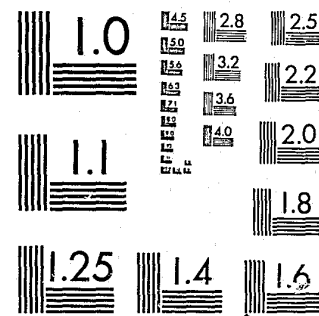


National Criminal Justice Reference Service

ncjrs

This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504.

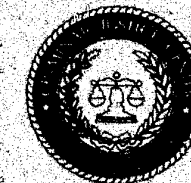
Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U. S. Department of Justice.

National Institute of Justice
United States Department of Justice
Washington, D. C. 20531

11/08/82

**CRIMINAL JUSTICE
HUMAN RESOURCES PLANNING
PROJECT**

**CRIMINAL JUSTICE CENTER
SAM HOUSTON STATE
UNIVERSITY**



8191761

✓
THE EFFECT OF UNIONIZATION VERSUS NON-UNIONIZATION
ON WAGE DETERMINATION IN MUNICIPAL POLICE AGENCIES WITH
ONE HUNDRED OR MORE SWORN AND NON-SWORN PERSONNEL

Michael P. Pugh

August, 1980

Prepared in part under grant number 80-MU-AX-0005 from the
Office of Criminal Justice Education and Training, Law Enforce-
ment Assistance Administration, U.S. Department of Justice.

Points of view or opinions in this document are those of the
author and do not necessarily represent the official position
or policies of the U.S. Department of Justice.

U.S. Department of Justice
National Institute of Justice

This document has been reproduced exactly as received from the
person or organization originating it. Points of view or opinions stated
in this document are those of the authors and do not necessarily
represent the official position or policies of the National Institute of
Justice

Permission to reproduce this copyrighted material has been
granted by

Public Domain
LEAA/U.S. Dept. of Justice
to the National Criminal Justice Reference Service (NCJRS)

Further reproduction outside of the NCJRS system requires permis-
sion of the copyright owner

CHAPTER I

INTRODUCTION

Police unionism represents a recent phenomenon relative to the overall development of labor relations. Although recorded events of police labor disputes date back to Ithaca, New York in 1889, Cincinnati, Ohio in 1918 and the well known Boston Police Strike of 1919 (Maddox, 1975), it was not until the 1960's that police unionism became relatively widespread and the power of police employee organizations began to be felt. Some of the reasons for this slow development as well as the recent rapid rise in police unionism, are common to the public sector in general, but some are specific to the police.

As we enter the decade of the 1980's, possibly the singular most pressing domestic issue facing the American taxpayer is the spiraling increase in the cost of living. As prices, taxes and interest rates continue to climb, each citizen comes to the realization that every dollar earned is capable of purchasing less each day. This situation creates an extremely complex two sided problem. On the one hand, each consumer wishes to see that every dollar is well spent and that the service or product purchased meets certain standards. This problem

is particularly acute within the public sector where it is often difficult to establish measures of productivity that would allow the taxpayer to determine if his tax dollar is being put to good use. During this time of fiscal austerity, the public is sensitive to government waste and is pushing for accountability, cutbacks in government spending and the abolishment of government programs that fail to provide some evidence of productivity.

The other side of the problem is that the individual worker not only wants to make each dollar go as far as it can, but he also feels the need to bring home a larger salary in order to keep pace with the rising cost of living. Once again, this presents a unique problem for the public sector. Government workers no longer consider themselves to be a special category of worker known as a public servant. Most government employees now want pay that is equal to what their private sector counterparts receive. With taxpayers demanding reductions in government spending and public sector employees pushing for higher wages, the stage has been set for confrontation. This conflict involves not only wage issues, but includes all aspects of the working environment, i.e. improved working conditions and increased benefits.

The police provide an excellent example of this two sided problem due to the fact that measures of

productively deal primarily with the crime solving functions of the police whereas a great deal of a policeman's time is spent in the area of order maintenance. In addition, the measures of productivity that do exist, i.e., number of arrests, clearance rates, response time, citizen complaints, etc. are often questioned regarding their validity. The police also are no longer willing to accept second class public servant status. As such, the police want better economic benefits, better job conditions and a voice in management policies. In order to achieve their goals, the police have formed unions to provide them with the organized strength necessary for the inevitable confrontations.

Juris (1973) gives four reasons for public sector's thirty year lag behind the private sector in the labor relations movement. First, the public sector experienced a great degree of job security prior to the 1960's which was highly valued during that time period. Second, there were better fringe benefits and working conditions in the public sector. Third, public employers vigorously resisted unionization efforts by public employees. And finally, until the end of the 1950's, there was no protected right to organize and bargain collectively for the public sector. The first two reasons created a lack of interest and the latter two represented formidable obstacles.

The movement toward unionization of the police had another obstacle to overcome which was largely brought about by one specific historical event: the Boston Police Strike of 1919. The Boston police were seeking recognition for bargaining rights over wages, benefits and working conditions. When the city refused to recognize the police, three-fourths of the police went on strike. Violence and looting occurred in the city and as a result all of the strikers were fired and replaced. This event established a historical precedent of jurisdictional refusal to collectively bargain with the police (Maddox, 1975).

However, police organizations did make some limited progress prior to the 1960's. Until the 1940's only the fraternal and benevolent associations represented the police and these served primarily as legislative lobbyists for securing improved police welfare and pension benefits. During the 1940's and 1950's, some police departments began to affiliate with organized labor (Burpo, 1971). The American Federation of State, County and Municipal Employees (AFSCME), an affiliate of the American Federation of Labor (AFL), had forty-nine police locals by the end of World War II and sixty-six locals by 1958. In addition to the slow entrance of organized labor into the police area, the Fraternal Order of Police (FOP) grew slowly from 169 police lodges in 1943 to 194 lodges in

1959. In 1953, the National Conference of Police Associations was formed to provide a permanent structure to facilitate future national cooperation among independent locals (Juris, 1973). By the end of the 1960's, there existed numerous autonomous statewide and local police associations, a national police union and some Afro-American police unions (Burpo, 1971). During the 1960's these associations began to change from mere social benevolent societies to unions aimed at bettering wages and working conditions through collective bargaining. Police strikes or work stoppages occurred in several cities across the United States (Rubin, 1978).

The recent rapid rise of police employee organizations, along with the accompanying increase in collective bargaining, can be attributed to several factors. The emergence of police militancy stems primarily from dissatisfaction. The increased public hostility of the 1960's created a chaotic environment for law enforcement (Juris, 1973): Ghetto riots, campus disorders, increasing disrespect of police authority by certain elements of society and the seeming indifference of the judiciary to law enforcement problems threatened the policeman's notion that he is the guardian of community lives and property (Burpo, 1971). During the mid-1960's, the call for law and order reinforced the policeman's self-image as conservator of the public welfare while also making

him aware that his pay and prestige were not commensurate with his responsibilities. The policeman's salary scale increased only half as much as that of factory workers during the period from 1939 to 1964 (Burpo, 1971). Inadequate salaries, job dissatisfactions and a lack of outlets for the resolution of grievances led to frustration.

The demonstration effect of other public employee successes (Juris, 1973) along with the successful use of collective bargaining by workmen in other fields set an example for the police (Maddox, 1975). The influx of young policemen during the 1960's coupled with the element of group cohesion which is common within the police profession contributed to a police willingness to engage in confrontation tactics (Juris, 1973). State and federal legislation and court decisions during the 1960's allowing public employees to join unions and bargain collectively gave the police in many states the right to join or form unions for collective bargaining purposes (Maddox, 1975). Approximately twenty-six states and the District of Columbia now give police collective bargaining rights (Rubin, 1978).

Therefore, due to the enabling legislation, the existing police employee organizations were largely transformed from benevolent social societies into labor unions for the purpose of collective bargaining. What the police want is recognition of the organization as

7

their collective bargaining agent, better economic benefits, better job conditions, a voice in management and, in some instances, professionalization of the police (Burpo, 1971). The police labor movement has made great strides in a relatively short period of time and the impact of this movement has not yet been fully determined. One area of concern voiced by the critics deals with the impact of police unions on wage determination. This concern is the focus of this study.

Problem Statement and Purpose of the Study

Along with the increase in the incidence of public employee unionism comes the related fear that these unions will cause undue stress on the city budget as well as causing possible damage to the public welfare. The increased militancy of public union workers has created concern that government workers might be able to extract unduly large pay increases (Hall and Vanderporten, 1977). Police unions are particularly susceptible to this criticism due the vital functions they perform for society. Even though strikes by police are illegal in all states, police officers have struck and initiated other job actions (Rubin, 1978). These disruptions have led to the belief that police are in the position to request and receive pay increases in excess of other public employees. It is believed by some that public management

8

is unable to provide a counterforce to these union wage demands (Mitchell, 1978).

Even though numerous studies have been conducted on public employee unionism's impact on wage determination, the primary focus has been on teachers and firefighters. These groups do indeed provide necessary societal functions, but not of such a vital and ongoing nature as that of the police. Therefore, the bargaining power of the police is thought to be greater than that of either teachers or firefighters (Hall and Vanderporten, 1977).

Two studies have been conducted that deal with the issue of police unions and their impact on wage determination. Even though the studies are similar in nature, they each have unique characteristics that have produced contradictory findings. A 1976 study conducted by Lewin and Keith, using 1971 and 1972 salary data, provided results indicating that an inverse relationship exists between police unionism and wage determination (Lewin and Keith, 1976). Despite certain caveats, the negative findings are comparable with the findings of other research efforts suggesting that police in low wage cities who organize for purposes of raising salaries possibly have not yet been successful in doing so (Lewin and Keith, 1976). A 1977 study using 1973 salary data indicates that a positive relationship exists between police unionism and wage determination (Hall and

Vanderporten, 1977). Even though the study produced positive results, the power wielded by police unions was shown not to be as great as some police union critics have feared. In addition, a review of several wage studies for ten categories of non-educational municipal employees (Ehrenberg and Goldstein, 1977) revealed that union/non-union differentials were larger for several categories of non-uniformed employees than they were for police. This is contrary to expectations that police could extract larger salaries due to the essential nature of their services.

Since the amount of research conducted in the area of police unionism and wage determination has been minimal and the results produced have been contradictory and somewhat confusing, the question of the degree of impact of police unions on wage determination continues to exist. This is the primary problem which this study will address. The purpose of the study is to add to the current store of police union and wage information by examining the relationship between wage determination and unionism using as additional independent variables those variables that have been hypothesized to influence wage determination. In some respects, this study will replicate previous police-public sector wage determination studies, but it will also include a characteristic which is intended to expand knowledge in the area.

This unique area deals with the relationship between the rise in unionism and the incidence of the independent variables that will be included in the study. The independent variables to be included are: crime rate, population size, population density, income inequality, average earnings of manufacturing production workers, the number of retail service and wholesale establishments per 1,000 population, monopsony power, government type, geographic region and LEAA region. These variables will be discussed in more detail in the methodology chapter. The possibility exists that these same variables may give rise to the development of unionism. It may be that when these independent variables are in existence and/or when they reach a certain magnitude, the resultant conditions are such that police labor feels the need to organize in order to improve their economic benefits and working conditions. Therefore, a second area of concern in this study will explore this relationship between unionism and the other independent variables included in the study.

Hypothesis Statement

The central hypothesis to be tested by this study is:

Hypothesis: Unionized municipal police departments will exhibit higher salaries than non-unionized municipal police departments.

The following chapters include a review of the literature, a discussion of the methodology, an analysis of the results and conclusions of the study.

CHAPTER II

REVIEW OF THE LITERATURE

Labor Unions

Before entering into a discussion of public sector labor relations in general and police unionism in particular, some common basic concepts, characteristics and definitions of that broad group of organizations known as labor unions will be presented. According to Davis (1977), "a labor union is an association of employees for the primary purpose of influencing their employer's decisions about their conditions of employment" [p. 25]. Bakke (1977) defines a union as "a pressure organization originating in the desire on the part of a group of people with relatively little power to influence the action of a group with relatively more power" [p. 22]. As such, the union is a social group that brings to the work environment a second formal organization with a union hierarchy that sits alongside the management hierarchy. The employee, as a formal member of both, benefits from the arrangement because if one organization does not satisfy his wants, he can turn to the other. However, this arrangement can also be annoying because of the conflicting demands placed

upon the employee by each (Davis, 1977).

This union presence, as a second formal and informal organization, increases the number of possible interactions and therefore complicates the organizational process. However, this should not be viewed negatively, since the effect of this increased complexity depends primarily on the social skills to operate it rather than any idealistic considerations (Davis, 1977).

An individual worker is generally motivated toward union membership to the degree that he thinks it will satisfy his wants or reduce his dissatisfactions. These wants and dissatisfactions are confined to three major need areas: economic, social and psychological. The economic need is the one most commonly mentioned (Davis, 1977) and the union is thought of as a device for continuously changing the balance of fundamental economic rights and rewards in favor of workers (Bakke, 1977). However, the union also helps to fulfill psychological and social needs of the worker by allowing greater freedom of expression, providing a chance for leadership, security from arbitrary management action and solidarity of group association (Davis, 1977).

In order to meet the needs of its members and to provide them with benefits, the union, as a specialized interest organization, establishes various goals that generally fall into three broad categories: fraternal,

social and institutional (Davis, 1977). The fraternal goals provide members with social satisfaction through group association and solidarity. The social goals provide social power and control in order to achieve benefits for members. This social power and control is manifested in two directions: inward toward the employer and the job and outward toward social and political forces which only indirectly influence the job. The first is known as business unionism and is utilized to regulate management discretion. The second, known as social unionism, is concerned with broader social, economic and political matters. The fraternal goals, which used to be paramount, are gradually yielding to the goals of business and social unionism (Davis, 1977).

The third broad categorical goal is derived from the fact that the union operates as a separate formal organization and in the course of time develops an institutional goal all its own. The purpose of this institutional goal is to protect the integrity of the union movement itself and to stress action for the good of the members (Davis, 1977). The objective is strength, power and prestige of the union as such and when bargaining, consideration must be given to the survival and growth of the union as well as to the employees of a single company (Bakke, 1977).

As previously noted, one of the major motivations for union membership is economic in nature. Therefore, as Davis (1977) has pointed out, in order for the union to meet this economic need, the union movement has traditionally functioned under the union wage philosophy of "we want more wages for our members" [p. 30]. The rationale for this philosophy is that higher wages will stimulate the economy through improved purchasing power. In the past, unions have shown little concern for the possible negative side effects of this philosophy, e.g. a hostile taxpayer reaction to an increase in taxes or the strain on a city budget.

✓ One of the major problems confronting labor/management relations stems from the fact that unions are political in nature, whereas management operates from a business perspective. A union leader is elected by the membership through political processes and this leadership is dependent upon political power to remain in office. Managers typically achieve their position through an appointed process that is frequently based on merit, competence and achievement. Union and management interact with one another on the basis of different types of leadership, sources of power and ways of thinking about problems. Therefore, the codes of behavior differ and conflict arises (Davis, 1977).

This labor/management confrontation need not necessarily force the individual employee into a position of choosing sides and identifying with only one of the two. Dual allegiance is a concept whereby a worker feels favorable toward both union and management, accepts membership in them both and generally approves of the overall philosophy of each. Evidence exists that dual allegiance tends to exist in the emotions of workers (Davis, 1977).

The discussion to this point has centered around basic concepts and characteristics of labor unions in general. The historical development of public sector unionism, along with some possible explanations for its recent rapid rise and a discussion of its present status will now be presented.

Public Sector Unionism

The unionization of public sector employees began in the 1830's when mechanics, carpenters and other craftsmen employed by the federal government joined craft unions which already existed to serve those occupations in private industry. Within ten years the movement began to exert itself by making demands for a shorter work week. These demands, along with the movement in general, usually followed the efforts and successes of the unionization movement in the private

sector. By 1835, private sector employers had agreed to ten hour work days and public sector employers soon acquiesced because they competed in the same labor market. In addition, the private sector unions assisted in applying pressure for this change (Public Sector Unionism, 1977).

State and local government employees were relatively successful in their efforts, but not so with federal employees. Federal employers, as department heads, were divorced from popular pressure. The War and Navy Departments were run by military officers who were less affected by public opinion. Therefore, the artisans and craftsmen employed by these departments were forced to exert more pressure to achieve results. In 1836, workers went on strike at the Washington, D.C. Naval Shipyard. The workers and their cohorts in private industry participated in mass demonstrations and ultimately President Jackson yielded by establishing a shorter work day for federal employees (Public Sector Unionism, 1977).

In the succeeding years, public employees maintained a secondary status in the struggles of the labor movement. The benefits secured by the public sector resulted from the fact that private sector unions in their particular industries had already secured such benefits. Until the 1880's, there were few established

organizations that existed primarily for public employees. The increased prosperity of the 1880's brought about the formation of a number of public employee organizations. These organizations were primarily benevolent in nature and did not participate in the militancy of the labor movement of the late 1800's. Actually there was no need for public sector labor militancy at this time since public employers usually followed private industry job standards. The improvements secured by private sector unions were generally granted to public employees without any effort on the part of public sector unions. This situation remained static until well into the twentieth century (Public Sector Unionism, 1977).

During the inflationary period that preceded World War I, state and local employees began to show interest in affiliating with the private sector unionization movement. However, this progress was stopped in 1919 by the public opposition that resulted as a consequence of the Boston Police Strike (Public Sector Unionism, 1977). This strike and its consequences will be discussed later in this chapter when the development of police unionism is addressed.

Another labor upsurge developed during the 1930's and public employees began to show renewed interest in labor organizations. In 1936, the American Federation of Labor (AFL) formed the American Federation of State,

County and Municipal Employees (AFSCME), the first national union for state and local government employees. At this same time, all types of government employees began joining unions comprised principally of workers of their own occupation. Teachers, firemen and police were among the first to organize. This movement progressed slowly until the 1960's when public employees became a prominent labor force within the nation (Public Sector Unionism, 1977).

Various statistics would seem to indicate that the government represents virtually the only sector of growth in the American Labor movement today. In 1956, when the Bureau of Labor Statistics first began to collect data on union membership in both the public and private sectors, government employees comprised 5.1 percent of the total union membership. In 1964, public employees equaled 8 percent of total union membership and by 1968, this figure had increased to 10 percent (Public Sector Unionism, 1977). According to Lewis (1977), by 1972 public union membership was almost twice that of private industry. In addition to these proportional differences, the overall growth rate in public sector employment far outstripped that in private industry. Between 1947 and 1967, the number of public employees increased by over 110 percent while the growth rate for the same period in the private sector equalled 42

percent (Kassalow, 1969). Lewin (1977) reports that between 1960-1975, state and local government employment doubled. The proportion of these government employees who have become members of labor unions has also increased significantly. In 1964, 7.7 percent of all state and local employees belonged to unions and in 1968 this number had increased to 8.8 percent (Public Sector Unionism, 1977). According to Bowers and Cohen (1979), in 1978 at least 50 percent of the public sector was unionized while the private sector reached its lowest ebb in contemporary history with 25 percent being unionized.

The overall growth rate of both public and private union membership has increased within the last two decades, but the growth rate for the public sector has been much greater than that of the private sector. Between 1956 and 1968 overall union membership increased by 2.1 million, of which 1.2 million were government employees while total government employment represented less than one-fifth of the total labor force. During this same period, those organizations whose members were primarily government employees increased their rolls by 135 percent while the private sector reported only a 5 percent gain (Public Sector Unionism, 1977).

As indicated by the statistics, it is axiomatic that the recent growth in public sector unionism has been dramatic. The factors that helped to produce this

growth and rapid change in public sector labor relations are closely related to the social changes experienced during the 1960's and early 1970's. The rapid increase in public employment was not accompanied by a comparable rise in public income and therefore the existing gap between public sector and industrial wages was widened (Kovach, 1969). As the private sector received more benefits, the growing public sector became more interested in unionization. The parity between public and private wages and working conditions was upset by a progressively inflationary economy with its attendant tight labor market. As a result, wages and benefits in government began to lag behind those in the private sector. Job layoffs due to restrictions on government spending began to threaten public sector job security. The established means of acquiring improvements were slow and cumbersome; wage increases required legislation that was generally opposed by over-burdened taxpayers. The increasingly isolated and alienated individual worker felt the compulsion to seek strength through collective action. There existed a need for an organization to exert pressure in favor of public employees (Public Sector Unionism, 1977).

During this time period, the private sector movement experienced little growth due to increased automation which caused a decline in the number of blue

collar workers. Therefore, unions changed their strategy and moved toward strengthening the labor movement in the white collar or service industries. Government workers were largely white collar and somewhat unorganized (Public Sector Unionism, 1977). Therefore, public sector unionization was mutually beneficial to both the unions and to the government employee.

The public sector labor movement was also strengthened by executive action and by the courts. According to Kassalow (1969), Executive Order 10988 issued by President Kennedy in 1962 encouraged unionism in the federal service. This order declared in part that "the efficient administration of the government and the well being of employees require that orderly and constructive relationships be maintained between employee organizations and management" [p. 122]. This was interpreted by state and local government employees as a mandate for protesting the historical denial of such rights on the state and local level (Kovach, 1969).

The courts also helped to clear up some of the misunderstandings about the constitutional rights of public employees. Since the late 1960's, federal courts have established that the First Amendment to the United States Constitution guarantees the right of public employees at all levels of government to join unions. Nigro (1978) reports that during its 1975-1976 term, the

U.S. Supreme Court declared in *Vorbeck vs. McNeal* that a section of the Missouri collective bargaining statute which prohibited police membership in labor unions was unconstitutional.

The militancy of public employees during the 1960's followed a general rise in civil disobedience and the use of protest by other groups in the nation, i.e., students, civil rights workers and draft resisters (Kovach, 1969). Protest was used extensively and was finally recognized as a legitimate mode of expression. This technique achieved results for other groups so the labor movement quickly jumped on the bandwagon (Public Sector Unionism, 1977). According to Kovach (1969), the success achieved by the initial illegal strikes became powerful proof that the power to strike was of far greater relevance than the right to strike. As long as some employees obtained improvements from the strike, others recognized it as a useful vehicle for their protest as well.

As a result of the factors just discussed, the public sector labor movement is well established in the American society today. The more recent activities of the labor movement would seem to indicate that the public sector may well be the heart of the labor movement in the foreseeable future. The shift from a manufacturing economy to a service oriented economy and the corresponding

rise in government employment point to this outcome. In addition, the 1978 merger of the American Federation of State, County and Municipal Employees (AFSCME) with the Civil Service Employees Association (CSEA) in New York made AFSCME the largest union affiliated with the AFL-CIO (Bowers and Cohen, 1979). As such, what are the issues currently confronting the public sector labor movement and what do some of the possible future trends appear to be?

Dealing with problems generated as a result of fiscal crises in the cities and with the concomitant tax revolts of the citizenry will consume much of the labor movement's time and energy. Increasing taxes and rising inflation have created a situation where demands are being made that the costs of government be reduced while employees are increasingly turning to unions to maintain and secure benefits. Citizens, by urging public officials to resist union efforts, are placing labor and management on a collision course in many jurisdictions (Bowers and Cohen, 1979). Therefore, the stage has been set for confrontation.

Even though public distrust of government has intensified, the public is beginning to side with government in these labor/management confrontations. This shift in support has come about primarily as a result of the public's wrath against unions for seeking increased

benefits (Nigro, 1978). Changes in public employer attitudes are becoming evident at confrontation at the bargaining table and in the streets became the dominant theme in 1978. Budget constraints and taxpayer revolts provided the impetus for aggressive bargaining on the part of public employers. Management is also beginning to show a greater willingness to take a strike. Bowers and Cohen (1979) suggest that this willingness has come about for the following reasons: (1) the development of contingency plans leaving the public employer better prepared to cope with a strike, (2) the public shift in blame for strike confrontations from employers to employees and (3) employers becoming disenchanted with arbitration as a means of conflict resolution. Therefore, the unions must learn to cope with an increasingly hostile public and with a management which is becoming more sophisticated in the bargaining arena.

Since employers' ability to pay increased benefits has diminished, unions are beginning to shift their emphasis to other matters, i.e., towards protection against layoffs and to areas where they have been seeking, but have not yet attained, participation rights. Unions are also intensifying and redirecting their efforts in the political arena. One phase of this effort is to obtain legislation, such as changes in the tax system, which will increase the government's ability to pay

better benefits. Some unions are even beginning to cooperate with management in efforts to improve productivity. The rationale behind such cooperation is that improved productivity would mean more and better services for the public at less cost, therefore, allowing salary increases for public employees (Nigro, 1978).

As a result of the fiscal status of cities and the resultant public mood, labor/management relations in the immediate future will probably continue on its present stormy course. Unionization and militancy reached new heights in 1978 with the strike being used increasingly (especially by police, firefighters and teachers) to achieve results. While pressure is being placed on the unions to satisfy the rising expectations of their members, the employees themselves are being placed on the defensive by the very public they serve (Bowers and Cohen, 1979). Now that public sector unionism has been firmly established within American society, the fight for recognition is no longer a pressing issue in most jurisdictions. It appears now that labor and management are intent on the basics of bargaining and conflict resolution along the same lines as that of the private sector.

Since conflict and confrontation appear inevitable and economic issues seem to represent the core of this struggle, it would be of interest to determine what

impact the union has on economic issues. In an effort to explore this area, the police unionization movement has been chosen as the specific public sector component to be studied. As such, it is first necessary that the development of the police unionization movement be discussed.

Police Unionism

According to Hilligan (1973), the history of police unionism can be broken down into four periods: pre-1919, 1919, 1919-1960 and 1960 to present. Other than a major setback during the 1919 period, the police unionizations movement experienced slow growth until the present period. It has been only during the current period that police unionization has developed into a powerful force within the field of labor relations. The historical events that occurred during these four periods will be presented along with a discussion of some of the causes for the recent rapid rise in the police unionization movement.

The period prior to 1919 witnessed the creation of police departments in the 1830's followed by the development of fraternal and social organizations comprised of the members of these departments. These organizations would not be considered to be labor organizations in the modern sense in that they made no

concerted effort to improve the economic or working conditions of their members (Hilligan, 1973). The year 1889 marks the date of the first recorded police labor dispute. Five members of the Ithaca, New York police force went on strike to protest a reduction in wages from twelve dollars to nine dollars per week. At the end of seven days, the original wage was restored by the city council (Burpo, 1971). In 1897, the Cleveland, Ohio police petitioned the American Federation of Labor (AFL) for a charter which was rejected because police and militiamen are often controlled by forces inimical to the labor movement (Hilligan, 1973). In 1918, 450 officers of the Cincinnati, Ohio police force went on strike to protest the discharge of four fellow officers who had met to discuss a \$300 per year pay increase. The striking policemen returned to work when the city agreed to reconsider the dismissals of the four officers (Burpo, 1971). The early twentieth century witnessed the continued growth of police fraternal and social organizations, some of which were beginning to show some concern over employment conditions and wages (Hilligan, 1973).

Possibly the most significant event to occur in the history of police labor relations represents the dominant feature in the second period of the police unionization movement: The Boston Police Strike of 1919. As a result of low morale due to poor working conditions,

low wages and the refusal of the police commissioner to meet with the police association, the Boston police applied for and received a charter from the American Federation of Labor. Subsequently, the police commissioner suspended nine officers for engaging in union activity. The negative reaction of the remaining officers was evident when 1,144 of 1,544 patrolmen voted to strike. The city of Boston experienced a night of massive rioting and looting where three persons lost their lives and property damage was estimated to be almost one million dollars. Order was eventually restored by militiamen and the remainder of the police force. Management's reaction to the strike consisted of the dismissal of over 1,100 police officers and the recruitment of an almost entirely new force. It should be noted that the new recruits were hired on the terms that the police originally requested. The reaction of Governor Calvin Coolidge to the strike represents the public sentiment at that time: "There is no right to strike against the public safety by anybody, anywhere, anytime" [Hilligan, 1973:290]. President Woodrow Wilson responded in a similar fashion:

A strike of policemen of a great city, leaving that city at the mercy of an army of thugs, is a crime against civilization. In my judgement, the obligation of a policeman is as sacred and direct as the obligation of a soldier. He is a public servant, not a private employee, and the whole honor of the community is in his hands.

He has no right to prefer any private advantage to the public safety [Hilligan, 1973:290].

What little progress the police labor movement may have achieved prior to 1919 was virtually destroyed by the events of and the public reaction to the Boston Police Strike. Approximately the first half of the third period of police unionism, 1919-1960, experienced an almost complete collapse of the unionization movement. As a result of the negative public reaction, the American Federation of Labor revoked all local police charters and other police departments that were considering affiliation with the American Federation of Labor dropped the idea. Management strongly resisted police associations that attempted to affiliate with organized labor or aggressively promoted self-interest. The negative impact was strengthened by general anti-union sentiments of the 1920's and early 1930's. These two decades represented inauspicious times for trade unions in general, with police unions being no exception (Juris and Feuille, 1973). Due to the general mood of the public and its reaction to the Boston Police Strike, a historical precedent of municipal refusal to collectively bargain with its employees had been established (Maddox, 1975).

According to Hilligan (1973), the void created during the early portion of the third period of police

union development was filled by the successful development of fraternal and social organizations, e.g., the Fraternal Order of Police. These organizations maintained a low profile and limited their activities to legislative lobbying, primarily for securing improved police welfare and pension benefits (Juris and Feuille, 1973). The 1940's witnessed the shaky re-emergence of organized labor. By 1945, the American Federation of Labor claimed to have organized local police unions in forty-five cities with populations in excess of ten thousand (Hilligan, 1973).

Even though the labor scene remained relatively quiet during the 1950's, some national organizational activity did occur. The American Federation of State, County and Municipal Employees, an affiliate of the American Federation of Labor, increased its activity during the 1940's and 1950's. By the end of World War II it claimed to represent forty-nine police locals and by 1958 this number had increased to sixty-six. Some of the locals disappeared under managerial opposition and it is doubtful the total membership ever exceeded 10,000 (Juris and Feuille, 1973). The Fraternal Order of Police, founded in 1915 with the original purpose to achieve civil service protections and better pension benefits (Burpo, 1971), exhibited slow and steady growth during this period. In 1943, it represented 169

lodges and by 1959 this number had increased to 194. The National Conference of Police Associations, whose name was later changed to the International Conference of Police Associations and more recently changed to the National Association of Police Officers, was established in 1953 as a permanent structure to facilitate future national cooperation among independent locals. The primary theme of this organization was professionalization (Juris and Feuille, 1973). Other than these slow and somewhat unobtrusive developments in the police labor movement, the period from 1919 to 1960 was not spectacular. In contrast, the fourth period of development, 1960 to present, may well be called the Golden Era of Police Unionism.

The fourth period of police union development, which has experienced rapid, significant and widespread growth, could best be characterized by the term militancy. As used in this context, militancy refers to overt, organized activity on the part of the police in efforts to secure improvements for themselves. The number of police associations increased dramatically during this time period due to the factors regarding the growth of public sector unions in general which were discussed in the first section of this chapter. Aussieker (1969) notes that during the 1960's these associations began to change from mere social benevolent

societies to unions aimed at bettering wages and working conditions through collective bargaining. The police were no longer willing to accept their relatively impotent position in the determination of wages and working conditions. The quasi-militaristic, authoritarian structure of police organizations began to crumble as a new breed of police officer emerged on the scene. No longer were the police willing to accept the dictates of the public and its politicians as pronounced following the Boston Police Strike of 1919. The police were dissatisfied with wages and working conditions and with the existing mechanisms for securing improvements. These dissatisfactions led to the emergence of militancy.

More specifically, there were at least four factors that contributed to police dissatisfaction. The increased public hostility of the 1960's created a chaotic environment for law enforcement (Juris and Feuille, 1973). Ghetto riots, campus disorders, increasing disrespect of police authority by certain elements of society and the seeming indifference of the judiciary to law enforcement problems threatened the policemen's notion that he is the guardian of community lives and property (Burpo, 1971). Second, an increased level of reported crimes involving interpersonal violence led to citizen demands that the crime problem be solved. The lion's share of this responsibility fell on the police (Juris and Feuille,

1973). Third, the economic rewards did not increase at the same rate as did the demands. The policeman's salary scale increased only half as much as that of factory workers during the period from 1939 to 1964 (Burpo, 1971). Finally, poor personnel practices, such as the failure of police and city management to provide avenues for the correction of job grievances, led to increased frustration (Juris and Feuille, 1973).

Since dissatisfaction does not inevitably lead to militancy, other factors must have been present. Three major factors contributed to the police willingness to engage in confrontation tactics as the means for seeking improvements. The 1960's could be characterized as a decade of confrontation, civil disobedience and militant activities by students, civil rights workers, Vietnam war protestors, black militants and groups of organized public and private employees. These types of activities brought both attention and success. The demonstrated effectiveness of other public employee successes (Juris and Feuille, 1973) along with the successful use of collective bargaining by working men in other fields set an example for the police (Maddox, 1975). According to Juris and Feuille (1973), a second reason for the willingness of the police to engage in confrontation tactics came about due to the influx of young policemen during the 1960's. As a result of the general spirit of the times, these younger officers

were accustomed to confrontation tactics. Being relatively unsocialized into the military mentality of obedience, they were more critical and less accepting of unilateral orders (Juris and Feuille, 1973). Finally, when in quest of group goals, especially when faced with common external challenges, the police have shown the ability to develop group cohesion. The police are more likely to act as a unified group when their expectations are violated than many other groups because of the greater degree of group unity among policemen (Juris and Feuille, 1973). Therefore, because of the successes of other groups, the influx of younger policemen and the characteristic of group cohesion, militancy emerged as the tactic of choice.

As a result of court decisions, executive enactments, legislative statutes and the willingness of the police to engage in confrontation tactics, the police are now well organized. By 1978, twenty-six states and Washington, D.C. had granted police bargaining rights (Rubin, 1978) with over 60 percent of the police in the United States covered by some form of collective bargaining contract, memorandum of understanding or local ordinance (Hewitt, 1978). The discussion to this point has been directed at police organizations in general. It would now be appropriate to describe some of the police organizations that exist today.

Swanson's (1977) typology of police collective bargaining employee organizations is divided into three broad categories: those organizations whose parent is an industrial union, independent governmental employee associations and independent police associations. With respect to the first category, the American Federation of State, County and Municipal Employees (AFSCME), is the largest of all public employee organizations. Its parent union is the AFL-CIO. In 1977, AFSCME represented 9,000 sub-federal level police officers, primarily in the states of Connecticut, Michigan and Maryland. This is an active, often militant union that is committed to collective bargaining and striking. According to Swanson (1977) it has given no evidence of creating locals at this time even though locals are generally favored by the police. The American Federation of Government Employees (AFGE) is the AFSCME counterpart in the federal government and therefore represents federal law enforcement personnel. The National Union of Police Officers (NUPO), which was founded in 1969 by John Cassesse, former President of the New York City Policeman's Benevolent Association, was meant to become the national police union. After failing to get a charter from the AFL-CIO, NUPO affiliated with the Service Employees International Union (SEIU) in 1972. In 1977, NUPO had 3,000 members, which was down from 10,000 in 1969. According to Swanson (1977), many individuals now consider

this union to be all but defunct. SEIU, separate from NUPO, has approximately thirty autonomous locals representing 4,000 officers in Louisiana, Michigan, Missouri, South Carolina and the Virgin Islands. Swanson (1977) mentions that SEIU intends to make itself a replica of AFSCME and that some jurisdictional dispute exists between the two. The International Brotherhood of Teamsters, Chauffeurs, Warehousemen, and Helpers of America (IBT) is the last union listed by Swanson in category one of his typology. IBT has been interested in organizing policemen since 1958 and 1977 represented 16,000 police in locals that consisted either entirely of public employees or of both public and private employees. It has experienced most of its organizing success in suburban, rural and western areas. With the IBT being known for its aggressiveness in seeking benefits, its members are often militant.

The second category in Swanson's typology, independent governmental employee organizations, consists of two major governmental unions, the National Association of Government Employees (NAGE), which was founded in 1961, has a police division known as the International Brotherhood of Police Officers (IBPO), which was formed in Rhode Island in 1964 and affiliated with NAGE in 1970. In 1977, IBPO represented 30,000 police in more than 500 locals. The strength of the IBPO is concentrated in the New

England states. The Assembly of Government Employees (AGE), which was founded in 1952, is organized on a government wide basis with 95 percent of its affiliates at the state level.

Independent police associations, the third category in the typology, function on either a national, state or local level with membership being limited to police personnel. The National Conference of Police Associations, established in 1953, was formed to promote the exchange of information among police employee organizations. When Canada affiliated, the name was changed to the International Conference of Police Associations (Juris and Feuille, 1973). Until 1973, the membership was open only to bona fide police associations, but later in that year, the decision was made for the ICPA to become a police union itself. In 1977, the union represented approximately 182,000 police officers in approximately 400 locals with seventy being located in the New York City area. There is also a considerable membership in the states of Illinois, New Jersey and California (Swanson, 1977). The name has recently been changed again to the National Association of Police Officers (Bowers, 1980).

The second national independent police association is the Fraternal Order of Police (FOP), which grew out of FOP Lodge Number One, established in Pittsburgh,

Pennsylvania in 1915. In 1977, the FOP claimed 1,000 local lodges that represented 150,000 members in forty states. The locals are concentrated primarily in the north central and southern states. Although founded for fraternal reasons, it has moved toward emphasizing economic objectives without changing its original statement or organizational aims. When serving as an exclusive bargaining agent it is a de facto union. Its leadership generally consists of low ranking officers who have had some years of service. The more militant police often view the FOP leadership as being soft or unnecessarily moderate (Swanson, 1977).

Of the statewide independent police associations, some are affiliated with national unions, e.g. FOP or NAPO, while the others remain independent. Most of the statewide associations do not represent the police directly, but instead they lobby in state capitals, conduct wage surveys, provide legal and financial aid and disseminate information (Swanson, 1977). In reference to local independent police associations, it should be noted that traditionally, police unionism has functioned primarily at the local level. According to Juris and Feuille (1973), this local emphasis can be attributed to two main factors. First is the inability or unwillingness of the national organizations to become integrally involved in local affairs due largely to the fact

that low financial income precludes such involvement. A second factor is that the municipal police industry is localized and monopolistic in nature. Even though locals will no doubt continue to play an important role, the trend seems to be changing. A 1972 survey indicated that the police were represented by locals in 40 percent of the cases. This figure has possibly since decreased as the national unions have sought the affiliation of independent locals or as these locals have been displaced. Future affiliations will probably occur with umbrella type organizations which permit a great deal of autonomy. According to Swanson (1977), these independent locals are often dominated by younger, college educated officers who tend to be more militant than others.

There exists a fourth category of recently developed police employee organizations which does not fit in neatly with Swanson's typology. These are the associations of black police officers. According to Juris and Feuille (1973), the purpose of these organizations is to combat racial discrimination against their members and to promote better police services to and treatment of, the black community. Most of the members of these organizations are also union members. They usually do not compete with the existing unions for representational rights.

As the brief foregoing discussion indicates, there exists a wide variety of organizational arrangements among police groups. Since a large portion of police union activity occurs at the local level and since the national unions grant a great deal of autonomy to their affiliates, it is difficult to provide a neat, concise national picture of police employee organizations. To further complicate matters, these organizations could also be categorized on the basis of the following functional criteria: the ranks the organization represents, percentage of eligible officers as members, whether or not the organization has exclusive representation status, the presence or absence of state bargaining legislation and the type of union-management relationship (Juris and Feuille, 1973). The point being made is that police employee organizations, both in terms of organizational structure and function, represent a complex configuration that is composed of many, often unrelated parts. However, a broad base of commonality does exist in reference to the goals of these organizations and the methods utilized to achieve these goals.

Goals and Methods of Police Employee Organizations

Burpo (1971) has identified five major goals of police employee organizations. Now that the issue regarding the right to organize has been firmly established,

the first goal of a police employee organization is that of recognition, e.g., being recognized as an organization by the employer for the purpose of bargaining collectively for improved benefits. A number of states do not yet have statutes that permit public employee organizations to collectively bargain and consequently municipalities often allege a lack of statutory authority to justify their refusal of recognition of police employee organizations. The second goal of police employee organizations is the attainment of improved economic benefits. In addition to higher salaries, the police also strive to secure overtime pay, improved pensions, paid holidays, callback pay, jury duty pay, shift differential pay, uniform allowances, meal allowances, permission to work a second job, and severance pay. The third goal of police employee organizations concerns the improvement of job conditions. Issues with which the police have concerned themselves in this area include hours of work, work week, vacations, holidays, sick leave, funeral leave, grievance procedures, and the use of bulletin boards. The move to secure a voice in management policies, the fourth goal, came about during the sixties when the rank and file began to take an interest in how their departments were being run. Such issues, which were once the sole prerogative of police administrators, include the number of patrol shifts, one versus two men riding in a squad car, promotions,

recruitment policies, job assignments, amount of paper work, performing nonpolice duties, consultation prior to the implementation of a standard operating procedure, transfers, and disciplinary proceedings. The fifth, and somewhat controversial goal of some police labor organizations is professionalization (Burpo, 1971). The controversy centers around the compatibility of the concepts of unionization and professionalization. This issue will be discussed later in the chapter.

There are four types of negotiations that can occur between labor and management when a police employee organization seeks to attain the aforementioned goals. Depending upon what the organization wants, the size and type of organization, the extent of representation and the history of the relationship with the employer (Hilligan, 1973), the methods of negotiation will take one or more of the following forms: informal discussions conducted through normal police administrative channels, lobbying through regular appearances before the city council, consultations with the chief who in turn makes recommendations to the city council, and/or direct bargaining between the police labor group and the representatives of the employer (Burpo, 1971). The first three methods are used most frequently in those states that do not have public employee bargaining statutes. Direct bargaining is generally used in those states where a

statute permits this form of negotiation.

Most state public employment bargaining statutes provide for the right of public employees to organize and join employee organizations for the purpose of negotiating a contract with their employer. The statute gives the employer the right to recognize the employee organization and usually requires that the employer bargain. Both parties are required to bargain in good faith over a limited scope of issues which usually include salaries, hours and other conditions of employment. The employees are organized into bargaining units, generally on the basis of rank so that the rank and the file officers and supervisory staff are represented separately (Burpo, 1971).

When labor and management are unable to reach an agreement during the negotiation process, the law usually provides for some type of impasse procedure. Although these procedures may differ from state to state, they generally consist of mediation, fact finding, voluntary and advisory arbitration, and compulsory and binding arbitration. Mediation is an informal procedure whereby a neutral, impartial third party attempts to resolve the impasse through discussions with and suggestions to both parties. A more formalized procedure, fact finding, involves a third person who conducts hearings to analyze all facets of the dispute. Recommendations are then made to both labor and management and if accepted, a contract

is made based on the recommendations. If not accepted, the findings of fact are made public on the assumption that both parties would rather accept the recommendations than risk the possible wrath of the public for refusal to accept them. Arbitration consists of a procedure whereby a three man panel, consisting of two representatives from the disputing parties and a third impartial member, conducts a formal hearing and reaches a conclusion on the basis of information gained at that hearing. When the arbitration is voluntary, it may be evoked by either labor or management. Compulsory arbitration, as the name implies, requires the parties to arbitrate when negotiations reach an impasse. Whereas advisory arbitration does not require the estranged parties to accept the panel's decision, binding arbitration requires compliance (Burpo, 1971).

If, after the exhaustion of impasse procedures, an amicable agreement has not yet been reached, the police organization will seek its goals through alternative means. These alternatives range along a continuum from mild forms of protest to the strike. These forms of protest are meant to attain desired goals through other channels, bring to the attention of the public the plight of the organization's members and in general to put pressure on management to acquiesce. The milder forms of protest include lobbying before the state legislature, picketing and the filing of civil lawsuits. Moving along the continuum, another

device that brings public attention to the situation is the work slowdown or speed-up. An example of this tactic is the traffic ticket slowdown resulting in few or no tickets being written even for flagrant traffic violations. The municipality suffers both in terms of public safety and the loss of city revenues. The traffic ticket speed-up, which occurs when officers write an inordinate number of tickets, creates a great deal of public inconvenience and resentment. The speed-up often leads to a rash of citizen complaints which the city may find to be embarrassing (Burpo, 1971).

At the extreme end of this alternative approach continuum is labor's ultimate weapon, the work stoppage. A work stoppage occurs when all or some police officers willfully fail to perform their duties, thereby causing a complete or partial breakdown in police service. There exist four forms of work stoppage that the police may utilize: the strike, sick call ("blue flu"), mass resignation, or attendance of professional seminars. Since no state grants the police the legal right to strike, the police are hesitant to simply walk off the job and call a strike. A strike action could not only jeopardize their employment status, but may also alienate the citizenry at a time when the public support is critical. The right to strike controversy centers around management's argument against the strike due to the threat to public

safety and labor's argument that they are at a bargaining disadvantage without the power to strike. In any event, due to the current legal ramifications, the police have developed other forms of work stoppage (Burpo, 1971).

The sick call or "blue flu" strategy involves participating officers calling in sick and complaining of ailments that are subjective in nature, such as a headache or backache. This makes it difficult, if not impossible, for management to prove malingering. Mass resignations occur when participating officers submit notices of resignation. This tactic avoids the possible negative ramifications of the strike or sick call. The final work stoppage strategy occurs when participating officers walk off the job for the stated purpose of attending a professional seminar to improve their professional knowledge (Burpo, 1971).

Issues in Law Enforcement Labor Relations

It should be evident at this point that the police labor movement is dynamic and widespread with numerous and varied types of police employee organizations currently in existence. The police are serious about the pursuit of their goals and are willing to go to extreme lengths to acquire those benefits that they believe they so readily deserve. As a consequence, labor, management and the general public are all confronted with

numerous issues regarding the scope of this involvement, its impact and how to cope with it. Four of these issues, which will now be discussed are as follows: the compatibility of unionization and professionalization, the impact of unions on the operation of the police agency, the impact of the cities' fiscal crises on law enforcement labor relations and the impact of the strike on the labor/management relationship.

Professionalization

The idea of professionalization for the police occupation is one that has been widely discussed within the literature and therefore no attempt will be made to elaborate here. However, the concept is generally meant to be aimed at unifying and improving the status and quality of police work as a whole. On the other hand, the unionization concept generally refers to self-help organizations that direct their energies toward securing benefits and protection for their members. The issue at hand is whether these two concepts are compatible.

As would be expected, labor and management have opposite opinions regarding the compatibility of unionization and the professionalization concept. Management argues that the objectives of unions are narrow in scope, immediate in nature and almost entirely non-altruistic in outlook. Therefore, advancement of social or professional goals is not an important part of union goals and the

unionization movement will cause the struggle for professional status to deteriorate into a struggle for immediate financial betterment. Management contends that employees will seek advancement through union pressure rather than through the more desirable channels of merit, examination and dedication to duty (Hilligan, 1973).

Unions counter the management argument by stating that better salaries and job conditions attract more qualified persons and thus provide a more professional approach to police service. In addition, unions boost morale, serve as a watchdog over administrative corruption and increase efficiency through participation by union members in the management process (Hilligan, 1973).

There also exists a lack of consensus regarding this compatibility issue among scholars who have written in the area. Halpern (1974) argues that unionization was fostered by and also contributes to the professionalization of the police. The turmoil of the 1960's brought the police increasingly into the public eye and consequently a great deal of criticism was leveled at the police for the manner in which they dealt with the various crises of that era. The criticisms led to the push for upgrading departments by improving facilities, equipment and salaries and by getting better trained and educated men on the force. The emphasis on professionalization has led to an increase in the number of younger policemen

viewing themselves as skilled persons who want a say in what they do. Halpern (1974) argues that whereas veteran policemen might be more interested in increased salaries and benefits, the younger and more professionalized policeman wants a voice in policy and programs as well as increased benefits. He cites as evidence the situation in Baltimore where the majority of the veterans belonged to a union that worked primarily for increased benefits whereas the younger officers belonged to a union which sought to influence such police policies as patrol, recruitment, and training procedures.

According to Olmos (1974), police unions will be forced to devote more attention to professionalization matters as societal concern for law and order begins to burn itself out. He argues that unions have concentrated on a rationale of exploiting this law and order concern as a primary means of gaining economic concessions. As the public concern shifts away from law and order, Olmos believes that it would be more productive in the long run for the unionization movement to stress a theme of developing professional excellence in return for substantial economic concessions from the taxpayers.

Along a similar line of reasoning, Nigro (1978) notes that since the public employer's ability to pay increased benefits has diminished, unions are beginning to shift their emphasis to other matters. As the public

becomes increasingly concerned with the fiscal crisis of American cities, citizens, legislators and the courts will be demanding an improved quality of services in return for increased economic concessions. Therefore, unions will become increasingly concerned with issues that are believed to increase the quality of police services, i.e., professionalization.

Hewitt (1978) takes a somewhat different position by asserting that the impact of unions on the notion of professionalization is a moot point. He argues that the police have never been a profession, and never will be as long as they are grossly fragmented under many political jurisdictions. The basic argument is that the American police have no police idea. The role and philosophy of the police changes from one generation to another and from one jurisdiction to another. Therefore, the police must first define the goals of professionalization and develop a workable program before the issue of the compatibility of unionization and professionalization can be addressed.

If one considers increasing educational requirements and providing educational incentives as being indicative of a step toward professionalization, then unions are indeed becoming involved in the promotion of professionalization. Many police labor contracts include such provisions. Unions are also becoming increasingly involved with the areas of recruitment standards,

selection, training, promotion criteria, job classification, discipline, grievance procedures and evaluation. Most of these efforts are directed toward decreasing the use of political favoritism and management discretion and increasing decision making and promotion on the basis of due process and merit.

While police unions have been involved to a certain extent with matters that may be considered related to professionalization and have possibly been responsible for some improvements, the overall consensus appears to be that police unions have, in general, had a negative impact on the concept of professionalization in the past. According to Feuille (1977), there seems to be a basic conflict between the goals police unions must pursue in their role as an employee self-help organization and those objectives which would further the quest for professional status. Union energies have been primarily devoted to securing basic economic benefits and job security protection for their members. However, the trend would seem to indicate that police unions will become increasingly involved with the professionalization issue in the future while continuing to pressure for increased benefits. The impact of this trend remains to be seen.

Union Impact on the Operation of the Police Agency

According to Feuille (1977), the major impact that unions have had on the operation of the police

agency is that they have had a significant influence on the chief's or the city's ability to manage. Unions have effected management discretion in the area of manpower deployment by attaching higher price tags to overtime, court time and standby. Unions also pressure for the increasing use of seniority in shift assignments and transfer. These types of efforts stem from union's desire to eliminate favoritism, secure extra pay for extra duty and to attain a greater degree of position security for senior officers.

Management discretion has also been reduced in the area of disciplinary procedures. The procedures as established by the unions require management to prepare better cases, make the punishment fit the offense and, in general, administer the disciplinary process more equitably. In addition, grievance procedures are commonly instituted as a result of union pressure. These procedures are established as a means of seeking redress for the infringement of contractual rights and as a means of enforcing union contractual rights. These grievance procedures are the mechanisms by which management and the union test the limits of managerial prerogatives and the extent of the union's voice in determining employment conditions (Feuille, 1977).

These and numerous other issues are now determined at the bargaining table rather than at the

discretion of the manager as was once the case. Management views this intrusion as being a threat to its traditional authority in a quasi-military organization that is highly dependent on discipline and loyalty for its efficient operation (Juris, 1971-1972). Management feels that the decision making functions of the department are being placed in the hands of the union organization rather than in the hands of those who are responsible for the implementation of those decisions. Also, the collective bargaining process places the manager in a position where demands are being made from two conflicting sources: the municipal employer and the policeman from whose ranks he came (Hilligan, 1973). In addition, management feels that it is at a disadvantage when bargaining with the union due to the union's ability to call a work stoppage. By disrupting normal police services, the cost to management of disagreeing with union terms is increased (Feuille, 1977).

Unions argue that these actions are necessary in order to protect the interests of their members. If management would take it upon itself to institute the changes that reflect the wishes of the employee, the union asserts that it would not need to become involved.

This influence of police unions on the operation of the police agency is not limited to its involvement at the bargaining table. Police unions are also involved in

legislative and elective politics that are aimed not only at strengthening their position at the bargaining table, but also at influencing its law enforcement policy making. The recognition of the political orientation of the police is not new, but when the police enter the political arena in an effort to act on their own behalf, the situation is different. Just as the way has been cleared for the rights of the police to organize and in some instances to bargain collectively, so have the restrictions been removed that once prohibited political involvement by the police. As such, the police are increasingly taking sides in elections and public issues. This type of political involvement by the police has caused some concern among police administrators and the general public due to the fact that in our system of government, a politician is thought to owe a debt when an organization plays a key role in his victory. This elective politics participation of the police is particularly suspect when the involvement centers around the election campaigns of those most intimately concerned with the administration of criminal justice in the community--the prosecutors and judges. Since these officials are supposed to be independent of the police in the administration of justice, how would this independence be affected if a victory was achieved due to the efforts of a police employee organization (Juris, 1971-1972)? Also, in a situation where a mayor or governor makes

campaign promises that would affect the criminal justice system, would it be appropriate for the police to support him and if so, what kind of support? Should a policeman be allowed to make monetary contributions to an individual's political campaign? Should he be allowed to distribute leaflets, canvass or collect money? Should the answer to these questions be based on the particular political office being sought? Should the answer be based on whether the officer is out of uniform? Should a police employee organization be allowed a similar degree of participation (Hilligan, 1973)? Such questions are indicative of the complexity of the issue of police unionization.

The political involvement of the police is not restricted to elective politics. Police unions are also continually concerned about policy issues that relate to how the law is to be enforced. Such issues might include the use of force, victimless crimes, civilian review boards, the types of weapons to be carried and the conditions regulating their use, the appropriate response to civil disorder and the functioning of the remainder of the criminal justice system. The police are speaking out more and more on these types of political and policy issues (Hewitt, 1978), and have experienced a great deal of success in their efforts.

Police management considers political activism as a challenge when issues of policy are raised, but endorses legislative political activity that results in large appropriations. The various employee organizations and society in general favor political activism by those with whom they agree, but are intolerant of activity by their opponents (Juris, 1971-1972).

It is apparent that police unions have had a significant impact on the operation of the police agency, both through the collective bargaining process and through political involvement. The police agency administrator no longer enjoys "carte blanche" with respect to the internal operations of his agency. The manager must now consider the union reaction to personnel management or policy changes and in all probability he will find it necessary to consult with union representatives before instituting any change that would have an impact on the union's members.

The Fiscal Crisis of American Cities

Many critics of police unions feel that the unionization movement has contributed to the financial crises of American cities (Nigro, 1978). The assumed propensity of the police to initiate a strike or other forms of work stoppage has led to the belief that the police are in a position to receive pay increases in excess of other public employees due to the vital nature

of the role they perform for society. It is believed by some that public management is unable to provide a counterforce to these union wage demands (Mitchell, 1978).

Increasing taxes and inflation have led to demands that the costs of government be reduced. The public is beginning to urge city officials to resist union efforts. Movements such as California's Proposition 13 have started a nationwide trend which has had a significant impact on labor/management relations. This public mood and the resultant demands have placed labor and management on a collision course in many jurisdictions (Bowers and Cohen, 1979). This conflict appears inevitable since taxpayers are demanding tax cuts and reductions in government spending with no reduction in the quantity or quality of services.

Although research indicates that the power wielded by police unions in the area of wage determination is not as great as has been feared (Ehrenberg and Goldstein, 1977) and that union pressure is not the sole or primary force affecting pay increases (Feuille, 1977), the public mood has led to a change in public employer attitudes. Budget constraints and taxpayer revolts have provided the impetus for aggressive bargaining on the part of public employers. Confrontation at the bargaining table and in the streets became the dominant theme during the latter part of the 1970's (Bowers and Cohen, 1979).

Therefore, the fiscal crises of cities have created a situation of increased conflict and confrontation between labor and management with the public shifting its support toward management and away from labor. Since union members perceive the most important function of the union to be bargaining for wages and benefits (Meyer, 1972), this situation will in all probability continue as long as the fiscal crisis is an issue.

Police Strikes

Police strikes are illegal in all states due to the perceived threat it poses to public safety. However, this has not stopped the police from engaging in strikes and other forms of work stoppage, e.g., "blue flu" and mass resignations. Even though various types of impasse procedures (mediation, fact finding, and arbitration) have been instituted in an effort to avoid work stoppages, the strike or threat of a strike has been perceived to be the most powerful bargaining weapon available to labor. Traditionally, management has complained that they are placed at a bargaining disadvantage due to the union's ability to call a strike. The union argues that without the ability to initiate some form of work stoppage, they would have no power and would be placed at a bargaining disadvantage.

One of the major complaints against the police unionization movement is that many people think of the

terms union and strike as being synonymous. As such, it is believed that the development of police unions could lead to strike activity that would endanger the public welfare as well as giving the police the ability to extract unduly large pay increases. Other than the Boston Police Strike of 1919 and the Montreal, Canada strike of 1969, police strikes have not resulted in a significant increase in the incidence of crime (Hilligan, 1973). In addition, even though most strike activity has occurred over wage issues (Meyer, 1976), there is no evidence to indicate that the police have gained excessive salary increases (Ehrenberg and Goldstein, 1977). Consequently, the fears voiced by the public and by management have not been realized.

Since the strike has not proven to be as threatening to the public welfare as was once perceived and as the public employer becomes more willing to take a strike, the police union/management relationship is beginning to develop along the same lines as that of the remainder of the public sector. However, it remains extremely doubtful that the police will ever be granted the legal right to strike and will continue to be treated as somewhat of an exceptional case in public sector labor relations. The perceived threat to public safety posed by the police strike will no doubt continue to exist and consequently it is probable that considerable effort will

continue to be directed toward the establishment of acceptable alternative impasse procedures.

As should be evident at this point, one of the major overriding controversies surrounding police unionism concerns the issue of money. Individual members want more money and they see the union as being the vehicle for achieving this goal. The general public and management often feel that police unions push too hard for this goal without considering the possible negative consequences. At a time of rising inflation when workers are increasingly turning to unions for help and when there exists a general public sentiment to cut back on government spending, there exists a need to determine what economic impact police unions do indeed have.

Wage Determination in the Public Sector

As was noted in the previous section of this chapter, there seems to exist a relationship between the fiscal operation of American cities and public sector unionism. The extent or impact of this relationship is difficult to discern since many other variables are involved. However, it is this aspect of police unionism that will be explored in more detail throughout the remainder of this study. More specifically, the central focus will be on the impact of police unionism on municipal police wage determination. Since the discussion to this

point has concentrated on police unionism, it is now necessary to present some background information on the process of government wage determination and the role of collective bargaining in this process.

Traditionally, according to Roscow (1976), there have been three different methods of government pay determination. Each of the succeeding methods represent an increased degree of delegation of authority, an increased participation and a lower order of control. The first and most traditional method is that of legislative pay setting. This remote and authoritarian method is the least likely to provide frequent wage increases, is less responsive to labor market forces, and is more responsive to budgetary control. Salary adjustments are less frequent, less systematic and often subject to unilateral determination. Structural improvements or reforms generally require special legislation which is laborious, slow and very infrequent.

The second method, executive action, is the result of delegation of authority from the legislature. This process varies in scope and method with the authority being either limited or complete. Executive action usually evolves as an outgrowth of ponderous or inefficient legislative pay fixing methods. Wage adjustments are more regular and frequent with the law often specifying frequency, defining criteria and allowing for legislative

veto or modification. Executive action is often based on the prevailing wage principle which, as noted by Fogel and Lewin (1977), requires government to pay wages comparable to those received by private employees. This method is sensible in terms of equity and efficiency since the output of government does not pass through the market place where its relative worth can be assessed by customers. According to Fogel and Lewin (1977), there is a need for comparable pay to attract employees but to pay more than the private sector would be unnecessary and a waste of tax dollars. The common practice is to obtain wage information from the geographic area of government jurisdiction and from only medium and large sized employers. This method holds down the cost of wage surveys, but imparts an upward bias to prevailing wage determination since only the "core" economy is surveyed. The periphery economy, which generally pays lower wages, is excluded. One problem with the prevailing wage concept occurs when there exists an absence of a private market for some government occupations. For certain groups that have no comparable counterpart, such as police and firefighters, parity, a term meaning equality, is commonly used for wage determination. Another method utilized to overcome this problem is to base pay on private sector wages for occupations to which individuals of comparable training and interests might be attracted (Fogel and Lewin, 1977).

Continuing with Roscow's (1976) discussion of governmental wage determination, the final method is collective bargaining. This process, which is more volatile, democratic and responsive to the labor market, is an outgrowth of the explosive growth of employment in the public sector, pressure for increased government services, rising expectations of workers and increased unionization. Collective bargaining is more difficult to control or predict due to political turnover of government managers, absence of long-term responsibilities for costs of short-term settlements and the fact that the employer must negotiate with competing groups at different times. It is this collective bargaining aspect of unionization which will now be explored.

Basically, collective bargaining in the public sector is the process by which representatives of a political entity and representatives of an employee organization meet to bargain in good faith over the terms under which labor will be performed (Maddox, 1975). As such, unionization has introduced a significant new element into the municipal budget-making process. A central issue has emerged as to whether union power has pre-empted the budgetary authority of public officials legally vested with the power to decide how, when and for what purposes city funds shall be spent (Spero, 1973). Collective bargaining disturbs the normal incremental budgeting cycle

by separating the determination of wages, fringe benefits and other personnel items from the task of budgeting for them. This change from a unilateral model of decision making has shifted the locus of authority from city officials to full-time labor relations specialists (Benecki, 1978). This problem is compounded by the fact that it is often difficult to determine who has final authority to represent the management side. This decentralized, multilateral bargaining aspect of city government often plays into the hands of unions who engage in "end run" tactics in order to obtain from one level of government what was denied at another (Mitchell, 1979). As a result of these characteristics, the situation is now such that the budget must accommodate collective bargaining. According to a study by Benecki (1978), this occurs in three ways: expenditure and revenue levels must increase (changing the size of the budget), transfers of budget items must occur (changing the distribution of the budget) or employment must decrease (changing both the size and distribution of the budget). It should be noted that these are not mutually exclusive and therefore any combination of the above may occur.

Unionism and collective bargaining activities in the public sector differ from those in the private sector in two major ways: political involvement and elasticity of demand. Regarding the politics of wage

setting, political bodies are sensitive to two constituencies: government employees who are directly affected by public wage decisions and the general public who is generally uninformed and disinterested. Since the first group watches the actions of politicians more closely, lawmakers are generally more responsive to them. Public employees have a tendency to exploit this situation. Fogel and Lewin (1977) have held that "the position of public employees as voters and opinion-makers who partially determine whether or not the employer retains his job" [p. 327] as the major factor underlying motivational differences between public employers and private, profit-maximizing employers. There is no counterpart to this political pressure in the private sector. According to Shapiro (1978), some critics note that restraints on the political activities of public sector unions may weaken this political pressure argument.

Elasticity of demand in the public sector refers to the demand for government services and how flexible this demand can be. Since most government services are monopolistic and many are essential in nature, coupled with the fact there are limited opportunities for the substitution of capital for labor in the production of these services, the demand for labor in the public sector is frequently inelastic or inflexible. The implication is that unions can push for increased wages with little

fear of adverse employment effects (Shapiro, 1978). Even though taxpayers can vent their hostilities at the polls, public employees are also voters. Therefore, politicians may opt to avoid a strike rather than refusing to pay higher wages (Orr, 1976). However, taking advantage of this inelasticity of demand depends upon the ability to withhold a significant amount of labor. Therefore, the union effect is related to the degree of union organization and the ability to strike. To the extent that existing legal barriers inhibit organization, union recognition, collective bargaining and strikes, union wage effects will be limited (Shapiro, 1978).

It is undeniable that the number of government employees and the size of government budgets and payrolls have increased dramatically during the past two decades. However, some controversy exists regarding unionism's role in this growth phenomenon and how the increases in the public sector compare with those in the private sector. Prior to the 1960's, the characteristics of low compensation and a high degree of job security dominated state and local government work (Orr, 1976). According to Roscow (1977), during the past two decades public sector pay has shown an increase of 188 percent compared to 141 percent in the private sector. Spero (1973) contends that the public sector payrolls increased by 402 percent between 1950-1968. Mitchell (1979) notes that state and local

employees increased their total compensation packages from 88 percent to 99 percent of the private sector compensation packages from 1945 to 1975. He also mentions that if state and local pay had risen at the same rate as pay in the private sector, public pay would have been 12 percent to 13 percent lower in 1975. Orr (1976) contends that between 1952-1966, government pay remained at parity with the private sector and that they generally remained within 3 percent of each other. However, since 1966, Orr (1976) states that government pay has risen steadily relative to the private sector and that by 1973 the public/private pay differential favored government workers by 10 percent. The earning differential was lower for state and local employees than for federal employees. Although these combined statistics do not necessarily coincide, due probably to the fact that it is not known what is being measured when reference is made to "pay, payroll, or compensation packages," it is axiomatic that public sector pay has risen at a more rapid rate than the private sector. Depending on whose statistics are read, the rapid rise in public sector pay has now placed government worker pay at parity with the private sector or may have even exceeded the private sector. Obviously such large scale comparisons are difficult to make.

Concomitant with the increase in government pay is the rise in government employment, public sector

unionism and the increased financial problems of American cities. According to Spero (1973), between 1950 and 1968 local government employment increased by 113 percent. According to Mitchell (1979), if state and local employment had grown at the same rate as the private sector during 1945 to 1975 (38.8%) instead of their actual rate of growth of 261.4 percent, state and local payrolls would be reduced by 60 percent. It is Mitchell's contention that the chief source of pressure for revenue, in terms of labor policy, has come from the employment side rather than the wage side. He states that the pressure for expansion of government activities and programs stemmed primarily from forces exogenous to collective bargaining.

One way of examining this argument would be to determine if public sector unions have a bargaining advantage over the private sector. It has been previously noted that the public sector may have the advantage due to the elasticity of demand and political pressure aspects that are unique to the public sector. A study by Shapiro (1978) indicated that there is no evidence that wage effects of public unions are greater than those in the private sector. The hourly earnings of unionized workers in the public sector tend consistently to be either on par with or somewhat below the hourly earnings of unionized workers in the private sector when controlled for individual worker characteristics, region, city size

and occupation group. However, his study did indicate that unionized blue collar workers in the public sector earn approximately 18 percent more than non-unionized workers in either the public or private sector. Obviously, Shapiro's findings and Mitchell's contention do indicate that the increase in employment has had a major impact on the pressure for revenue, but it also is apparent that unionization has also played a part. Therefore, the controversy continues. The increased demand for government services (which of course increases the need for labor); the spiral of inflation which increases cities' cost of purchasing services and goods from the private sector; the needed expansion and modernization of government facilities; and enlarged welfare rolls have all contributed to the financial burden of America's cities (Spero, 1973).

Since the city is a creature of the state and has no inherent powers of taxation, its ability to cope with these financial problems is somewhat limited. Cities are heavily dependent on the federal government and it is estimated that less than one-half of the city budget comes from city raised revenue. Cities are tied to a relatively inflexible real estate tax, which accounts for approximately two-thirds of the revenues from taxes directly levied by them. In addition, a large percentage of grants-in-aid from federal and state governments

are earmarked for specific purposes (Spero, 1973). Therefore, the cities' ability to cope with this increased demand for revenue is fairly limited. Public sector unions argue that where the money comes from is not their problem. Fact finders seem to support this view and have in the past found that city employees should not be expected to carry the cities' financial burden on their backs alone. In addition, it is unrealistic to assume that costs can be suppressed in the public sector when the free flow of market forces permits employee gains in the private sector (Spero, 1973).

Police Wages

The police have been chosen for this study mainly because the police would seem to possess, to an extreme, those characteristics that would give them an advantage at the bargaining table. Due to the vital nature of the functions they perform for society, the demand for police labor is thought to be highly inelastic. In addition, police unions are now widespread and well organized which provides them with a great deal of political muscle (Mitchell, 1978). Also, the police are highly labor intensive. Whereas personnel costs of a typical city budget range from 50 percent to 80 percent (Spero, 1973), the percentage of police budgets expended on salaries and wages is better than 90 percent on the average (Odoni, 1978).

Not only are the police highly labor intensive, but they are also the second largest group of local employees, with teachers being the largest. According to Hewitt (1978) the nation employs approximately 375,000 police at a cost of seven billion dollars annually. Approximately 80 percent of the police are employed at the local level with the remainder employed by the state and federal governments (Rubin, 1978). Since 60 percent or better of these police are covered by some form of collective bargaining agreement, contract, memorandum of understanding or local ordinance (Hewitt, 1978), any effect that police unions have on wage determination would cause a widespread impact.

As with the remainder of the public sector, police salaries have rapidly increased. Between 1939 and 1950, police salaries increased by only 52 percent while the average annual salary of federal employees increased 83 percent, municipal transit operating employees increased 110 percent and the consumer price index increased 69 percent (Aussieker, 1969). This of course, was during a time when there was little unionism due to adverse legal and public opinion. Between 1951 and 1961 police salaries increased by 56.9 percent while the increase for factory production workers was 50 percent, for federal employees and municipal transit operating employees the increase was 54.1 percent and urban school teachers' salaries increased

by 12.1 percent (Aussieker, 1969). This trend changed during the period from 1964 to 1969 when police salaries rose by 38 percent for an average annual increase of 6.7 percent compared to 4 percent for white collar and factory production workers. Prior to this, from 1939 to 1964, police salaries had increased one-half as much as that of factory workers (Burpo, 1971). Therefore, the wage increase differential began to favor the police during a time period when police unionism was gaining strength and momentum due to the lessening of legal and political restrictions.

Odoni (1978) has noted one aspect of police salaries that deserves mention. Local governments have a tendency to pay public employees higher salaries than the private sector at the lower level jobs while paying lower salaries than the private sector for higher level jobs. This differential may be due to employee organization pressure at the lower level while public employees in higher level positions are more visible to a public that is skeptical, at best, of the contributions of highly paid government employees. In addition, employees in the higher level positions are typically not as well organized as those at the lower level (Mitchell, 1979). Odoni (1978) has discovered some statistics that would tend to indicate that the police differ with respect to this public sector characteristic. From 1959 to 1973, salaries for

nonsupervisory police more than doubled with maximum salaries rising more than minimum. The salary gains for chiefs, captains and sergeants, i.e., upper level, supervisory positions, were remarkably similar to each other and to the nonsupervisory gains. Police unionism probably contributed to the nonsupervisory gains, but supervisory officers are usually represented to a lesser extent and are less militant. The reason may lie in the desire to maintain traditional wage differentials within police ranks. Therefore, the wage impact of police unions may extend beyond a particular bargaining unit.

Relative wage impact studies, i.e., the extent to which union workers pay differs from non-union worker pay, indicate that public sector unions raise the wages of unionized government workers by approximately 5 percent ("Wage Impacts . . .," 1977). The empirical basis for this conclusion consists primarily of studies of teacher and firefighter bargaining in local government (Lewin, 1977). The few studies that have been conducted to determine the relative wage impact of police unions have produced contradictory results.

Schmenner (1973), using time series wage information for eleven American cities during 1962-1970, discovered a negative relationship between collective bargaining and wages for police and firefighters. He states that the negative sign goes against all intuition

and admits that no ready explanation for it is available. A cross sectional study by Lewin and Keith (1976) using 1971-1972 salary data on all but two American cities with a population of 250,000 or more, indicated that unionism appears to have a negative impact on police salaries. These authors provide the following possible explanations for their findings:

1. Unionization may lead to an increased supply of policemen and thus lower salaries.
2. Unions may be more concerned with fringe benefits than with salaries.
3. When negotiations go to arbitration, settlements may be made retroactive and the salaries used in their study may not reflect this.
4. The data did not indicate whether a written contract existed nor were the scope of the issues identified.
5. Police in low wage cities who organize for purposes of raising salaries, possibly have not yet been successful in doing so.

A study by Hall and Vanderporten (1977), using 1973 salary data for 141 American cities with populations of over 50,000, indicated that police salaries are increased by formal negotiations, but the amounts are quite modest. Therefore, there seems to exist no definitive study that would indicate what, if any, impact police unions have on

wage determination.

This study will attempt to determine the impact of police unions on wage determination by comparing the wages of unionized to nonunionized city police departments. The following chapter will discuss the methodology to be used in this endeavor. The discussion will include a description of the research design, identification of the dependent and independent variables, the statistical routines that will be utilized, limitations of the study and the hypotheses statements.

CHAPTER III

METHODOLOGY

Since the amount of research conducted in the area of police unionism and wage determination has been minimal and the results produced have been contradictory and somewhat confusing, the problem of the degree of impact of police unions on wage determination continues to exist. This is the primary problem which this study will address. The purpose of the study will be to add to the current knowledge about the relationship between police unions and wages by examining the relationship between wage determination and unionism using as additional independent variables those variables that have been shown to have significant impact in earlier studies as well as some independent variables, discovered through literature review, that have been hypothesized to influence wage determination. In some respects, this study will provide comparative information in that it will replicate previous police-public sector wage determination studies, however, it will also add a unique characteristic which is intended to expand knowledge in the area.

The unique area deals with the relationship between unionism and the incidence of the following

independent variables that will be included in the study: crime rate, population size, population density, income inequality, average earnings of manufacturing production workers, the number of retail service and wholesale establishments per 1,000 population, monopsony power, government type, geographic region, LEAA region and the number of law enforcement employees per 1,000 population. These variables will be discussed in more detail later in the chapter. The possibility exists that these same variables may give rise to the development of unionism. It may be that when these independent variables are in existence and/or when they reach a certain magnitude, the resultant conditions are such that police labor feels the need to organize in order to improve their economic benefits and working conditions. Therefore, a second area of concern in this study will explore this relationship between unionism and the other independent variables in the study.

Methodology

The approach used by H. G. Lewis (1963) for estimating the impact of unions on wages in the private sector, i.e., the extent to which a union raises the wage of its members above the wages of comparable unorganized workers, will be used for this study. The results of such studies, including this study, are presented as

a ratio of the union to non-union wage expressed in percentage terms. Many of the previous studies in the area of the impact of public sector unions on wage determination have utilized this approach (Lewin, 1977). The groups to be compared in this study will consist of municipal police departments that are unionized and collectively bargain for wages and municipal police departments that are non-unionized and therefore do not collectively bargain for wages.

Population Under Study

Using the 1975 Uniform Crime Report, all United States cities with 100 or more law enforcement employees, both sworn and civilian, were identified and surveyed. A copy of the questionnaire is included as Appendix A. The staff of the Texas Criminal Justice Center Manpower Planning Project, an LEAA funded grant project, designed and mailed the survey instrument as a part of their grant program. Four hundred sixty cities were surveyed and 312 responded for a return rate of 67.8 percent. Wage schedules for the 1979-1980 fiscal year were selected for the purposes of this study. Of the 312 wage schedules received, fifty-seven were omitted because the salary schedules pertained to an inappropriate fiscal year. Therefore, a total of 255 agencies were utilized, of which 166 (65%) were union, 89 (35%) were non-union. The data

received consisted of both contract and non-contract data from which the salary and union information were obtained.

It should be noted at this point that a random sample was not utilized for this study and therefore some doubt may be raised regarding the validity of the tests of significance. Many critics feel that without the use of randomization, a great deal of control is lost and therefore the number of rival hypotheses is vastly increased. Since the tests of significance do not dispose of these rival hypotheses, it is often suggested that the tests are useless and misleading and should be abandoned. However, Winch and Campbell (1969) have taken the position that it is very important to have a "formal and nonsubjective way" of determining whether data varies in a systematic or haphazard fashion. If the variance is haphazard, there is no real reason to further the exploration. If the variance is systematic, then the analysis does not conclude with the test of significance, but is just beginning. Therefore, Winch and Campbell believe that significance tests are of critical importance in weighting the plausibility that a relationship exists and that it should not be left to the intuition of the researcher to determine if a systematic or haphazard arrangement exists.

Dependent Variables

Three related dependent variables will be utilized for this study: minimum level (entrance) patrolman salaries, maximum level patrolman salaries, and the average of the two. Patrolman level salaries have been chosen for the unit of study since bargaining unit definitions vary from union to union (Rubin, 1978), but almost every unionized municipal police department has a bargaining unit consisting entirely of patrolmen or includes patrolmen along with other police classifications. In addition, the patrol unit is the largest unit in police agencies with 44.23 percent to 45.57 percent of the police personnel working in the patrol unit (Farmer, 1977).

The minimum and maximum levels of the dependent variable have been chosen based upon a review of the results of two previous studies (Lewin and Keith, 1976; Hall and Vanderporten, 1977), which indicate that union impact varies according to salary level. The average of the two is included to determine if the overall impact is significant regardless of the impact at the minimum and maximum level.

Hypothesis Statement

The central hypothesis to be tested by this study is:

Hypothesis: Unionized municipal police departments

will exhibit higher salaries than non-unionized municipal police departments.

Independent Variables

There will be twelve independent variables included in the study. The independent variables represent a combination of the variables that were utilized in two previous studies, and additional variables that have been hypothesized in the literature to have an influence on wage determination but have yet to be included in an empirical analysis of the impact of police unionism on wage determination. There are two major factors that have an influence on wage determination: supply of police services and demand for police services. The supply of police services is influenced primarily by the environment within which the police officer must work and by the availability of other employment of comparable pay requiring similar skills and/or qualifications. The demand for police services is influenced primarily by the community environment and by the community's willingness or ability to pay. Most of the independent variables were selected as measures of these two factors.¹ The independent variables to be included are as follows:

1. Unionization/non-unionization

Unionization is a dummy variable that is operationally defined as those police unions that

collectively bargain for wages. These are 1979 data and are available from the Manpower Planning Project Data Base. A positive relationship between unions and wage determination is expected.

2. Crime rate

The crime rate represents the rate of crime per 100,000 people in the city's population. Only the part one index crimes are included in this figure. As a high crime rate increases the demand for police protection, the supply is reduced because a policeman's job in a high crime rate area is viewed as being less desirable (Hall and Vanderporten, 1977). Therefore, it is likely that higher police salaries would be paid in high crime rate areas and a positive relationship is anticipated.

These are 1975 data and were obtained from the County City Data Book, 1977.²

3. Population density

Population density is defined to be population per square mile. Criminal activity is thought to be a function of population density and should therefore be positively associated with police salaries (Lewin and Keith, 1976). These are 1975 data and are located in the County City Data Book, 1977.

4. Population

Population is hypothesized to influence police salaries in a similar manner as population density.

Population figures are being used in addition to population density figures because increased populations will possibly not only cause the handling of crime matters to be more complex and thus make police work less appealing, but greater urban size has also been associated with a greater competitiveness in the labor market (Hall and Vanderporten, 1977). These are 1975 data and are located in the County City Data Book, 1977.³

5. Income inequality

This variable is defined to be the percentage of families with annual incomes over \$15,000. This income inequality theoretically induces criminal activity (Vold, 1958) and as the activity increases, the community demands more police services and is therefore willing to pay higher salaries (Lewin and Keith, 1976). These are 1969 data and are available from the County City Data Book, 1977.⁴

6. Number of full-time sworn police protection employees per 1,000 population

This variable is included due to the possibility that the community may choose to employ more police rather than increasing the salaries of incumbent police officers in response to an increase in the crime rate. Therefore, a negative relationship is anticipated. Both the population data and the employee data are for the year 1975 and are available from the County City Data Book, 1977. The number of employees per 1,000 population will be

computed from these figures.⁵

7. Average annual earnings of manufacturing production workers

This variable represents salaries that potential police applicants might earn elsewhere and therefore a positive relationship is anticipated (Lewin and Keith, 1976). These are 1972 data and were computed from figures obtained from the County City Data Book, 1977.⁶

8. The number of retail, service and wholesale establishments per 1,000 population

This variable is thought to represent a measure of the taste for police protection of private property and would reflect a positive relationship (Hall and Vanderporten, 1977). This is 1972 retail, service and wholesale establishment data to be used with 1975 population data. This information is available from the County City Data Book, 1977.⁷

9. Monopsony power

A city is defined to exercise monopsony power if that city is the only one in a SMSA with a population of 25,000 or better. Therefore, the city does not have to compete with other cities of similar size for police recruits and this monopsonistic power could be exercised to the detriment of police salaries (Hall and Vanderporten, 1977). This information is available from the County City Data Book, 1977 and is based on 1975 population data.⁸

10. Government type

Many cities have chosen to employ a city manager as the principal operating officer because it is believed that a professionally trained manager could produce a desired set of services at a lower cost than could an elected non-professional. Therefore, higher salaries would be expected in city manager cities because lower costs could possibly leave more money for salaries (Ehrenberg and Goldstein, 1977). This is 1974-75 data and is available from the County City Data Book, 1977.⁹

11. Geographic region

According to the Urban Data Service, 1972, police pay varies by geographic region (Lewin and Keith, 1976). The regions to be included will be West, North Central, Northeast, and Southern as specified by the U.S. Bureau of the Census.

12. Law Enforcement Assistance Administration (LEAA) regions

Since the four census regions encompass such large land areas, the ten LEAA regions have been included in an effort to determine more specifically where the differences may lie (see Chapter IV, Table 4 for a listing of the states included in each region).

Most of the aforementioned independent variables have been included due to the effect they may have on the dependent variables either through influencing the supply of police officers and/or the demand for police services.

Analysis of the Data

The data will be analyzed to determine if the unionization variable contributes significantly to the explanation of wage determination. Multiple regression has been chosen as the method of analysis due to its ability to handle non-experimental ex post facto research that utilizes both continuous and dichotomous variables. The method is capable of analyzing the collective and separate contributions of the independent variables to the variation of the dependent variable (Kerlinger and Pedhazur, 1973). First, it is hypothesized that statistically significant differences will exist between the specified salaries of unionized and non-unionized police departments. This difference will be tested with the t test. Second, true stepwise regression analysis will be utilized to determine which of the independent variables contribute significantly to the explanation and prediction of wage determination. It is hypothesized that the unionization variable will be included as one of the significant variables in the regression analysis.

Regarding the second area of concern, i.e., the relationship between the independent variables and unionization, multiple regression analysis will also be utilized. For this portion of the analysis, unionization will be treated as the dependent variable and will be regressed on the same independent variables as used in the first portion

of the analysis of the data. This portion of the study is meant to be descriptive in nature and therefore no hypothesis is being tested.

For this second portion of the analysis, the dependent variable (union/non-union) will be dichotomous. According to Gillespie (1977), Goodman (1976), and Knoke (1975), regression analysis is an appropriate method of analysis for a dichotomous dependent variable when the split on the variable for a sample as a whole is between 25 percent and 75 percent. The split on the unionization variable for this study is 35 percent non-union and 65 percent union. In addition, Kerlinger and Pedhazur (1973) maintain that multiple regression can easily handle dichotomized independent variables via dummy coding as is used in this study.

Limitations of the Study

As with most prior studies of this nature, this research effort is not without its limitations. These limitations will be discussed and suggestions will be made for improving future research in this area.

In the cross sectional survey which was utilized for this study, data were collected at one point in time. This type of survey is useful not only for purposes of description but also for the determination of relationships between variables at the time of the study (Babbie,

1973). However, the problem with using this type of survey is that temporary conditions may be confused with long term tendencies (Mitchell, 1979). Longitudinal or time-series analysis, whereby data are collected at various points in time, measuring both pre- and post-unionization, would provide a better picture (The Impact of Unions . . . , 1977). Even though this study utilized the cross-sectional approach, it closely replicates previous studies (Hall and Vanderporten, 1977; Lewin and Keith, 1976) that also utilized the cross-sectional approach. This does not mean that the aforementioned problem is not a concern, but this replication will help to provide a clearer picture of the union impact on wages.

One area of this study that may present a more serious problem concerns the dependent variable measures and their comparability from agency to agency. The problem revolves around the issue of how to insure that the maximum and possibly even the minimum police officer levels are comparable. In order to grasp the significance of this problem it is first necessary to discuss some of the characteristics of police salary schedules and classification plans for sworn personnel.

The classification plan refers to the various ranks or positions that are included within the police department. The positions range from police officer to chief and an example of the positions that fall in between

include corporal, detective, sergeant, lieutenant, captain and major. Since there is no uniform classification plan that is used nationwide, the position listings vary from agency to agency. The salary schedule refers to a listing of the classification levels accompanied by the pay range for each level. There are generally multiple pay grades within each classification level along with a time frame specified for advancement eligibility to each pay level.

The National Advisory Commission on Criminal Justice Standards and Goals (1973) recommends that the position classification plan be designed so that the characteristics of each position are identified, the positions are grouped according to a logical plan and qualifications and equitable salary scales are established for each group. Employees should be paid on the basis of merit according to qualifications, degree of responsibility and performance. There needs to be a sufficient number of promotional levels within all classifications, but it is more crucial at the patrolman level since most police will not progress past this level. A sufficient number of merit increases is needed to motivate veterans to continue to make professional contributions. The National Advisory Commission (1973) considers it inadvisable to expand the classification structure by creating new classifications that may fragment the functional integrity of existing positions. Therefore, if insufficient salary appears to be a problem

within a police agency, it is preferred to expand the number of pay grades within existing classifications.

The National Advisory Commission (1973) emphasizes the importance of well defined individual classifications. Mediocrity may be encouraged if within any one classification level, there exists substantial differences in individual positions, but the pay for all is the same. Positions should be defined individually, with distinct levels of compensation being awarded to each. The idea is to include few position classifications with multiple pay grade levels in each. This would provide ample opportunity for mobility within each classification and salary advancement without promotion. It is necessary to define accurately the requirements of each position in terms of the particular skill, speciality or expertise needed. In addition, the plan should include well defined criteria that would facilitate movement through various career paths.

Considering the aforementioned background information, the problem of comparability becomes apparent when reviewing salary schedules from a number of police agencies. Since this study concerns the police officer classification, the discussion will be limited to the police officer level. The dependent variable data for this study was derived from salary schedules that were received as a result of the survey. A variety of classification plans and salary schedules were received. No

information was included regarding the qualifications or requirements for each position nor in most instances was the procedure mentioned for promotion or movement from one pay level to another within a classification level or from one classification level to another. Three types of salary schedules were identified from the information received.

Possibly the most common and simplified type of salary schedule received is shown in the following examples:

EXAMPLE A

	<u>Entry</u>	<u>Step 1</u>	<u>Step 2</u>	<u>Step 3</u>	<u>Step 4</u>	<u>Step 5</u>
Police Officer	\$	\$	\$	\$	\$	\$

EXAMPLE B

	<u>Entry</u>	<u>6 Months</u>	<u>1 Year</u>	<u>2 Years</u>	<u>3 Years</u>	<u>4 Years</u>
Patrolman	\$	\$	\$	\$	\$	\$

Most of the salary schedules of this type had three to ten pay grades with some agencies reporting only the minimum and maximum salary. The entry level salary was used as the minimum level dependent variable and the final step was used as the maximum level dependent variable. A common variation of the above schedules is shown in the following examples of the second type of salary schedule:

CONTINUED

1 OF 2

EXAMPLE C

	<u>Salary</u>
Probationary (Recruit, trainee, cadet) 0-12 months	\$
Police Officer - Step 1 (or 1 year)	\$
Police Officer - Step 2 (or 2 years)	\$
Police Officer - Step 3 (or 3 years)	\$
Police Officer - Step 4 (or 4 years)	\$
Police Officer - Step 5 (or 5 years)	\$

EXAMPLE D

	<u>Salary</u>
Probationary Patrolman	\$
Patrolman II	\$
Patrolman III	\$
Patrolman IV	\$

For this type of salary schedule the probationary level was used as the minimum level dependent variable and the last patrol officer/patrolman level was used as the maximum level dependent variable. The problem of comparability increases when there are multiple positions within the police officer/patrolman classification. Examples of this third type of salary schedule are as follows:

EXAMPLE E

	<u>Salary</u>	
	<u>Minimum</u>	<u>Maximum</u>
Police Officer	\$	\$
Police Officer - Master Intermediate	\$	\$
Police Officer - Master Advanced	\$	\$
Police Officer - Senior Master Intermediate	\$	\$
Police Officer - Senior Master Advanced	\$	\$

EXAMPLE F

	<u>Salary</u>
Assistant Patrol Officer I	\$
Assistant Patrol Officer II	\$
Assistant Patrol Officer III	\$
Assistant Patrol Officer IV	\$
Patrol Officer I	\$
Patrol Officer II	\$
Patrol Officer III	\$
Patrol Officer IV	\$
Senior Patrol Officer I	\$
Senior Patrol Officer II	\$
Senior Patrol Officer III	\$
Senior Patrol Officer IV	\$

For this type of salary schedule the first and last salaries listed were used for the minimum and maximum level dependent variables.

Even though there were other minor salary schedule variations, the examples given represent the major types of salary schedules that were received and used for this study. The following tables represent a

tabulation of the salary schedules according to the type of schedule in use by both union and non-union agencies.

TABLE 1

UNION

	Number	Per Cent
Type I	160	76.2
Type II	36	17.2
Type III	13	6.6
TOTAL	209	100.0

TABLE 2

NON-UNION

	Number	Per Cent
Type I	63	61.2
Type II	29	28.2
Type III	11	10.6
TOTAL	103	100.0

With reference to the minimum level dependent variable, the problem of non-comparability could occur if some agencies include the probationary/trainee/cadet

classification in the salary schedule while other agencies may begin their salary schedule with the next highest level of classification. When comparing Examples A and B to Examples C and D, it is not known if the entry level classification of Examples A and B represent the probationary status as indicated in Examples C and D. It seems unlikely that the probationary status classification would be excluded from the salary schedule, but if it were the comparisons being made would be between dissimilar classification levels. However, since both union and non-union police agencies use the various types of salary schedules in approximately equal proportions, the problem may not be significant. For purposes of future research, it may be of interest to determine who is represented at the entry level and then to determine if the union may have a significant impact on wages at the classification level following probationary status as well as determining the impact at the probationary level. As noted by Mitchell (1979), if unions affect wages partially through changing the progression plans and de facto entry levels, the union impact might be obscured.

It is at the maximum level dependent variable that the comparability problem may be more significant. According to Farmer (1977), the problem is how to insure that those individuals at the maximum police officer level are comparable. Is promotion to the maximum level merely

a formality based on years of service or is the promotional procedure significant? For purposes of discussion, Examples A and F will be compared. The issue at hand is whether Step 5 of Example A is comparable to the Senior Police Officer IV of Example F in terms of the criteria and qualifications required for reaching each level, the duties of each, the skill, speciality and expertise of each and whether there is a comparable amount of responsibility between the two. If, in Example F, each separate classification is individually defined and the promotional criteria has been established on this basis of merit whereas if in Example A movement along the pay scale is considered to be automatic based primarily on years of service, the two groups being compared would not be comparable. However, as noted previously, both union and non-union police agencies use all types of salary schedules in approximately equal proportions and therefore, any discrepancies should balance out. However, for purposes of future research, it is recommended that determinations be made regarding promotional procedures, the qualifications required for each classification level and the responsibilities associated with each level or pay grade. The extent of union involvement and impact on the development of classification plans and salary schedules should also be determined. More precise comparisons could therefore be made and the amount of union impact could more accurately be determined. It

should be noted that this comparability problem may also exist within each type of salary schedule as well as between types.

Continuing with the discussion of the limitations of the study, there are several characteristics of the study that may cause the amount of union impact to be obscured. The dependent variable measures which are being used to determine union impact, represent only the tip of the economic iceberg. The remainder of the total compensation package consists of rank differentials, shift differentials, longevity pay, health benefits, vacations, paid holidays, educational incentive pay, retirement contributions, uniform allowance, cost of living raises, health insurance and other forms of what is considered to be fringe benefits (Hewitt, 1978). By using only salaries as a measure of union influence, the estimates of the economic impact of unions will possibly be biased downward. It should be noted that this problem may not be as significant when dealing with local agencies as it would be when dealing with state or federal agencies. Mitchell (1979) suggests that local agencies tend to devote less to deferred and indirect compensation than do the state and federal agencies or the private sector. It may be, as in the private sector, the size of the agency and fringe benefits are correlated. However, there is very little data available on local level fringe benefits. If a method

could be devised for including fringe benefit packages in union impact studies, the determination of the union economic impact would be greatly enhanced.

Another factor which may obscure the union impact is a concept known as the spillover or threat effect (Kahn, 1978). This problem occurs when non-union employers adjust their wage structures based on the settlements negotiated by unionized workers. Therefore, the estimates of union impact would be biased downward. This problem is more pronounced when the non-union group is smaller than the union group ("The Impact of Unions ...," 1977). Therefore, the problem may be present in this study since the non-union group is smaller both nationwide and in this sample. On the other hand, if union wage gains lead to a cutback in the quantity of union labor demanded, the resulting increased labor supply to non-union agencies may lower the wages there. This crowding effect would therefore enhance the relative union wage impact (Kahn, 1978).

Another area of limitations to this study concerns the identification and inclusion of other independent variables that may have an effect on the dependent variable measures. Parity was identified as a variable that has had an effect on wages in previous union wage studies (Hall and Vanderporten, 1977), but it was not included in this study since the information was not

available from the data received. Historically, wage parity has been maintained between police and firefighters. This arrangement has a tendency to depress police wages since the principal of parity dictates that comparable positions within the two departments receive comparable pay. Therefore, increased salaries will increase the total amount paid and place a heavier burden on the city budget and the individual taxpayer which will have a tendency to decrease the probability of any one department receiving significant pay raises. However, it should be noted that recently the parity concept has been eroding with pay differentials appearing in favor of the police (Rubin, 1978). This is possibly due in part as a result of the public's sensitivity to rising crime rates, which have caused an expansion and modernization of police services (U.S. Department of Labor ..., 1976).

Another variable which was identified that may possibly affect wages is the degree of unionization, i.e., the percent of employees organized for bargaining purposes. Mitchell (1979) suggests there is a tendency for the union effect on wages to become larger as the proportion of unionized workers increases. This provides the union more effective political pressure and more muscle at the bargaining table. The variable was not included in this study because the information was not available from the data received.

One final note regarding the limitations of this study deals with the problems associated with ex post facto research. The basic problem with this type of research is that direct control of the variables is not possible: neither experimental manipulation nor random assignment is available to the researcher. Therefore, this lack of control of the independent variables is considered to be an inherent weakness of ex post facto research (Kerlinger, 1973). The police agencies used in the study were already union or non-union and obviously the unionization variable (along with all other independent variables) could not be manipulated nor could the police agencies be randomly assigned to union and non-union groups. In an effort to partially overcome this control problem and to possibly diminish the risk of improper interpretation of the results, alternative or control independent variables were included which in essence represent alternative hypotheses or explanations of the dependent variables under consideration. Identifying and isolating those independent variables that would, in addition to unionization, have an influence on municipal wage determination is therefore critical to this type of research. Obviously, it is not possible to identify, measure or include every plausible independent variable that would have an effect on wage determination, but through the literature review, most of the major factors that are hypothesized to have an impact

on wage determination were identified and variables selected which represent measures of those factors.

In the following chapter the results of the analysis of the data will be presented.

CHAPTER IV

RESULTS

The presentation of the results of the study is divided into five parts: (1) descriptive information on all variables, (2) hypothesis testing, (3) regression analysis with wages as the dependent variable, (4) descriptive information on all independent variables as they relate to unionism and (5) regression analysis with unionism as the dependent variable.

Descriptive Information

Tables 3 and 4 provide descriptive information on the continuous and categorical variables. The N sizes are not consistent for all variables due to the fact that complete data were not available for all municipalities. In addition to the N sizes, the mean, standard deviation, minimum and maximum values are shown for all continuous variables. The N sizes and percentages are depicted for the discrete variables. With reference to Table 3, the minimum and maximum values for each variable reveal that the cities utilized for this study apparently represent a widely diverse population. For example, the mean population is 192,176.26 with the smallest city having

TABLE 3

Descriptive Information - Continuous Variables

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
Minimum Salary	254	\$13,223.91	2,494.01	\$ 6,864.00	\$20,650.00
Maximum Salary	255	\$17,061.61	3,103.22	\$10,296.00	\$25,709.00
Average Salary	254	\$15,139.99	2,631.55	\$10,078.00	\$23,108.00
Population	243	192,176.26	559,251.66	27,442.00	7,481,600.00
Population Density	243	4,476.26	3,484.34	301.00	24,964.00
Crime Rate	238	7,477.32	2,556.04	2,362.00	18,711.00
Income Inequality	243	22.16%	10.32	7.7%	99.6%
Police Per 1000 Population	241	2.26	2.70	.99	35.59
Average Wage of Manufacturing Production Workers	220	\$ 7,753.02	1,511.86	\$ 4,846.15	\$12,180.72
Retail, Service and Wholesale Establishments per 1000 Population	243	21.26	8.275	6.43	111.70

TABLE 4

Descriptive Information - Discrete Variables

VARIABLES	N	%
Government Type	243	
Manager	143	59%
Commission	15	6%
Mayor	85	35%
Census Region ^a	255	
West	56	22%
North Central	67	26%
Northeast	54	21%
South	78	31%
LEAA REGIONS		
Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)	22	9%
Region 2 (New Jersey, New York)	24	9%
Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia)	24	9%
Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)	35	14%
Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)	51	20%
Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)	27	11%
Region 7 (Iowa, Kansas, Missouri, Nebraska)	15	6%
Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)	6	2%

TABLE 4--Continued

Descriptive Information - Discrete Variables

VARIABLES	N	%
LEAA REGIONS (continued)		
Region 9 (Arizona, California, Hawaii, Nevada)	49	19%
Region 10 (Alaska, Idaho, Oregon, Washington)	2	1%
UNIONIZATION	255	
Union	166	65%
Non-Union	89	35%
MONOPSONY	82	32%
NO MONOPSONY	173	68%

^aCensus Regions:

West: Washington, Idaho, Montana, Oregon, Wyoming, California, Nevada, Utah, Colorado, Arizona, New Mexico.

North Central: North Dakota, South Dakota, Minnesota, Wisconsin, Michigan, Nebraska, Iowa, Kansas, Missouri, Illinois, Indiana, Ohio.

Northeast: Maine, Vermont, New Hampshire, New York, Massachusetts, Connecticut, Rhode Island, New Jersey, Pennsylvania.

South: Delaware, District of Columbia, Maryland, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, Texas, Arkansas, Louisiana, Alabama, Georgia, Florida, South Carolina, North Carolina.

a population of 27,442 and the largest being 7,481,600. This wide range characteristic of the variables would seem to give strength to the study since the explanation of variance in the dependent variable via variance in the independent variables is the primary focus of this research effort.

Table 4 indicates that the majority (59%) of the cities have the city manager form of government, followed by mayor (35%) and commission (6%). This would tend to indicate that cities do indeed, as mentioned in Chapter III, seem to be favoring the city manager form of government in these times of fiscal austerity. All four census regions (Table 4) are well represented in the study, as indicated by the fact that between 21 percent and 31 percent of the cities fell into each one of the four categories. The distribution of cities within the LEAA regions (Table 4) is more varied with four regions each containing greater than 10 percent of the cities (Region 4, 14%; Region 5, 20%; Region 6, 11%; and Region 9, 19%). The remaining six regions each contain less than 10 percent of the cities as follows: Regions 1, 2 and 3, 9 percent; Region 7, 6 percent; Region 8, 2 percent; Region 10, 1 percent. As noted in Chapter III, 65 percent (166) of the police agencies are unionized and 35 percent are non-union (Table 4).

Hypothesis Testing

The hypothesis being tested by this study is as follows:

Hypothesis: Unionized municipal police departments will exhibit higher salaries than non-unionized municipal police departments.

The three dependent variables chosen to test this hypothesis are: minimum, maximum and average patrolman level salaries. The Student's t test was performed on each dependent variable to determine if there was a statistically significant difference between the union and non-union salaries. The results of the analysis are presented in Table 5.

The mean minimum union salary is \$14,067.87 and for the non-union agencies it is \$11,659.30 with a mean difference of \$2,408.56. The analysis reveals that there is a statistically significant difference between the union and non-union minimum salaries (Table 5, $t=8.43$, $p=.000^{10}$). Based on these figures the minimum salary for unionized police departments is 20.6 percent higher than the minimum salary for non-union police departments.

The mean maximum salary for unionized police departments is \$17,913.10 and for non-union agencies it is \$15,473.43 with a mean difference of \$2,439.68. The analysis reveals a statistically significant difference

TABLE 5
Hypothesis Testing

DEPENDENT VARIABLE		N	MEAN	MEAN DIFFERENCES	t	PROBABILITY
Minimum Salary	Union	165	\$14,067.87	\$2,408.56	8.43	.000
	Non-Union	89	\$11,659.30			
Maximum Salary	Union	165	\$17,913.10	\$2,439.68	6.77	.000
	Non-Union	89	\$15,473.43			
Average Salary	Union	165	\$15,979.49	\$2,395.88	8.03	.000
	Non-Union	89	\$13,583.61			

between the two (Table 5, $t=6.77$, $p=.000$) with the unionized departments exhibiting salaries that are 15.8 percent higher than non-union departments. The results of the mean average salaries analysis are similar with the mean average salary for union departments being \$15,979.49 and \$13,583.61 for non-union police agencies. The mean difference of \$2,395.88 was found to be statistically significant (Table 5, $t=8.03$, $p=.000$) with the unionized departments exhibiting average salaries that are 17.6 percent higher than non-union police agencies.

Regression Analysis for Wages

The aforementioned results would tend to indicate that police unions do indeed have a significant impact on salaries. However, when a regression analysis is performed that includes the previously mentioned (Chapter III) independent variables, the results are not as conclusive. Table 6 illustrates the correlation matrix that was utilized to perform the regression analysis. A review of the table indicates that the union variable is indeed significantly correlated with the wage variables ($p=.000$), but that eight of the other independent variables are also correlated with one or more of the wage variables at the same level of significance. It should be noted that even though government type, census region and LEAA region are subdivided into

TABLE 6
Correlation Matrix

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Y1	1.000	.773	.926	.462	.107	.327	.199	-.256	.408	.067	.336	-.019	.140	-.107	-.048	.508	.069
Y2	.773	1.000	.955	.375	.132	.233	.276	-.308	.497	.075	.312	-.060	.266	-.183	-.190	.609	.055
Y3	.926	.955	1.000	.435	.128	.292	.255	-.303	.481	.076	.339	-.049	.223	-.189	-.134	.601	.066
Y4	.462	.375	.435	1.000	.022	.268	.073	-.077	.180	.067	.308	-.121	.134	-.167	.151	.190	-.017
Y5	.107	.132	.128	.022	1.000	.437	.058	-.066	-.015	.080	-.018	-.013	-.145	-.036	.168	.006	-.017
Y6	.327	.233	.292	.268	.437	1.000	.077	-.215	.041	.269	.031	-.033	-.158	-.094	.211	.051	-.084
Y7	.199	.276	.255	.073	.058	.077	1.000	.073	-.079	.176	.075	.188	.160	-.023	-.155	.224	-.004
Y8	-.256	-.308	-.303	-.077	-.066	-.215	.073	1.000	-.274	-.044	.075	.075	-.169	.149	.172	-.223	.142
Y9	.408	.497	.481	.180	-.015	.041	-.079	-.274	1.000	-.076	.292	.050	.166	-.137	-.102	.750	.141
Y10	.067	.075	.076	.067	.080	.269	.176	-.044	-.076	1.000	-.035	.068	-.006	-.002	.008	.011	-.096
Y11	.336	.312	.339	.308	-.018	.031	.075	.075	.292	-.035	1.000	-.171	-.096	-.123	.162	.121	.457
Y12	-.019	-.060	-.049	-.121	-.013	-.033	.188	.075	.050	.068	-.171	1.000	.047	.075	-.086	.047	-.116
Y13	.140	.266	.223	-.134	-.145	-.158	.160	-.169	.166	-.006	-.056	.047	1.000	-.282	-.799	.355	-.172
Y14	-.107	-.183	-.189	-.167	-.036	-.094	-.023	.149	-.137	-.002	-.123	.075	-.282	1.000	-.177	-.092	.002
Y15	-.048	-.190	-.134	.151	.168	.211	-.155	.172	-.102	.008	.162	-.086	-.799	-.177	1.000	-.275	.221
Y16	.508	.609	.601	.190	.006	.051	.224	-.223	.250	.011	.121	.047	.355	-.092	-.275	1.000	-.317
Y17	.069	.055	.066	.101	-.017	-.084	-.004	.142	.141	-.096	.457	-.116	-.172	.002	.221	-.317	1.000
Y18	-.006	-.163	-.098	.380	.090	.435	-.189	-.090	-.042	.148	-.039	-.041	-.392	-.048	.265	-.275	-.309
Y19	.464	.005	.059	.000	.080	.000	.002	.077	.257	.011	.071	.262	.000	.233	.000	.000	.000
Y20	-.515	-.455	-.512	-.603	-.063	-.321	-.048	.144	-.325	-.038	-.458	.102	.193	.123	-.199	-.352	-.396
Y21	-.023	-.124	-.119	.225	-.059	.064	-.146	.028	-.103	-.006	-.057	-.082	-.206	-.077	.198	-.163	-.183
Y22	.028	-.024	-.010	.236	.171	.452	-.071	-.136	.045	.221	-.075	.029	-.229	-.024	.025	-.171	-.192
Y23	.448	.350	.436	.000	.004	.000	.136	.015	.240	.000	.133	.327	.030	.354	.087	.003	.001
Y24	-.220	-.173	-.228	-.158	-.010	.035	-.142	-.078	-.191	-.020	-.139	-.071	.015	-.024	.000	-.171	-.192
Y25	.000	.003	.000	.006	.441	.296	.107	.001	.379	.019	.135	.460	.354	.500	.003	.001	.001
Y26	-.308	-.303	-.324	-.353	-.047	-.155	.102	.116	-.196	.020	-.315	.183	.100	.142	-.137	-.212	-.258
Y27	.000	.000	.000	.000	.231	.308	.058	.032	.001	.380	.000	.202	.055	.011	.014	.000	.000
Y28	.137	.143	.150	.160	-.015	-.010	-.008	.239	.193	-.073	.453	-.115	-.170	-.042	.729	.265	.618
Y29	.014	.011	.058	.005	.406	.440	.450	.613	.001	.129	.000	.037	.003	.254	.000	.500	.000
Y30	-.234	-.213	-.229	-.283	-.011	-.230	-.058	.145	-.183	-.048	-.218	.018	.048	.076	-.054	-.152	-.295
Y31	.000	.000	.000	.000	.412	.000	.057	.010	.002	.230	.001	.371	.224	.112	.195	.008	.000
Y32	-.119	-.150	-.145	-.062	-.002	-.114	.024	.042	-.061	-.051	.070	-.024	-.014	.000	.035	-.133	.419
Y33	.029	.008	.012	.163	.459	.019	.355	.252	.172	.217	.152	.355	.413	.447	.407	.017	.000
Y34	-.040	-.011	-.025	-.158	-.007	-.012	-.011	.004	-.005	-.076	.034	.026	-.031	.181	.000	.230	-.304
Y35	.761	.431	.343	.605	.458	.476	.431	.475	.464	.346	.356	.346	.129	.062	.500	.000	.278
Y36	.571	.643	.646	.232	.009	.061	.213	.251	.283	.027	.150	.030	.371	-.127	-.232	.875	-.271
Y37	.000	.000	.000	.000	.443	.172	.003	.603	.603	.567	.000	.372	.000	.000	.000	.000	.000
Y38	.074	.014	.016	.065	-.010	-.030	.005	.001	-.017	-.009	.052	.023	.023	-.002	-.063	.168	-.051
Y39	.352	.176	.231	.150	.441	.319	.156	.295	.297	.273	.267	.162	.165	.342	.157	.074	.199

TABLE 6---Continued
Correlation Matrix

	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	
V1	-.036 .464	-.515 .000	-.023 .358	.003 .418	-.220 .000	-.308 .000	.137 .014	-.234 .000	-.119 .029	-.040 .261	.571 .000	.024 .352	Minimum Salary
V2	-.163 .005	-.455 .000	-.184 .002	-.024 .350	-.173 .003	-.303 .000	.143 .011	-.213 .000	-.150 .008	-.011 .431	.643 .000	.058 .176	Maximum Salary
V3	-.075 .059	-.512 .000	-.119 .000	-.010 .000	-.206 .000	-.324 .000	.150 .000	-.229 .000	-.145 .011	-.025 .343	.646 .000	.046 .333	Average Wage
V4	.380 .000	-.603 .000	.236 .000	.236 .000	-.159 .000	-.353 .000	.160 .000	-.283 .000	-.062 .163	-.159 .006	.232 .000	.065 .150	Union
V5	.090 .080	-.063 .165	-.058 .177	.171 .034	-.010 .441	-.047 .231	-.015 .432	-.011 .439	-.002 .458	-.007 .458	.009 .413	-.010 .441	Population
V6	.435 .000	-.321 .000	.064 .158	.452 .000	.025 .256	-.155 .000	-.010 .410	-.230 .000	-.134 .019	-.012 .426	.061 .172	-.030 .319	Population Density
V7	-.189 .002	-.048 .230	-.146 .012	-.071 .136	-.142 .014	.107 .058	-.008 .450	-.098 .067	.074 .355	-.011 .431	.213 .000	.056 .196	Crime Rate
V8	-.090 .077	.144 .011	.026 .330	-.156 .015	-.078 .107	.116 .032	.139 .013	.145 .010	.042 .252	.004 .475	-.251 .030	.034 .295	Monopsony
V9	-.042 .257	-.325 .000	-.013 .419	.045 .240	-.191 .001	-.193 .001	-.183 .001	-.061 .002	-.006 .172	.283 .464	-.017 .000	.397 .397	Income Inequality
V10	.148 .011	-.038 .280	-.006 .461	.221 .000	-.020 .379	.020 .390	-.073 .129	-.048 .230	-.051 .217	-.026 .346	.022 .367	-.030 .323	Police per 1000 Population
V11	-.099 .071	-.458 .000	-.057 .200	-.075 .133	-.139 .019	-.315 .000	.463 .000	-.218 .001	.070 .152	.034 .308	.100 .059	.042 .267	Average Annual Wage for Manufacturing Production Workers
V12	-.041 .262	.102 .057	-.082 .100	.029 .327	-.071 .135	.183 .002	-.115 .037	.018 .391	-.024 .355	.026 .346	.030 .322	.023 .362	Retail Service and Wholesale Establishments per 1000 Population
V13	-.392 .000	.193 .001	-.206 .000	-.229 .000	.015 .048	.100 .055	-.170 .003	.048 .224	-.014 .413	-.071 .129	.371 .000	-.079 .105	Manager
V14	-.048 .223	.123 .025	-.077 .111	-.024 .354	-.024 .154	.142 .011	-.042 .112	.076 .447	.008 .002	.181 .002	-.122 .026	-.022 .362	Commission
V15	.265 .000	-.159 .001	.198 .001	.085 .007	.000 .500	-.137 .014	.229 .000	-.054 .195	.035 .287	.000 .500	-.282 .000	-.063 .158	Mayor
V16	-.275 .000	-.352 .000	-.163 .005	-.171 .003	-.171 .003	-.212 .000	-.265 .000	-.152 .000	-.133 .017	.230 .000	.895 .000	.168 .004	West
V17	-.309 .000	-.396 .000	-.183 .002	-.192 .001	-.192 .001	-.238 .000	.838 .000	-.205 .000	.419 .000	-.034 .295	-.291 .000	-.053 .199	North Central
V18	1.000	-.344 .000	.593 .000	.622 .000	.096 .063	-.227 .000	-.259 .000	-.178 .002	-.130 .019	-.080 .100	-.253 .000	-.046 .232	Northeast
V19	-.344 .000	1.000	-.204 .000	-.214 .000	.252 .000	.601 .000	-.332 .000	.491 .000	-.166 .004	-.103 .050	-.302 .000	-.059 .174	South
V20	.593 .000	-.204 .001	1.000	-.099 .057	-.099 .057	-.123 .025	-.154 .007	-.106 .046	-.077 .111	-.049 .224	-.150 .006	-.027 .332	Region 1
V21	.622 .000	-.214 .000	-.099 .057	1.000	-.104 .049	-.129 .020	-.161 .005	-.111 .039	-.081 .100	-.050 .213	-.157 .026	-.029 .324	Region 2
V22	.076 .063	.252 .000	-.099 .057	-.104 .049	1.000	-.129 .020	-.161 .005	-.111 .039	-.091 .100	-.050 .213	-.157 .026	-.029 .324	Region 3
V23	-.207 .000	.601 .000	-.123 .025	-.129 .020	-.123 .020	1.000	-.199 .001	-.137 .014	-.100 .056	-.062 .162	-.195 .001	-.035 .286	Region 4
V24	-.259 .000	-.332 .000	-.154 .007	-.161 .005	-.161 .005	-.199 .001	1.000	-.172 .003	-.125 .023	-.072 .158	-.274 .000	-.044 .240	Region 5
V25	-.178 .002	.431 .000	-.106 .046	-.111 .039	-.111 .039	-.137 .014	-.172 .003	1.000	-.085 .005	-.053 .198	-.168 .024	-.031 .313	Region 6
V26	-.130 .019	-.166 .004	-.077 .111	-.081 .100	-.081 .100	-.120 .016	-.125 .023	-.026 .045	1.000	-.039 .269	-.127 .026	-.022 .362	Region 7
V27	-.080 .100	-.193 .000	-.048 .224	-.050 .213	-.050 .213	-.062 .162	-.078 .168	-.053 .198	-.019 .269	1.000	-.076 .114	.014 .413	Region 8
V28	-.253 .000	-.192 .000	-.150 .000	-.157 .000	-.157 .000	-.195 .001	-.244 .000	-.168 .000	-.122 .026	-.076 .114	1.000	-.043 .245	Region 9
V29	-.046 .232	-.053 .174	-.027 .332	-.029 .324	-.029 .324	-.035 .266	-.044 .240	-.041 .313	-.022 .362	-.014 .413	-.013 .245	1.000	Region 10

seventeen dichotomous variables, for the purposes of this discussion they will be referred to as only three independent variables. The eight variables most highly correlated with one or more of the dependent wage variables are population density, crime rate, monopsony, income inequality, average annual production wage, form of government (manager), census region (West and South) and LEAA region (Regions 3, 4, 6 and 9).

There are several aspects of the correlation matrix that bear discussion. The negative correlations between the monopsony variable and all salary variables was anticipated and lends support to the contention that those cities that exercise monopsony power are able to pay lower salaries than the other cities. The positive correlations between population, population density, crime rate, income inequality, police per 1,000 population and average production wage were all anticipated. However, the negative correlations between the dependent wage variables and the number of retail, service and wholesale establishments per 1,000 population are contrary to expectations. Any explanations for this result would be based purely on conjecture and since none of the correlations are highly significant no explanations will be attempted.

The highly significant positive correlations between the dependent wage variables and the city manager

form of government is capable of securing higher salaries for police officers. The negative correlations for both the commission and mayor forms of government lend support to this argument. With reference to the census region correlations the highly significant positive correlations for the West and the highly significant negative correlations for the South would tend to indicate that the highest salaries would be paid in the West with the lowest salaries being paid in the South. One interesting point should be made regarding the negative correlations for the Northeast census region. Even though the union variable is highly correlated in a positive direction with the variables, the fifty-four cities in the Northeast census region are all unionized (see Table 14) and yet the correlations with wages for this census region are all negative. This may indicate that geographic region is a more important wage determinant than is unionization. The positive wage correlations for western LEAA regions and negative correlations for the southern and northeastern LEAA regions lend support to this argument.

In an effort to further explore the wage determination impact of unionism, regression analyses were performed to determine the amount of variance in the dependent variable that could be explained by the independent variables. Tables 7, 8, and 9 illustrate the results of the stepwise regression analysis using

TABLE 7
Stepwise Regression - Minimum Salary

INDEPENDENT VARIABLE	R_t^2	F	P_f	r^2	P
LEAA Region 9	.3263	103.161	.000	.3263	.000
Union	.4408	83.572	.000	.1146	.000
Income Inequality	.4878	66.982	.000	.0470	.000
Population Density	.5331	59.955	.000	.0453	.000
LEAA Region 5	.5637	54.002	.000	.0305	.000

R_t^2 =Total R^2

P_f =F test level of significance

r^2 = r^2 for each variable

P=Level of significance for each R^2 as it is entered into the equation.

TABLE 8
Stepwise Regression - Maximum Salary

INDEPENDENT VARIABLE	R_t^2	F	P_f	r^2	P
LEAA Region 9	.4133	150.04	.000	.4133	.000
Income Inequality	.5212	115.39	.000	.1079	.000
LEAA Region 5	.5723	94.11	.000	.0511	.000
Population Density	.6071	81.12	.000	.0348	.000
Crime Rate	.6328	72.02	.000	.0257	.000
Union	.6435	62.58	.000	.0108	.000
Monopsony	.6541	55.91	.000	.0105	.000
West	.6628	50.61	.000	.0087	.000

TABLE 9
Stepwise Regression - Average Salary

INDEPENDENT VARIABLE	R_t^2	F	P_f	r^2	P
LEAA Region 9	.4168	152.23	.000	.4168	.000
LEAA Region 5	.5175	113.67	.000	.1006	.000
Population Density	.5808	97.44	.000	.0633	.000
Income Inequality	.6311	89.82	.000	.0503	.000
Union	.6544	79.16	.000	.0233	.000
Crime Rate	.6708	70.64	.000	.0164	.001
Monopsony	.6785	62.40	.000	.0077	.027

all independent variables. With reference to Table 7 (minimum level patrolman salaries), five of the independent variables remained in the equation and were found to contribute significantly ($p=.000$) to the explanation of the variance in the dependent variable. The total amount of variance explained was 56.37 percent ($R^2=.5637$). The variable that accounted for the most variance was LEAA Region 9 with an r^2 of .3263 or 32.63 percent. The unionization variable remained in the equation and accounted for 11.46 percent of the variance. Income inequality, population density and LEAA Region 5 each contributed less than 5 percent to the explanation of the dependent variable variance. Therefore, it appears that LEAA Region 9 is the primary variable that accounts for the variance in minimum level patrolman wage determination.

Table 8 (maximum level patrolman salaries) indicates that 66.28 percent ($R^2=.6628$) of the dependent variable variance is accounted for by eight of the independent variables. Once again, LEAA Region 9 explains the majority of the variance with an r^2 of .4133 (41.33%). Income inequality ($r^2=.1079$) and LEAA Region 5 ($r^2=.0511$) combined account for 15.9 percent of the variance with the remaining five variables (population density, crime rate, union, monopsony, census region West) each contributing less than 4 percent. For this dependent variable,

unionization ($r^2=.0108$) accounts for only 1.08 percent of the total variance. While the contribution of the unionization variable is statistically significant, its minimal r^2 does not appear to be of any real practical significance. LEAA Region 9 continues to be the variable contributing the most to the explanation of the variance in the dependent variable.

The results of the stepwise regression analysis for the average salary of patrolmen (Table 9), indicate that seven of the independent variables contribute significantly to the explanation of variance for this dependent variable with an $R^2=.6785$ (67.85%). LEAA Region 9 is the major contributor to this explanation with $r^2=.4168$ (41.68%). Once again the explanatory power of the other variables diminishes rapidly following the Region 9 contribution (LEAA Region 5, 10.6%; population density, 6.33%; income inequality, 5.03%; unionization, 2.33%; crime rate, 1.64%; monopsony, .77%). As with the previous dependent variable, the unionization contribution is of little practical significance.

Since the primary purpose of this study is to examine the impact of unionization on wage determination, further analyses were performed to determine the unique contribution of unionization to the explanation of wage determination. In all probability, unionization shares some variance with the other variables included in the

stepwise regression analysis and therefore it is difficult to determine from the aforementioned results the amount of variance explained that is unique to unionization. In an effort to get at this unique contribution, additional regression analyses were performed using the forced entry method of entering the variables into the equations. This two step procedure involves first entering those variables into the equation that were included in the stepwise regression analysis except the unionization variable. Following the calculations using these variables, the unionization variable was then entered into the equation. This method of analysis is designed to eliminate the shared variance in the first calculation and thus the unique variance will be revealed in the second calculation. Tables 10, 11 and 12 illustrate the results of these calculations for all three dependent variables.

For each of the three tables, the first R_t^2 represents the total R^2 for the listed independent variables excluding the union variable. The second R_t^2 represents the total R^2 after the union variable is added to the equation. The r^2 associated with the union variable represents the unique r^2 for the union variable. Therefore, the amount of dependent variable variance accounted for by the union variable alone is 4.01 percent ($p=.000$) for minimum salaries, 1.18 percent ($p=.008$) for maximum

TABLE 10
Minimum Salary - Regression Analysis - Forced Entry Method

INDEPENDENT VARIABLES	R_t^2	F	P_f	r^2	P
LEAA Region 9	.5235	57.69	.000	.5235	.000
Income Inequality					
Population Density					
LEAA Region 5					
Union	.5637	54.002	.000	.0401	.000

TABLE 11

Maximum Salary - Regression Analysis - Forced Entry Method

INDEPENDENT VARIABLES	R_t^2	F	P_f	r^2	P
LEAA Region 9 LEAA Region 5 Population Density Crime Rate Income Inequality West	.6510	55.159	.000	.6510	.000
Union	.6628	50.61	.000	.0118	.008

122

TABLE 12

Average Salary - Regression Analysis - Forced Entry Method

INDEPENDENT VARIABLE	R_t^2	F	P_f	r^2	P
LEAA Region 9 Crime Rate LEAA Region 5 Income Inequality Population Density Monopsony	.6546	65.704	.000	.6546	.000
Union	.6785	62.404	.000	.0239	.000

123

salaries and 2.39 percent ($p=.000$) for average salaries. Based on these figures, it appears that unionization has only a minimal impact on wage determination. Using the same lists of independent variables to calculate partial correlations (which is a different technique to examine the unique relationship between unionization and the dependent variables) produced results that tend to support this line of reasoning. The squared partial correlations between the union variable and minimum, maximum and average salaries were respectively as follows: .042, .019 and .034.

Since the aforementioned discussion of the results of the various analyses tend to indicate that the union variable does not contribute significantly (in a practical sense) to the explanation of wage determination and that the union variable possibly shares some variance with the other independent variables (as evidenced by different r^2 values for the stepwise and forced entry methods of regression analysis), a separate regression analysis was performed using the union variable as the dependent variable. This analysis was performed in an effort to produce some descriptive information (in a predictive sense) on unionization.

Descriptive Information

Tables 13 and 14 provide descriptive information on all independent variables as they relate to the unionization variable. For the continuous variables (Table 13) the Student's t was calculated to determine if a significant difference exists between the union and non-union cities on each variable. With the exception of the number of establishments over 1,000 population, the values for unionized cities are consistently higher than for non-unionized cities. However, the differences are statistically significant at the .05 level for only three of the six variables: population density, income inequality and average annual production wage. Therefore, it would appear that these variables may be of predictive value.

In reference to the categorical variables (Table 14), the union/non-union N sizes, percentages, mean salaries, χ^2 's, and eta statistics are reported. The χ^2 values reported for three independent variables (government type, census region and LEAA region) all exceed the critical value at the .05 level of significance and therefore the null hypothesis (the classifications are independent) must be rejected. Since the results indicate that unionization and the three independent variables are dependent classifications, these variables may also be of predictive value. The χ^2 value

TABLE 13
Descriptive Information - Continuous Variables

VARIABLE		N	MEAN	MEAN DIFFERENCE	t	PROBABILITY
Population	Union	154	201,343.96	25030	.39	.697
	Non-Union	89	176,313.05			
Population Density	Union	154	5,184.67	1934.20	4.94	.000
	Non-Union	89	3,250.47			
Crime Rate	Union	150	7,719.46	384.43	1.22	.233
	Non-Union	88	7,335.03			
Income Inequality	Union	154	23.57%	3.85	3.04	.003
	Non-Union	89	19.71%			
Police per 1000 Population	Union	153	2.40	.377	1.32	.187
	Non-Union	88	2.02			
Average Annual Production Wage	Union	139	8,107.86	\$963.76	4.70	.000
	Non-Union	81	7,144.10			
Retail, Service, and Wholesale Establishments per 1000 Population	Union	154	20.50	-2.07	-1.61	.110
	Non-Union	89	22.57			

TABLE 14
Descriptive Information - Dichotomous Variables

VARIABLE	N	%	MEAN SALARIES	X ²	P	eta ²
Government Type				11.988	.002	
Manager	Total	143	Minimum \$13,533.60			Union .2259
	Union	85	Union \$14,903.36			Government Type .0378
	Non-Union	58	Non-Union \$11,549.81			Combined .3087
			Maximum \$17,792.04			Union .1458
			Union \$19,291.15			Government Type .0875
			Non-Union \$15,595.07			Combined .2873
			Average \$15,660.47			Union .1974
			Union \$17,083.98			Government Type .0677
			Non-Union \$13,598.85			Combined .3173
Commission	Total	15	Minimum \$11,532.67			
	Union	5	Union \$12,649.00			
	Non-Union	10	Non-Union \$10,974.50			
			Maximum \$14,791.67			
			Union \$15,278.60			
			Non-Union \$14,548.20			
			Average \$13,161.00			
			Union \$13,960.00			
Mayor	Total	85	Minimum \$13,054.28			
	Union	64	Union \$13,305.78			
	Non-Union	21	Non-Union \$12,287.81			
			Maximum \$16,230.40			
			Union \$16,444.45			
			Non-Union \$15,578.05			
			At age \$14,642.42			
			Union \$14,875.20			
			Non-Union \$13,933.00			

TABLE 14--Continued
Descriptive Information - Dichotomous Variables

VARIABLE	N	%	MEAN SALARIES	X ²	P	eta ²
Census Region				102.392	.000	
West	Total	56	Minimum \$15,629.35			Union .2131
	Union	46	Union \$16,183.64			Census Region .3892
	Non-Union	10	Non-Union \$13,135.00			Combined .4541
			Maximum \$20,614.95			Union .1410
			Union \$21,136.80			Census Region .4556
			Non-Union \$18,214.40			Combined .5010
			Average \$18,141.04			Union .1845
			Union \$18,655.78			Census Region .4750
			Non-Union \$15,824.70			Combined .5340
North Central	Total	67	Minimum \$13,511.33			
	Union	49	Union \$13,795.69			
	Non-Union	18	Non-Union \$12,737.22			
			Maximum \$17,345.06			
			Union \$17,801.10			
			Non-Union \$16,103.61			
			Average \$15,428.19			
			Union \$15,798.47			
North-east	Total	54	Minimum \$13,196.33			
	Union	54	Union \$13,196.33			
	Non-Union	0	Non-Union ---			
			Maximum \$16,088.26			
			Union \$16,088.26			
			Non-Union ---			
			Average \$14,642.13			
			Union \$14,642.13			
			Non-Union ---			

TABLE 14--Continued
Descriptive Information - Dichotomous Variables

VARIABLE	N		%	MEAN SALARIES	χ^2	P	η^2
South	Total	78		Minimum \$11,300.10			
	Union	17	22%	Union \$12,020.17			
	Non-Union	61	78%	Non-Union \$11,099.31			
				Maximum \$14,940.87			
				Union \$15,309.53			
				Non-Union \$14,838.13			
				Average \$13,120.97			
				Union \$13,665.06			
				Non-Union \$12,969.34			
LEAA Region					100.685	.000	
Region 1	Total	22		Minimum \$13,038.41			Union .2131
	Union	22	100%	Union \$13,038.41			LEAA Region .4702
	Non-Union	0	0%	Non-Union ---			Combined .5324
				Maximum \$15,206.55			Union .1410
				Union \$15,206.55			LEAA Region .5529
				Non-Union ---			Combined .5908
				Average \$14,122.73			Union .1894
				Union \$14,122.73			LEAA Region .5674
				Non-Union ---			Combined .6181
Region 2	Total	24		Minimum \$13,287.33			
	Union	24	100%	Union \$13,287.33			
	Non-Union	0	0%	Non-Union ---			
				Maximum \$16,828.83			
				Union \$16,828.83			
				Non-Union ---			
				Average \$15,057.46			
				Union \$15,057.46			
				Non-Union ---			

TABLE 14--Continued
Descriptive Information - Dichotomous Variables

VARIABLE	N	%	MEAN SALARIES	X ²	P	eta ²
Region 3	Total	24	Minimum \$11,530.50			
	Union	10	Union \$13,017.20			
	Non-Union	14	Non-Union \$10,468.57			
			Maximum \$15,401.46			
			Union \$15,871.10			
			Non-Union \$15,066.00			
			Average \$13,466.08			
Region 4			Union \$14,444.20			
			Non-Union \$12,767.43			
	Total	35	Minimum \$11,306.91			
	Union	8	Union \$13,021.13			
	Non-Union	27	Non-Union \$10,799.00			
			Maximum \$14,711.63			
			Union \$16,711.38			
Region 5			Non-Union \$14,119.11			
			Average \$13,010.34			
			Union \$14,866.50			
			Non-Union \$12,460.37			
	Total	51	Minimum \$13,906.00			
	Union	41	Union \$14,097.20			
	Non-Union	10	Non-Union \$13,122.10			
			Maximum \$17,948.43			
			Union \$18,287.22			
			Non-Union \$16,559.40			
			Average \$15,927.20			
			Union \$16,192.27			
			Non-Union \$14,840.40			

TABLE 14--Continued

Descriptive Information - Dichotomous Variables

VARIABLE	N		%	MEAN SALARIES	X ²	P	eta ²
Region 6	Total	27		Minimum \$11,534.96			
	Union	7	26%	Union \$10,980.43			
	Non-Union	20	74%	Non-Union \$11,729.05			
				Maximum \$15,146.07			
				Union \$14,027.14			
				Non-Union \$15,537.70			
				Average \$13,396.15			
				Union \$12,504.00			
Region 7				Non-Union \$13,708.40			
	Total	15		Minimum \$12,041.40			
	Union	8	53%	Union \$12,250.50			
	Non-Union	7	47%	Non-Union \$11,802.42			
				Maximum \$15,207.53			
				Union \$15,309.75			
				Non-Union \$15,090.71			
				Average \$13,624.53			
Region 8				Union \$13,780.25			
				Non-Union \$13,446.57			
	Total	6		Minimum \$12,578.00			
	Union	1	17%	Union \$11,760.00			
	Non-Union	5	83%	Non-Union \$12,741.60			
				Maximum \$16,842.00			
				Union \$17,256.00			
				Non-Union \$16,759.20			
				Average \$14,710.00			
				Union \$14,508.00			
				Non-Union \$14,750.40			

TABLE 14--Continued
Descriptive Information - Dichotomous Variables

VARIABLE	N		%	MEAN SALARIES	x^2	P	η^2
Region 9	Total	49		Minimum \$16,169.42			
	Union	43	88%	Union \$16,397.95			
	Non-Union	6	12%	Non-Union \$14,569.67			
				Maximum \$21,144.06			
				Union \$21,321.93			
				Non-Union \$19,869.33			
				Average \$18,652.65			
Region 10				Union \$18,857.38			
				Non-Union \$17,219.50			
	Total	2		Minimum \$13,895.00			
	Union	2	100%	Union \$13,895.00			
	Non-Union	0	0%	Non-Union ----			
				Maximum \$19,097.00			
				Union \$19,097.00			
Monopsony				Non-Union ----			
				Average \$16,496.00			
				Union \$16,496.00			
				Non-Union ---			
	Total	82		Minimum \$12,301.67	1.518	.218	Union .2131
	Union	49	60%	Union \$13,329.55			Monopsony .0654
	Non-Union	33	40%	Non-Union \$10,775.42			Combined .2633
				Maximum \$15,674.61			Union .1410
				Union \$16,604.55			Monopsony .0951
				Non-Union \$14,293.79			Combined .2195
				Average \$13,988.02			Union .1394
				Union \$14,966.78			Monopsony .0917
				Non-Union \$12,534.73			Combined .2632

TABLE 14--Continued
Descriptive Information - Dichotomous Variables

VARIABLE	N		%	MEAN SALARIES	x^2	P	η^2
No Monopsony	Total	172		Minimum \$13,663.60			
	Union	116	67%	Union \$14,379.74			
	Non-Union	56	33%	Non-Union \$12,180.16			
				Maximum \$17,719.03			
				Union \$18,461.13			
				Non-Union \$16,168.57			
				Average \$15,689.18			
				Union \$16,407.28			
				Non-Union \$14,201.70			

for the monopsony variable does not exceed the critical value and therefore unionization and monopsony are considered to be independent classifications. The descriptive information for government type indicates that those cities with the city manager form of government pay higher salaries than the other forms of government. In addition, for all three types of government, the salaries for unionized departments is higher than for non-unionized departments. The η^2 values indicate that the unionization variable is more highly associated with wages than is government type.

The descriptive information for the census region variable (Table 14) indicates that the census region West pays the highest salaries with the South paying the lowest salaries. Excluding the Northeast, which is 100 percent unionized, the salaries for unionized agencies exceeds those for non-unionized agencies in all regions. The eta statistic indicates that census region is more highly associated with wages than is unionization. The LEAA information reveals that Region 9 pays the highest salaries with Region 4 paying the lowest. With the exception of LEAA Region 6, the salaries for unionized departments is consistently higher than for non-unionized departments. The eta statistic indicates that LEAA region is more highly associated with wages than is unionization.

Regression Analysis for Unionization

Table 15 illustrates the results of the stepwise regression analysis for unionization using all the independent variables. The four variables remaining in the equation (census regions South and Northeast; LEAA Regions 7 and 8) account for 45.89 percent ($R^2 = .4589$) of the variance in the dependent variable. Three of the four variables (census region South, LEAA Regions 7 and 8) are negatively correlated (Table 6) with unionization while the Northeast census region is positively correlated. Therefore, despite the fact that three of the continuous variables show significant union/non-union differences, geographic region seems to be the only variable type of any significant predictive value.

In the following chapter, some possible explanations, insights and inferences will be given based upon the results reported in this chapter.

TABLE 15
Stepwise Regression - Dependent Variable - Unionization

INDEPENDENT VARIABLE	R_t^2	F	P_f	r^2	P
South	(-) .3637	121.748	.000	.3637	.000
LEAA Region 8 (-)	.4126	74.444	.000	.0489	.000
LEAA Region 7 (-)	.4439	56.136	.000	.0313	.001
Northeast	.4589	44.519	.000	.0150	.017

CHAPTER V

SUMMARY AND CONCLUSIONS

The results of this study indicate that the wage differential between union and non-union police agencies is indeed significant. Whereas previous public sector wage studies have indicated that public sector unions increase salaries on an average of 5 percent (Ehrenberg and Goldstein, 1977), this study indicates that unionized police departments pay salaries that are 20.6 percent higher for minimum salaries, 15.8 percent higher for maximum salaries and 17.6 percent higher for average salaries. Previous wage studies involving police unions have indicated either an inverse relationship between wages and police unions (Lewin and Keith, 1976) or that police unions have a minimal impact on salaries (Hall and Vanderporten, 1977). The fact that Lewin and Keith (1976) did not differentiate between employee organizations that collectively bargain for wages and those that do not may partially contribute to their inverse findings. Hall and Vanderporten (1977) made this distinction and discovered that the presence of collective bargaining did make a difference.

Both of these previous studies utilized salary data for the early 1970's. The passage of time may account for the differences between their findings and those of this study. During the past few years police unions have had the opportunity to mature and gain strength in numbers. In addition, the economic situation of local and state governments has deteriorated at a time when the cost of living is continuing to rise at a rapid rate and the general public is pushing for cutbacks in government spending. Therefore, it seems logical to assume that those police officers who are represented by an organized voice would be more successful at obtaining salary increases when limited government funds are available than would unorganized police officers.

Looking specifically at the three levels of salary (minimum, maximum and average), police unions appear to be more successful at obtaining increased salaries at the minimum level. On the surface, this finding appears to be contrary to what one would expect. Since police unions are composed of incumbent police officers, one would assume that union efforts would be directed primarily at assisting in-service police officers rather than incoming officers. Therefore, it seems that the union impact would be greater at the maximum level than at the minimum level. However, this assumed contradiction may be occurring due to the spillover effect that was

discussed in Chapter III. Non-union police agencies may be more concerned with keeping in-service police officers than with attracting incoming police officers. Therefore, some non-union departments may adjust their maximum level salaries on the basis of wage settlements negotiated by unionized police officers. If this is the case, the union impact at the maximum level salary may be obscured.

While the results of the regression analyses indicate that the unionization variable contributes to the explanation of the variance of the dependent variable at a statistically significant level, it is LEAA Region 9 (Arizona, California, Hawaii, Nevada) that consistently contributes the most to the explanation of variance. When all LEAA Regions are compared on the basis of the other independent variables (excluding other geographic variables) that remained in the stepwise regression equations (see Table 16), an explanation for this phenomenon can be attempted... Table 16 indicates that the mean values for Region 9 are higher (with the exception of monopsony) than the total mean values for each variable. None of the other LEAA regions display this characteristic. Therefore, it appears that it is this unique combination of independent variable values that accounts for the significant contribution of Region 9. It should be noted that the income inequality value (percentage of

TABLE 16
Descriptive Information for LEAA Regions

VARIABLE	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Mean
Income Inequality (Mean)	21.70%	23.87%	16.06%	17.23%	26.05%	16.82%	19.71%	21.78%	27.97%	20.25%	22.16%
Population Density (Mean)	5246	10205	4848	3166	4410	2217	2663	4215	4899	3320	4476
Crime Rate (Mean)	6193	6919	6467	8216	7536	6882	7816	7398	8644	9122	7577
Monopsony (Percentage)	36.4%	12.5%	20.18%	45.7%	45.1%	51.9%	40%	33.3%	8.2%	50%	32.2%
Union (Percentage)	100%	100%	42%	23%	80%	26%	53%	17%	88%	100%	63%

families with annual income in excess of \$15,000) for Region 9 is higher than for all other regions. It was originally hypothesized that this income inequality figure was possibly associated in a positive direction with crime rate and thus the demand for police services would increase as income inequality and the crime rate increased. However, income inequality and crime rate are negatively correlated (see Table 6, Chapter IV). Therefore, it is more likely that the income inequality variable is a measure of the ability to pay. If this is the case, there may be more money available to pay police increased salaries in Region 9. In addition, a higher income inequality figure may lead to an increased demand for police service, which may in turn lead to a greater willingness to pay increased salaries.

Another interesting characteristic of Region 9 is that it has the lowest value for the monopsony variable. As noted in Chapter IV, those cities that exercise monopsony power are capable of paying lower salaries since they do not have to compete in the labor market with cities of similar size. Since Region 9 has the lowest percentage of cities that are capable of exercising this monopsonistic power, the cities within Region 9 apparently have to be more competitive. Even though other LEAA regions have mean values that are higher for the population density, crime rate, and

unionization variables, only LEAA Region 9 possesses values for all five variables that are above the total mean values. Therefore, there is no one variable that can account for the large contribution of Region 9, but rather this effect is created due to the excessive values for all variables in the region.

In reference to the population density and crime rate variables and their contribution to the variance of the dependent variable, it was hypothesized that population density and crime rate would be associated and therefore the demand for police services would increase causing salaries to be higher. However, population density and crime rate are not highly correlated, and yet both variables are highly correlated with wages and both remained in the stepwise regression equation. Since both variables were included as a measure of the negative aspects of the policeman's work environment that would affect both the supply of and demand for police services, it may be that these variables do not represent measurements of the same concept. Population density contributes more to the explanation of the variance than does the crime rate variable in both the maximum and average level salaries. The crime rate variable did not remain in the stepwise regression equation for minimum salaries whereas population density did. Since crime rate figures are not necessarily reliable as an indicator of

the extent of the crime problem, it may be that population density is a more valid measure of the negative aspects and the complexity of the policeman's work environment. The fact that population density is more highly correlated with the union variable than is crime rate would seem to lend support to this argument.

In reference to the regression analyses with unionization as the dependent variable, it was noted in Chapter IV that geographic variables are the only variables that remain in the equation. In an effort to determine what may be causing this phenomenon, each geographic variable was examined using all other independent variables as the basis for comparison (see Tables 17 and 18). Looking first at those variables that are correlated negatively with unionization (census region South; LEAA Regions 7 and 8) it should be noted that census region South accounts for most of the total variance (see Chapter IV, Table 15). As indicated in Table 17, the South has the lowest mean values for population, population density, income inequality, and average production wage. The South has the highest number of retail, service and wholesale establishments per 1,000 population and predominantly utilizes the manager form of government. LEAA Regions 7 and 8 have mean values that are below the total mean values for population, population density and income inequality. The South and

TABLE 17
Descriptive Information for Census Regions

VARIABLE	WEST	NORTH CENTRAL	NORTHEAST	SOUTH	MEAN
Population	198,045.13	176,472.62	300,924.40	141,299.50	192,176.26
Population Density (Mean)	4798.89	3998.67	7735.26	2852.12	4476.26
Crime Rate (Mean)	8609.93	7560.29	6505.20	7399.83	7577.32
Monopsony (Percentage)	12.5%	43.3%	24.1%	42.3%	32.2%
Income Inequality (Mean)	26.86%	24.54%	21.22%	17.29%	22.16%
Police per 1000 Population (Mean)	2.32	1.84	3.13	2.12	2.26
Average Production Wage (Mean)	8093.53	8890.55	7440.45	6753.26	7753.02
Establishments per 1000 Population (Mean)	21.97	19.69	20.53	22.48	21.26

TABLE 17--Continued
Descriptive Information for Census Regions

VARIABLE	WEST	NORTH CENTRAL	NORTHEAST	SOUTH	MEAN
Government Type					
Manager (Mean)	89.3%	41.8%	18.5%	70.5%	56.1%
Commission (Mean)	1.8%	6%	3.7%	10.3%	5.9%
Mayor (Mean)	8.9%	50.7%	57.4%	19.2%	33.3%

TABLE 18
Descriptive Information for LEAA Regions

VARIABLE	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Mean
Population (Mean)	78,688.16	540,645.94	175,592.39	127,669.97	175,345.54	174,750.11	188,257.20	168,403.67	202,443.50	133,074.50	192,176.26
Population Density (Mean)	5246.21	10204.765	4848.30	3166.23	4409.52	2216.74	2663.60	4214.67	4898.63	3320.00	4476.26
Crime Rate (Mean)	6193.06	6919.94	6467.52	8216.00	7536.65	6881.96	7815.67	7398.50	8644.86	9122.00	7577.32
Monopsony (Percent)	36.4%	12.5%	20.8%	45.7%	45.1%	51.9%	40%	33.3%	8.2%	50%	32.2%
Income Inequality (Mean)	21.70%	23.87%	16.06%	17.24%	26.05%	16.82%	19.71%	21.78%	27.97%	20.25%	22.16%
Police per 1000 population (Mean)	2.21	4.5	2.01	2.39	1.88	1.89	1.73	1.83	2.38	1.39	2.26
Average Production Wage (Mean)	7464.97	7359.71	7122.60	6557.59	9112.35	6814.73	8190.91	8090.15	8055.81	8418.43	7753.02
Establishments per 1000 population (Mean)	18.92	22.13	19.45	24.95	19.39	21.68	20.49	22.59	21.75	23.32	21.26
Government Type											
Manager (Mean)	22.7%	20.8%	58.3%	68.6%	39.2%	63%	53.3%	33.3%	93.9%	100%	51.6%
Commission (Mean)	0%	4.2%	4.2%	14.3%	3.9%	11.1%	6.7%	33.3%	0%	0%	5.9%
Mayor (Mean)	63.6%	45.8%	33.3%	17.1%	54.9%	25.9%	40%	33.3%	6.1%	0%	33.3%

LEAA Regions 7 and 8 have mean values below the total mean value for the number of police per 1,000 population.

With reference to the Northeast census region, which is positively associated with unionization, the population, population density and number of police per 1,000 population variables are higher than for all other census regions. The Northeast census region utilizes the mayor form of government predominantly.

Therefore, it appears that unionization is associated primarily with population size, population density, income inequality and the number of police per 1,000 population. The higher the values are for these variables, the more likely the police are to unionize. Increased population and population density figures would probably have a negative impact on the policeman's working conditions which in turn may lead to unionization in an effort to improve working conditions. The income inequality variable may be an indicator of the amount of money generally available in the area and an indicator of the demand for police services. Since income inequality and the average production wage are highly correlated (see Chapter IV, Table 6), it may be that those areas which have a high income inequality value may turn to unionization as a means of obtaining parity with their private sector counterparts. Those areas where the income inequality values are low may not be confronted with

this parity problem since there is probably less money available and therefore less of an opportunity for wide discrepancies to develop between public and private sector pay. The fact that the South has the lowest mean value for average production wage may lend support to this argument. If this variable is also an indicator of the demand for police services, those municipalities with a high income inequality figure may demand a higher standard of performance from the police and thus increase the amount of work for the individual police officer. In reference to the number of police per 1,000 population, this variable is probably a function of population size and population density since it is highly correlated with these two variables and not highly correlated with the union variable. Therefore, it appears to be related indirectly to unionization through its relationship with population size and population density.

Summary

The purpose of this study was to determine the degree of impact that police unions have on wage determination. As has been demonstrated, unionized municipal police departments do indeed exhibit higher minimum, maximum and average salaries than do no-union municipal police departments for the population under study. However, it should be noted that the small union values

revealed through the partial correlations and the forced entry regression calculations indicate that unionization is not a strong predictor of wages. Geographic region serves as the strongest predictor due to a unique combination of several independent variables, one of which is unionization. Police unions appear to have the largest amount of impact at the minimum level salary, but it should be remembered that the union impact may be obscured at the maximum level salary due to the possible spillover effect. In these times of fiscal austerity, those police officers who are represented by an organized voice and reside in certain geographical areas seem to be weathering the economic storm better than non-union officers.

In addition to the union variable, the results of the regression analyses indicate that income inequality, population density, crime rate and monopsony contribute significantly to the explanation of the variance in the dependent variables. Geographic region also contributes significantly to the explanation of variance, but it is believed to do so because of the influence the aforementioned variables have within a specific region. LEAA Region 9 contributed the most to the explanation of variance and it displayed mean values for the independent variables that were consistently higher than the total mean values for those variables.

Those variables that did not contribute significantly to the explanation of variance include population size, the number of police per 1,000 population, the average annual wage for manufacturing production workers, the number of retail, service and wholesale establishments per 1,000 population and government type. It should be noted that of these variables, the negative correlations between the number of establishments per 1,000 population was contrary to what was anticipated. It may be that as the number of retail, service and wholesale establishments increase, the owners of these establishments may begin using the services of private security agencies and would therefore be reluctant to support salary increases for police officers. Since this explanation is based on conjecture, additional research in this area is needed. It should also be noted that the annual production wage variable and the government type (manager) variable were both highly correlated with wages even though they did not contribute significantly to the explanation of variance.

The results of the regression analysis with unionization as the dependent variable indicated that geographic region was the only variable type that explained a significant amount of variance. However, when the four geographic variables were compared, it was determined that population size, population density and income

inequality presented unique features for all four geographic regions. Therefore, it appears that unionization is most likely to occur in heavily populated areas where the demand for police services and the ability to pay is the greatest. It should also be noted that higher salaries are more likely to be found in these same areas, but that union salaries will probably be higher than non-union salaries within these high salary areas.

FOOTNOTES

FOOTNOTES

¹ It should be noted at this point that the data for several of the independent variables are for years that do not correspond to the years of the dependent variables. However, the data being utilized are the most current available for individual cities within the nation. It is believed that the inclusion of the variables is justified due to their importance to this study. Additional justification will be made as each variable is discussed.

² Even though the crime rate data is for the year 1975 and the wage data is for the year 1979, the national crime rate data are similar for the years 1975 and 1978. The national crime rate for 1975 was 5,282 and 5,109 for 1978. When city size is taken into consideration, the data are also similar. For cities with a population of 25,000-49,999, the crime rates for violent crimes for the years 1975 and 1978 were 343 and 364 respectively. For cities with a population of 50,000-99,999 the crime rates for violent crimes for 1975 and 1978 were 451 and 486 respectively; 100,000-249,999: 632 and 627; 250,000 or more: 1,159 and 1,121 (U.S. Bureau of the Census, 1979). With all the above rates taken into consideration, the average difference between the 1975 and 1978 data is only 3.94%.

³ The use of 1975 population data should not present significant problems in this study since the average annual percentage increase in population for the nine census regions for the years 1970 to 1978 was only .8% with a range of -.2% to 2.6% (U.S. Bureau of the Census, 1979). Therefore, one would not expect a dramatic proportional change in 1979 for either the population or population density figures.

⁴ In an effort to update this data, the income inequality figures were adjusted on the basis of changes in income reported by the U.S. Census. For the years 1970 to 1977, the mean percentage change of families with income in excess of \$15,000 annually for the four census regions was as follows: Northeast, 0%; North Central, 13.5%; South, 8.5%; and West, 12.5%. After the adjusted income inequality figures were computed, the correlation between the adjusted variable and the original income inequality variable was found to be .95. Therefore, the original income inequality variable appears to be a valid measure and there is no need to include the adjusted variable.

⁵ The change in the number of police per 1,000 population should not vary dramatically from 1975 to 1979 since the average increase in the number of police officers from 1975 to 1977 was 2.9 percent on a nationwide basis (U.S. Department of Justice, 1978).

⁶ Based on Consumer Price Index (CPI) figures, this data should be comparable to 1978 data in reference to the change over time. Using 1967 as the base, the CPI figures for 1972 for cities or SMSA's reveal a range difference of 15.5 and for 1976 the difference was 13.5. For 1978, the Consumer Price Index figures for urban dwellers using 1977 as a base revealed a range of 102.2 to 103.5 for the four census regions (U.S. Bureau of the Census, 1979). Therefore, homoscedasticity is comparable for the years in question.

⁷ Since the population figures have not varied dramatically during the last ten years, it is doubtful that this figure would experience a dramatic proportional change.

⁸ Note footnote number three regarding changes in population figures.

⁹ A comparison of a random number of cities used in this study with the data contained in The World Almanac and Book of Facts, 1979, revealed no change in government type from 1975 to 1978.

¹⁰ The levels of significance presented in this chapter are reported as they appeared on the computer print-out. Since the computer provides results only to three decimal places, a P value of .000 is considered to be highly significant.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Aussieker, M. W., Jr. Police Collective Bargaining. Chicago, Ill.: Public Employee Relations Library, No. 18, Public Personnel Association, 1969.
- Babbie, Earl R. Survey Research Methods. Belmont, Calif.: Wadsworth Publishing Co., Inc., 1973.
- Bakke, E. Wright. "Some Basic Characteristics of Unions." Collective Bargaining in the Public Sector: Selected Readings in Law Enforcement. Edited by Richard M. Ayers and Thomas L. Wheelen. Gaithersburgh, Maryland: International Association of Chiefs of Police, Inc., 1977.
- Beuecki, Stanley. "Municipal Expenditure Levels and Collective Bargaining." Industrial Relations, Vol. 17, No. 2 (May, 1978), 216-230.
- Bowers, Mollie. "The Status of Police Labor Relations at the Close of the 1970's." Paper presented at the annual meeting of the Academy of Criminal Justice Sciences, Oklahoma City, Oklahoma, March 13, 1980.
- Bowers, Mollie H. and Cohen, David M. "Recent Developments in Public Sector Labor Relations." Municipal Year Book, 1979. Washington, D.C.: International City Management Association, 1979, 251-255.
- Burpo, John H. The Police Labor Movement: Problems and Perspectives. Springfield, Ill.: Charles C. Thomas, Publisher, 1971.
- Davis, Keith. "Labor Unions." Collective Bargaining in the Public Sector: Selected Readings in Law Enforcement. Edited by Richard M. Ayers and Thomas L. Wheelen. Gaithersburgh, Maryland: International Association of Chiefs of Police, Inc., 1977.
- Delury, George E., ed. The World Almanac and Book of Facts, 1979. New York, N.Y.: Newspaper Enterprise Association, Inc., 1978.
- Ehrenberg, Ronald G. and Goldstein, Gerald S. "A Model of Public Sector Wage Determination," Public Sector Labor Relations: Analysis and Readings. Edited by David Lewin, Peter Feuille, and Thomas Kochan. Thomas Horton and Daughters, 1977.

- Farmer, Michael T. Survey of Police Operational and Administrative Practices 1977. Police Executive Research Forum, 1978.
- Feuille, Peter. "Police Officers as Unionists: The Police Labor Movement." The Administration of Justice System: An Introduction. Edited by Donald T. Shanahan. Boston, Mass.: Holbrook Press, Inc., 1977.
- Fogel, Walter and Lewin, David. "Wage Determination in the Public Sector." Public Sector Labor Relations: Analysis and Readings. Edited by David Lewin, Peter Feuille and Thomas Kochan. Thomas Horton and Daughters, 1977.
- Gillespie, Michael W. "Log-Linear Techniques and the Regression Analysis of Dummy Dependent Variables: Further Basis for Comparison." Sociological Methods and Research, Vol. 6, No. 1 (August, 1977), 103-122.
- Goodman, L.A. "The Relationship Between the Modified and More Usual Multiple Regression Approach to the Analysis of Dichotomous - Variables." Sociological Methodology. Edited by D. R. Heise, San Francisco, Calif.: Jossey-Bass, 1976.
- Hall, Clayton W., and Vanderporten, Bruce. "Unionization, Monopsony Power, and Police Salaries." Industrial Relations. Vol. 16, No. 1 (February, 1977), 94-100.
- Halpern, Stephen C. "Do Police Unions Have Any Impact on Police Department Operations." Police Chief, Vol. 41, No. 2 (February, 1974), 35.
- Hewitt, William H., Sr. "Current Issues in Police Collective Bargaining." The Future of Policing. Edited by Alvin W. Cohen, Beverly Hills and London: Sage Publications, 1978.
- Hilligan, Thomas J. "Police Employee Organizations: Past Developments and Present Problems." Labor Law Journal. Vol. 24, No. 5 (May, 1973), 288-305.
- Juris, Hervey A. "The Implications of Police Unionism." Law and Society Review, Vol. 6 (1971-1972), 231-245.

- Juris, Hervey A. and Feuille, Peter. Police Unionism: Power and Impact in Public Sector Bargaining. Lexington, Mass.: D.C. Heath and Company, 1973.
- Kahn, Lawrence M. "The Effect of Unions on the Earnings of Non-union Workers." Industrial and Labor Relations Review, Vol. 31, No. 2 (January, 1978), 205-216.
- Kassalow, Everett M. "Trade Unionism Goes Public." The Public Interest, No. 14 (Winter, 1969), 118, 130.
- Kerlinger, Fred N. Foundations of Behavioral Research. New York, N.Y.: Holt, Rinehart and Winston, Inc., 1973.
- Kerlinger, Fred N. and Pedhazur, Elazar J. Multiple Regression in Behavioral Research. New York, N.Y.: Holt, Rinehart and Winston, Inc., 1973.
- Kovach, Kenneth A. "State and Local Employee Labor Relations - Where Are They Headed?" Journal of Collective Negotiations, Vol. B, No. 1 (1969), 19-29.
- Knoke, D. "A Comparison of Log-Linear and Regression Models for Systems of Dichotomous Variables." Sociological Methods and Research, 3 (May, 1975), 416-434.
- Lewin, David. "Public Sector Labor Relations: A Review Essay." Public Sector Labor Relations: Analysis and Readings. Edited by David Lewin, Peter Feuille and Thomas Kochan. Thomas Horton and Daughters, 1977.
- Lewin, David and Keith, John H. "Managerial Responses to Perceived Labor Shortages: The Case of the Police." Criminology, Vol. 14, No. 1 (May, 1976), 65-92.
- Lewis, H. G. Unionism and Relative Wages in the United States: An Empirical Inquiry. Chicago, Ill.: The University of Chicago Press, 1963.
- Maddox, Charles W. Collective Bargaining in Law Enforcement. Springfield, Ill.: Charles C. Thomas, Publisher, 1975.

- Meyer, John C., Jr. "Rank and File Perceptions of Police Employee Association Functions." Police, Vol. 16, No. 5 (1972), 47-52.
- Meyer, John C., Jr. "Discontinuity in the Delivery of Public Service: Analyzing the Police Strike." Human Relations, Vol. 29, No. 6 (1976), 545-557.
- Mitchell, Daniel J.B. "Collective Bargaining and Wage Determination: Is Armageddon Really at Hand?" Public Personnel Management, Vol. 7, No. 2 (March-April, 1978), 80-95.
- Mitchell, Daniel J.B. "The Impact of Collective Bargaining on Compensation in the Public Sector." Public Sector Bargaining. Edited by Benjamin Aaron, Joseph R. Grodju and James L. Stern. Washington, D.C.: The Bureau of National Affairs, Inc., 1979.
- National Advisory Commission on Criminal Justice Standards and Goals. "Police" Washington, D.C.: U.S. Government Printing Office, 1973.
- Nigro, Felix A. "Manager in Government and Labor Relations." Public Administration Review, Vol. 38, No. 2 (March/April, 1978), 180-183.
- Odoni, Amedeo R. "Recent Employment and Expenditure Trends in U.S. City Police Departments." Police Accountability: Performance Measures and Unionism. Edited by Richard C. Larson, Lexington, Mass.: Lexington Books, D.C. Heath and Co., 1978.
- Olmos, Ralph A. "A New Approach to Collective Bargaining for Police Unions." Police Chief. Vol. 41, No. 2 (February, 1974), 28-30.
- Orr, Daniel. "Public Employee Compensation Levels," Public Employee Unions: A Study of the Crisis in Public Sector Labor Relations. San Francisco, Calif.: Institute for Contemporary Studies, 1976.
- "Public Sector Unionism - Origins and Perspective - Part I: Historical Summary." Collective Bargaining in the Public Sector: Selected Readings in Law Enforcement. Edited by Richard M. Ayers and Thomas L. Wheelen. Gaithersburg, Maryland: International Association of Chiefs of Police, Inc., 1977.
- Roscow, Jerome M. "Public Sector Pay and Benefits." Public Administration Review, Vol. 36, No. 5 (September-October, 1976), 538-543.

- Roscow, Jerome M. "Public Sector Pay and Productivity." Harvard Business Review, Vol. 55, No. 1 (January-February, 1977), 6-7.
- Rubin, Richard S., "Labor Relations for Police and Fire: An Overview." Public Personnel Management, Vol. 7, No. 5 (September-October, 1978), 337-345.
- Schemenner, Roger W. "The Determination of Municipal Employee Wages." Review of Economics and Statistics, Vol. 55, No. 1 (February, 1973), 83-90.
- Shapiro, David. "Relative Wage Effects of Unions in the Public and Private Sectors." Industrial and Labor Relations Review, Vol. 31, No. 2 (January, 1978), 193-203.
- Spero, Sterling and Cappozzola, John M. The Urban Community and the Urbanized Bureaucracies: Pressure Politics in Local Government Labor Relations. New York, New York: Dunellen Publishing Co., Inc., 1973.
- Swanson, Charles R., Jr. "A Typology of Police Collective Bargaining Employee Organization." Journal of Collective Negotiations, Vol. 6, No. 4 (1977), 341-345.
- "The Impact of Unions on Public Sector Wages." Public Sector Labor Relations: Analysis and Readings. Edited by David Lewin, Peter Feuille, and Thomas Kochan. Thomas Horton and Daughters, 1977.
- U.S. Bureau of the Census. County and City Data Book, 1977. Washington, D.C.: U.S. Government Printing Office, 1978.
- U.S. Bureau of the Census. Statistical Abstract of the United States: 1979 (100th edition). Washington, D.C.: U.S. Government Printing Office, 1979.
- U.S. Department of Justice, Law Enforcement Assistance Administration and U.S. Bureau of the Census. Trends in Expenditure and Employment Data for the Criminal Justice System: 1971-1977. Washington, D.C.: U.S. Government Printing Office, 1978.
- U.S. Department of Labor, Bureau of Labor Statistics. Collective Bargaining Agreements for Police and Firefighters. Washington, D.C.: U.S. Government Printing Office, 1976.

Vold, George B. Theoretical Criminology. New York:
Oxford University Press, 1958.

"Wage Impacts of Unionism." Public Sector Labor
Relations: Analysis and Readings. Edited by
David Lewin, Peter Feuille and Thomas Kochan.
Thomas Horton and Daughters, 1977.

Winch, Robert F. and Campbell, Donald T. "Proof? No.
Evidence? Yes. The Significance of Tests of
Significance." The American Sociologist. Vol.
4, No. 2 (May, 1969), 140-143.

APPENDIX

APPENDIX

Dear Director:

The Criminal Justice Center at Sam Houston State University, under a LEAA funded project, is now developing a computerized Manpower information/planning system that is designed to give you immediate access to information needed for manpower planning in Criminal Justice. This project represents the first effort to develop a data base designed specifically for use by operational agencies. It will not produce a shelf product which will have limited use and accessibility, but rather when completed will be an on-going fully developed information and planning system which will allow you instant access to both published documents and comparative data which you need as a police planner and manager. For example:

- * Comparative Data such as salary levels, cost of living indices for any given area, population figures, UCR statistics, number of employees, and more than 200 other demographic records.
- * Bibliographic Information through which books, journal articles, management manuals, government publications, etc. pertaining to any desired CJ manpower topic may be readily identified.
- * Legal Information is the category under which a user will be able to obtain state and federal case precedents and statutes pertaining to manpower (labor relations decisions, discipline cases, EEO decisions, etc.)
- * Extant Agency Information will contain a myriad of useful material such as collective bargaining agreements, departmental policy/procedure manuals, selected agency reports, operational guidelines, training manuals, etc.

When the system is complete you will be able to obtain salary or other comparative personnel information for neighboring departments, departments of similar size, or departments serving communities with similar population distributions, characteristics and cost of living. You will have at your fingertips copies of current labor contracts for every city in the country employing 100 or more sworn personnel. The potential utility of the system is virtually limitless. The system will be inexpensive, easy to operate, and provide near instantaneous information.

Because of the extensive scope of our efforts, the initial focus of the project will be limited to the area of police labor relations. To this end, we are soliciting approximately 650 collective bargaining agreements from police agencies employing 100 or more sworn employees for inclusion in the system. Your agency has been selected to participate in the initial phase of the project.

In the event your organization engages in collective bargaining or meet and confer deliberations, we request that you provide us with a copy of your contract, memorandum of understanding or other document evidencing your labor management relationship in terms of establishing wages, hours and conditions of employment. If your organization does not engage in collective bargaining, resulting in a contract, memorandum of understanding or other document, we would appreciate you completing the enclosed form.

I cannot emphasize strongly enough the fact that your participation is vital to the success of the project. We appreciate greatly the time and effort you will expend in assisting us and contributing to the structuring of a truly innovative and useful manpower information system. When your reply is received we will place you on our mailing list. You can then expect to hear from us regularly regarding the progress of this system as it is developed.

Sincerely,

Charles L. Johnson
Project Manager
Manpower Planning Project

CLJ/pme

Enclosure

MANPOWER PLANNING PROJECT
Labor Relations Questionnaire

I. AGENCY INFORMATION

- A. Agency Name _____
 Address _____
 City _____ State _____ Zip _____
 Telephone Area Code _____ Number _____
- B. Operational Head of Agency (Include Title) _____

II. LABOR RELATIONS INFORMATION

- A. Does your agency periodically enter into a collective bargaining agreement/contract or memorandum of understanding with an employee organization? (If your answer is yes, please include a copy of the agreement, contract or memorandum)

☐ Yes ☐ No

- B. Please identify by title and name the person responsible for negotiating the police collective bargaining contract, agreement or memorandum of agreement.
- _____
- _____

- C. If your agency does not collectively bargain or meet and confer with employees...

1. Please provide a copy of current pay schedules of all personnel

and

2. Provide the approximate date upon which department salaries are traditionally reviewed and adjusted _____
- _____

- D. Is your agency currently operating under a court/consent order entered with respect to the Equal

Opportunity Employment Act?

☐ No ☐ Yes (Date of Order) _____

- E. Please provide the name and address of the organization(s) representing employees within your agency and the composition of the bargaining unit(s) for each.

Name _____
 Address _____
 City _____ State _____
 Zip _____

Composition of Bargaining Unit _____

Name _____
 Address _____
 City _____ State _____
 Zip _____

Composition of Bargaining Unit _____

Name _____
 Address _____
 City _____ State _____
 Zip _____

Composition of Bargaining Unit _____

- F. Under what authority do you negotiate or meet and confer with employee representatives?

State Law (Provide citation) _____
 County or Municipal Charter _____
 County or Municipal Ordinance _____
 State, County or Municipal Legal Opinion _____

III. SPECIFIC REMUNERATIVE INFORMATION

- A. Does your department offer any of the following special pay categories?

- a. Longevity _____
 b. College _____
 c. Hazardous duty _____
 d. Speciality _____
 e. Other _____

- B. Does your department provide additional pay for the following levels of higher education?

- ☐ 1 year of college
☐ 2 years of college

- ☐ 3 years of college
☐ B.A. or B.S.
☐ M.A. or M.S.

C. Uniforms and Leather

Uniforms furnished by: ☐ Officer ☐ Department
 Leather furnished by: ☐ Officer ☐ Department
 Sidearms furnished by: ☐ Officer ☐ Department

D. Retirement System

Annual contribution to retirement
 _____ % by Officer _____ % by City

E. Minimum Retirement Provisions

- a. years of service _____
 b. age _____
 c. benefits _____

F. Maximum Retirement Provisions

- a. years of service _____
 b. age _____
 c. benefits _____

G. Disability Pension - Illness and Injury

- ☐ Non-service connected
☐ Service connected

H. Death Benefits - Pension

- ☐ Widow
☐ Surviving children
☐ Other (specify) _____

I. Death Benefits other than Pension

- ☐ Natural death
☐ Line of Duty

J. General Benefits

Sick Leave

Annual days paid sick leave _____
 Limit of accumulation (days) _____

Vacation (annual amount of vacation in working days, please specify increases with length of service)

Number of Paid Holidays per year _____

K. Health Care

A. Extent of Coverage*

Deductible Amount (if any) % Coverage
 _____ % up to \$ _____,
 _____ % over \$ _____

Dollar Limit

\$ _____

B. Health Insurance Premiums

_____ % Paid by Employee

_____ % Paid by Agency

C. Dental Insurance Provided ☐ Yes ☐ No

D. Life Insurance Provided ☐ Yes ☐ No

*Under extent of coverage an example would be a policy with \$200 deductible, with the coverage being 80% up to \$2,500 and 100% over \$2,500, up to a maximum dollar limit of \$100,000.

END