DOCUMENT RESUME

ED 352 725 EA 024 532

AUTHOR Encarnation, Dennis J.; Richards, Craig E.
TITLE Race and Educational Employment: Public and Catholic Schools Compared. Project Report No. 84-A15.
INSTITUTION Stanford Univ., Calif. Inst. for Research on Educational Finance and Governance.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Jun 84
CONTRACT NIE-G-83-0003
NOTE 40p.; For a related document, see ED 228 698.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Blacks; Block Grants; Categorical Aid; *Catholic Schools; Elementary Secondary Education; *Employment Patterns; Hispanic Americans; *Institutional Characteristics; Models; *Public Schools; State Federal Aid; *Teacher Distribution; *Teacher Employment
IDENTIFIERS *California (San Francisco Bay Area)

ABSTRACT

Findings of a study that examined patterns of minority employment among elementary and secondary teachers in public and Catholic schools in six San Francisco Bay area counties are presented in this paper. Using an open systems model of service delivery, the study assessed the ability of the model to explain variation in minority teacher employment across public and Catholic schools. Two variables defined the institutional environment of schools: sectoral and intergovernmental. The three environmental variables included student segregation, employment growth, and targeted aid. Regression analysis was conducted on 1981-82 data on public and nonpublic schools in six Bay area counties. Findings indicate that client characteristics (the racial composition of schools) influenced the employment of Black and Hispanic teachers more strongly in public than in Catholic schools. Most employment gains were made in large public schools with higher proportions of minority students. Implications are that the trend toward block grants may dampen the positive employment effects of previous categorical funding, and that urban schools may be confronted with a "crisis of legitimacy" if the political dimensions of the teacher-student relationship are ignored. Two figures and three tables are included. The appendix contains statistical results. (Contains 53 references.) (LMI)

IFG

Institute for Research on Educational Finance and Governance

SCHOOL OF EDUCATION STANFORD UNIVERSITY

Project Report No. 84-A15

RACE AND EDUCATIONAL EMPLOYMENT: PUBLIC AND CATHOLIC SCHOOLS COMPARED

Dennis J. Encarnation
and
Craig E. Richards

June 1984

Project Report No. 84-A15

RACE AND EDUCATIONAL EMPLOYMENT: PUBLIC AND CATHOLIC SCHOOLS COMPARED

Dennis J. Encarnation
and
Craig E. Richards

June 1984

Dennis J. Encarnation is Assistant Professor in the Graduate School of Business, Harvard University.

Craig E. Richards is Assistant Professor in the Graduate School of Education at Rutgers University.

The research for this report was supported by funds from the National Institute of Education (Grant No. NIE-G-83-0003). The analyses and conclusions do not necessarily reflect the views or policies of this organization.

INSTITUTE FOR RESEARCH ON EDUCATIONAL FINANCE AND GOVERNANCE

The Institute for Research on Educational Finance and Governance is a Research and Development Center of the National Institute of Education (NIE) and is authorized and funded under authority of Section 405 of the General Education Provisions Act as amended by Section 403 of the Education Amendments of 1976 (P.L. 94-482). The Institute is administered through the School of Education at Stanford University and is located in the Center for Educational Research at Stanford (CERAS).

The research activity of the institute is divided into the following program areas: Finance and Economics; Politics; Law; and Organizations. In addition, there are a number of other projects and programs in the finance and governance area that are sponsored by private foundations and government agencies which are outside of the special R&D Center relationship with NIE.

Abstract

Today, another restructuring of the operations of government is underway -- a response to the perceived failure of earlier government-initiated social reforms. Since state and federal education programs have been at the center of the new reforms, there are important implications for the continued reduction and redirection of educational funding and regulation on the future employment prospects of minority teachers in public and Catholic schools. This study explores within sector variations in minority employment in public and Catholic schools.

The present study is both geographically and occupationally specific: we examine patterns of employment for elementary and secondary teachers in public and Catholic schools operating in the six counties surrounding San Francisco Bay. Operating within the constraints of available data, this report explores several environmental determinants of minority employment in public and Catholic schools. Employing an open systems model of service delivery, the present study reassesses the ability of that model to explain variation in minority teacher employment across public and Catholic schools. Subsequently we present a more detailed analysis of the different employment experiences of Black and Hispanic teachers within public and Catholic schools. Finally, the results of these two sets of analyses form the basis for a discussion of general conclusions and policy implications.

Nearly two decades have elapsed since the first major federal social programs were enacted in pursuit of Lyndon Johnson's Great Society. Since then, California and other states have matched and often surpassed the level of federal funding and regulation in the areas of education, health, welfare, employment, and public housing. The proliferation of federal and state social programs since the 1960s has fundamentally restructured the operations of government in the 1980s. However, the social outcomes of this restructuring measured in terms of both equity and efficiency have been subjected to considerable controversy.

Today, another restructuring of the operations of government is underway. This restructuring is a response to the perceived failure of earlier government-initiated social reforms. The "new" reforms, initiated by the Reagan Administration, have concentrated on reducing social spending and regulation, and on redirecting social service delivery through private providers. As before, the social impact of this new restructuring is the subject of controversy. This time, however, attention has turned to the impact of "privatization" and "deregulation" on minority employment (See: James and Levin, 1983; Rumberger, 1983). Since state and federal education programs have been at the center of these new reforms, there are important policy implications for the continued reduction and redirection of educational

funding and regulation on the future employment prospects of minority teachers in public and Catholic schools. In a previous study (Encarnation and Richards, 1984), we examine the significance of one such outcome: the impact of government social spending and regulation on the employment of minority teachers in public, Catholic and private schools. The present study explores in greater detail within sector variations in minority employment in public and Catholic schools.

Looking back over the past two decades, few analysts contest the conclusion that federal and state social policies have failed to achieve many of their intended economic objectives. Yet, numerous assessments of program implementation have concluded that these same programs improved the material well-being of ethnic and racial minorities by expanding employment opportunities in professional and semi-professional occupations. Early analyses concluded that this growing minority middle class owed its new-found economic status to federal (and state) equal employment legislation and subsequent judicial interventions in pursuit of affirmative action (For a summary, see Wallace, 1977). No distinction was drawn in these early studies between public and private sector employment gains, especially for professional occupations. Later studies indicated that the gains in minority professional employment were attributable not to growth in the private sector but to the direct creation of publicly-funded jobs in government agencies (Carnoy et al., 1976; Freeman, 1973). Moreover, increases in minority employment were greatest in those government agencies that implemented federal and state social welfare programs designed to serve low-income clientele (Brown and Erie, 1981; Newman,

1976). At the state and local levels, where most of this new public employment took place, public education accounted for two-thirds of the social welfare employment increase (Brown and Erie, 1981). Thus educational employment merits closer scrutiny.

While existing research has focused on important public-private distinctions, these studies suffer from several shortcomings. With a few exceptions (e.g., Lindsay, 1976), existing research analyzes racial employment patterns across the entire national economy. This approach presents several problems: occupational categories are broadly defined; potential employers vary widely across dissimilar industries; labor markets become less and less comparable as their geographic boundaries expand. The present study differs from earlier research by being both geographically and occupationally specific: we examine patterns of employment for elementary and secondary teachers in public and Catholic schools operating in the six counties surrounding San Francisco Bay.

Another shortcoming of previous studies is their failure to pay much attention to characteristics of public and private sector labor markets internal to the same industry. As the authors demonstrated in prior research (Richards and Encarnation,1982), the personal characteristics of teachers and the environmental characteristics of schools shape the internal labor markets of those schools. Operating within the constraints of available data, this report explores several environmental determinants of minority employment in public and Catholic schools. Government social spending and regulation must be viewed as but one set of variables that defines the institutional

environment of schools. To this may be added the sector within which the school operates. Ownership patterns and federal categorical programs, for example, have each been identified as important determinants of employment patterns. Similarly, two additional sets of variables define in part the consumer environment of schools--student characteristics and their changing composition. Our first report (Encarnation & Richards, 1984) examined variation between sectors as one explanation of differences in minority employment across public, Catholic and other private schools. Building on this earlier research, the present report explores patterns of variation within the two largest educational sectors--public schools and Catholic schools.

Finally, existing research on determinants of minority employment has paid scant attention to the varied employment experiences of minority groups within public and private institutions. Yet, as the authors demonstrated in previous research on the public sector (Richards and Encarnation, 1982), Anglo, Black, and Hispanic teachers work in strikingly different types of schools. For example, Hispanic teachers typically work in more highly Hispanic-segregated schools than do Black teachers in Black-segregated schools. Similarly, Anglo teachers predominate in schools that are Anglo-segregated--i.e., where Black and Hispanic pupils are a small percentage of the total pupil population. Using our earlier research as a point of departure, this report analyzes variation in racial employment patterns for Black and Hispanic teachers within public and Catholic schools.

Employing an open systems model of service delivery developed and tested in our first report, the present study reassesses in Section I

the ability of that model to explain variation in minority teacher employment across public and Catholic schools. Subsequently we present a more detailed analysis of the different employment experiences of Black and Hispanic teachers within public and Catholic schools. Finally, the results of these two sets of analyses form the basis for our discussion of general conclusions and policy implications.

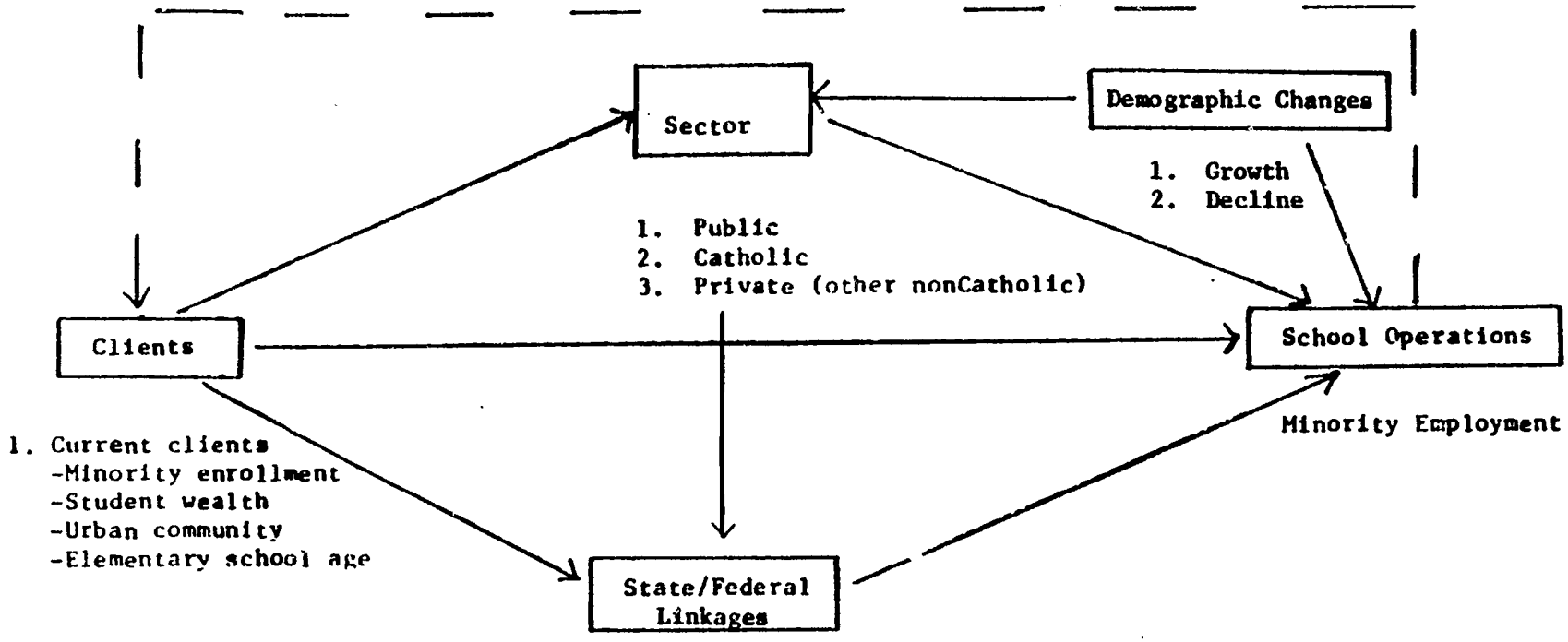
Environmental Determinants of Minority Employment: Retesting A Model

The model. Figure 1 summarizes the hypothesized relations between factors that comprise a school's environment and one important component of a school's internal operations, its employment of minorities. Two variables define the institutional environment of schools--the first, sectoral; the second, intergovernmental. These institutional factors in turn are affected by the current and changing composition of a school's consumer environment. Taken together, these several environmental variables have both direct and indirect effects on employment patterns.

By sector we mean that schools can be classified according to their degree of "publicness"; that is, schools may be classified by the extent to which they are publicly or privately owned or controlled, and by whom. The hypothesis that sector is an important predictor of minority employment is consistent with research concerning the direct creation of publicly-funded jobs in government agencies that serve low-income clientele. In addition, the relation between sector and minority employment is also consistent with research (Lindsay, 1976) reported on the incentive structure of service industries generally: the argument here is that managers of private service providers value Anglo over minority professionals because managers perceive that this ordering characterizes the preference functions of their clients and consumers. These nonpublic managers may find it easy to match their demand for Anglo teachers with available supply. Research concerning the occupational preferences of teachers (Chambers, 1978) suggests that

Figure 1

An Open Systems Model of Minority Employment



Anglo teachers will accept lower wages in order to work in public schools (and presumably private schools) that have low levels of violence, are located in pleasant suburban surroundings, have a well-maintained physical plant, and so on. In sum, widely different bodies of literature concerning the demand for, and supply of teachers support the hypothesis that the number of minority teachers rises in public schools, declines in private schools. Moreover, research suggests that the institutional factors that define the concept of sector have an independent effect on minority employment. In our first report, sector was treated as a variable in the analysis; in the present report, sector is treated as a control so that within-sector variation among the determinants of minority employment may be examined.

The second component of a school's institutional environment, inextricably related to the first, is defined by the extent of state and federal fiscal and regulatory entanglement with the local educational agency, be it a school or school district. As noted above, minority employment gains were greater in those state and local agencies that implemented federal and state social programs. These programs were not the exclusive preserve of public schools. Nonpublic schools or their students were eligible for funding or "in kind" services under most federal schemes (Encarnation, 1983). Federal programs were generally of two types. Categorical aid targeted to selected students must be distinguished from other programs designed to provide incentives for broad purposes defined locally. It is the former set of programs that are associated with minority employment;

that is, as the number of students participating in compensatory education or bilingual education programs increases, the number of minority teachers is likely to increase. The reasons for this are many and varied; social welfare programs designed to serve low-income clientele have been a major source of minority employment gains (Brown and Erie, 1982; Newman, 1976; Carnoy et al., 1976); most such programs are tightly monitored by state and federal agencies or the courts (Wallace, 1977); a few may link funding to desegregation of the labor force (Levin, 1977); an even fewer number may implicitly link minority professional specialization with ethnic identity (Richards, 1984; Richards and Encarnation, 1982). By contrast, broadly defined incentive grants do not have these characteristics (Encarnation, 1983), and enjoy higher rates of participation among public and nonpublic schools alike (Coleman et al., 1982). Nontargeted aid programs would, therefore, be expected to have negligible effect on minority employment.

Institutional sources of employer demand for minority teachers--be they sectoral or intergovernmental--do not alone explain variation in staffing patterns across different schools. Other sources of variation can be explained by the consumer environment of schools. While these demands may be institutionalized--witness the emergence of parent-teacher associations and school site councils--more often than not they are reflected in the characteristics of the students who attend schools. Our previous research identified two broad sets of student characteristics that have an effect on school operations generally, and staffing patterns specifically (Encarnation and

Richards, 1984).[1] As we see from Figure 1, one set identifies the current composition of students; the other, changes in that composition.

Widely different bodies of research concerning the demand for, and supply of teachers all draw the same conclusion: the single best predictor of the number of minority teachers employed in a given school is the number of minority students enrolled in that school. The reasons for this direct, positive relationship between minority employment and minority enrollment are many and varied: minority teachers are recognized as important role models for minority students (Dworkin, 1980; Naboa, 1980; Haney, 1978); they partially satisfy political demands emitted from the community and from within the school (Peterson, 1981; Kirp, 1982); they work in minority-segregated inner-city schools otherwise deemed less desirable by their Anglo counterparts (Chambers, 1978).

A related predictor of minority employment is a dynamic component of that same consumer environment: growth in the labor market for school personnel. Such growth is associated with greater employment of minorities, largely because growth is often driven by increased minority (especially Hispanic) enrollments. Decline, on the other hand, is usually driven by reductions in Anglo enrollment. The response to declining Anglo enrollment is shaped by structural features in the teacher labor market: seniority and tenure provisions in teacher contracts, and the proclivity of managers to retain personnel long under their employ. Since minority teachers are among the most recently hired for the environmental reasons outlined above, existing

research suggests that they are likely to be among the first fired (Richards, 1983; Richards and Encarnation, 1982). In other words, lower minority employment should be found in schools experiencing larger reductions in teachers employed.

In summary, our review of existing research identified several environmental determinants of minority employment in elementary and secondary schools. In the institutional environment of schools, these determinants include sectoral as well as intergovernmental variables. Additional sources of variation may be found in the consumer environment of schools, environs shaped by the current and changing composition of the students served by schools. Taken together, these variables and the linkages among them define an open systems model of service delivery, a model portrayed in Figure 1.

Data and methodology. Using the indicators identified in Equation (1), we were able in our first report to operationalize the variables identified in the model (Encarnation and Richards, 1984). Data were drawn from public and nonpublic schools surveyed during 1981-82 in the six counties surrounding San Francisco Bay.[2] Schools sampled in these six counties exhibited wide variation on variables of interest to the study, while at the same time operating in close proximity to each other.[3] Geographic proximity, as we noted at the outset of this essay, reduces the number of confounding factors that would otherwise distort a nation-wide sample of schools.

In order to isolate the contribution of separate environmental factors to minority employment, ordinary least square estimation procedures were performed using step-wise inclusion criteria.[4] In

our first report, data from all public, Catholic, and other private schools responding to the survey were entered into regressions, and the general applicability of the model to this cross-section of schools was demonstrated. However, we also suggested that within each sector, the specification of the model may be different. In the present report, we seek to retest the open system model of service delivery outlined above, focusing this time on the applicability of the model as an explanation of minority employment patterns within the two largest educational sectors--public schools and Catholic schools.[5]

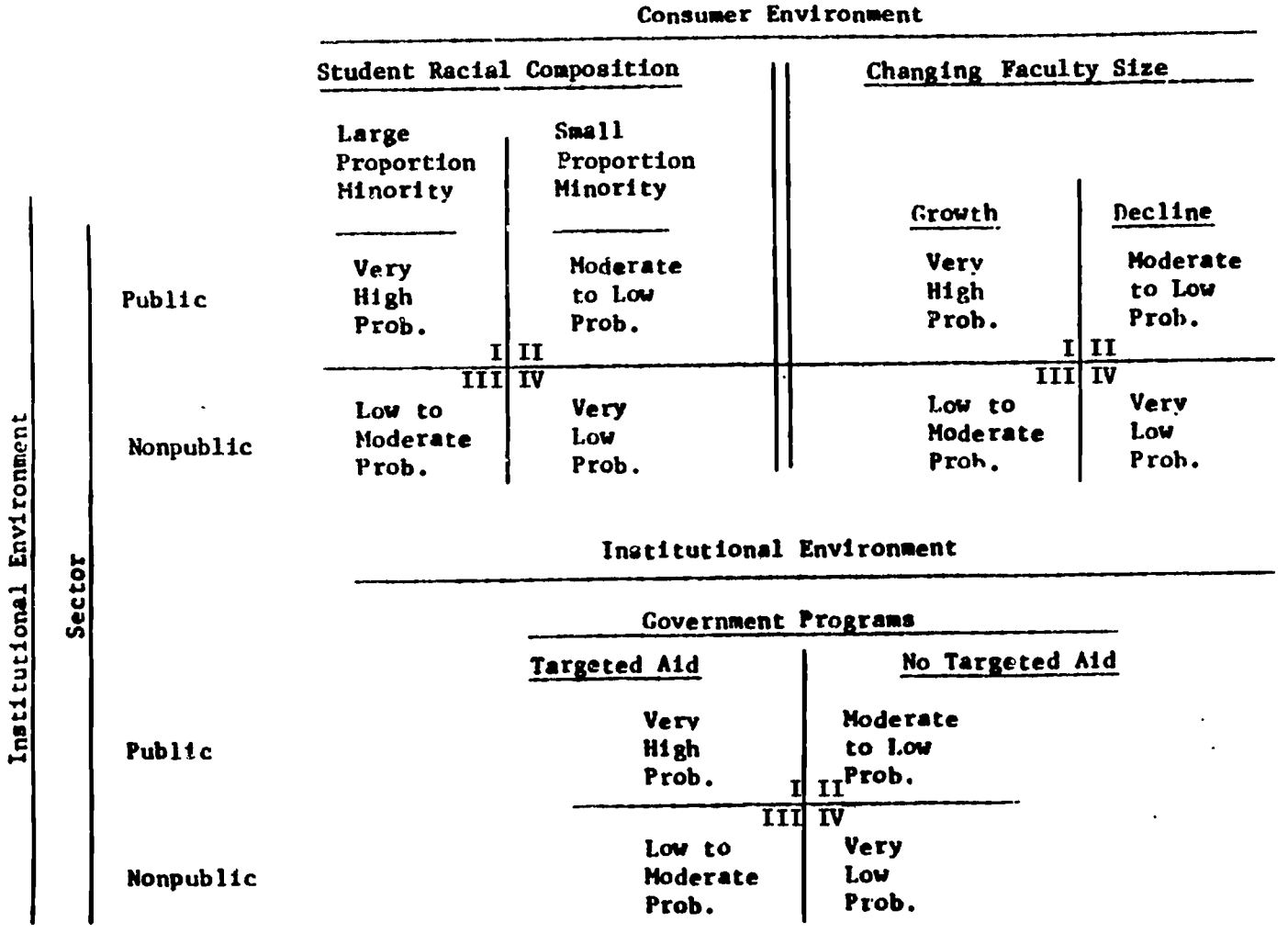
In summary, our own empirical findings combined with limited outside evidence give reason to hypothesize significant variation among and between private and public schools in their employment of Anglos, Blacks, and Hispanics. That variation in employment otherwise attributed to sectoral differences should be altered, we further hypothesize, by three additional environmental factors--student segregation, employment growth, and targeted aid--that themselves vary by sector. For example, the level of minority (and especially Hispanic) employment should be higher in public as compared to private schools. That level should be especially high in those public schools with proportionately larger minority (especially Hispanic) enrollments, growth in the labor force, and large numbers of students enrolled in targeted programs (See Figure 2). The opposite should hold for levels of Anglo employment.

A private school that scores high on each of these measures--student enrollment, employment growth, targeted programs--should come close to looking like a public school that scores

Figure 2

HYPOTHESIZED RELATIONSHIPS:

Environmental Factors Shaping the Probability of Minority (Especially Hispanic) Employment



low on these measures. In other words, one can imagine a continuum of "publicness" in which selected private schools begin to look more and more like public schools depending upon the environment within which they operate. With regard to the employment of minorities, this continuum would run from Quadrant I to Quadrant IV, from the highest probability of minority (especially Hispanic) employment to the lowest. We have constructed this continuum to reflect our hypothesis that sector should dominate all other environmental variables as a predictor of employment.

In our previous analysis of the determinants of minority employment in public, Catholic and private schools (Encarnation and Richards, 1984) we found that "publicness" alone was insignificant when predicting the number of minority teachers in our San Francisco Bay Area sample of public, Catholic and private schools. Rather a small subset of variables--the proportion of minority students enrolled, the proportion of students enrolled in compensatory education programs, the size of the school and the number of new teachers in the school--were the most important predictors of increased employment of minority teachers. Two important and related questions arose as a result of this first analysis:

(1) Were there important interaction effects between sector and the significant subset of variables identified in our first analysis?

(2) Did the model we specified have equal predictive power for both Black and Hispanic teachers?

To test for interaction effects, we restricted the sample to public and Catholic schools, and employed an elaborated regression

model. The original 12 variables (minus the Catholic dummy variable) were forced into a regression equation and then the interaction variables were allowed to enter into the equation using a stepwise inclusion criterion. Two interaction terms were statistically significant. The final model is represented in equation (1). The analysis was restricted to a public-Catholic school comparison because of the low numbers of minority students in private (non-Catholic) schools, and their low levels of participation in state and federal categorical programs.

(1) $$Y = b_1 + b_2 X_1 + b_3 X_2 + b_4 X_3 + b_5 X_4 + b_6 X_5 + b_7 X_6 + b_8 X_7 + b_9 X_8 + b_{10} X_9 + b_{11} X_{10} + b_{12} X_{11} + b_{13} X_{12} + b_{14} (X1.X5) + b_{15} (X1.X9)$$

Where:

Y = the number of minority teachers employed

X_1 = a dummy variable for public sector, where 1 - public and 0 = Catholic

X_2 = a dummy variable for urban location where "1" indicates the school is within the city limits of Oakland, San Francisco, and San Jose, and "0" indicates all other locations

X_3 = a dummy variable for school type where 1 = elementary and 0 = secondary

X_4 = a dummy variable for school participation in former ESEA Title IV-B where "1" indicates the school received funds for library materials and "0" indicates non participation

X_5 = total school enrollment

X_6 = total preschool enrollment

X_7 = number of teachers with less than 5 years seniority

X_8 = the number of teachers laid-off during the two-year period 1979-1981

X_9 = the proportion of minority students enrolled

X_{10} = the proportion of low SES students enrolled

X_{11} = the proportional of students enrolled in federally funded compensatory education programs (former ESEA Title I)

X_{12} = the proportion of students enrolled in federally or state funded bilingual education programs (former ESEA Title VII).

To test whether our model was equally predictive of both Black and Hispanic teacher employment we made two further changes. First, we ran two separate regressions changing the dependent variable from Minority Teachers to Black Teachers and Hispanic Teachers, respectively. Second, we altered the independent variables so that they reflected the proportions of Black and Hispanic students rather than the previous proportions of minority students. Thus, for example, on our second regression the dependent variable became the number of Black teachers employed and our corresponding student enrollment variable became the proportion of Black students enrolled. The third regression (with the number of Hispanic teachers employed as the dependent variable) utilized a parallel modification for Hispanic students.

Table 1 describes the results of the interaction effects and their implications; Tables 2 and 3 describe the fit of the model for Black and Hispanic teachers. Appendix A contains the actual estimates and significance tests generated by the stepwise regression procedures.

TABLE 1

Hypothesized Relations and Empirical Findings:
Determinants of Minority Employment[a]

Independent Variables	Hypothesized Relationship[b]	Linear Model (R^2 = .72)	
Institutional Factors		**B Value**	**Significance**
Local/Sectoral			
Public	+	-1.656	.059
State/Federal			
Incentive Grants			
Library Materials	0	-0.568	.042
Targeted Aid			
Compensatory Education	+	3.004	.0004
Bilingual Education	+	1.027	N.S.
Teacher Growth & Decline			
Growth	+	0.080	.002
Decline	-	-0.086	N.S.
Client Characteristics			
Minority Race	+	-0.918	N.S.
Low SES	+	.872	N.S.
Urban Community	+	0.992	.007
Elementary School Age	0	0.209	N.S.
Size (K-12)	0	.000	N.S.
Interaction Terms			
Public X Minority	+	5.604	.000
Public X Size (K-12)	+	0.004	.028

Notes: [a]See Appendix A for the complete estimation of the linear regression model.

[b]Key: (+) or (-) indicate a positive or negative relationship, respectively; (0) indicates no predicated relationship.

TABLE 2

Hypothesized Relations and Empirical Findings:
Determinants of Black Teacher Employment[a]

Independent Variables	Hypothesized Relationship[b]	Linear Model (R^2 = .79)	
Institutional Factors		**B Value**	**Significance**
Local/Sectoral			
Public	+	-0.039	N.S.
State/Federal			
Incentive Grants			
Library Materials	0	-0.367	.050
Targeted Aid			
Compensatory Education	+	0.516	N.S.
Bilingual Education	+	3.477	.022
Changing Composition			
Growth	+	0.023	N.S.
Decline	-	-0.037	N.S.
Client Characteristics			
Proportion Black Students	+	2.111	.053
Low SES	+	1.246	.069
Urban Community	+	0.523	.027
Elementary School Age	C	-0.188	N.S.
Size (K-12)	0	0.001	.0004
Interaction Terms			
Public X Black Students	+	7.886	.0001

Notes: [a]See Appendix A for complete estimation of the linear regression model.

[b]Key: (+) or (-) indicate a positive or negative relationship, respectively; (0) indicates no predicted relationship.

TABLE 3

Hypothesized Relations and Empirical Findings:
Determinants of Hispanic Teacher Employment[a]

Independent Variables	Hypothesized Relationship[b]	Linear Model (R^2 = .57)	
Institutional Factors		**B Value**	**Significance**
Local/Sectoral			
Public	+	-1.491	.007
State/Federal			
Incentive Grants			
Library Materials	0	0.092	N.S.
Targeted Aid			
Compensatory Education	+	-0.067	N.S.
Bilingual Education	+	0.212	N.S.
Changing Composition			
Growth	+	0.060	.0005
Decline	-	0.002	N.S.
Client Characteristics			
Proportion Hispanic Students	+	0.954	N.S.
Low SES	+	-1.072	.066
Urban Community	+	0.117	N.S.
Elementary School Age	0	-0.053	N.S.
Size (K-12)	0	-0.001	N.S.
Interaction Terms			
Public X Hispanic Students	+	3.270	.036
Public X Size (K-12)	0	0.003	.004

Notes: [a]See Appendix A for complete estimation of the linear regression model.

[b]Key: (+) or (-) indicate a positive or negative relationship, respectively; (0) indicates no predicted relationship.

Findings

Interaction Effects

The first objective of this study was to determine if sector and the various predictors in our model interact. That is, for example, whether minority enrollments have the same impact on the employment of minority teachers in public and Catholic schools. Statistically significant interaction terms provide positive evidence of different within-sector slopes for the corresponding predictor. The logic of this procedure is similar to that for the Chow test. The results are reported in Table 1.

Of the several interaction terms introduced into equation (1) only two were significant; the proportion of minority students enrolled and school size. With the introduction of these two interaction terms into the model, the overall R^2 increased from .68 to .71. Both variables were significant at the .05 level. These results indicate that the proportion of minority students enrolled and school size are more strongly related to minority employment in public schools rather than in Catholic schools.

Black and Hispanic Teacher Employment

As stated previously, we were also concerned whether our model would predict equally well for Black and Hispanic teachers in separate regressions. There is reason to believe that Black and Hispanic teacher employment patterns might be differentially affected by the predictors in our model.

Based on earlier research (Richards and Encarnation, 1982) we found that in California, Black teachers on average had more years of

teaching experience than Hispanic teachers, suggesting they entered the labor force in the 1960s and 1970s. This was a time when overall school enrollments were expanding; it was prior to the era of fiscal constraint engendered by Proposition 13; and it was at the apex of the Black civil rights and school desegregation movements. This confluence of demographic, fiscal, and social forces may have generated somewhat historically unique employment opportunities for Black teachers. Hispanic teachers, on the other hand, began entering the teacher labor force in California in the 1970s, at a time when overall enrollments were dramatically declining, fiscal constraints were a serious impediment to expanded teacher employment and the momentum of the Civil Rights movement had slowed considerably. Thus, one might expect our model to fit better for Black teachers and not as well for Hispanic teachers. The regression models for Black and Hispanic teachers are reported in Tables 2 and 3, respectively.

With respect to the two issues raised in the introduction to this report, we found:

(1) a significant interaction between "publicness" and the racial composition of the school in predicting both Black and Hispanic teacher employment. This result suggests that client characteristics influence the employment of minority teachers more strongly in the public school sector than in the Catholic school sector.

Only one other interaction term was significant in our study. Public sector and school size interacted to predict increased employment of Hispanic teachers.

(2) We found important differences in the fit of our two models, as indicated by the R^2, when we decomposed the original model into separate regressions for Black and Hispanic teachers. The fit increased for Black teachers, and sharply decreased for Hispanic teachers.

This finding was in accordance with the predictions set forth above on the basis of earlier research (Encarnation and Richards, 1982). In addition to these major conclusions a number of additional findings are noteworthy. Some important differences between the predictors of Black and Hispanic teacher employment are as follows:

(1) The dummy variables for public sector were significant and negative in the Hispanic regression, but not in the Black regression. This indicates that for Hispanic teacher employment, the intercept (constant) terms differ according to sector.

(2) The proportion of students enrolled in bilingual education, contrary to our prediction, is positively and significantly associated with increased employment of Black teachers but not insignificantly associated with the employment of Hispanic teachers.

(3) Schools with larger numbers of teachers with less than 5 years experience have significantly higher levels of Hispanic teacher employment but not of Black teacher employment.

(4) The proportion of Black students predicts the employment of Black teachers independent of school sector; the proportion of Hispanic students is not a statistically significant predictor of Hispanic teacher employment.

(5) Larger schools independent of sector tend to hire more Black teachers; whereas, only larger public schools tend to hire more Hispanic teachers.

(6) The crucial interaction term for both models was public sector with proportion Black and Hispanic students respectively. That is, public schools with higher proportions of Black and Hispanic pupils were predicted by each model to hire more Black and Hispanic teachers.

(7) Finally, the proportion of low-SES students of the same race showed a marginally significant positive association with Black teacher employment, and a marginally significant negative association with Hispanic teacher employment.

There are few straightforward and unambiguous explanations consistent with these complex results. At the risk of generalizing beyond the limitations of our data, however, we suggest one line of plausible argumentation extrapolated form the preceding analyses.

We believe that our analysis supports the conclusion that the client-provider relationship is most important in explaining the racially based patterns of minority teacher employment. Within the public schools in our sample, this relationship was particularly strong, and the finding held for both Black and Hispanic teachers. In Catholic schools, the relation was significantly weaker. One explanation for the observed relationship consistent with previous research is that public schools, in contrast to private and Catholic schools, are more sensitive to what Hans Weiler (1983) has termed the "compensatory legitimacy" claims placed by consumers on state sponsored institutions. Thus, it is argued, the combination of fiscal,

regulatory and judicial mandates of the previous decade created a "crisis of legitimacy" which was reflected, in part, by increased employment of minorities in schools with high proportions of minority clientele. Apparently neither the private sector, nor public schools with few minority students, have as yet responded to these legitimacy claims. By implication, client political pressure seems to be a more significant factor than either general regulatory or judicial mandates as they are expressed in current affirmative action or equal employment opportunity legislation. Generalizations about the "leadership role" of the public sector in increasing minority professional employment are not warranted by available evidence. In the case of education, predominantly non-minority public schools behave much like their private counterparts with respect to the employment of minority teachers.

It is also noteworthy that the proportion of Black students predicts the employment of Black teachers for both public and Catholic schools, but the corresponding relationship for Hispanics was found only in the public sector. While the overall levels of employment of Black teachers in Catholic schools is quite low, Catholic schools have also responded somewhat to our hypothesized client-provider model.

One further result, contrary to our prediction, was the finding that larger schools, independent of sector, hired more Black teachers, but only larger public schools were associated with increased employment of Hispanic teachers. This was true even after controlling for school types (e.g., elementary, secondary) and urban location. Although there is no direct evidence it may be the case that larger schools with "impersonal environments" are responding to a perceived

need to maintain higher levels of social control and therefore employ additional minority teachers.

Two important policy implications emerge from this study. First, there is cause for concern, particularly in the case of public schools, but also for the general educational labor market, that most employment gains for minority teachers have been limited to public schools with high proportions of minority students. The prevailing economic climate for education in combination with the continuous decline in student enrollment in suburban schools suggests that the employment of minority teachers is likely to continue in the present pattern. Furthermore, all of our evidence suggests that general aid has no minority employment impact and that categorical aid has contributed to increased minority employment only in urban, segregated, public schools. The present trend away from categorical aid and toward block grants is likely to dampen the positive employment effects of previous categorical funding.

Finally, the current preoccupation with the "technical" and "efficiency" aspects of teacher selection and training, as represented by a variety of recent national commissions, is likely to ignore the legitimacy and political dimensions of the relationship between teacher and student. Since available evidence shows that urban schools are more segregated today than in 1967 (Orfield, 1982) and that minority interest in education as a profession has sharply dropped, urban schools may be confronted with yet another "crisis of legitimacy" in the near future.

Notes

1. For a detailed summary of the data set, survey instruments, and summary statistics, see: Edward M. Gilliland and Janice Radle, "Characteristics of Public and Private Schools in the San Francisco Bay Area: A Descriptive Report." Institute for Research on Educational Finance and Governance, Stanford, CA. January 1984.

2. The six counties represented in the survey of public, Catholic and private schools are: Alameda, Contra Costa, Marin, San Francisco, San Mateo, and Santa Clara.

3. The schools sampled in these six counties exhibit wide variation, encompassing three central cities (Oakland, San Francisco, and San Jose) and numerous suburban towns with wide diversity in the racial, ethnic and socio-economic composition of their inhabitants.

4. We are particularly indebted to Edward Haertel for his technical assistance in the preparation of this report and for devising the weighting design used in the regression analyses. Details of the weighting design are available from the Institute for Research on Educational Finance and Governance, Stanford, CA.

5. For an excellent discussion of an environmental approach to organizational systems from a sociological perspective, see: John W. Meyer and W. Richard Scott, Organizational Environments: Ritual and Rationality, Beverly Hills, CA: Sage Publications, 1983.

References

Abramowitz, S., and Stackhouse, E. A. 1980. Private High School Today. Washington, D.C.: National Institute of Education.

Bascomb Associates. 1975. State and Federal Laws Relating to Nonpublic Schools. Washington, D.C.: U.S. Office of Education

Berman, P., et al. 1981. Improving school improvement. A policy evaluation of the California school improvement program. Berkeley, CA: Manifest International.

Borjas, G. 1982. "The Politics of Employment Discrimination in the Federal Bureaucracy." Journal of Law and Economics (October):

Boyer, E. L. 1983. High School: A Report on Secondary Education in America. Carnegie Foundation for the Advancement of Teaching, Washington, D.C.

Brown, M. and Erie, S. P. 1984, forthcoming.

Brown, M. and Erie, S. P. 1981. "Blacks and the Legacy of the Great Society: The Economic and Political Impact of Social Policy." Public Policy (Summer): pp. 300-330.

California State Department of Education. School Statistics. Sacramento, selected years.

Carnoy, M., Girling, R., and Rumberger, R. 1976. Education and Public Sector Employment. Palo Alto, CA: Center for Economic Studies.

Chambers, J. 1984, forthcoming. "Descriptive Report." Stanford, CA: Institute for Research on Educational Finance and Governance, Stanford University.

Chambers, J. 1979. "Educational Cost Differentials and the Allocation of State Aid for Elementary/Secondary Education." Journal of Human Resources 13:4 (Fall).

Coleman, J.S., Hoffer, T., and Kilgore, S. 1982. High School Achievement: Public, Catholic, and Private Schools Compared. New York: Basic Books.

Cremin, L. 1964. The transformation of the school: progressivism in education, 1876-1957. New York: Bantam.

Dworkin, G. 1980. "The Changing Demography of Public School Teachers: Some Implications of Faculty Turnover in Urban Areas." Sociology of Education 53:2 (April): 66.

Educational Management and Evaluation Commission (California). 1982. "California School Governance: An Analysis and Call for Papers." Report to the California State School Board, December, unpublished.

Encarnation, D. J. 1983. "Public Finance and Regulation of Nonpublic Education: Retrospect and Prospect." In Public Dollars for Private Schools. T. James and H. M. Levin, eds. Philadelphia: Temple University Press: pp. 175-195.

Encarnation, D. J., and Mitchell, D. E. 1984, forthcoming. "Alternative State Policy Mechanisms for Influencing School Performance." Educational Researcher.

Encarnation, D. J., and Mitchell, D. E. 1983. "Critical Tensions in the Governance of California Public Education." Stanford, CA: Institute for Research on Educational Finance and Governance, Stanford University.

Encarnation, D. J., and Richards, C. 1981. "Labor Unions and Categorical Programs." Stanford, CA: IFG Policy Notes, Stanford University.

Encarnation, D. J., and Richards, C. 1984. "Government Social Policy and Minority Employment in Public, Catholic and Private Schools. Stanford, CA: Institute for Research on Educational Finance and Governance, Stanford University.

Erickson, D. A., and Madaus, G. F. 1972. Issues of Aid to Nonpublic Schools. Vol. 3: Public Assistance Programs for Nonpublic Schools. Washington, D.C.: President's Commission on School Finance.

Freeman, R. B. 1973. "Changes in the Labor Market for Black Americans, 1948-1972." In Brookings Papers on Economic Activity 1: 67-120.

Garms, W., Guthrie, J., and Pierce L. 1978. School Finance: The Economics and Politics of Education. Englewood Cliffs, N.J.: Prentice Hall.

Goodlad, J. I. 1983. A Place Called School, New York: McGraw-Hill.

Halvorsen, R., and Palmquist, R. 1980. "The Interpretation of Dummy Variables in Semilogarithmic Equations." American Economic Review 70:3 (June): 474-75.

Haney, J. E. 1978. "The Effects of the Brown Decision on Black Educators." Journal of Negro Education 78:1; pp. 88-95.

Hanushek, Eric A. "Conceptual and Empirical Issues in the Estimation of Educational Production Functions," Journal of Human Resources, 1979 14(3) 351-388.

James, T., and Levin, H. M. 1983. Public Dollars for Private Schools. Philadelphia, PA: Temple University Press.

Kirp, D. E. 1982. Just Schools. Berkeley, Ca.: University of California Press.

Kirst, M. W. 1982. "Teaching Policy and Federal Categorical Programs." Stanford, CA: Institute for Research on Educational Finance and Governance, Stanford University.

Kirst, M. 1980. "A tale of two networks." Taxing and Spending 3: 43-49.

Levin, H. M. 1977. "A Decade of Policy Developments in Improving Education and Training for Low-Income Populations." In A Decade of Federal Antipoverty Programs. Robert H., Haveman, ed. New York: Academic Press, pp. 123-188.

Lindsay, C. M. 1976. "A Theory of Government Enterprise." Journal of Political Economy 84:5 (October): 1061-77.

Mitchell, D. E. 1981. Shaping legislative decision: education policy and the social sciences. Lexington, MA: D. C. Heath and Co.

Mueller, D. C. 1979. Public Choice. Cambridge: Cambridge University Press.

Murnane, R. J. 1975. The Impact of School Resources on the Learning of Inner-City School Children. Cambridge, MA: Ballinger.

Murnane, R. J. 1983. "Comparisons of Public and Private Schools: Lessons from the Uproar," Harvard Graduate School of Education (no member) unpublished.

Naboa, A. 1980. "Hispanics and Desegregation: Summary of Aspira's Study on Hispanic Segregation Trends in U.S. School Districts." METAS, (Fall): 1-24.

National Catholic Education Association. 1980. How to Service Students with Federal Educational Program Benefits.

National Institute of Education. 1978. Violent Schools--Safe Schools, Volume I. Washington, D.C.: U.S. Government Printing Office.

Newman, D., et al. 1976. Protest, Politics, and Prosperity. New York: Pantheon.

Odden, A., and Dougherty, V. 1982. State Programs of School Improvement: A 50-State Survey. Denver, CO: Education Commission of the States.

O'Malley, C. J. 1981. "Governance of Private Schools." Private School Quarterly (Summer): 12-15.

Peterson, P. E. 1982.

President's Commission on School Finance. 1971. Public Aid to Non-Public Education. Washington, D.C.: The Commission.

Richards, C. E. 1984, forthcoming. "Bilingualism and Hispanic Employment: School Reform or Social Control," in Advances in Bilingual Education Research, E. E. Garcia and R. V. Padilla (eds.) University of Arizona Press.

Richards, C. E. 1983. Race and Educational Employment: The Political Economy of Teacher Labor Markets. Stanford, CA: Unpublished Ph.D. dissertation, Stanford University

Richards, C. E., and Encarnation, D. J. 1982. "Race and Educational Employment." Stanford, CA: Institute for Research on Educational Finance and Governance, Stanford University.

Rumberger, R. 1983. "Social Mobility and Public Sector Employment." Stanford, CA: Institute for Research on Educational Finance and Governance, Stanford University.

Scott, R. D. 1981. Organizations: Rational, Natural and Open Systems, Engelwood Cliffs, N. J.: Prentice Hall.

Sullivan, D. J. 1974. Public Aid to Nonpublic Schools. Lexington, MA: Lexington Books.

Vitullo-Martin, T. 1978. "Federal Policies and Private Schools." In Government in the Classroom. Mary Frase Williams, ed. New York: Proceedings of the Academy of Political Science, 33: 2, 124-35.

Wallace, P. A. 1977. "A Decade of Policy Developments in Equal Opportunities in Employment and Housing." In A Decade of Federal Antipoverty Programs. Haveman, R. H., ed. New York: Academic Press, 329-59.

MAXIMUM R-SQUARE IMPROVEMENT FOR DEPENDENT VARIABLE TCH_MIN

THE FIRST 12 VARIABLES IN EACH MODEL ARE INCLUDED VARIABLES.

IE ABOVE MODEL IS THE BEST 13 VARIABLE MODEL FOUND.

:EP 14 VARIABLE PENROLL ENTERED R SQUARE = 0.71305468
C(P) = 9.64380878

	DF	WEIGHTED SS	MEAN SQUARE	F	PROB>F
:GRESSION	13	1661.57315239	127.81331941	36.13	0.0001
:ROR	189	668.64527560	3.53780569		
)TAL	202	2330.21842799			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
:TERCEPT	-0.31705774				
:R_TOT	0.00015980	0.00164666	0.03331787	0.01	0.9228
:R_PRE	0.00000000	0.00000000	0.00000000	0.00	1.0000
JBLIC	-1.65577982	0.87220412	12.74978560	3.60	0.0592
:HLE5	0.08023673	0.02596066	33.79472709	9.55	0.0023
\YOFFS	-0.08614970	0.05717716	8.03149405	2.27	0.1336
:NTCITY	0.99224642	0.36120335	26.69743345	7.55	0.0066
.EMSEC	0.20930503	0.46796007	0.70774321	0.20	0.6552
:DLIBM	-0.56826277	0.27828759	14.75178912	4.17	0.0425
\OPCOMP	3.00444762	0.83519121	45.78164752	12.94	0.0004
\OPFBIL	1.02662652	2.15729070	0.80120119	0.23	0.6347
\OPMIN	-0.91781047	1.37963906	1.56570174	0.44	0.5067
\OPSES	0.87174305	0.99442518	2.71873411	0.77	0.3818
!IN	5.60369381	1.40787724	56.04710651	15.84	0.0001
:NROLL	0.00352148	0.00159359	17.27554312	4.88	0.0283

IE ABOVE MODEL IS THE BEST 14 VARIABLE MODEL FOUND.

MAXIMUM R-SQUARE IMPROVEMENT FOR DEPENDENT VARIABLE TCH_BLCK

THE FIRST 12 VARIABLES IN EACH MODEL ARE INCLUDED VARIABLES.

ARNING: 12 OBSERVATIONS DELETED DUE TO MISSING VALUES.

TEP 0 INCLUDED VARIABLES ENTERED R SQUARE = 0.74228818
C(P) = 52.27508172

	DF	WEIGHTED SS	MEAN SQUARE	F	PROB>F
EGRESSION	11	1029.09197115	93.55381556	48.44	0.0001
RROR	185	357.28597973	1.93127557		
OTAL	196	1386.37795088			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
NTERCEPT	-1.58972717				
NR_TOT	0.00107571	0.00033482	19.93479453	10.32	0.0016
NR_PRE	0.00000000	0.00000000	0.00000000	0.00	1.0000
UBLIC	1.03986095	0.32066550	20.30908261	10.52	0.0014
CHLE5	0.02287961	0.01893781	2.81891443	1.46	0.2285
AYOFFS	-0.06492763	0.04241518	4.52543897	2.34	0.1275
ENTCITY	0.47753494	0.26254922	6.38900314	3.31	0.0706
LEMSEC	0.02950809	0.35245924	0.01353657	0.01	0.9334
EDLIBM	-0.34110528	0.20865423	5.16139061	2.67	0.1038
ROPCOMP	0.39156208	0.64848511	0.70411805	0.36	0.5467
ROPFBIL	3.34128404	1.69085219	7.54153494	3.90	0.0496
ROPBLCK	8.05856639	0.74999999	222.96531531	115.45	0.0001
ROPSES	2.07573397	0.75215342	14.70871584	7.62	0.0064

TEP 13 VARIABLE PBLACK ENTERED R SQUARE = 0.79616602
C(P) = 7.17854719

	DF	WEIGHTED SS	MEAN SQUARE	F	PROB>F
EGRESSION	12	1103.78701223	91.98225102	59.89	0.0001
RROR	184	282.59093865	1.53582032		
OTAL	196	1386.37795088			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
NTERCEPT	-0.43389209				
NR_TOT	0.00107013	0.00029858	19.72863890	12.85	0.0004
NR_PRE	0.00000000	0.00000000	0.00000000	0.00	1.0000
UBLIC	0.03947639	0.31991917	0.02338485	0.02	0.9019
CHLE5	0.02314193	0.01688803	2.88391099	1.88	0.1723
AYOFFS	-0.03719788	0.03803259	1.46914607	0.96	0.3293
ENTCITY	0.52280096	0.23422089	7.65176988	4.98	0.0268
LEMSEC	-0.18847487	0.31585949	0.54683897	0.36	0.5514
EDLIBM	-0.36650747	0.18610519	5.95647197	3.88	0.0504
ROPCOMP	0.51641725	0.57857027	1.22357236	0.80	0.3733
ROPFBIL	3.47741368	1.50796102	8.16719445	5.32	0.0222
ROPBLCK	2.11068381	1.08384527	5.82441344	3.79	0.0530
ROPSES	1.24630521	0.68120329	5.14085979	3.35	0.0689
BLACK	7.88630086	1.13083088	74.69504108	48.64	0.0001

MAXIMUM R-SQUARE IMPROVEMENT FOR DEPENDENT VARIABLE TCH_HISP

THE FIRST 12 VARIABLES IN EACH MODEL ARE INCLUDED VARIABLES.----------

HE ABOVE MODEL IS THE BEST 13 VARIABLE MODEL FOUND.

TEP 14 VARIABLE PHISP ENTERED R SQUARE = 0.57293906
C(P) = 7.91667624

	DF	WEIGHTED SS	MEAN SQUARE	F	PROB>F
EGRESSION	13	383.22504452	29.47884958	19.30	0.0001
RROR	187	285.65071046	1.52754391		
OTAL	200	668.87575498			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
NTERCEPT	0.17 02				
NR_TOT	-0.00 99	0.00111321	0.56161387	0.37	0.5450
NR_PRE	0.00000000	0.00000000	0.00000000	0.00	1.0000
UBLIC	1.49056330	0.54413923	11.46237138	7.50	0.0068
CHLE5	.06044466	0.01698527	19.34482655	12.66	0.0005
AYOFFS	0.00241310	0.03701059	0.00649372	0.00	0.9481
ENTCITY	0.11664005	0.23561207	0.37436396	0.25	0.6211
LEMSEC	0.05303880	0.30252413	0.04695274	0.03	0.8610
EDLIBM	0.09245352	0.17964041	0.40460621	0.26	0.6074
ROPCOMP	-0.06720539	0.50234542	0.02733991	0.02	0.8937
ROPFBIL	0.21200952	1.54406082	0.02879888	0.02	0.8909
ROPHISP	0.95445569	1.13168772	1.08655581	0.71	0.4001
ROPSES	-1.07154092	0.57840965	5.24252069	3.43	0.0655
HISP	3.26964124	1.54709538	6.82275422	4.47	0.0359
ENROLL	0.00313836	0.00107912	12.91999641	8.46	0.0041

HE ABOVE MODEL IS THE BEST 14 VARIABLE MODEL FOUND.