness Required ^a	-.02	-.20
Peak Wage Rate ^b	.40**	.67***
Wage of Coach Operators Relative to Police ^b	.33	.70***

^aKendall's rank order correlation

* p < .10

^bPearson product-movement correlation

** p < .05

*** p < .01

TABLE 6-4. PEARSON CORRELATIONS BETWEEN GRIEVANCE PROCEDURES AND EMPLOYEE WITHDRAWAL

<u>Independent Variables</u>	<u>Employee Withdrawal Indicators</u>				
	Self-reported Absenteeism	Separation Rate	Intent to Leave	Stability Rate	Tardiness
Employee Perceptions of Leader Effectiveness in Handling Grievances	-.01	-.26	-.14	.11	-.55**
Employee Influence in Deciding to File a Grievance	.28*	-.28*	-.18	.33*	-.02
Employee Influence in Deciding to Take a Grievance to Arbitration	.05	-.21	-.13	.22	-.05
Employee Influence in Deciding Whom to Support if Two Members Conflict in a Grievance	.27	-.42**	-.25	.12	-.24

* p < .10

** p < .025

Hypothesis 6.4. Of the four organizational policy hypotheses, this hypothesis received the least support. The measures of adaptability were correlated with three provisions from the collective agreement, as shown in Table 6-5. Only two correlations were significant, but the direction of the correlations was opposite our predictions. The observed correlations for the "joint obligation" provisions suggest that such provisions may be inserted into the agreement as an afterthought, only when management has lost a great deal of its flexibility.

Inducements/Contributions Perspective

We noted earlier that the collective agreement is usually quite explicit about employee inducements, but it is less explicit and often reserves to management the right to establish expected levels of employee contribution. A scale measuring inducements/contributions disequilibrium was created from provisions within the collective agreement. This scale is defined in Appendix 1.

The results of the test of Hypothesis 6.5, relating inducements/contributions disequilibrium with the performance indicators, are presented in Table 6-6. These results are again quite supportive of the hypothesis. As the disequilibrium between inducements and contributions grows larger, service efficiency decreases significantly, employee withdrawal increases, and adaptability decreases. Among all the indicators, only those for service effectiveness are not associated with the independent variable in the expected direction. These results indicate a strong relationship between inducements/contributions equilibrium and transit property performance.

Negotiation Outcomes Perspective

Two measures of management perceptions of the collective agreement were correlated with the performance measures of test Hypothesis 6.6. One scale reflected manager views of the extent to which the collective agreement was a compromise on distributive issues. The rationale for the scale is that compromise is a more desirable resolution of distributive issues than one-sided outcomes. The second scale measured the extent to which the collective agreement resolved common problems.

TABLE 6-5. KENDALL RANK ORDER CORRELATIONS BETWEEN SELECTED ORGANIZATIONAL POLICIES AND THE ADAPTABILITY INDICATORS

	Organizational Policies	Adaptability as Perceived by Transit Managers	Adaptability as Perceived by Employees
Increasing	Management Latitude to Contract Out	.09	-.13
Decreasing	Recognition of Joint Obligation to Promote Efficiency	-.01	.35*
Decreasing	Recognition of Joint Obligation to the "Public Interest"	.31*	.05

* $p < .05$

TABLE 6-6. SPEARMAN RANK ORDER CORRELATIONS BETWEEN INDUCEMENTS/
CONTRIBUTIONS DISEQUILIBRIUM AND THE PERFORMANCE INDICATORS

Performance Indicators	Inducements/Contributions Disequilibrium (inducements minus contributions)
SERVICE EFFICIENCY	
Revenue Vehicle Hours per Driver Hour	-.46**
Operating Expense per Employee	.43**
Operating Expense per Revenue Vehicle Hour	.48***
SERVICE EFFECTIVENESS	
Revenue Passengers per Service Area Population	.004
Revenue Passengers per Revenue Vehicle Hour	.002
EMPLOYEE WITHDRAWAL	
Self-reported Absenteeism	.20
Separation Rate	.18
Intent to Leave	.40**
Stability Rate	.35*
Tardiness	.27
ADAPTABILITY	
Employee Perceptions	-.19
Manager Perceptions	-.29

* $p < .10$

** $p < .05$

*** $p < .01$

This scale suggests that integrative solutions improve the negotiation outcomes for both parties.

Table 6-7 presents Spearman rank order correlations between the negotiation outcome measures and the transit performance indicators. The results are generally in the expected direction, but only a minority are significant. The extent of perceived problems solved appears to be a better predictor of effectiveness than the extent of compromise on distributive issues. Compromise is negatively associated with one service effectiveness indicator, and only weakly related to the other performance measures. Resolution of common problems, however, is significant in four instances. When the collective agreement is perceived as resolving common problems, unit operating expenses, intent to leave and tardiness are lower, and adaptability is higher.

DISCUSSION

At the outset of this chapter we indicated that we expected the relationships between the content of the collective agreement and transit property performance to be quite direct. The findings support this expectation. Each of the complementary perspectives we examined received persuasive support from the statistical analyses. This section discusses some of the implications of the specific findings.

The first finding which needs to be emphasized is that sweeping generalizations about the relationship of work rules to transit performance do not appear to be warranted. We found that increasingly restrictive scheduling provisions are associated with higher labor productivity; increasingly demanding hours provisions are associated with higher unit operating expenses. The diversity of our findings suggests, however, that intuitive assessments of the impacts of specific work rules on performance are not always borne out by empirical analysis.

These and other findings associated with the organizational policy perspective provide some clear directions for reorienting labor-management decision making in urban transit. Three specific changes might be pursued. First, some consideration should be given to the relaxation of minimum guarantees and provisions which restrict the work week to

TABLE 6-7. SPEARMAN RANK ORDER CORRELATIONS BETWEEN PERCEIVED NEGOTIATION
OUTCOMES AND THE TRANSIT PERFORMANCE INDICATORS

<u>Performance Indicators</u>	<u>Manager Perceptions of Extent to Which Col- lective Agreement Represents Compromise on Distributive Issues</u>	<u>Manager Perceptions of Extent to Which Collective Agreement Reflects Resolution of Common Problems</u>
SERVICE EFFICIENCY		
Revenue Vehicle Hours per Driver Hour	-.09	.07
Operating Expense per Employee	-.20	.03
Operating Expense per Revenue Vehicle Hour	-.24	-.35*
SERVICE EFFECTIVENESS		
Revenue Passengers per Service Area Population	.06	.01
Revenue Passengers per Revenue Vehicle Hour	-.35*	-.13
EMPLOYEE WITHDRAWAL		
Self-reported Absenteeism	.10	.20
Separation Rate	-.23	-.02
Intent to Leave	-.21	-.50**
Stability Rate	.15	-.07
Tardiness	-.31	-.37*
ADAPTABILITY		
Employee Perceptions	.15	.30*
Manager Perceptions	-.06	.15

* p < .10

** p < .01

five consecutive days. The effects of such changes would be to create more flexibility in the assignment of employees and, in the long-run, reduced manning levels. Such changes are similar to current proposals (and practices in a small number of organizations) calling for the use of part-time employees. Very modest changes in hours provisions, for current employees, however, represent an alternative means for bringing equivalent savings in operating expenses.

A second change which might be pursued by labor and management involves reducing employee absenteeism. New organizational policies must be designed to combat two tendencies suggested by our findings, i.e., that some employees obviously use sick leave because it is available and that absenteeism increases with the absolute and relative wage rate. The second tendency presents a double-edged problem for management. In addition to the direct costs associated with negotiated wage increases, incremental costs may be incurred because of marginal increases in absenteeism. Significant work attendance bonuses (sometimes called "well" pay) might be an effective method for distributing monies that would otherwise be used to increase basic wage rates. Such a system might be designed so that absenteeism is significantly reduced, the transit property realizes a significant savings, and employees with good attendance records earn more than they would ordinarily earn from across-the-board wage increases.

Absenteeism might also be reduced by developing and rewarding better attendance norms among new employees. A number of steps could be taken in an effort to improve attendance norms. First, a more progressive wage rate structure could be established. Progression from the base to the peak rate for operators could be stretched to 4 or 5 years rather than the 2-3 months currently used in many transit organizations. Four or five years is about the amount of time it takes operators to reach peak performance and the wage structure should reflect initial performance variations among employees. Second, movement to each successive step of the wage structure might take place automatically unless an employee has an unsatisfactory work attendance record. If an employee's work attendance record is unsatisfactory, he or she could expect to remain at their existing salary step until the next evaluation period. An arrangement such as this which ties

pay to attendance during an employee's early years with a property should improve work attendance norms and reduce absenteeism and tardiness.

A final area which requires joint attention from labor and management is the administration of grievance procedure. The grievance procedure serves as a means for removing specific causes of employee dissatisfaction. It thereby helps to minimize dysfunctional and costly behaviors such as tardiness and turnover. Our site visits revealed that transit labor and management were often unaware of the contribution of effective grievance mechanisms to organizational effectiveness. The policy for grievance handling was often elusive. Each organization was able to point to a sequence of steps in the grievance resolution procedure. However, in attempting to trace the number of formal grievances initiated in the past year, it became apparent that interpretation and application of organizational policies was another matter. Defining which complaints counted as "grievances" and which did not was a problem.

More important was how grievances were frequently handled by labor and management officials. In some instances labor and management officials placed a premium on their ability to informally handle employee grievances without resorting to contractual procedures or other established organizational policies. However, informal handling of grievances often "short circuited" the process, either by excluding lower levels of management from being involved in resolving a conflict which they helped to create or by cutting off one of the few avenues of upward communication for lower level employees. In treating grievances informally, top labor and management officials also occasionally arrived at a quid pro quo which suited their roles and interests but was at odds with the interests of the employee initiating the grievance.

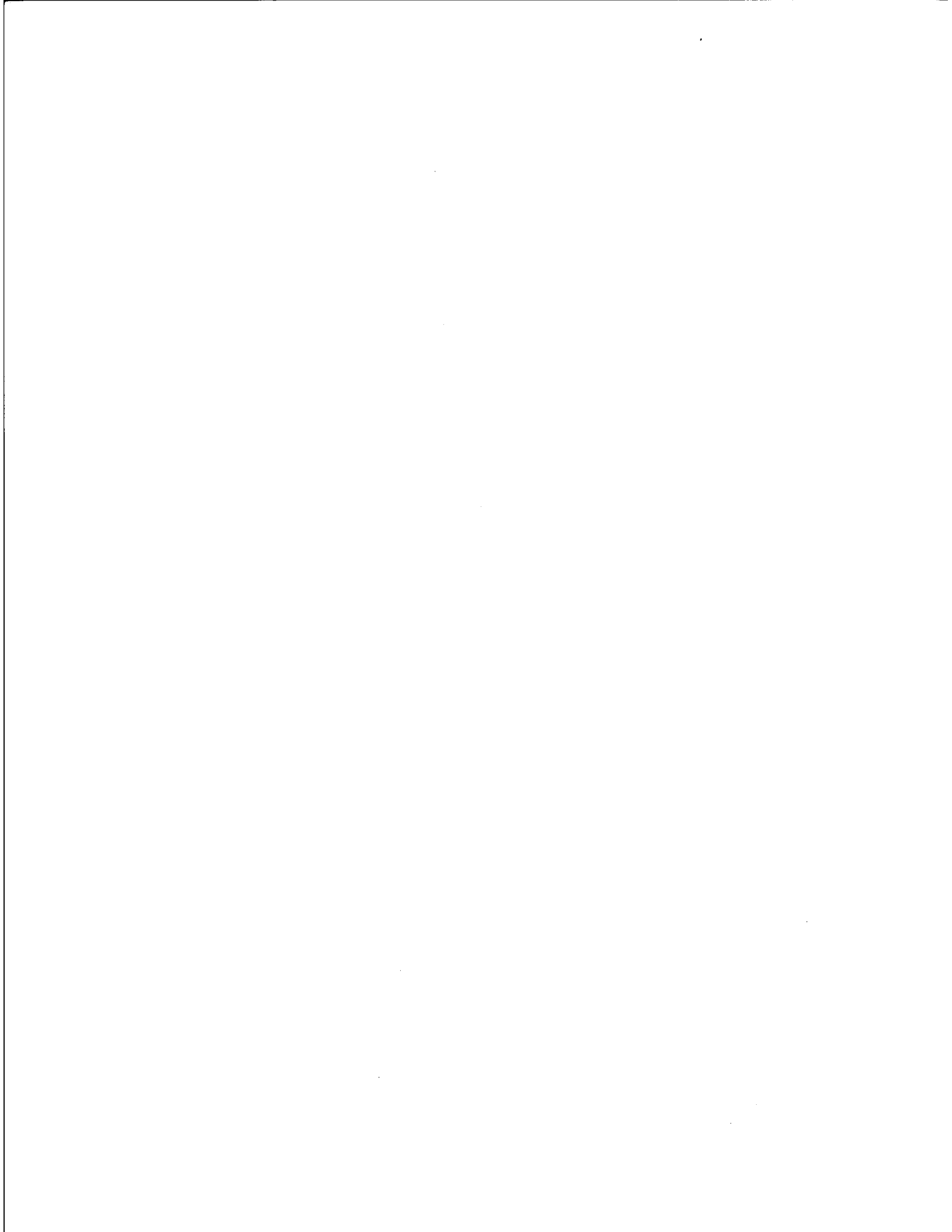
Perhaps the most serious potential abuse of the grievance process occurred where labor and management officials allowed grievances at the arbitration stage to "hang fire" rather than risk establishing a precedent detrimental to either side. In these situations, the grievance process neither clarified uncertainty about the collective agreement nor served as an acceptable communication channel for employee dissatisfaction.

CONCLUSION

The research findings about organizational policy indicate specific changes which can be negotiated between labor and management. Our assessments of other perspectives complement these findings by suggesting probable conditions which are necessary for improvements in transit performance to result from changes in organizational policies. First, changes in organizational policy must bring with them improvements in existing inducements/contributions levels within the transit property. Second, negotiated changes in organizational policy must involve more than merely "buying-out" bad practices which presently place limitations on transit performance. This condition for performance improvement seems to be consistent with our findings about negotiation outcomes. Management perceptions that the collective agreement was a compromise on distributive issues was only weakly related to higher performance. However, perceptions that the agreement resolved common problems was much more strongly related to higher organizational performance. Distributive issues must increasingly be re-defined as joint problems, where gains are potentially shared by both parties, in order for improvements to result in transit performance.

PART III

CONCLUSIONS



CHAPTER 7
SUMMARY OF THE FINDINGS
AND IMPLICATIONS

This study has investigated associations between the labor-management relationship and selected indicators of transit property performance. The study focused on fixed-route bus systems and on the bargaining unit that represented the transit operators in those systems. Four components of performance were selected for analysis: service efficiency; service effectiveness; employee withdrawal (i.e., turnover, absenteeism, and tardiness); and adaptability. The associations of these four performance components with aspects of the labor relations system were assessed statistically. Data for the study were collected from organizational archives, personal interviews, questionnaires and on-site observation at 28 urban mass transit organizations.

In this chapter, we review and assess the cumulative results of the research. The review and assessment of the results are divided into three parts. The first part is devoted to a review of conclusions about the specific hypotheses which were investigated. This section also summarizes the general findings of the research. Second, we discuss the implications of our findings for the urban transit industry. Finally, some items are suggested for an agenda of future research.

SUMMARY OF FINDINGS

Two sets of findings are summarized in this section. First, we review briefly the specific conclusions about our tests of 22 hypotheses. Then we summarize the general conclusions which can be drawn from the research results.

The conclusions about the hypotheses tested in Part II are reviewed in Table 7-1. Among the hypotheses we investigated, only five were not supported. Eleven hypotheses received partial support and six were fully supported. Thus 17 of the 22 hypotheses received some support.

The general conclusions from the research, organized around the five components of the labor relations systems model, are listed below.

TABLE 7-1. SUMMARY OF CONCLUSIONS ABOUT THE HYPOTHESES

<u>HYPOTHESIS</u>	<u>CONCLUSIONS ABOUT SUPPORT/LACK OF SUPPORT</u>
<p>Hypothesis 3.1: Transit properties will be generally less effective under legal frameworks that require the employer to bargain collectively than under alternative legal provisions. Where cooperative relationships exist, however, there will be no differences in transit performance attributable to the legal policy governing bargaining rights.</p>	<p>PARTIALLY SUPPORTED: Measures of operating expense per revenue vehicle hour, absenteeism and tardiness were related significantly, and as predicted, to statutory bargaining rights. However, the service effectiveness measures were associated (non-significantly) in the wrong direction, as was separation rate.</p>
<p>Hypothesis 3.2: The legal policy governing the scope of bargaining will have no significant impact on transit property performance.</p>	<p>SUPPORTED: Of the twelve effectiveness indicators tested, only one, (separation rate) showed a significant relationship to the legal policy governing scope of bargaining.</p>
<p>Hypothesis 3.3: Transit properties which have available or use dispute resolution mechanisms other than binding arbitration to resolve labor-management disputes will be more effective than those properties which use binding arbitration. Transit properties which rely upon the strike to resolve disputes will be less effective than those in which disputes are resolved by other means.</p>	<p>PARTIALLY SUPPORTED: Little association was found between either the use of arbitration or strike policy and transit performance. Strong associations, as predicted, were found between actual strike behavior and six of the twelve transit performance indicators, in particular, measures of service efficiency, absenteeism, and tardiness.</p>
<p>Hypothesis 3.4: Aside from differences in effectiveness attributable to variations in bargaining rights, there will be no significant difference between the performance of transit properties in which 13(c) has had a perceived impact and those in which it has not.</p>	<p>SUPPORTED: Of the twelve effectiveness indicators tested, only one (intent to leave) appeared closely related to the perceived impact of 13(c), even when the variance due to differences in bargaining rights was statistically removed. In general, adjusting for differences in bargaining rights further reduced the already weak relationships between perceived 13(c) impact and the effectiveness indicators.</p>

HYPOTHESIS

Hypothesis 4.1: The likelihood of the local of a national union participating in a strike should be associated negatively with national union control of local union activities, negatively with local union attachment to the national union, and positively with intermediate body control of local activities.

Hypothesis 4.2: As the number of bargaining units representing employees increases, the efficiency of labor negotiations and labor relations administration will decrease, thereby decreasing transit performance.

Hypothesis 4.3: The decision-making authority of the management negotiator should be positively associated with transit performance.

Hypothesis 4.4: External influences in bargaining should be negatively associated with transit performance.

CONCLUSIONS ABOUT SUPPORT/LACK OF SUPPORT

NOT SUPPORTED: As predicted, strike activity was negatively related to local union attachment to the national. However, neither of the other two predictions was supported. Both sets of relationships were in a direction opposite the prediction, and one of those (national control of union activities) was significant ($p < .05$).

PARTIALLY SUPPORTED: All measures of service efficiency and adaptability, as well as absenteeism and tardiness, tended to support the prediction. Four of these seven relationships were significant. However, the two measures of service effectiveness failed to support the hypothesis, while support from the turnover measures was mixed.

PARTIALLY SUPPORTED: Although most of the correlations are weak, the preponderance are in the predicted direction and the four that tend in the non-predicted direction are well below statistical significance.

PARTIALLY SUPPORTED: Measures of service efficiency, adaptability, absenteeism and tardiness were all consistent with the hypothesis, as was the most sensitive measure of turnover (intent to leave). However, the service effectiveness results ran counter to the hypothesis. Furthermore, when the data were adjusted for differences in transit property size, the relationships tended to weaken.

HYPOTHESIS

Hypothesis 5.1: The nature of the labor-management relationship pattern will be agreed upon by labor and management interests.

Hypothesis 5.2: Service efficiency will be highest for a cooperative relationship pattern and lowest for a containment-aggression relationship pattern.

Hypothesis 5.3: Service effectiveness will be highest for a cooperative relationship pattern and lowest for a containment-aggression relationship pattern.

Hypothesis 5.4: Employee withdrawal (turnover; absenteeism; tardiness) will be highest for a containment-aggression relationship pattern and lowest for a cooperative relationship pattern.

Hypothesis 5.5: Adaptability will be highest for a cooperative relationship pattern and lowest for a containment-aggression relationship pattern.

Hypothesis 5.6: Where a transit property has been recently organized or is in the process of being organized, the ambient relationship pattern will be containment-aggression.

CONCLUSIONS ABOUT SUPPORT/LACK OF SUPPORT

SUPPORTED: There was substantial agreement between labor- and management-derived ratings of the participating transit properties' labor management relationship pattern ($r = .84$; $p < .001$). The scale developed for these ratings was found to have excellent psychometric properties.

NOT SUPPORTED: All three service efficiency measures were approximately equal under cooperative and containment-aggression relationship patterns, and slightly lower under the intermediate accommodation pattern.

NOT SUPPORTED: Though not statistically significant, the trend for the relationships was in a direction opposite to that predicted.

NOT SUPPORTED: While the hypothesis received strong support from the self-report measure of turnover, the absenteeism results ran counter to the hypothesis, while the tardiness results were inconclusive.

SUPPORTED: Both employee- and transit manager-derived measures of adaptability varied across labor-management relationship categories, as predicted.

PARTIALLY SUPPORTED: The relative proportion of containment-aggression relationship patterns was more than three times as high for newly-organized (unionized) properties. However, because of the small sample size, even this disparity failed to attain statistical significance.

HYPOTHESIS

Hypothesis 5.7: A history of the employment of third-party intervention in contract negotiations is associated with a containment-aggression relationship pattern.

Hypothesis 5.8: Frequency of formal contract renegotiation is associated with the ambient relationship pattern; renegotiation is more frequent toward the conflictual end of the scale.

Hypothesis 6.1: The fewer restrictions placed upon the conduct of work and the use of labor by the collective agreement, the greater the service efficiency of the transit property.

Hypothesis 6.2: The more that organizational policies specified in the collective agreement encourage reporting for work and discourage not reporting for work, the lower the absence rate among transit property employees.

Hypothesis 6.3: The less that organizational policies accord employees the opportunity to present grievances, the higher the turnover, absenteeism, and tardiness among transit property employees.

CONCLUSIONS ABOUT SUPPORT/LACK OF SUPPORT

PARTIALLY SUPPORTED: The direction of the disparity in relative proportions of "containment-aggression" properties having intervention vs. nonintervention histories supported the hypothesis. However, in view of the small sample size, the magnitude of the difference was not statistically significant.

PARTIALLY SUPPORTED: "Containment-aggression" properties renegotiated more often, as predicted. The difference was again not statistically significant.

PARTIALLY SUPPORTED: Several (though not all) work rule restrictions were related to lower service efficiency, as measured by the two measures of operating expense. On the other hand, the measure of revenue vehicle hours per driver hour yielded several findings at variance with the hypothesis.

SUPPORTED: Statistically significant relationships were found, as predicted, between absenteeism and three of the four organizational policies investigated. The fourth policy (requirement for proof of illness) was weakly related to absenteeism but opposite the prediction.

PARTIALLY SUPPORTED: Turnover and tardiness relationships generally supported the hypothesis. However, absenteeism was related to grievance procedures opposite the prediction.

HYPOTHESIS

Hypothesis 6.4: The more that organizational policies specified in the collective agreement constrain the implementation of new technologies or programs, the lower the adaptability of the transit property.

Hypothesis 6.5: The closer to equilibrium the inducements and contributions specified in the collective agreement, the greater the effectiveness of the transit property.

Hypothesis 6.6: The greater the extent to which distributive issues are resolved through compromise rather than unilateral concession, the greater the effectiveness of the transit property; the greater the extent to which labor-management decisions resolve common problems, the greater the effectiveness of the transit property.

CONCLUSIONS ABOUT SUPPORT/LACK OF SUPPORT

NOT SUPPORTED: Correlations between selected organizational policies and adaptability indicators were either nonsignificant or in a direction opposite to that predicted.

SUPPORTED: Ten of twelve possible relationships were in the direction predicted with five of those statistically significant.

PARTIALLY SUPPORTED: The majority of the relationships between both compromise and problem solving and the twelve performance indicators are in the predicted direction. However, only five of the twenty-four total relationships were significant, and one of those was in the reverse direction.

Transit Performance Indicators

1. Performance or effectiveness is a multidimensional concept. No single summary measure can serve as "the" criterion of transit organization performance. The four criteria (service efficiency, service effectiveness, employee withdrawal, and adaptability) selected for this study, however, appear to be valid measures of variations in the labor-management situation.

2. Although the three withdrawal variables (i.e., absenteeism, turnover, and tardiness) all represent a withholding, by employees, of organizational participation, they do not appear simply to be different points on a single continuum. Instead, absenteeism and turnover in transit organizations are inversely related, indicating some form of interdependence between the two behaviors.

3. Data collected for the study included (but were not limited to) operational statistics, budgetary data, scheduling data, employee pay data and attendance records and demographic data. Although dozens of separate data elements were collected most were of the type necessary for normal management information or for reporting to state and federal agencies. Thus, we expected that the information would be readily available and highly standardized. As it turned out, this was not the case.

Data elements often had different meanings in different organizations. Something as straightforward as "total route miles" included variants such as one-way measures, overlap with other numbered routes double-counted, overlap not double counted, etc. Similar variations were encountered in other data elements, making it necessary to define in great detail the data in which we were interested. In fact, it was not possible to collect completely comparable data in all instances.

The most surprising discovery was the extent to which information that would presumably be needed for ongoing management was not readily available (e.g., absenteeism rates, which would appear to be necessary for establishing employee schedules). Although not all the desired archival data were available at each site, this in itself was informative. Whether or not a given data element was accurately maintained appeared to reflect management's attitude toward the process of transit management. One specific indicator of this sort was the recording of customer complaints and compliments. There was a wide range of systematization in recording this information, and interviews with several managers

verified that the extent to which these data were recorded coincided closely with the general manager's overall assessment of the extent to which customer feedback is a legitimate matter of concern.

Labor Relations Legal Framework

1. The legal rules governing labor-management relations, though somewhat influential, had less impact upon transit performance than we had anticipated. With a few notable exceptions, management officials who presumably should have been knowledgeable about the legal constraints were not fully cognizant regarding key provisions of the statutes. This lack of familiarity with the legal framework for labor relations often resulted in significant differences between objective legal constraints and operative constraints. While this variation between the statute and the "rules" at the property appeared to be the result of lack of familiarity with the statutes, these differences had no apparent influence on performance.

2. Any significant adverse impacts of Section 13(c) upon transit performance appear to be more of a potential, rather than a real, problem. No instances were encountered in our sample in which protections guaranteed by a 13(C) agreement were granted an employee because of an adverse impact of federal funding. Considerable uncertainty did exist, however, about the circumstances which might lead to a 13(c) judgment.

3. The scope of bargaining and the availability of arbitration had no association with the transit performance indicators. Of the different aspects of formal collective bargaining legal policy which we investigated, only bargaining rights variations had some association with transit performance. Even for this variable the associations were limited. Strikes, on the other hand, were associated with the effectiveness indicators, suggesting that actual behavior is more clearly and directly related to effectiveness than formal policy.

Labor and Management Organizational Structure

1. Several characteristics of transit labor organizations are related to the incidence of strikes. These characteristics are: 1) the absence of a functioning intermediate labor organization between the national and local organizations; 2) low levels of negotiating expertise among labor officials at the local level; and 3) high levels of participation by national and international officials in local bargaining. While national officials most often bring to the local organization skills unavailable at the local

level, their presence also has certain liabilities. Foremost among these liabilities is that, because of demands upon their time created by their role in assisting many organizations, national representatives cannot be fully responsive to the unique demands of the local membership or particular problems of local management. National officials must, therefore, react to local issues according to routine response patterns they develop over time. Part of the problem associated with national representatives participating in local negotiations is also the tendency of management to "over react" to their presence.

2. Centralization of decision-making authority in negotiations may be a necessary condition, but it is not a sufficient condition, for achieving preferred organizational outcomes. Centralization alone produces few net benefits for transit organization performance. The relationship between centralization of management decision-making authority in negotiations and transit performance is probably moderated by the particular policies management pursues in negotiations.

3. External influences in bargaining are probably a normal feature of public transit negotiations, particularly in larger properties. The effects of external influences in bargaining upon transit performance, however, are minimal. A linkage which was suggested by the results is that change, particularly through the bargaining process, is more difficult to achieve when multiple interests become involved in negotiations and the scope of conflict extends beyond the bilateral relationship:

Labor-Management Relationship Patterns

1. Labor leaders and transit managers at each property essentially agreed on their characterizations of the relationship pattern along a conflict-cooperation continuum. Their agreement suggests that the relationship pattern concept is a unitary and stable organizational attribute which can be used to predict organizational outcomes.

2. The linkages between the relationship pattern concept and transit performance are more complex than we had originally anticipated. More cooperative relationship patterns were associated with lower personnel turnover and greater perceived ability of the transit property to adapt to changing conditions. Absenteeism, however, was higher as the relationship pattern became more cooperative. Although a cooperative relationship pattern is usually considered to be the most desirable, these results do

not clearly identify an optimal relationship pattern for urban mass transit.

The Collective Agreement

1. Sweeping generalizations about the relationship of work rules to transit performance do not appear to be warranted. Work rule restrictions on scheduling and assignment of runs were associated with more efficient utilization of human resources. In contrast, provisions covering minimum hours guarantees and scheduling of days-off were related to higher unit operating expenses.

2. The amount of absenteeism at a property is a direct function of the number of sick days granted to employees. We expected the tendency of employees to use sick days, merely because they were available, to be diminished in those organizations where the collective agreement contained a "proof of illness" requirement. The results did not support this expectation. We did find that as wage levels improve with respect to an absolute or relative standard of living, employees are less inclined to work the full amount of their scheduled time. Thus, high relative wages can be a disincentive for employees to consistently report to work.

3. Grievance procedures which employees perceive as facilitating communication generally tend to reduce employee withdrawal behaviors. We observed during our site visits, however, that the grievance procedure available in some transit properties is inadequately administered.

4. Clauses in the collective agreement related to contracting out and the obligation of the parties to the public interest and toward improving efficiency were not associated with variations in organizational adaptability. Adaptability was associated with the labor-management relationship pattern and might, therefore, more probably be a function of general attitudes rather than specific policies.

5. If they are to improve performance, changes in transit property policy must produce changes in existing inducements/contributions ratios of individual employees. Negotiated changes in organizational policy must also involve more than merely "buying-out" bad practices if such changes are to improve transit performance. Distributive issues must increasingly be redefined by labor and management as joint problems,

where gains are potentially shared by both parties, in order for transit performance to improve.

IMPLICATIONS FOR URBAN MASS TRANSIT

These findings, set against the current environmental context, suggest a number of implications for urban mass transit. In earlier chapters, we discussed some of the immediate, practical implications of the research. We noted in Chapter 4 that the creation of stronger intermediate bodies in labor organizations where they do not already exist might reduce the need for participation of national officials, thereby generally reducing the level of conflict in the urban transit industry. We also suggested that labor-management decision-making might be improved if national officials placed greater emphasis on training and preparing their local counterparts to assume a larger role in negotiations.

Several other direct implications were drawn from our assessment of organizational policies in Chapter 6. Three specific changes were suggested. First, some consideration should be given to the relaxation of minimum guarantees and provisions which restrict the work week to five consecutive days. The effects of such changes would be to create more flexibility in the assignment of employees and, in the long run, to reduce manning levels. Such changes are similar to current proposals calling for the use of part-time employees. Very modest changes in hours provisions represent an alternative means for bringing savings in operating expenses.

Second, new organizational policies must be developed to reduce employee absenteeism. These policies must be designed to counteract two tendencies suggested by our findings, i.e., that some employees probably use sick leave because it is available and that absenteeism increases with the absolute and relative wage rate. Significant work attendance bonuses might be an effective method for distributing some of the monies that would otherwise be used to increase basic wage rates in systems already having high relative wages. Such a program might be designed so that absenteeism is significantly reduced, the transit property realizes a significant

savings, and employees with good attendance records earn more than they would ordinarily earn from across-the-board wage increases.

Finally, we suggested that labor and management focus on improving grievance procedures in their organizations. Our site visits revealed that labor and management were often unaware of the contribution of effective grievance mechanisms to organizational effectiveness. The grievance procedure serves as a means for removing specific causes of employee dissatisfaction. It thereby helps to minimize dysfunctional and costly behaviors such as tardiness and turnover.

The implications of this study also complement, as well as qualify, some of the implications suggested by Meyer and Gomez-Ibanez in their study of urban mass transit productivity.¹ Our finding that external influences in bargaining impede adaptation agrees with their conclusion that management's efforts to negotiate productivity improvements are discouraged by extensive public involvement. The results of the present study do not affirm Meyer and Gomez-Ibanez's conclusion, however, that management's bargaining position is weakened by labor's appeal to public officials. We found no clear association between multilateralism and transit performance. Thus, the case cannot be made that external influences pose a threat to transit performance and ought, therefore, to be minimized.

Similarly, our findings do not support the Meyer and Gomez-Ibanez conclusion that transit performance can be improved by exchanging less restrictive work rules for higher employee compensation. The shortcoming of such "exchanges" is that they often bring no net improvements in performance. Negotiated changes in organizational policy must, therefore, involve more than merely buying-out practices that presently place limitations on transit performance.

At several points in the course of this report we have alluded to the difficulties we encountered during our site visits in obtaining reliable information from organizational records to support our data collection plan. Although recordkeeping at several of the better managed

¹John R. Meyer and Jose A. Gomez-Ibanez, Improving Urban Mass Transportation Productivity, (Washington, D.C.: Urban Mass Transportation Administration, 1977).

transit properties was thorough and up-to-date, there seemed to be little emphasis on the acquisition and monitoring of management information at an alarming number of others. To a great extent, our subjective impressions of differences in performance among the properties we visited were created by observed differences in management's attitude toward collecting and using management information. To a very great extent, these subjective impressions were borne out by the data.

Both efficiency and effectiveness demand management's intensive attention to management information. What can management do? One suggestion might be to better utilize existing sources of "organizational intelligence," such as the transit operators.² These workers function at the boundary between the transit organization and the riding public, and as such are exposed to large amounts of potentially relevant information.³ A recurrent theme in drivers' ready rooms was that "nobody will listen." The transit operator appears to see himself/herself as a man (or woman) in the middle. On the one hand the operator is in face-to-face contact with the riding public. As far as that public is concerned, the operator represents the organization and is readily available as a means of input--particularly with respect to complaints. On the other hand, the operator often feels powerless to re-direct public comment to a level where it can be acted upon. Even in cases where formal suggestion systems were established, there appeared to be a widespread belief that they were not operative.

A second source of "organizational intelligence" for the transit industry might be the formal survey. In our field visits to 28 transit organizations, we encountered only a few cases where such surveys had been recently taken. For the most part, such surveys are limited to current

²Term ascribed to Wilensky, who saw the need for information acquisition by an organization to be as essential as that for the military, which has developed a full-fledged intelligence function. See Harold L. Wilensky, Organizational Intelligence (New York: Basic Books, 1967).

³Howard Aldrich and Diane Herker, "Boundary Spanning Roles and Organizational Structure," Academy of Management Review, 2 (1977), 217-230.

users of the transit system. While this is obviously easier than broader surveys of potential system users, it falls far short of determining the steps needed to enhance service effectiveness (i.e., "doing the right things").

Thirdly, a more systematic approach could be taken to recording, categorizing and analyzing customer service compliments and complaints. This may be one of the better means available for detecting shifts in the public mood.

Within the organization, the means exist for management information systems that are responsive to management's needs on a timely basis. Computer technology has advanced to the point where the smallest organization can afford a system appropriate in complexity to its needs. However, the existence of such a mechanism in an organization in no way ensures its proper use. In this respect, there is no substitute for management attention from the top down. Transit management must, therefore, be a proactive process.

FUTURE RESEARCH

Although this study has helped to answer many questions, it raises several which deserve future investigation. Foremost among these questions is whether the results could be replicated by a longitudinal study. Cross-sectional research is useful for determining static relationship among variables but it does not substitute for longitudinal research from which a dynamic picture can be obtained. Longitudinal research could contribute to an understanding of causal relationships. This study has had to avoid imputing causality to any relationships.

A second area for future research involves the transit performance indicators. This research has helped to "empirically" validate some transit performance indicators. The results for the service efficiency and employee withdrawal measures were generally consistent with our predictions. This suggests that the performance indicators actually measured what was intended. However, the results for the service effectiveness and adaptability measures were much less consistent with our predictions. Some of this lack of support might be attributable to inadequacies in

the measurement of service effectiveness and adaptability. Future research could pursue the development and validation of substitute indicators for these concepts. Measures derived from written customer complaints and compliments might be more satisfactory indicators for service effectiveness. However, our recent experience indicates that there is currently a wide inter-property variability in record keeping even for these data. Standardized counts of management and technological innovations might substitute for or complement psychometric measures of adaptability.

A third area for future examination concerns the associations among absenteeism and turnover. We discovered a relatively complex relationship between the two behaviors. They are not different qualitative points along a withdrawal continuum but appear to be substitutes for one another. This "substitution" phenomenon argues that the two behaviors be studied together. Factors which reduce absenteeism might increase turnover. Some understanding must also be gained, therefore, of when these types of tradeoffs are desirable and when they are undesirable. For example, if organizational changes which reduce absenteeism lead to increases in the quit rate among good performers, then the change may be highly undesirable. On the other hand, turnover may not always be a bad thing. If those who leave tend to be the less effective performers, their departure opens the way for the hiring of better performers. Furthermore, some turnover may simply be an inevitable aspect of a renewal process for a healthy organization, in contrast to absenteeism, which is usually costly. Further research efforts are needed to better draw the necessary distinctions between these two aspects of employee withdrawal, both in their proximate causes and in their organizational impacts.

APPENDIX 1

MEASUREMENT OF SELECTED VARIABLES

Decision-making Authority of the Management Negotiator

A Guttman scale created from manager responses to the following series of dichotomous items:

The chief negotiator has the authority to make decisions during negotiations on

1. Meeting times and places (yes/no).
2. Changes in strategy or tactics (yes/no).
3. Concessions on management demands (yes/no).
4. Binding concessions on union demands (yes/no).
5. The size of the package offered to the union (yes/no).

Coefficient of reproducibility = .97

Minimum marginal reproducibility = .73

Coefficient of scalability = .88

External Influences in Bargaining

A count of yes responses by managers to ten trichotomous questionnaire items (don't know responses were permitted):

1. Transit officials took actions outside of negotiations that weakened management's bargaining position.
2. City or county officials took actions outside of negotiations that weakened management's bargaining position.
3. Labor representatives discussed bargaining demands with transit officials who were not on the management bargaining team.
4. Labor representatives discussed bargaining demands with city or county officials who were not on the management bargaining team.
5. Community interest groups became involved in the bargaining.
6. Elected officials overturned agreements that had been reached in bargaining.

7. Elected officials failed to implement agreements that had been reached in bargaining.
8. Elected officials directly intervened in an attempt to mediate an impasse.
9. Labor attempted to use the news media to influence negotiations.
10. Management attempted to use the news media to influence negotiations.

The average intercorrelation for the responses is .42 and the average item-total correlation is .60. Coefficient alpha for the scale is .87. Organization scores were created by taking the mean response of all managers responding for a particular organization.

Inducements/Contributions Disequilibrium

This scale is the difference between the sum of inducements items and the sum of contribution items in the collective agreement. The scores for the following contract provisions from Appendix 2 were summed to form the inducements scale:

- Wages - Basic (categorized)
- Wages - Peak (categorized)
- Wage Rate Ranges - # of Months to Peak Rate (categorized)
- Progression Through the Ranges - Operators
- COLA: Conversion Ratio (categorized)
- Overtime Pay
- Holiday Allowance (Premium) for Time Worked
- Call in Pay (categorized)
- Report Pay for Extra Board (categorized)
- Longevity Pay (categorized)
- Paid Holidays (categorized)
- Paid Vacation (after 1 year) (categorized)
- Paid Vacation (after 5 years) (categorized)
- Paid Vacation (maximum) (categorized)
- Paid Vacation Use
- Vacation Scheduling
- Paid Sick Leave - Days Deductible
- Paid Sick Leave (Maximum Rate of Cumulation)
- Paid Sick Leave (Maximum Accumulation)
- Jury Duty
- Paid Sick Leave - Proof of Illness Required
- Paid Sick Leave (Uses)
- Unused Sick Leave

Scores for the following contract provisions from Appendix 2 were summed to form the contributions scale:

Split Shift - Assignment
 Split Shift - Maximum Spread Time Before Overtime Paid
 Bidding on Regular Runs - Required Yearly Number of Postings
 Changes, Additions, Deletions of Regular Runs
 Bargaining Unit Integrity - Contracting Out
 Regular Runs - % Required (categorized)
 Part-time Employees
 Straight Runs - % Required (categorized)
 Management Prerogatives Clause
 Job Evaluation

Intermediate Body Control of Local Union Activities

A count of yes responses by labor leaders to three dichotomous questionnaire items:

1. A regional body must approve a strike decision.
2. A regional representative is directly involved in negotiations.
3. A regional body must approve any proposed contract.

The average intercorrelation for the responses is .37 and the average item-total correlation is .43. Coefficient alpha for the scale is .63. Organization scores were created by taking the mean response of all labor leaders responding for a particular organization.

Labor-Management Relationship Pattern (Labor Leader)

The mean of a summated rating scale (7 point) created from labor leader responses (extent of agreement/disagreement) to the following statements:

IN GENERAL

1. Management is reasonable in dealing with the union.
- *2. Management tries to interfere in internal union affairs.
3. Management will give in to the union, when the union is right.
4. Management deals openly with the union.
- *5. Management abuses its power.
6. Management tries to cooperate with the union.
- *7. Management doesn't really understand the union's problems.
8. The union's relations with management are satisfactory.

- *9. The union and management are natural enemies.
- 10. In this organization, relations with management are better than they used to be.
- *11. I expect a strike at this organization within the coming year.

IN NEGOTIATIONS

- *12. Management uses pressure tactics.
- *13. Union and management are hostile toward each other.
- 14. Management makes concessions to avoid problems.
- *15. Management won't listen to new ideas.
- 16. The union and management share most information.
- *17. Management won't give in on anything unless it is forced.
- 18. Both sides are willing to try new solutions.
- 19. The union and management work together to try to find creative solutions to problems.

IN DEALING WITH GRIEVANCES:

- 20. Management tries to understand the other side.
- *21. Management uses pressure tactics.
- 22. Management is more concerned with winning a dispute than "what is right."
- 23. Management shares all relevant information with the union.

*These items were worded in the opposite "sense," relative to the others, in order to break up any tendency toward response set.

**Labor leaders in non-union labor organizations were instructed to respond to all questions by reading "employee association" wherever the word "union" appeared.

The average intercorrelation for the responses is .49 and the average item-total correlation is .65. Coefficient alpha for the scale is .95.

Labor-Management Relationship Pattern (Transit Manager)

The mean of a summated rating scale (7 point) created from transit manager responses (extent of agreement/disagreement) to the following statements:

IN GENERAL

1. The union is reasonable in dealing with management.
- *2. The union weakens employee discipline.
3. The union will give in to management, when management is right.
4. The union deals openly with management.
- *5. The union abuses its power.
6. The union tries to cooperate with management.
- *7. The union doesn't understand management's problems.
8. Management's relations with the union are satisfactory.
- *9. The union and management are natural enemies.
10. In this organization, relations with the union are better than they used to be.
- *11. I expect a strike at this organization within the coming year.

IN NEGOTIATIONS

- *12. The union uses pressure tactics.
- *13. The union and management are hostile toward each other.
14. The union makes concessions to avoid problems.
- *15. The union won't listen to new ideas.
16. The union and management share most information.
- *17. The union won't give in on anything unless they are forced.
18. Both sides are willing to try new solutions.
19. The union and management work together to try to find creative solutions to problems.

IN DEALING WITH GRIEVANCES

20. The union tries to understand management's side.
- *21. The union uses pressure tactics.
- *22. The union is more interested in supporting its members than in "what is right."
23. The union shares relevant information with management.

*These items were worded in the opposite "sense," relative to the others, in order to break up any tendency toward response set.

**Transit managers at properties having a non-union labor organization were instructed to respond to all questions by reading "employee association" wherever the word "union" appeared.

The average intercorrelation for the responses is .46 and the average item-total correlation is .57. Coefficient alpha for the scale is .92.

Local Union Attachment to the National Union

A count of yes responses by labor leaders to three dichotomous questionnaire items:

1. The local negotiates its own agreement, but follows the guidelines of the national agreement.
2. The local introduces national bargaining proposals.
3. A local representative participates in national bargaining.

The average intercorrelation for the responses is .36 and the average item-total correlation is .44. Coefficient alpha for the scale is .63. Organization scores were created by taking the mean response of all labor leaders responding for a particular organization.

Manager Perceptions of Collective Agreement as Compromise on Distributive Issues

Managers were asked to agree or disagree on a seven-point scale with five Likert-type items. The scale is the mean of manager responses to the following items:

1. Our agreement has helped to solve common problems.
2. Labor and management have fundamental disagreements on provisions in the agreement.
3. Labor and management are frequently unable to agree on issues of common concern.
4. Problems shared by labor and management have been resolved in the agreement.
5. Labor and management are able to agree on issues about which they are concerned.

*These items were reverse scored in order to break up any tendency toward response set.

The average intercorrelation for the responses is .31 and the average item-total correlation is .43. Coefficient alpha for the scale

is .68. Organization scores were created by taking the mean response of all managers responding for a particular organization.

Manager Perceptions of Collective Agreement as Resolution of Common Problems

Managers were asked to agree or disagree on a seven-point scale with five Likert-type items. The scale is the mean of manager responses to the following items:

1. Our agreement is a compromise on wage issues.
2. The provisions of our agreement are a mutual compromise.
3. Our agreement is a compromise on non-wage issues.
4. Our agreement benefits both parties equally.

The average intercorrelation for the responses is .32 and the average item-total correlation is .43. Coefficient alpha for the scale is .65. Organization scores were created by taking the mean response of all managers responding for a particular organization.

Union or Employee Association Solidarity

The mean of a summated rating scale (7 point) created from employee responses (extent of agreement/disagreement) to each of the following statements:

1. Members of this union stand solidly together on the issues.
2. I am loyal to the union.
3. Fines should be levied for not attending union meetings.
4. I talk up this union to my friends as a great union to belong to.
- *5. I find it hard to agree with my union's policies.
6. I don't care if the union survives.
7. In case of a strike, I'm sure union members would stick together.
8. Every worker should be expected to join the union where he/she works.

*These questions were worded in a reversed "sense" with respect to the others.

**Employees at properties having an employee association rather than a union were instructed to frame responses with respect to the employee association wherever the term "union" was encountered.

The average intercorrelation for the responses is .29. The average item-total correlation is .45. Coefficient alpha is .75.

APPENDIX 2

CONTRACT CODING INSTRUMENT

UNION SECURITY PROVISIONS

Variable

Recognition Clause

- 0 No reference
- 1 Some form of recognition for the specific local indicated

Unit Definition

- 0 No reference
- 1 Definition of unit in terms of job titles, work location, or department

Union Security - Compulsory Membership

- 0 Open shop (any form of compulsory membership expressly prohibited)
- 1 No reference
- 2 Maintenance of membership
- 3 Modified agency shop (may contribute to charity instead of union)
- 4 Agency shop
- 5 Union shop

Union Security - Checkoff

- 0 Contract does not allow dues checkoff
- 1 Contract allows checkoff

Antidiscrimination Clause

- 0 No reference
- 1 Clause prohibits discrimination and/or other acts that would discourage union membership ("1" if union shop)

Use of Bulletin Boards

- 0 No reference
- 1 Some provision

WAGE PROVISIONS

Variable

Wages - Basic (regular operator, as of September 1977)

_____ Basic Hourly Rate

Wages - Peak (regular operator, as of September 1977)

_____ Peak Hourly Rate

Wage Rate Ranges - # of Months to Peak Rate

_____ (specify # of months to reach the peak hourly rate for operators)

Progression Through the Ranges - Operators

- 0 No reference (no range)
- 1 Merit on management prerogative
- 2 Merit, subject to grievance procedure
- 3 Automatic unless employer initiates withholding for cause
- 4 Automatic - function of time

COLA: Conversion Ratio

_____ (% wage increase for each % increase in cost-of-living)

Overtime Pay

- 0 No provisions
- 1 Straight time pay or straight compensatory time off
- 2 Employee option for straight time cash or compensatory time off
- 3 Some premium pay greater than straight time and less than time-and-one half
- 4 1-1/2 time pay (cash or compensatory time off at employer's option)
- 5 1-1/2 time pay (cash or compensatory time off at employee's option)
- 6 Double time pay (cash or compensatory time off at employer's option)
- 7 Double time pay (cash or compensatory time off at employee's option)

Variable

Holiday Allowance (Premium) for Time Worked

- 0 No reference
- 1 Compensatory time off
- 2 Compensatory time off at premium rate
- 3 Extra pay at premium rate

Call-in Pay

_____ (specify minimum hours guaranteed calculated at straight time)

Report Pay for Extra Board - Amount

_____ (specify number of hours guaranteed)

Longevity Pay

_____ (specify annual amount)

FRINGE PROVISIONS

Variable

Paid Holidays

_____ (specify number of days)

Paid Vacation (after 1 year)

_____ (specify number of days)

Paid Vacation (after 5 years)

_____ (specify number of days)

Paid Vacation (maximum)

_____ (specify number of days)

Paid Vacation Use

- 0 No reference
- 1 Vacation only
- 2 Pay in lieu of vacation (e.g., wages, severance, retirement credit)

Variable

Vacation Scheduling

- 0 Unilateral management right
- 1 Management will give full consideration to seniority but at discretion of department head
- 2 No reference
- 3 Bid by seniority

Paid Sick Leave - Days Deductible

- 0 First 3 or more days - conditional
- 1 First 2 days - conditional
- 2 First day - conditional
- 3 No reference
- 4 First day - unconditional
- 5 First two days - unconditional
- 6 First 3 or more days - unconditional

Paid Sick Leave (Maximum Rate of Cumulation)

- 0 No reference
- 1 1/2 day per month or less
- 2 1/2+ to 1 day per month
- 3 1+ to 1 1/2 days per month
- 4 Over 1 1/2 days per month

Paid Sick Leave (Maximum Cumulation)

- 0 No reference
- 1 30 days or less
- 2 31-60 days
- 3 61-90 days
- 4 91-120 days
- 5 121 days or more (unlimited)

Jury Duty (Other Legal Duties Excluding Company Business)

- 0 No references
- 1 Time off - No pay or provision for pay
- 2 Time off with residual pay
- 3 Time off with full pay

Paid Sick Leave - Proof of illness required

- 0 Proof of illness required
- 1 No reference
- 2 Proof of illness not required

Variable

Paid Sick Leave (Uses)

- 0 No reference
- 1 Restricted to use for personal illness only
- 2 May be used for family illness
- 3 May be used for family illness and personal business
- 4 May be used for family illness, personal business, and vacation

Unused Sick Leave

- 0 No reference
- 1 Cash payments for accumulation (or retirement credit, etc.)

Paid Funeral Leave - Eligibility

- 0 No reference to paid funeral leave
- 1 Unpaid funeral leave granted
- 2 Paid funeral leave granted

Hospital - Medical - Surgical (Employee)

- 0 No reference
- 1 Full contribution by employee
- 2 Employer contribution less than 100%
- 3 Fully paid by employer

Hospital - Medical - Surgical (Family)

- 0 No reference
- 1 Full contribution by employee
- 2 Employer contribution less than 100%
- 3 Fully paid by employer

Life Insurance

- 0 No reference
- 1 Full contribution by employee
- 2 Employer contribution less than 100%
- 3 Fully paid by employer

Accident Insurance

- 0 No reference
- 1 Full contribution by employee
- 2 Subsidized by employer at less than 100%
- 3 Fully paid by employer

Variable

Pension, Retirement Plan

- 0 No reference
- 1 Participation in legally established plan, no reference to contributions
- 2 Employee pays full cost
- 3 Refers specifically to contributions by employee and employer
- 4 Employer pays full pension cost

Severance Notice or Pay

- 0 No reference
- 1 Advance notice required, no days specified
- 2 Three days to two weeks notice required for layoff
- 3 More than two weeks notice required for layoff
- 4 Provision for severance benefit greater than above

Military Service

- 0 No reference
- 1 Retention of job rights or reference to law
- 2 Accumulation of seniority and benefits

Free Transportation

- 0 No reference
- 1 Employee only
- 2 Employee plus family (some or all members)

Drivers' Uniforms - Provision

- 0 Employee required to purchase uniforms (company may provide assistance in obtaining supplier and/or purchase discounts)
- 1 No reference
- 2 Company provides uniforms or uniform allowance

Compensation for Losses in Holdups, etc. - Drivers

- 0 No reference
- 1 Some provision for driver losses in robberies, holdups, etc.

JOB SECURITY

Variable

Seniority Uses - Drivers

- 0 No reference
- 1 Layoff, run selection, vacation selection allocations

Job Titles and Duties - Drivers

- 0 No reference
- 1 Contract lists titles
- 2 Contract lists titles and qualifications or duties

Layoff Procedure - Drivers

- 0 No reference
- 1 Seniority not a factor
- 2 Seniority subject to exceptions, e.g., can perform work, competence, etc.
- 3 Seniority sole determinant

Bumping Rights - Drivers

- 0 No reference
- 1 Any job within job line
- 2 Any job on property (if capable)

Probationary Period - Length (Drivers)

- 0 No reference
- 1 More than 90 days
- 2 61-90 days
- 3 31-60 days
- 4 30 days or less

Job Protection after Loss of License on Points (Drivers)

- 0 No reference
- 1 Provision for leave of absence
- 2 Retention in the bargaining unit with downgrade

Scope of Seniority Unit

- 0 No reference
- 1 Job classification or line
- 2 Department
- 3 Property wide

WORK RULES

Variable

Split Shift - Assignment

- 0 Management has unilateral right to assign split shift
- 1 No reference
- 2 Management right to assign split shifts but some limitation
- 3 Split shifts are prohibited

Split Shift - Maximum Spread Time Before Overtime Paid

- 0 No reference
- 1 Spread time not to exceed 15 hours
- 2 Spread time not to exceed 14 hours
- 3 Spread time not to exceed 13 hours
- 4 Spread time not to exceed 12 hours
- 5 Spread time not to exceed 11 hours
- 6 Spread time not to exceed 10 hours
- 7 Spread time not to exceed 9 hours or less

Bidding on Regular Runs - Required Yearly Number of Postings

- 0 No reference
- 1 At least one time
- 2 At least two times
- 3 At least three times
- 4 At least four times

Changes, Additions, Deletions of Regular Runs

- 0 Management can change or discontinue run without general pick occurring
- 1 No reference
- 2 Open to general bidding procedure only if change occurs specified number of days prior to scheduled rebidding of regular runs
- 3 Open to general bidding procedure anytime change occurs

Extra Board - Penalty for Refusal

- 0 No reference
- 1 Provision disallowing refusal of assigned work
- 2 Rotation to bottom of the extra board
- 3 Forfeiture of minimum hour guarantee - may be conditional (e.g., conditional on all others refusing the same piece of work)

Variable

Bargaining Unit Integrity - Contracting Out

- 0 Specific management prerogative to contract out
- 1 No reference
- 2 Contracting out restricted (effects, e.g., regular employees not to be laid off or discharged)
Contracting out restricted (motive of management, e.g., economy, efficiency are O.K.; elimination of union or discrimination are prohibited motives)
- 3 Contracting out prohibited

Supervisor Performing Bargaining Unit Work

- 0 No reference
- 1 Prohibited or restricted

Distribution of Overtime Opportunity - Drivers

- 0 No reference
- 1 Seniority emphasized more than equalizing overtime hours
- 2 Company attempts to equalize but no penalties for management error
- 3 Company attempts to equalize with penalties for management error

Extra Board - Eligible Operators (e.g., only probationary, all employees, etc.)

- 0 No reference
- 1 Some provisions defining operators who may be placed on the extra board

Extra Board - Provision for Rotation

- 0 No reference
- 1 Some provision defining rotation procedure

Regular Runs - % Required

_____ (specify minimum % of weekly service hours which must be written into regular runs)

Part-time Employees

- 0 Some provision allowing part-time employees
- 1 No reference
- 2 Prohibited

Variable

Straight Runs - % Required

_____ (specify minimum % of runs which must
be straight runs)

GRIEVANCE PROCEDURES

Variable

Provision for Grievance Procedure (GP)

- 0 No GP
- 1 Provision for GP

Civil Service Appeals Procedure

- 0 No Civil Service procedures, contract silent,
or not applicable, employees are private
- 1 Provision for CS procedures which cover topics
excluded from GP
- 2 Provision for CS procedures which act as dual
procedures, e.g., cover same topics

Final Decision in GP

- 0 No GP
- 1 Official of mass transit agency
- 2 Authority or governing body of agency (e.g., JTA)
- 3 Political officers (mayor, city council, other
than 2)
- 4 Binding arbitration

Maximum Number of Steps in GP (All Steps in Contract
Including Arbitration)

_____ No. of steps (specify # of steps in GP)

Extent to Which Grievance Procedure Includes Time Limits

- 0 No GP
- 1 No time limits stipulated
- 2 Includes some time limits
- 3 Time limits for all appeals and decisions

Variable

Union Official Has Right to Initiate Grievance (Even if not the Aggrieved)

- 0 No grievance procedure
- 1 Not stipulated
- 2 No
- 3 Yes

Exclusions from GP

- 0 No GP
- 1 Some topics are expressly excluded
- 2 No exclusions

Provision for Arbitration

- 0 No GP
- 1 No arbitration provision
- 2 Provision for arbitration

Authority of Arbitrator's Award

- 0 No arbitration
- 1 Advisory
- 2 Binding

Provision for Expense of Arbitration

- 0 No provision for arbitration procedure
- 1 No provision for expense of arbitration
- 2 Parties share equally
- 3 Management (or the union) pays all expenses

Union Can Refuse to Represent Employee

- 0 No grievance procedure
- 1 Yes
- 2 Not stipulated
- 3 No

Union Can Screen Employee Appeals (i.e., Union Decides Whether Employee Grievance is Justified)

- 0 No grievance procedure
- 1 Yes
- 2 Not stipulated
- 3 No

Variable

Number of Stewards Which are Specified

- 0 No GP
- 1 Not stipulated
- 2 "Reasonable number"
- 3 Number specified (actual number of ratio per shift or department, etc.)

Discipline - Union Representative Present at Disciplinary Meetings and/or given Copy of Disciplinary Notice

- 0 No reference
- 1 Some provision

Grievance Definition

- 0 No GP
- 1 No definition
- 2 General definition, e.g., matter of concern, complaint, working conditions
- 3 Definition stating interpretation, application, or violation of agreement

Paid Time Off - Stewards - Grievances

- 0 Specific prohibition against handling grievances on company time
- 1 No reference
- 2 Provision allowing for time off without pay for stewards to investigate grievances
- 3 Provision allowing paid time off for stewards to investigate grievances

Paid Time Off - Employees - Grievance Procedure

- 0 Paid time off specifically prohibited
- 1 No reference
- 2 Employees involved in grievance procedure receive paid time off

HOURS PROVISIONS

Variable

Minimum Guaranteed Hours for a Regularly Scheduled Run

- 0 Guarantee specifically excluded
- 1 No reference

Variable

- 2 Less than 8 hours
- 3 8 hours or more, but less than 8-1/2
- 4 8-1/2 hours or more, but less than 9
- 5 9 hours or more, but less than 9-1/2

Scheduled Days Off

- 0 No reference
- 1 Work week consists of six days
- 2 Work week consists of five days
- 3 Work week must provide two consecutive days off or consist of five consecutive days

Charter Runs and/or Special Service - Minimum Guarantee

- 0 No reference
- 1 8 hours guarantee for stipulated mileage
- 2 Minimum hour guarantee for all charters

Check-in Time

- 0 No reference
- 1 Exempt from overtime computation
- 2 Contract specifies check-in time but silent with regard to overtime payment
- 3 Included, in computation for overtime pay

Relief Time

- 0 No reference
- 1 Exempt from overtime computation
- 2 Contract specifies relief time but silent with regard to overtime payment
- 3 Included in computation for overtime pay

MANAGEMENT PREROGATIVES

Variable

Management Prerogatives Clause

- 0 Reference
- 1 No reference

Joint Committees

- 0 No reference
- 1 Safety only
- 2 JC for issues in addition to safety

Variable

Job Evaluation

- 0 Unilateral management right
- 1 No reference
- 2 Citation of job evaluation silent with regard to union participation
- 3 Provision requiring union participation or specific subject of grievance procedure

Employer - Employee Efficiency

- 0 Refers to union obligation to promote efficiency and other aims listed above
- 1 Refers to greater efficiency or better performance of service; adequate service to community
- 2 No reference

"Public Interest"

- 0 Specific reference to union obligation with regard to the public interest
- 1 Specifically referred to
- 2 No reference

Discipline - Just Cause for Discipline

- 0 No reference
- 1 Reference

MISCELLANEOUS

Variable

Fare Integrity

- 0 No reference
- 1 General provisions e.g., duty of bus driver to maintain fare integrity
- 2 Procedures indicating method of fare accountability

Contract Length

- 0 No reference
- 1 One year or less
- 2 Two years or less (over one year)
- 3 Three years or less (over two years)

Variable

Sanctions

- 0 No reference
- 1 No strike clause - general prohibition
- 2 No strike clause - contract term only

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