

only to a short-term cash savings program to pay employee cost-of-living adjustments. Negative perceptions of future goal achievement, a diminishing environmental stimulus, and jurisdictional ambiguity between productivity and collective bargaining issues indicate that a long-term productivity program would not succeed.

One obstacle is strong union dissatisfaction. Two-thirds of union respondents believed that the current program will disband after the agreement expires. In fact, 73 percent of the labor cochairmen interviewed agreed that the program will be unnecessary when normal collective bargaining is resumed. Because these cochairmen are local union leaders, their dissatisfaction and lack of commitment are definite weaknesses in the current program. Their negative perceptions will affect other labor participants in the program, as well as the union's rank and file. □

FOOTNOTE

¹ The sample included 12 of the 26 participating agencies: Housing and Development Administration, Human Resources, Personnel, Environmental Protection, Law, Economic Development, Model Cities, Parks, Police, Sanitation, Fire, and Corrections. Interviews with city and union staff experts suggested that these included an even mix of the most and least effective agency subcommittees.

Final-offer arbitration and salaries of police and firefighters

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Did final-offer arbitration have a discernible impact on the salaries of police and firefighters in Massachusetts during the 3-year trial period which ended June 30, 1977? To analyze this question, we collected information on the maximum salary paid to police patrolmen, police sergeants, firefighters, and fire lieutenants for a large sample of Massachusetts municipalities. We integrated these data with police and fire impasse experiences and added several economic and environmental characteristics for each Massachusetts municipality. Then we performed several tests of the economic impact of final-offer arbitration.

In the first test, we compared police and

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Table 1. Percent Increases in police and fire salaries, selected areas, 1973-76

Area	1973	1974	1975	1976
Massachusetts:				
Patrolmen	6.0	6.9	8.4	7.5
Police sergeants		8.0	8.7	9.0
Firefighters		7.0	7.3	7.6
Fire lieutenants		8.1	7.8	8.2
New York:				
Patrolmen		7.2	8.8	
Firefighters		7.0	7.9	
Northeastern cities:				
Patrolmen	6.2	3.2	6.6	
Firefighters	6.6	3.5	6.1	

NOTE: Dashes indicate data not available.

firefighter salary increases in Massachusetts for the period 1973 (or 1974) through 1976 with comparable salary increases in New York State and Northeastern cities with populations of 100,000 or more (table 1). Police and fire salary changes in Massachusetts were generally higher in 1975 and 1976 than they had been in 1974, and for police patrolmen, in 1973. But it is also true that public safety employee salary settlements were higher in both New York State municipalities and large Northeastern cities in 1975 than they had been in 1974. Note, for example, that in 1974, the year preceding the availability of final-offer arbitration in Massachusetts, the percentage increases in police and fire salaries were at least double those for large Northeastern cities, while in 1975, the differences were considerably smaller, although still favorable to the uniform officers of Massachusetts.

Given the limitations of using large Northeastern cities as a basis for comparison with Massachusetts municipalities of all sizes, it is probably more instructive to examine the New York data. New York State, like Massachusetts, used factfinding to resolve public safety disputes in the 1973-74 period. The data, although incomplete, indicate that there was very little difference in police and fire salary settlements between the two neighboring States in 1973-74. (Police patrolmen in New York appear to have done slightly better than their counterparts in Massachusetts.) An approximate estimate of the impact of using final-offer arbitration versus conventional arbitration can be obtained by comparing Massachusetts and New York data for 1975. This comparison shows that patrolmen and firefighters in New York won somewhat higher salary settlements than their counterparts in Massachusetts. The differences are so minor, however (about one-half of one percentage point), that it is not prudent to conclude that

the Massachusetts final-offer arbitration statute had an impact on salaries that differed from the New York conventional arbitration statute.

Clearly, there was some factor (or set of factors) that operated in Massachusetts, New York, and the large Northeastern cities to raise police and fire salary settlements in 1975 to a higher level than existed in 1974. Only a more thorough analysis would reveal that factor.

In a second test of the salary effects of final-offer arbitration, we cross-tabulated percentage changes in police and fire salaries by stage of settlement. We compared the results with those for New York State (table 2). Applying Chi-square tests to the data, we were able to find a significant association between salary awards made in arbitration and salary settlements achieved without arbitration. To be sure, there are instances where settling at some stage other than arbitration seems to be associated with a higher or lower percentage increase in salary. For example, police sergeants in 1975 who settled in mediation clearly did better than their counterparts who settled without impasse, in factfinding, or in arbitration in that year. But these effects are not systematic in nature, so it is not possible to claim a consistent relationship between any stage of settlement and the level of salary

increase. Note that similar results were found for New York patrolmen and firefighters in 1975.

Certainly, the stage of settlement is not the only factor affecting the level of salary settlements in police and fire negotiations. In order to assess the independent influence of arbitration and other impasse steps on the salary outcomes of bargaining, we tested a series of multiple regression equations in which percentage salary change for a particular public safety employee group in a particular year was the dependent variable and the independent variables included a number of economic and institutional variables hypothesized to influence salary changes (such as population of the town or city, full value of assessments per capita, State aid, median income). Evaluation of the arbitration and impasse coefficients in these equations confirmed the impressions gathered from table 2; that is, stage of settlement in negotiations involving patrolmen and firefighters (the vast majority of uniformed employees) had no significant influence on the magnitude of their salary settlements, even when other relevant salary determinants are held constant.¹

It might be claimed that the lack of a significant difference in arbitrated settlements is the result of the pattern-setting nature of the arbitration awards. Spillover from arbitrated awards to settlements achieved short of arbitration may have obliterated the effect that the arbitration statute had on all police and fire salary changes in Massachusetts. We cannot rebut this argument, but we doubt that it is true. First, our research showed that arbitrated awards were generally determined in the factfinding process. To support the spillover hypothesis, one would have to show that factfinders made recommendations that were higher than they would have been in the absence of the statute. But comparison of factfinders' recommendations before and after the law was passed provides no support for this proposition. Second, the average time that elapsed from the declaration of an impasse to an arbitration award was 12 months. On the other hand, settlements reached in mediation and factfinding occurred, on average, from 2 to 9 months after the declaration of impasse.² Thus, in a given year most settlements in mediation and factfinding were reached before most of the arbitration awards were handed down. It was literally impossible for most arbitration awards to serve as pattern setters for other settlements achieved short of arbitration in the same negotiating year (although it is possible that arbitrated awards in 1 year set patterns that were

Table 2. Relationship between stage of settlement and percent change in police and fire salaries, selected areas, 1974-76

Area	Stage of settlement			
	No impasse	Mediation	Factfinding	Arbitration
Massachusetts				
1974:				
Police (patrol)	7.0	7.3	5.7	(¹)
Police sergeants	7.9	8.4	8.8	(¹)
Firefighters	6.9	5.6	10.2	(¹)
Fire lieutenants	8.2	5.3	9.6	(¹)
1975:				
Police (patrol)	8.2	10.2	6.8	8.1
Police sergeants	8.6	12.1	5.9	7.6
Firefighters	7.4	7.1	6.4	8.1
Fire lieutenants	7.5	8.9	6.3	8.2
1976:				
Police (patrol)	7.6	7.2	(²)	(²)
Police sergeants	9.2	8.4	(²)	(²)
Firefighters	7.4	8.8	6.6	8.0
Fire lieutenants	9.5	3.1	5.7	5.8
New York				
1975:				
Police (patrol)	8.1	10.6	6.8	8.2
Firefighters	7.7	8.2	8.4	7.9

¹ Not applicable.

² As the table is derived from the merger of the impasse data collected from State files and contract data collected independently, we are only able to report salary changes where we have been able to match the two sets. Therefore, there are not observations for settlements reached in fact-finding and arbitration for police patrol and sergeant in 1976.

NOTE: New York data are from Thomas A. Kochan and others, *An Evaluation of Impasse Procedures for Police and Firefighters in New York State* (New York State School of Industrial and Labor Relations, Cornell University), p. 210, table 6-18.

followed in the next year's police and fire negotiations).

The only other studies of the direct effect of arbitration on the salaries of police and firefighters are by James L. Stern and others of the experience in Wisconsin, Michigan, and Pennsylvania and by Thomas A. Kochan and others of the experience in New York.³ The Stern study found that the "preponderance of evidence makes it reasonable to conclude that the institution of final-offer arbitration tended to raise the salaries of the police and firefighters in Michigan and Wisconsin by more than 1 but less than 5 percent and that the positive effect was much smaller, if it was present at all, in the subsequent year." The Kochan study concludes, "Our tests for the impact of the change in the legislation *per se* indicated that, on average, the existence of arbitration had a small positive, but generally insignificant, effect on the size of the wage increases obtained." In similar fashion, our study does not support the notion that the addition of final-offer arbitration to the array of impasse

procedures available to Massachusetts public safety employees had a significantly positive effect on their salaries. □

—————FOOTNOTES—————

¹In the case of one regression—for fire lieutenants—we found that the use of arbitration had a statistically significant impact on salary changes in 1975–76. These results are reported more fully in David B. Lipsky and Thomas A. Barocci, *The Impact of Final Offer Arbitration in Massachusetts: an Analysis of Police and Firefighter Collective Bargaining* (Alfred P. Sloan School of Management, Massachusetts Institute of Technology), working paper 941–77, May 1977.

²For the experience with time spans and delays under arbitration in New York, Pennsylvania, and Michigan, see Thomas A. Kochan and others, *An Evaluation of Impasse Procedures for Police and Firefighters in New York State* (New York State School of Industrial and Labor Relations, Cornell University), pp. 301–04 and Mollie H. Bowers, "A Study of Legislated Interest Arbitration in the Public Safety Services in Michigan and Pennsylvania," Ph.D. Dissertation, Cornell University, 1973.

³James L. Stern and others, *Final-Offer Arbitration* (Lexington, Mass., D.C. Heath, 1975) and Thomas A. Kochan and others, *An Evaluation of Impasse Procedures for Police and Firefighters in New York State*.