Predicting the employment of minority officers in U.S. cities: OLS fixed-effect panel model results for African American and Latino officers for 1993, 1996, and 2000

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Abstract

Using panel data collected on a representative sample of police departments serving populations of 25,000+ residents across the country in 1993, 1996, and 2000 (N = 281), fixed-effect panel models were used to assess the influence of environmental and institutional variables on the hiring of African American and Latino officers. The primary findings were that the presence of a substantial minority population was among the most important predictors of minority officer employment in city police departments. The presence of a Latino mayor and the presence of an African American or a Latino police chief were also significantly associated with increased minority police officer employment. Additionally, no evidence was found to suggest a detrimental impact caused by different minority groups competing with each other for limited police employment resources. Implications for future research are discussed in some detail.

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Introduction

Historically, a particularly controversial issue in police personnel administration was the wisdom of the practice of the active recruitment and promotion of minority and female officers (Martin, 1991; Steel & Lovrich, 1987; Warner, Steel, & Lovrich, 1989; Zhao & Lovrich, 1998). In the era of the Civil Rights Movement, and later in the context of the Vietnam War, the greater representation of African American officers was broadly regarded as a critical step toward improving the state of police-minority community relations in the U.S. Enhanced employment of minority officers was seen as a way to both serve social equity and promote more effective control of urban crime (Decker & Smith, 1980; President’s Commission on Law Enforcement and Administration of Justice, 1967, pp. 167–177).

The enhanced presence of minority officers did indeed occur in the 1990s. For example, the representation of African American officers in large police agencies employing one hundred or more sworn officers increased from 9.5 percent in 1990 to 10.38 percent in 2000 (U.S. Department of Justice, Bureau of Justice Statistics, 1990, 2000). The employment of Latino police officers grew even more rapidly during the past decade, growing from 5.4 percent in 1990 to 7.7 percent in 2000 (see U.S. Department of Justice, Bureau of Justice Statistics, 1990, 2000).

During the same period of time, the population of African Americans in the U.S. edged up marginally from 12.3 percent in 1990 to 12.8 percent in 2000 (U.S. Census Bureau, 2000). A more significant change in the Latino population occurred during this period (U.S. Census Bureau, 2000).
the Latino population grew from 9.0 percent of U.S. population in 1990 to 11.8 percent in 2000, with growth being particularly rapid in the Southwest and Midwest regions of the country.

It was clear that many more minority officers were employed in American police departments over the course of the 1990s than had been employed in the past. Knowledge, however, was limited regarding the factors associated with this change in minority representation at the level of municipal police departments. For example, was the increase in African American officers more associated with institutional influences such as ambitious affirmative action programs or were environmental factors such as population growth more predictive of enhanced minority representation on police forces? Similarly, did the significant increase in Latino officer representation reflect the growth of Latino populations in U.S. cities during the 1990s, or was it more a reflection of the political mobilization of Latinos in local government? To the best of the authors’ knowledge, there was no empirical study which examined change in the recruitment of minority officers during this period, and no studies compared change in the recruitment of these two ethnic groups and the factors associated with their differential rate of change.

The purpose of this article is to identify the key factors associated with change in the employment of minority police officers during the decade of the 1990s. Different from previous studies which typically examined the representation of one ethnic group (e.g., African American or Latino officers) in law enforcement (Ramirez, 1997; Zhao & Lovrich, 1998), the authors attempted to identify the key factors that might be significant predictors of the employment of African American and Latino police officers, respectively; it was possible that the factors affecting the employment of African American and Latino officers differed in important ways. Panel data for 281 municipal police agencies surveyed in 1993, 1996, and 2000 were used in the analysis of change in minority representation in American policing at the municipal level in major U.S. cities.

**Theoretical considerations**

A review of the relevant literature identified two broad environmental factors (external and internal) that were broadly presumed to have an impact on the recruitment of minority officers. For example, Walker (1985) argued that four factors derived from social and institutional environments should be included in the analysis of change in the hiring of minority officers, especially African American officers, in the 1970s. In this section, the discussion of the literature will be focused on these types of factors associated with the hiring of minority police officers by local law enforcement agencies.

**External environment (minority and political representation)**

**Minority demographics explanation**

This account of the advent of substantially higher levels of minority police officers focuses on the increase in African American and Latino populations in the U.S. since the 1970s (Karnig, 1980; Lewis, 1989; Ramirez, 1997; Saltzstein, 1989; Walker, 1985). Simply stated, a higher proportion of minority population (African American or Latino) in a city means more minority candidates are going to apply for and be selected to serve as a police officer (Saltzstein, 1989), notwithstanding any other factors that may come into play. Behr (2000, p. 244) noted with respect to local government employment that “the size of the city wide minority is often considered an explanation for the employment of municipal jobs.” Empirically, Wrinkle, Longoria, Polinard, and Meier (1992) found that Latino population was closely associated with Latino employment in municipal government in eight cities in the state of Texas during the 1980s.

In the area of policing, a study was conducted examining the phenomenon of African American representation in 105 police departments in jurisdictions ranging from 37,000 to 1.6 million in size. In that study, Saltzstein (1989) found that the percentage of African American population in a city was the single strongest predictor of the hiring of African American officers (also, see Lewis, 1989). Similarly, using a 1993 survey of 281 police agency executives and their corresponding municipal government clerks, Zhao and Lovrich (1998) found that minority population was the most important predictor of African American officer representation in these police departments. With respect to Latino officers, based on a national study of cities with at least 5 percent of Latino population, Ramirez (1997) concluded that the size of the Latino population was the strongest predictor of the rate of employment of Latino officers. Given these empirical findings reported in prior research, it seemed reasonable to postulate that there was a positive relationship between the proportion of population which was African American or Latino in a city and the rate of employment of African American and Latino police officers.

The second environmental explanation is associated with political influence considerations (the role of the minority mayor and minority council members). In the American political arena, elected public officials in local government are inclined to promote the interests of the people they believe got them elected to office. African Americans have been well organized at the municipal level of government since the days of this Civil Rights Movement of the 1960s. DeSipio, de la Garza, and Setzler (1999) observed that since the 1980s, it was possible to speak of a “Latino vote” and witness the influence of increasingly well organized Latino groups on the American political landscape.

Studies on city politics observed the significant influence of top elected officials in municipal government on a
number of policy outcomes (e.g., Behr, 2000; Nelson & Meranto, 1977). For example, based on findings of a study concerning the civil service system and its impact on police administration supported by the National Institute of Justice (NIJ) and the Law Enforcement and Assistance Act (LEAA), Greisinger, Slovak, and Molkup (1979) found that municipal top administrators had considerable discretionary power in determining the outcome of personnel policies in a local police agency. This was particularly the case with respect to conducting recruitment programs, determining minimum acceptable test scores in hiring, and establishing qualification standards—all of which had direct relevance to minority hiring. Overall, their extensive authority in police personnel decision-making was rated only slightly lower than police chiefs (3.48 for mayor or city managers, and 3.97 for chiefs on a scale ranging from 1 to 4) (Greisinger et al., 1979, p. 60).

Elected officials such as mayors commonly use municipal jobs as rewards given to their supporters (Dahl, 1967). Following this line of thinking, elected minority mayors are likely to increase the employment of minorities in municipal government as a way to gain and keep the support of their constituency (Behr, 2000). Eulau and Karps (1977) labeled this phenomenon “active representation” or the direct advocacy of policies beneficial to one’s own core supporters or constituents. A number of research studies examined, for example, the relationship between the presence of an African American mayor and the likelihood of the provision of noteworthy collective benefits to African Americans (Campion et al., 1975); key among these benefits were employment in municipal jobs (Eisinger, 1982) and the establishment of education policies directed toward the improvement of public schools with high minority enrollment (Meier & England, 1984).

Lewis (1989) examined the effect of the presence of African American mayors on the employment of African American police officers. He noted that the correlation between the presence of an African American mayor and African American representation in police agencies was high, particularly when formal affirmative action programs were in place. Similarly, Saltzstein (1989, p. 536) in her study of municipal police personnel found that the standardized coefficients of a multiple regression analysis indicated that the presence of an African American mayor was the second most important contributor to the increase in representation of African American officers in U.S. cities (about half of the magnitude of African American population).

Two more recent studies, however, found little support for an effect of a minority mayor on the rate of employment of minority police officers. Zhao and Lovrich’s (1998) analysis of 281 police agencies surveyed in 1993 did not find a significant relationship between the presence of an elected African American political official and a corresponding increase in African American officers. Moreover, in his national study of cities with substantial Latino populations, Ramirez (1997) found that Latino political power had little influence on the hiring of Latino police officers.

In addition to the chief administrator in a city, elected council members also attracted scholarly attention because they too were active players in city politics and might seek benefits for groups that helped put them on the council. The research findings in this area were mixed (Behr, 2000), however. In their panel data analysis of minority employment information reported to the Equal Employment Opportunity Commission between 1975 through 1987, Kerr and Mladenka (1994) found that the number of African American or Latino council members had no effect on the employment of African Americans and Latinos in sixty-five municipal governments. In the area of policing, however, researchers noted the influence of city council on policy outcomes. For example, in his classical book on policing, Wilson (1968) found that elected council members could exercise considerable influence over the policy outcomes of a city (e.g., watchman style of policing). Similarly, Walker (1977) documented the influence of council members who were elected by wards in large cities over departmental policies, such as hiring in the history of police departments in the U.S. It was hypothesized, therefore, that political influence (the presence of a minority major and council members) was positively associated with the hiring of minority officers of the same ethnic group.

Institutional environment

Institutional factors of interest include agency characteristics that are hypothesized to have an influence on the employment of minority officers. In general, two such factors are commonly identified. The first concerns the role of the police chief. The chief of police is broadly considered to be the most important person in policy formation and implementation within any police agency (Eisenberg, Kent, & Wall, 1973; Greisinger et al., 1979). In a survey of 493 county and municipal police agencies sponsored by the International Association of Chiefs of Police and the Police Foundation, Eisenberg et al. (1973, p. 13) found that 84 percent of the survey participants identified the chief of police as “most frequently designated as having the major responsibilities for establishing personnel policies for sworn personnel.” Furthermore, it was well documented in the law enforcement literature that police chiefs had considerable independence of action in a number of areas such as in the development of departmental policies, the elaboration of agency philosophies, and the determination of agency mission statements (Sparrow, 1988). Legendary stories concerning the independent role of chiefs were retold elsewhere (e.g., MacNamara, 1977; Skolnick & Bayley, 1986).

A recent study of the unprecedented drop in crime in New York City during the 1990s dramatized the role of the
city’s Police Commissioner Brandon, who was given credit for transforming the department into an operation with a high reliance on modern technology and crime mapping with the use of COMPSTAT (Silverman, 1999). Similarly, in his three-year study of the implementation of quality management in the Omaha Police Department, Zhao (1999) found that the primary factor leading to the success or failure of the Total Quality Management program was degree of support expressed by the chief. Consequently, the next hypothesis was that the presence of a minority chief was positively correlated with the employment of minority police officers of the same racial or ethnic group.

Affirmative Action programs in effect is often considered to be another important institutional factor that relates directly to the achievement of minority representation in the public service (Martin, 1991; Palombo, 1992; Steel & Lovrich, 1987; Walker, 1985; Zhao, Herbst, & Lovrich, 2001). The passage of the Equal Employment Opportunity Act of 1972 made a vast number of federal, state, and local agencies subject to the requirements for “good faith effort” affirmative action programs as defined by federal courts and the Equal Employment Opportunity Commission (EEOC). A key aspect of affirmative action programs is their focus on a set of specific goals and timetables keyed to pools of qualified applicants (Felkenes, 1992; U.S. Commission on Civil Rights, 1981). For example, facing lawsuits and threat of lawsuits by minority groups and the U.S. Department of Justice, the City of Omaha and the Department of Justice reached a consent decree in 1980 specifying that African American officers should make up 9.5 percent of the force that roughly reflected the percentage of African American people in the city. In 1993, the City of Omaha met the percentage of hiring African American officers as specified in the decree (“Lawsuits blaze path,” 1998).

Empirical research examining the effects of affirmative action programs—either voluntary, formal planned efforts or specific programs instituted under court order—showed evidence of significant effects on the rate of hiring of minority and female officers in the past. Lewis (1989) reported that the effect of the presence of an affirmative action program was associated with increased representation of minorities over time through the 1970s and 1980s. For example, the presence of an affirmative action program was not a significant factor in his 1972–75 research, but it was highly significant on the hiring of African American officers in the 1975–85 period. More recently, Zhao and Lovrich (1998) observed that after controlling for the effect of African American population and political factors, the presence of an affirmative action program had neither a direct nor an indirect effect on the hiring of African American police officers in 1993. The conflicting findings between two studies (Lewis, 1989; Zhao & Lovrich, 1998) called for the use of a longitudinal design in studies on the relationship between the existence of affirmative action programs and the employment of minority officers since the effects of these programs was likely to vary over time. The authors’ next working hypothesis was as follows: the presence of an affirmative action program has a positive effect on the employment of minority officers.

The next institutional factor associated with the recruitment of minority officers concerns the availability of slack resources. It is reasonable to postulate that police agencies are more likely to hire minority officers if there are openings available to fill than if employment opportunities are scarce. In a certain sense, the presence of slack resources reflects the financial health of the jurisdiction during the period of study. In a classic writing penned some forty years ago, Lindblom (1959) argued that organizational adaptation to change was best achieved by means of a series of incremental changes. He dubbed this process the “muddling through” approach. Accordingly, in police organizations minority officer hiring may not reflect an immediate policy change, but rather reflect a policy that is tentative and incremental over time. In the review of literature, only one study was found that examined the relationship between the number of vacant sworn positions and the frequency of hiring Hispanic officers. Ramirez (1997) found that the recruitment of Latino officers was significantly and negatively associated with the percentage of city budget allocated to law enforcement. He did not, however, have data to assess the influence of actual fluctuation of departmental personnel on the hiring of minority officers. As a result, it was hypothesized that there was a parallel relationship between an increase in the number of officers and the rise in authorized sworn officer force level and the rate of recruitment of minority officers. Consequently, the next hypothesis was: there is a positive relationship between increase in number of police officer positions and the recruitment of minority officers in municipal law enforcement agencies.

The final factor, the competition over scarce personnel resources, examines the competitive nature of the hiring decisions when only scarce resources are available and multiple constraints are present. Affirmative Action can be viewed as an administrative or legal means to redistribute social fairness under conditions of scarcity (employment opportunities) in public organizations. It is important to acknowledge that the hiring of different ethnic groups can be a zero sum game (McClain & Karnig, 1990). That is, with a limited number of employees to hire an increase in the hiring of African American officers, for example, may mean a decrease in the recruitment of Latino officers. In his cross-sectional study on the recruitment of Latino police officers in 163 cities across the country, Ramirez (1997) employed three variables—number of African American officers, White female officers, and other officers—to measure the effect of competition for scarce employment opportunities. The results reported by Ramirez showed that both the number of African American and the number of White female officers were significantly and negatively correlated with the hiring of Latino officers. In accord with this finding, the authors’ final hypothesis was that the
number of African American and White female officers was negatively associated with the employment of Latino officers.

The discussion in this section served to highlight three primary points. First, there was a consensus in the literature concerning the positive association between the recruitment of minority officers and minority population, either from a theoretical point of view (e.g., Walker, 1985) or from an empirical standpoint (Lewis, 1989; Ramirez, 1997; Zhao & Lovrich, 1998). Second, the relationships among these several explanatory factors were not static, but rather appeared to be quite dynamic in nature. This fact would indicate the need to use longitudinal data to assess the changing nature of factors affecting minority recruitment in policing over time. Lewis found that the effect of minority political influence was not constant, for example, but rather changed over time (Lewis, 1989). Finally, the relative scarcity of employment opportunities might suggest that the recruitment of African American, Latino, and White female police officers might constitute mutually exclusive goals. That is, an increase in one group of racial/ethnic group could come at the cost of the others.

Methodology

Sources of data

The data used in this study came from a series of surveys conducted by the Division of Governmental Studies and Services (DGSS) at Washington State University in 1993, 1996, and again in 2000. The staff of DGSS conducted mail surveys to the same set of 281 municipalities and their respective police departments (PDs) located in forty-seven states in roughly three-year intervals since 1978. The cities in the original sample were selected from among those municipalities initially surveyed in a nationwide survey of cities of over 25,000 population conducted by the International City Management Association in 1969. In the most recent round of the periodic survey, 233 cities (82.9 percent) and 223 PDs (79 percent) in the sample participated in the periodic survey of 2000. In year 1996, 244 cities (86.8 percent) and 245 PDs (87 percent) completed and returned survey questionnaires. In 1993, the survey responses of 241 cities (85.8 percent) and 224 PDs (80 percent) were available for the final analysis. The consistently high survey return rates yielded a core sample of 185 cities (65.85 percent) and 172 PDs (61 percent) which returned complete survey instruments in all three national surveys.1

U.S. Census reports were used as supplements. Population size (including percentage distributions among major racial/ethnic categories, i.e., African Americans and Latinos) reported in the 1990 and 2000 Census was used for the 1993 and 2000 surveys, respectively. The population estimates of 1995 reported in the Uniform Crime Report were used for the 1996 survey.

Measures

Two dependent variables were used in this study: (1) the percentage of African American officers, and (2) the percentage of Latino officers. The dependent measures included both gender groups. In two fixed-effect Ordinary Least Square regression models using panel data, each of the two dependent variables was regressed on a set of independent variables (see Appendix A for model specifications). A total of nine independent variables were employed in each statistical model in addition to forty-six state dummy (the first listed state in the data set, Alabama, was used as the reference group) and two year dummy variables (i.e., 1996 and 2000, 1993 was the reference group).2 City size was measured by the number of residents living in a city (in thousands). The percentages of African American and Latino population in the city were used to represent minority presence in a city for each group. The external political environment dimension was measured by the presence of a minority mayor. Two dummy variables were used: (1) African American mayor (1 = yes), and (2) Latino mayor (1 = yes).

Five variables were available to gauge the impact of departmental institutional factors on minority officer employment. The first such factor was the presence of a minority police chief. Two dummy variables were created correspondingly: (1) African American chief (1 = yes), and (2) Latino chief (1 = yes). The second factor was the percentage of commissioned officers in a police agency in each year of the national survey. The third factor was the percentage of White female officers in the department. Finally, two dummy variables indicating the existence of two different types of affirmative action programs in a police department were included: (1) informal program in place (1 = yes);3 and (2) formal program in effect or agency working under court order (1 = yes). The reference category for this multivariate analysis was “no affirmative action program.”

Findings

Descriptive statistics for all the dependent and independent variables are presented in Table 1, separated by each wave of the national survey (see Appendix B for more information). Each of the hypotheses developed above were tested. For the two dependent variables, statistically significant changes were observed only in the percentage of Latino officers. A substantial increase from about 3 percent to about 8 percent of total officer workforce in Latino officer employment was observed in less than a decade (between 1993 and 2000). In contrast, the employment of African American officer remained statistically unchanged (at about 9 percent) over the same time period.

The percentages of the corresponding African American and Latino populations told a similar story. There was noticeable (and statistically significant) change in the Latino population in this time period, but not in the
African American population. The size of the cities involved in the study remained relatively stable, with a mean population around 190,000 across the three surveys. More than 10 percent of the cities in the sample had African American mayors at the time of the respective surveys. The percentage of cities with Latino mayors was much lower (varied from 2 to 6 percent). Neither minority mayor measures registered statistically significant changes across three waves of surveys.

Slightly more than 20 percent of the police departments in the surveys indicated that they had an informal Affirmative Action program in place. This observation remained true throughout the three survey waves. In comparison, close to 40 percent of the municipal police departments had formal Affirmative Action programs according to the first two waves of the survey; however, the rate dropped to about 21 percent in the latest round of survey conducted in the year of 2000. This change was statistically significant.

The percentage of police departments headed by an African American chief remained stable between 13 and 15 percent. It was worth noting that statistically significant changes in the percentages of Latino police chiefs occurred in 2000 (8 percent) compared to the earlier rates at 2 percent in 1996 and 4 percent in 1993. Finally, consistent and statistically significant increases in both the rate of sworn officers per 1,000 population and the percentage of White female officers could be observed.

Table 2 reports a correlation matrix based on pooled data. The findings based on bivariate correlation coefficients revealed some noteworthy observations. Most of the explanatory factors identified in the preceding literature were significantly correlated with the dependent measures. Among them, the following observations were highlighted. First, the percentages of African American and Latino populations had the highest correlations (.87, .83) with the minority officer employment, respectively. The variable council representation (Black or Latino) was dropped from multivariate analysis because of an exceptionally high bivariate association. Second, moderate correlations between minority chiefs and minority officer employment (.41, .30), and between minority mayors and minority officer employment (.48, .47) were observed as well. Third, city size was positively correlated with the minority officer employment (.26, .18).

Some interesting correlational relationships also deserved attention. Affirmative Action programs, either informal or formal, did not appear to be closely associated much with the minority officer measures; the only statistically significant coefficient occurred between percent African American officers and the presence of a formal Affirmative Action program, but that association was weak (.10). The rate of sworn police officers per 1,000 population was positively correlated with the percentage of African American officers, but not with that of Latino officers. The percentage of White female officers yielded negative correlations with both minority officer employment measures, which was consistent with the hypothesis based on zero-sum competition over scarce job vacancies. Only the correlation between percent of African American officers and percent of White female officers, however, was statistically significant, and the magnitude of this correlation was weak (−.09).

Table 3 represents the results based on two fixed-effect least square regression models using panel data. In Model 1, four variables were found to be statistically significant predictors of the dependent variable (i.e., percentage of African American officers). Among these variables, per-
percentage of African American population (b = .52) was one of the important predictors. City size (b = .00) and the presence of an African American police chief (b = 1.64) were both statistically significant positive predictors of the dependent variable as well. Interestingly, the percentage of Latino officers turned out to be a statistically significant positive predictor (b = .10) while controlling for all the other variables entered in the model. The overall adjusted R square measure was .84.

Model 2 featuring percentage of Latino officers as the dependent variable revealed some similar and some dissimilar findings to those documented in Model 1. First, the percentage of both Latino population (b = .48) and the presence of a Latino chief (b = 4.94) were found to be statistically significant predictors of the dependent variable. Again, city size had a statistically significant but negative impact (b = -0.00). Unlike the results in Model 1, in Model 2 there was evidence of a statistically significant impact of the presence of a minority (in this case, a Latino) mayor on the percentage of Latino officers (b = 4.02). In addition, both the percentages of African American officers and White female officers were significant and positive predictors of the percentage of Latino officers (b = .01 and b = .20, respectively). Controlling for all other vari-

<table>
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<tr>
<th>Table 2</th>
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<tr>
<td>Correlation matrix based on pooled data</td>
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<td>1</td>
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<tr>
<td>% African American officers</td>
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<tr>
<td>% Hispanic officers</td>
</tr>
<tr>
<td>% African American population</td>
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<tr>
<td>% Hispanic population</td>
</tr>
<tr>
<td>City size (in 100,000)</td>
</tr>
<tr>
<td>African American mayor</td>
</tr>
<tr>
<td>Hispanic mayor</td>
</tr>
<tr>
<td>African American chief</td>
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<tr>
<td>Hispanic chief</td>
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<tr>
<td>Informal AA program</td>
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<tr>
<td>Formal AA program</td>
</tr>
<tr>
<td>Officers per 1,000 pop.</td>
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<tr>
<td>% White female officers</td>
</tr>
</tbody>
</table>

* p < .05.
ables, the year dummy variable representing the year of 1996 was statistically significant with a positive coefficient (b=1.18), indicating a net increase in the percentage of Latino officers at that time. The adjusted R square measure for model 2 was .74.

Discussion and conclusion

The central concern of this study was to identify some key explanatory variables affecting the representation of minority officers in the 1990s. The use of panel data analysis enabled the authors to examine the rate of change in the hiring of minority officers in a random sample of 281 municipal police departments distributed broadly across the country. The primary finding suggested that minority population was consistently an important predictor of hiring minority police officers, for either African Americans or Latinos. The regression analysis indicated that a 1 percent increase in African American population led to a .52 percent increase in the hiring of African American officers in these police agencies during the 1990s. Similarly, the magnitude of the coefficient for Latino population showed a similar effect on the recruitment of Hispanic officers. The rate of population change in Latino population was greater than the rate of population change in African American population among the panel data cities. This finding for the cities included in this study was consistent with the national survey reported by the U.S. Census Bureau in 2000.

At this point, the authors were inclined to speculate that the increase in minority population might lead to an enhancement of the pool of minority applicants. Traditionally, police officer positions had not required a long list of qualifications in order to apply, most police officers were drawn from working class backgrounds, and there was limited emphasis on the possession of a college education (Zhao & Lovrich, 1998). A recent survey of police agencies revealed that a majority of police agencies required only a high school diploma (69.9 percent), with only 2.4 percent specifying a college degree as a condition of employment (see U.S. Department of Justice, Bureau of Justice Statistics, 2000). Today, a law enforcement job may be more attractive to minority applicants given the fact that well-paid, blue-collar jobs in manufacturing have been disappearing from American cities since the late 1960s (Jaret, 1991).

The multivariate analysis also revealed evidence of some political influence on the recruitment of minority officers. For example, the presence of an African American police chief, a Latino police chief, and Latino mayor were all significant predictors of the employment of their respective ethnic groups in police departments. The consistent finding of the minority chief role in the hiring of minority officers highlighted the substantial leadership role of police chiefs in shaping personnel policies in their agencies.

It was important to note that the presence of neither a formal Affirmative Action program nor informal Affirmative Action program predicted the rate of employment of minority officers. The frequency distributions for these programs for the three points of survey findings showed that there was a significant drop in the number of formal affirmative programs in place between 1996 and 2000; in contrast, the number of informal affirmative programs remained largely the same across the 1990s. Two reasons could be offered to explain the falloff in the number of formal programs. The first reason was that after nearly three decades of implementation, many police agencies had significantly increased the number of minority officers in their departments. Consequently, the need to have a formal affirmative action program in place declined over time for this group of agencies. When the Omaha Police Department reached its goal of hiring 9.5 percent Black officers in 1993, for example, the force of the consent decree was dissolved. The second reason concerned the recent challenges made to affirmative action programs across the country. The University of California Board of Regents voted to terminate an affirmative action program which accorded special consideration to African American and Latino students in recent years. The special programs, likewise, aimed at enhancing the enrollment of African American students in undergraduate and graduate programs implemented by the University of Michigan were challenged. The U.S. Supreme Court sustained some of the programs and disallowed others. While Lewis (1989) found that affirmative action programs enhanced the rate of employment of African American officers during the 1970s and 1980s, the legal structure surrounding the employment process for police agencies might have changed in the decade of the 1990s.

Finally, it was interesting to observe that the hiring of one ethnic group did not exclude the hiring of another group or White female officers. The signs of correlation coefficients among these variables were positive and significant. This finding called into question the existence of a zero-sum game among underutilized groups. The authors speculated that police administrators were aware of the importance of balancing the racial and gender distribution in their workforce in the process of hiring minority police officers. It would appear that they were purposely taking into consideration the racial and gender considerations of workforce diversity in their recruitment efforts. This concern for diversity was commendable, particularly in light of the developing external pressure to promote affirmative action from the federal government.

Appendix A. Statistical model

Pooled cross-sectional time-series (or panel data) analysis was used in the study reported here. Based on a set of well-established criteria from the field of econometrics (cf. Baltagi, 2001; Judge, Hill, Griffiths, Luthepohl, & Lee,
fixed-effects model estimation was specified as the appropriate technique for the study. The Breusch and Pagan Lagrangian multiplier test for random effects and the Hausman specification test were examined systematically. The Hausman test results indicated that coefficients associated with fixed-effect and random-effect models were significantly different from one another. The Breusch and Pagan test results weighed in favor of the fixed-effect model.

The general model can be written as:

\[ Y_{it} = \beta X_{it} + z_i + \gamma t + e_{it} \]

\[ E_{xi} = E_{xit} = 0 \]

\[ E_{xij} = \sigma x_{ij}, \text{ for } i \neq j \]

where \( Y \) is the dependent variable for city \( i \) at year \( t \). The symbol \( X \) represents a set of explanatory variables, and \( e \) represents the error term. The state-specific effect is measured by \( \alpha \) (forty-six state dummies were used out of a total of forty-seven states included in the sample, Alabama was the reference category). The time-specific component \( \gamma \) represents two year dummy variables (1996 and 2000, 1993 was the reference category) that control for the unknown factors affecting the extent of minority officer employment that are not accounted for by the other variables.

### Appendix B. Characteristics of the participating agencies in each wave of the national survey

<table>
<thead>
<tr>
<th>City size (population)</th>
<th>2000 n (%)</th>
<th>1996 n (%)</th>
<th>1993 n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>49,999 and under</td>
<td>62 (22.3%)</td>
<td>48 (19.0%)</td>
<td>62 (23.6%)</td>
</tr>
<tr>
<td>50,000–99,999</td>
<td>82 (29.5%)</td>
<td>78 (31.0%)</td>
<td>79 (30.0%)</td>
</tr>
<tr>
<td>100,000–249,999</td>
<td>85 (30.6%)</td>
<td>78 (31.0%)</td>
<td>73 (27.8%)</td>
</tr>
<tr>
<td>250,000–999,999</td>
<td>43 (15.5%)</td>
<td>43 (17.1%)</td>
<td>44 (16.7%)</td>
</tr>
<tr>
<td>1,000,000 and more</td>
<td>6 (2.2%)</td>
<td>5 (2.0%)</td>
<td>5 (1.9%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Police department size (# of sworn officers)</th>
<th>25–99</th>
<th>100–499</th>
<th>500–999</th>
<th>1,000–9,999</th>
<th>10,000 and more</th>
</tr>
</thead>
<tbody>
<tr>
<td>25–99</td>
<td>51 (23.0%)</td>
<td>60 (24.8%)</td>
<td>60 (27.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100–499</td>
<td>124 (55.9%)</td>
<td>135 (55.8%)</td>
<td>117 (53.2%)</td>
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</tr>
<tr>
<td>500–999</td>
<td>25 (11.3%)</td>
<td>24 (9.9%)</td>
<td>24 (10.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,000–9,999</td>
<td>21 (9.5%)</td>
<td>22 (9.1%)</td>
<td>18 (8.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 and more</td>
<td>1 (0.5%)</td>
<td>1 (0.4%)</td>
<td>1 (0.5%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>2000 n (%)</th>
<th>1996 n (%)</th>
<th>1993 n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>56 (26.3%)</td>
<td>67 (28.3%)</td>
<td>62 (27.7%)</td>
</tr>
<tr>
<td>North central</td>
<td>66 (31.0%)</td>
<td>67 (28.3%)</td>
<td>67 (29.9%)</td>
</tr>
<tr>
<td>South</td>
<td>57 (26.8%)</td>
<td>65 (27.4%)</td>
<td>64 (28.6%)</td>
</tr>
<tr>
<td>Northeast</td>
<td>34 (16.0%)</td>
<td>38 (16.0%)</td>
<td>31 (13.8%)</td>
</tr>
</tbody>
</table>

### Notes

1. Due to the variation of response rate in each wave of the survey, an unbalanced panel data had to be used to maximize the valid data points. Surveys were sent directly to the offices of police chief and city mayor/manager.

2. Use of city dummies was more preferable when it was possible. State dummies, however, were used in the current study to free up more degree of freedom for the statistical tests. The time-series was too short to allow sufficient data points if city dummies were to be used in the panel data analysis.

3. Informal affirmative action plans refer to those programs that were not mandated by court order, i.e., those voluntary actions taken by local police department to promote racial and gender integration.

### References


