



## **VOLUME VII**

# **UNIONS AND THE CONSTRUCTION INDUSTRY IN NEW JERSEY: BARRIERS TO ENTREPRENEURSHIP**

# **HISTORICAL RECORD OF MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES IN PUBLIC AND PRIVATE CONTRACTING IN NEW JERSEY**

**A Report Submitted to  
NJ TRANSIT  
and the  
Governor's Study Commission on Discrimination in  
Public Works Procurement and Construction Contracts**

**by  
The Afro-American Studies Program  
University of Maryland at College Park**

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***This report was prepared by Edward Montgomery, Professor of Economics, University of Maryland College Park, as a consultant to the Afro-American Studies Program, University of Maryland College Park. This volume is a supplement in accordance with Contract No. EL-91-1323 with the New Jersey Transit Corporation.***

## 1. Introduction

Many factors go into determining the extent of self-employment in the economy and the success or failure of new business enterprises. Access to credit, the presence of an adequate customer base, and the performance of the local or national economy are just some of the important factors. Equally, if not more important than these ingredients, however, is the prior experience and knowledge of the entrepreneur or owner. This expertise is generally acquired through on-the-job experience with another firm in the industry and/or from the completion of some form of formal training program.<sup>1</sup> The ability of individuals or groups to gain access to this training or expertise will have a major impact on whether they are likely to become successful entrepreneurs.

In the construction industry the majority of workers are craft workers of one form or another.<sup>2</sup> In part because of the high degree of skill needed for these jobs, workers in this industry typically complete some form of explicit training program. In unionized construction this generally involves the completion of a union run apprenticeship program which can take up to 6 years to complete.<sup>3</sup> At nonunion firms, workers receive their training through vocational schools, military training

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<sup>1</sup>In 1982, 95% of white male, 92.5% of women, 91.5% of Hispanic, and 92% of black construction contractors had previously gained experience as an employee of another firm.

<sup>2</sup>See Opening the Skilled Construction Trades to Blacks, by Richard Rowan and Lester Rubin, University of Pennsylvania Press, Philadelphia, Pa., 1974.

<sup>3</sup>Occupational Outlook Handbook, Department of Labor, GPO, Washington, D.C., April 1988.

programs; on-the-job experience as a "helper", or from the completion of an apprenticeship program.

The purpose of this study is to determine whether and to what extent limitations on the ability of women and minorities to gain access to the requisite training and experience has contributed to the absence of minority contractors. In particular, I examine the link between access to apprenticeship programs and entrepreneurship in the construction industry. Attention will be paid to whether minorities and women have historically been excluded from these programs and whether this has resulted in their under representation in the pool of construction contractors.

The report proceeds as follows: In Section 2, I look at the record on the extent to which minority contractors are under represented in the construction arena. I will look at the historical record on the size and distribution of minority and women-owned construction firms. In Section 3, the historical record on minority representation as workers in the construction industry is examined. Evidence on the role and extent of race and gender barriers to equality in representation is examined. Part of this examination represents a review of some of the legal decisions that revealed the presence of a pervasive pattern of racial discrimination in the building trades. In Section 4, evidence on the extent to which employment in the craft trades was limited because of the inability of women and minorities to gain access to apprenticeship programs is examined. In Section 5, the evidence on the link between minority and female under representation in apprenticeship programs and their under

representation in the pool of minority contractors is discussed. Finally, in Section 6, other barriers to the existence of black entrepreneurs and factors that may have lead to their segregation into the less profitable residential markets are discussed.

## **2. Minority and Women Contractors**

In part because of the risks and degree of uncertainty concerning future income, it seems clear that owning or operating a business is not an activity that everyone would deem to undertake. In fact, only a minority of individuals earn all or even a portion of their living from being self-employed. This is true whether one looks at the overall population or at sub-groups within the population. Despite the fact that entrepreneurship is not the dominant activity for any group, it is an important one because it is thought to be an critical source of innovation and a creator of jobs in the economy.<sup>4</sup> In addition, self-employment can also be an escape route from poverty or discrimination.

Table 1 represents data on the extent to which self-employment in New Jersey varies across gender and ethnic groups. These data provide an upper bound estimate of the extent of entrepreneurship because an individual may receive self-employment income while remaining a full-time employee of someone else. Nonetheless, the numbers clearly show that the self-employed are a distinct minority, accounting for less than 5 percent of all workers. Approximately six percent of white males are self-employed while only about 2 percent of black males are self-employed. The incidence of self-employment among black males is thus between 30 and 40 percent of the rate among white males.

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<sup>4</sup>See "Why Are There So Few Black Entrepreneurs?" by Bruce Meyer, NBER working paper no. 3537, Cambridge, Dec. 1990.

TABLE 1

## New Jersey Labor Force Characteristics by Race and Spanish Origin: 1980

	WHITE			BLACK			AMERICAN INDIANS, ESKIMO and ALEUT			ASIANS and PACIFIC ISLANDER			SPANISH ORIGIN				
	Total	Central City	Urban Fringe	Total	Central City	Urban Fringe	Total	Central City	Urban Fringe	Total	Central City	Urban Fringe	Total	Mexica Rican	Puerto Rican	Cuban	Other Spanis
Employed Persons 16 and over																	
TOTAL	2837478	152743	2273777	343469	103277	218792	4402	614	2759	49471	7113	37777	187998	4855	72126	42880	68137
PERCENT:																	
Self Employed	8.17%	5.41%	7.96%	2.57%	2.15%	2.75%	4.34%	4.56%	3.95%	7.63%	3.88%	8.12%	3.12%	3.71%	1.94%	5.28%	2.96%
Unpaid Family Workers	0.30%	0.22%	0.27%	0.10%	0.10%	0.10%	0.23%	0.81%	0.18%	0.37%	0.24%	0.42%	0.17%	0.41%	0.15%	0.20%	0.15%
Employed Females 16 and over																	
TOTAL	1182078	66362	952445	175087	53140	111484	1943	267	1191	21124	3359	15541	78166	2072	27982	19175	28932
Self Employed	3.40%	2.15%	3.22%	1.12%	1.01%	1.18%	2.21%	5.24%	1.51%	5.18%	5.24%	1.51%	1.58%	0.72%	0.95%	2.64%	1.51%
Unpaid Family Workers	0.56%	0.30%	0.51%	0.12%	0.09%	0.12%	0.51%	1.87%	0.42%	0.73%	0.12%	0.93%	0.22%	0.29%	0.14%	0.22%	0.30%

NOTE: Self-Employed includes employees of own corporation.

Hispanic and Asian males are more likely than blacks to be self-employed but still have self-employment rates that are 60 and 88 percent, respectively, of the rate for white males. The incidence of self-employment for women is consistently less than 50 percent of the male rate, while women have a higher incidence of being unpaid family workers than males.

Although the overall the incidence of self-employment is low, it is possible that rates of entrepreneurship may vary significantly across industries. In Table 2, data are shown on the extent of business formation for women and minorities in the construction industry. There were only 1414 women-owned and 1237 minority-owned construction firms in New Jersey in 1982. Blacks and Hispanics accounted for the vast majority of the minority run firms and they had average sales that were twice those of Asian contractors. Nevertheless, these firms tended to be quite small, with average gross receipt of less than \$100,000 for women-owned and \$50,000 for minority-owned firms. It should be noted than both the number and sales of these firms have grown over the past two decades but they still remain fairly small and scarce. These findings clearly indicate that minorities and women are substantially under represented in the pool of entrepreneurs. This is true in the economy as a whole and for the construction industry in particular.



TABLE 2

## MINORITY-OWNED AND WOMEN-OWNED CONSTRUCTION FIRMS IN NEW JERSEY, 1969 TO 1982

YEAR	TOTAL MINORITIES*			WOMEN		
	TOTAL	GROSS RECEIPTS	RECEIPTS PER FIRM	TOTAL	GROSS RECEIPTS	RECEIPTS PER FIRM
1969	756	\$20,415	\$27			
1972	784	\$36,576	\$47			
1977	785	\$25,532	\$33	595	\$72,392	\$122
1982	1237	\$48,862	\$40	1414	\$139,170	\$98
1987				2591	\$1,014,642	\$392
PERCENTAGE CHANGE						
From 1969-1972	3.70%	79.16%	72.76%			
From 1972-1977	0.13%	-30.19%	-30.28%			
From 1977-1982	57.58%	91.38%	21.45%	137.65%	92.24%	-19.10%
From 1982-1987				83.24%	629.07%	297.88%
From 1969-1982	63.63%	139.34%	46.28%			

Source: Survey of Minority-Owned Business Enterprises, U.S. Department of Commerce, Bureau of the Census, 1969, 1972, 1977, 1982.

\*Total Minorities for 1980 is the sum of figures for Blacks, Hispanics, and Asians, American Indians and other minorities.

Receipts are in the thousands of dollars.

The lack of minority firms and their small size seems to have persisted despite the presence of minority set aside provisions in many state and federal construction contracts. These set asides may not have achieved their intended goal of increasing the number women and minority contractors for a number of reasons. A study by the Greater Newark Urban Coalition found, despite explicit language in the law, that minority business enterprises (MBE) often did not get the 10 percent set asides that they were entitled.<sup>5</sup> The study found that in almost a quarter (23 percent) of the construction projects in New Jersey instituted under the 1976 federal Local Public Works Program minorities did not achieve the 10 percent participation goal. Although the average participation rate was 14 percent this was due to high MBE participation on a few projects while there was little or no participation on the majority of projects. Further, the study found evidence of substantial over reporting of participation on some projects and fraud in terms of phantom claims of minority or women-ownership by what were ostensibly white male companies.

As shown in Appendix Tables 1 and 2, expenditures on public housing and public works account for only a small share of total construction spending in New Jersey. Thus, even if participation goals had been met in government contracting it is not clear how much this would have contributed to rectifying the under representation of women and minority contractors. In any case, it remains true that there is substantial under representation of minorities and women in the contractor

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<sup>5</sup>See The Local Public Work's II Minority Participation Program, a report by The Greater Newark Urban Coalition, Newark, NJ, April 1980.

community. Given this, we now turn to an examination of whether this under representation is related to the inability of minorities and women to gain access to construction training and jobs.

TABLE 3

## TRENDS IN TOTAL EMPLOYMENT AND CONSTRUCTION EMPLOYMENT IN NEW JERSEY, 1940 TO 1980

YEAR	TOTAL EMPLOYED			CONSTRUCTION			SHARE		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
1940	1569059	1120137	448922	78387	76994	1384	0.049	0.068	0.003
1950	1961778	1373017	588761	121934	118697	3237	0.062	0.086	0.005
1960	2345496	1582652	762844	129797	125220	4577	0.055	0.079	0.006
1970	2858967	1787048	1071919	153991	145214	8777	0.053	0.081	0.008
1980	3288302	1886108	1402194	154009	142081	11928	0.046	0.075	0.008

Source: U.S. Census of Population, New Jersey, 1940, 1950, 1960, 1970, 1980.

### 3. Minorities and Women in Construction

Table 3 represents data on total and construction employment in New Jersey. Total employment in New Jersey has risen over the last 50 years with female employment growing more rapidly than male employment overall. Within the construction industry total employment has doubled over the post war period. Both males and females have experienced increased employment within construction over this time period and, in fact, each group has seen the share of its total employment that is in construction rise. Nonetheless, the share of total employment accounted for by those in construction has declined slightly from 5 to 4.6 percent.

Despite the growth in female employment in the construction industry, and the fact that women represent about 43 percent of all employees in New Jersey, women still account for only about 7 percent of all construction workers. Further, less than 1 percent of all women are employed in the industry compared to 7.4 percent of males. Thus, construction was and remains an overwhelmingly male industry in New Jersey.

In Table 4 and in Appendix Table 3 data on total and construction employment is broken down by race.<sup>6</sup> Total employment and construction employment for whites and all of the minority groups examined rose in New Jersey over the post war period. The Share of total employment accounted for by the

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<sup>6</sup>Unfortunately the Census did not provide detailed data on other minority groups until recently. Consequently, all minority groups besides blacks are aggregated together in much of the statistical analysis presented in this report.

TABLE 4

## TRENDS IN TOTAL EMPLOYMENT AND CONSTRUCTION EMPLOYMENT IN NEW JERSEY BY RACE AND GENDER, 1940 TO 1980

YEAR	TOTAL EMPLOYED			WHITE TOTAL	MALE	FEMALE	BLACK TOTAL	MALE	FEMALE	OTHER MINORITIES*		
	TOTAL	MALE	FEMALE							TOTAL	MALE	FEMALE
1940	1569059	1120137	448922	1494627	1077833	416974	73207	41667	32040	1225	1137	88
1950	1961778	1373017	588761	1832585	1295776	536809	127266	75686	51580	1927	1555	372
1960	2345496	1582652	762844	1469274	1469274	681795	189125	109948	79177	5302	3430	1872
1970	2858967	1787048	1071919	1632564	1632564	941012	270374	145807	124567	40439	27741	12798
1980	3288302	1886108	1402194	1655400	1655400	1182078	343469	168382	175087	241874	140638	101236

  

YEAR	CONSTRUCTION			WHITE TOTAL	MALE	FEMALE	BLACK TOTAL	MALE	FEMALE	OTHER MINORITIES*		
	TOTAL	MALE	FEMALE							TOTAL	MALE	FEMALE
1940	78378	76994	1384	75210	73857	1353	3158	3127	31	10	10	--
1950	121934	118697	3237	113293	110213	3080	8622	8466	156	19	18	1
1960	129797	125220	4577	119866	115418	4448	9837	9720	117	94	81	12
1970	153991	145214	8777	140926	132548	8378	12643	12277	366	1412	1272	140
1980	154009	142081	11928	141218	130340	10878	10309	9409	900	6932	6509	423

  

YEAR	SHARE			WHITE TOTAL	MALE	FEMALE	BLACK TOTAL	MALE	FEMALE	OTHER MINORITIES*		
	TOTAL	MALE	FEMALE							TOTAL	MALE	FEMALE
1940	0.049	0.068	0.003	0.050	0.068	0.003	0.043	0.075	0.001	0.008	0.008	--
1950	0.062	0.086	0.005	0.061	0.085	0.005	0.067	0.111	0.003	0.009	0.011	0.002
1960	0.055	0.079	0.006	0.055	0.078	0.006	0.052	0.088	0.001	0.017	0.023	0.006
1970	0.053	0.081	0.008	0.054	0.081	0.008	0.046	0.084	0.002	0.034	0.045	0.011
1980	0.046	0.075	0.008	0.049	0.078	0.009	0.030	0.055	0.005	0.028	0.046	0.004

Source: U.S. Census of Population, New Jersey, 1940, 1950, 1960, 1970, 1980.

\*Refers to the groups for the specified years (as listed in the U.S. Census):

1940, 1950, 1960: Other Races; 1970: Puerto Rican birth or parentage;

1980: American Indians, Eskimos and Aleuts; Asians and Pacific Islanders; and Spanish Origin

construction industry declined, however, from 4.3 to 3.0 for black males, but rose for white and other minority males and for white, black, and other minority women. Because female employment grew so rapidly over this period, and because women account for such a small percentage of construction employment, the share of total employment that was in construction fell for both whites and blacks as a whole.

Because of the increase in the number of minority and female workers in construction, it is reasonable to wonder if they are still having problems gaining access to employment in construction. One way to access this is to look at their representation in construction relative to their representation in the work force. In the absence of systematic difference in tastes or desires to be employed in construction, one might expect that all groups would be about as equally well represented in construction as they are in total employment. In Table 5, penetration ratios are calculated to illustrate the relative representation of different groups in the industry. A penetration ratio less than 1 implies a group is under represented while the converse is the case if its greater than 1.

TABLE 5

## TRENDS IN TOTAL EMPLOYMENT AND CONSTRUCTION EMPLOYMENT FOR NEW JERSEY: 1940-1980

## PENETRATION RATIOS

YEAR	TOTAL EMPLOYMENT		WHITE		BLACK		OTHER	OTHER	WOMEN	
	TOTAL	CONSTR.	TOTAL	CONSTR.	TOTAL	CONSTR.	MINS.* TOTAL	MINS.* CONSTR.	TOTAL	CONSTR.
1940	1569059	78378	1494627	75210	73207	3158	1225	10	448922	1384
1950	1961778	121934	1832585	113293	127266	8622	1927	19	588761	3237
1960	2345496	129797	2151069	119866	189125	9837	5302	94	762844	4577
1970	2858967	153991	2573576	140926	270374	12643	40439	1412	1071919	8777
1980	3288302	154009	2837478	141218	343469	10309	241874	6932	1458398	12201

## PENETRATION RATIOS\*\*

YEAR	WHITE	BLACK	OTHER	WOMEN
	TO TOTAL	TO TOTAL	MINS. TO TOTAL	TO TOTAL
1940	1.007	0.86	0.163	0.061
1950	0.994	1.089	0.158	0.088
1960	1.006	0.939	0.320	0.108
1970	1.016	0.868	0.648	0.152
1980	1.062	0.640	0.611	0.178

Source: U.S. Census of Population, New Jersey, 1940, 1950, 1960, 1970, 1980.

\*OTHER MINS. (Minorities) refers to the following groups for the specified years (as listed in the U.S. Census):

1940, 1950, 1960,: Other Races; 1970: Puerto Rican birth or parentage;

1980: American Indians, Eskimos and Aleuts; Asians and Pacific Islanders; and Spanish Origin

\*\*Ratios are computed according to the following example: (black construction/total construction)/(black total/total).



As is the case with women, these results suggest that blacks and minorities were still substantially under represented in construction in 1980. The degree of under representation is greater for other minorities than for blacks, but black's share of construction employment is still almost 40 percent below what one might expect.<sup>7</sup> Interestingly, while other minorities have increased their representation relative to whites in construction since 1950, that is not the case for blacks. Overall, there is strong evidence for a prima facie case suggesting that women and minorities have had a differentially hard time gaining access to construction employment.

Women and minorities appear to have had a particularly difficulty gaining access to the high paying craft jobs in construction. Table 6 illustrates data on the number of laborers and trades people by race and gender group for the construction industry in New Jersey. While 90 percent of white males are in skilled trades, only 72 percent of blacks males and 80 percent of Hispanic males are. Women appear to be more heavily concentrated in the lower paying laborer jobs as only 86 percent of white women and 75 percent of black women are employed in craft trades. Interestingly, the few Hispanic women employed in construction are almost exclusively in craft trades.

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<sup>7</sup>Interestingly, this was not true historically. The relative decline in black employment in construction is the result of the falling usage of unskilled black laborers.

TABLE 6

## CONSTRUCTION EMPLOYMENT TRENDS IN NEW JERSEY: TRADES AND LABORERS

OCCUPATION	TOTAL		WHITE			BLACK			SPANISH ORIGIN		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Total Construction			121530	120280	1250	9507	9219	288	5033	4918	115
Construction trades			108825	107754	1071	8904	6686	218	4034	3923	111
Construction laborers			12705	12526	179	2603	2533	70	999	995	4
Ratio of trades to total			0.895	0.895	0.856	0.726	0.725	0.756	0.801	0.797	0.965
Ratio of laborers to total			0.104	0.104	0.143	0.273	0.274	0.243	0.196	0.202	0.034

Source: U.S. Census, New Jersey, 1980.

Studies by Rowan and Rubin (1974), Northrup (1971), Ozanne (1972), and Marshall (1968) among others have documented the fact that minorities and women have had difficulties gaining access to the skilled trades within the construction industry.<sup>8</sup> This historical pattern is both a national and a New Jersey phenomena. Both southern and northern unions have either explicitly acted to exclude altogether or to segregate women and minorities workers. Plumbers, sheet metal workers, and electricians actively discriminated against blacks or minorities in many regions of the country through their control over occupational licensing boards and apprenticeship programs. Carpenters, painters, bricklayers and others craft unions were less exclusionary but still often relegated minorities to separate locals or to working in the less desirable nonunion residential section of the industry.<sup>9</sup>

To see if this historical legacy still translates into an under representation of minorities and women, data on employment by trade within the construction industry are presented in Table 7. These data illustrate the extent to which minorities and women have had problems gaining employment in construction

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<sup>8</sup>See Richard Rowan and Lester Rubin, Opening the Skilled Construction Trades to Blacks, University of Pennsylvania Press, Philadelphia, Pa., 1972; Herbert Northrup, Organized Labor and the Negro, New York: Kraus Reprint, Ch. 2, 1971; Robert Ozanne, The Negro in the Farm Equipment and Construction Machinery Industry, The Racial Policies of American Industry Series, No. 26, Philadelphia: Industrial Research Unit, The Wharton School, University of Pennsylvania, 1972; and Ray Marshall, "The Negro in Southern Unions," in Julius Jacobson, ed., The Negro and the American Labor Movement, New York: Doubleday & Co., 1968.

<sup>9</sup>See Rowan and Rubin, op. cit.

TABLE 7

## TOTAL AND MINORITY EMPLOYMENT BY FIELD IN CONSTRUCTION IN NEW JERSEY: 1980

OCCUPATION	TOTAL	MALE	FEMALE	WHITE TOTAL	MALE	FEMALE	BLACK TOTAL	MALE	FEMALE	OTHER MINORITIES TOTAL	MALE	FEMALE
Brickmason	6607	6573	34	5718	5697	21	830	817	13	59	59	0
Carpenter	28711	28381	330	27009	26762	247	1264	1181	83	438	438	0
Electrician	17302	17049	253	16386	16191	195	728	675	53	188	183	5
Masons, tile setters, & stone cutters	7611	7557	54	6657	6616	41	895	882	13	59	59	0
Painters, paperhangers, & glaziers	10825	10536	289	9439	9193	246	1066	1046	20	320	297	23
Plumbers and pipe fitters	15748	15676	72	14845	14773	72	785	785	0	118	118	0
Welder												
OCCUPATION	SHARE GENDER	MALE	FEMALE	WHITE TOTAL	MALE	FEMALE	BLACK TOTAL	MALE	FEMALE	OTHER MINORITIES TOTAL	MALE	FEMALE
Brickmason	0.9949	0.0051		0.8654	0.8667	0.6176	0.1256	0.1243	0.3824	0.0089	0.0090	0
Carpenter	0.9885	0.0115		0.9407	0.9430	0.7485	0.0440	0.0418	0.2515	0.0153	0.0154	0
Electrician	0.9654	0.0146		0.9471	0.9497	0.7708	0.0421	0.0396	0.2095	0.0109	0.0107	0.0198
Masons, tile setters, & stone cutters	0.9929	0.0071		0.8747	0.8755	0.7593	0.1176	0.1167	0.2407	0.0078	0.0078	0
Painters, paperhangers, & glaziers	0.9733	0.0267		0.8720	0.8725	0.8512	0.0985	0.0993	0.0692	0.0296	0.0282	0.0796
Plumbers and pipe fitters	0.9954	0.0046		0.9427	0.9424	1.0000	0.0496	0.0501	0	0.0075	0.0075	0
Welder												

Source: U.S. Census, 1980.

NOTE: gender share is total male/total, total female/total; all others are computed according to the following formula: total black/total; total black male/total male; total black female/total female.

trades. The most under represented group is women, as they account for less than 2 percent of the workers in each of the craft occupations examined despite the fact that they represent about a third of all workers in New Jersey. Of the handful of women that are employed in construction, the vast majority are white women. Blacks males account for about 13 percent of the bricklayers but only 4 percent of the electricians and carpenters. Thus, even though the share of construction workers that are black is less than their share of total employment, there are at least some occupations in which they are not substantially under represented. Hispanics and other minorities males on the other hand are only marginally more prevalent than women in the pool of construction workers. Among those other minority groups, as among blacks, women are even more under represented and in fact have absolutely no representation in a number of crafts.

As shown in these data, the problems of under representation are particularly acute in certain skilled trades. A study by the New Jersey Department and Labor found that as late as 1970 there were no black roofers in the Newark Standard Metropolitan Statistical Areas (SMSA), despite that fact that 20 percent of the Newark employment or 11 percent of the construction employment was accounted for by minorities.<sup>10</sup> A report by the New Jersey Division of Civil Rights and Rutgers Law School also found that in 1969, New Jersey blacks represented 1 percent or less

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<sup>10</sup>see Report of the Panel on Equal Employment Opportunities in the Construction Trades in Newark, New Jersey, New Jersey Department of Labor and Industry, Office of Manpower, New Jersey State Employment Service, 1970.

of each of the following skilled trades: electrical, iron and sheet metal, and carpenters.<sup>11</sup> Hispanic workers were .6 of one percent in the aforementioned trades. The Panel on Equal Employment Opportunities in Construction Trades of Newark found that minorities made up less than 2 percent of the workers in the skilled trades they examined.<sup>12</sup> This under representation was just as acute on federal construction contracts despite the fact that Executive Order 11246 outlawed discrimination in hiring and mandated that contractors undertake affirmative action steps to remedy past under utilizations.

Thus, there is a long historical record documenting problems with access to skilled construction jobs in New Jersey for women and minorities. There is also substantial evidence that this lack of representation is at least partially the result of discriminatory policies on the part of building trades unions. In fact, the Equal Employment Opportunity Commission concluded that there exists in the construction industry a pattern of discrimination on the part of unions in recruitment, training, hiring, referral, and access to membership.<sup>13</sup> In numerous legal cases the courts have concluded that unions have used their control of hiring and referrals to discriminate against minorities. For instance in United States v United States Association of Journeymen and Apprentices of Plumbing and Pipefitting Industry of

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<sup>11</sup>See Alfred Blumrosen, James Blair, and Frank Askin, Enforcing Equality in Housing and Employment Through State Civil Rights Laws, Rutgers Law School, 1974, p.307.

<sup>12</sup>See Report of the Panel on Equal Employment Opportunities in the Construction Trades in Newark, 1970, op. cit..

<sup>13</sup>See Blumrosen, Blair, and Askin (1974), op.cit..

U.S. and Canada Local Union No. 24 (D. N.J. 1973), New Jersey locals of plumbers, electricians, ironworkers and operating engineers were charged with discrimination in employment.<sup>14</sup> All but the electricians agreed to consent decrees imposing remedies for past discrimination.

Local 52 of the International Brotherhood of Electrical Workers was found to have no black journeymen prior to 1965. Further, after this date the union was found to have assigned those few black journeymen that it did admit into the union to inferior job classifications. Finally, the Court concluded that the union run apprenticeship program adopted admission criteria that had a disparate adverse impact on minority applicants.

In United States v International Union of Elevator Constructors 1976, the Court held that there was evidence of a pattern and practice of discrimination against blacks.<sup>15</sup> This case involved Local 5 of the union, which represents workers in New Jersey and the Philadelphia area of Pennsylvania. The union was found guilty of discrimination because it refused to refer nonunion members to jobs. Since the only means of becoming a union member in this trade is by first being referred for work by the union as a probationary worker, the control of the hiring hall referral service served to prevent minorities from gaining access to the trade.

In United Building and Construction Trades Council of Camden County v Mayor

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<sup>14</sup>see United States of America v United Association of Journeymen and Apprentices of Plumbing and Pipefitting Industry of United States and Canada, Local Union No. 24, No. 444-71, United States District Court, District of New Jersey, February 16, 1973.

<sup>15</sup>see United States of America v The International Union of Elevator Contractors, Local Union No. 5, No. 75-2134, United States Court of Appeals, Third Circuit, May 6, 1976.

and City Council of Camden 1982 the Courts upheld a 25 percent minority hiring goal for public works contracts with the city because of the stark under representation of women and racial minorities in construction.<sup>16</sup>

Finally, in *Joyce v McCrane* 1970, the Court upheld an affirmative action plan by the State of New Jersey.<sup>17</sup> The State was requiring that construction contractors agree to their affirmative action plan before bidding on the construction of the New Jersey College of Medicine and Dentistry. This plan mandated that contractors employing union members require those unions to pledge to admit minority workers to full membership within a specified period of time. The Court upheld the legality of this affirmative action plan because of "the discriminatory practices of the unions in the past".

Given the fact that in the construction industry employers rely on unions to train and refer workers, these discriminatory actions take on major importance. Because of the reliance on union hiring halls, the actions of construction unions have a direct effect on the supply of labor to the high paying craft jobs in the industry. With unions historically barring the door, coupled with actions of employers left minorities and women with few avenues open to them if they still wished to be employed in the industry. Thus, the under representation of these groups in terms of total employment is not surprising nor is the fact that those who did gain employment

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<sup>16</sup>see *United Building and Construction Trades Council of Camden County and Vicinity v Mayor and Council of the City of Camden and the Department of the Treasury of the State of New Jersey*, Supreme Court of New Jersey, December 15, 1981.

<sup>17</sup>see *John Joyce Inc. v McCrane and Local No.3, Bricklayers, Masons, and Plasterers International Union of America*, 320 F.Supp. 1284, 1970.



disproportionally work in the nonunion residential parts of the industry.

#### **4. The Role of Apprenticeship Programs**

Although the apprenticeship system exists in over 800 hundred occupations, thirty trades account for three-fourths of all apprentices. The construction industry alone enrolls 50 percent of all apprentices.<sup>18</sup> In any discussion of apprenticeship programs in the construction industry, the primary focus will be on union apprenticeship programs. The reason for this is that the craft unions tend to dominate employment relations in construction despite the fact that they actually represent a minority of workers. They have achieved this dominance because contractors tend to be small, divided on craft lines, and have low profit margins which make them very susceptible to work stoppages.<sup>19</sup> Further, because of the casual nature of the work, in which employment last only as long as the job lasts, employers have come to rely on union hiring halls to refer workers for employment. The combination of closed shops and the exclusive use of union hiring halls as a source of workers when interacted with union administration of apprenticeship programs gives construction unions substantial control over the supply of workers to the industry.<sup>20</sup>

The basic federal law establishing apprenticeship policy is the National

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<sup>18</sup>See Apprenticeship for Adulthood, by Stephen Hamilton, The Free Press, New York, 1990.

<sup>19</sup>This discussion borrows heavily from Rowan and Rubin, op. cit..

<sup>20</sup>See Apprenticeship Training in New Jersey, NJ Department of Education and the Department of Labor and Industry, June 1973, p.3.

acquired their training from other methods.<sup>22</sup> These effects are there regardless of whether workers ultimately ends up employed in a union or nonunion jobs. Thus, formal apprenticeships appear to serve as a mechanism for acquiring superior training or access to the better jobs within construction. One way this enhanced access manifests itself is through the fact that under the Davis-Bacon Act only apprentices in registered programs can work on federal construction projects.

Minorities have consistently been under represented in formal apprenticeship programs. According to the 1960 Census only 2.52 percent of apprentices were nonwhite. Further, there were only 62 nonwhite plumber apprentices and 79 electrical apprentices in the whole country. However, since the passage of the Civil Right Act of 1964, the share of minorities in construction apprenticeship programs has risen rapidly so that by 1972 10.5 percent of apprentices were nonwhites in New Jersey. As seen in table 8, there is considerable variability, however, in the share of apprentices that are minorities. In 1990, over half of the roofer and painter apprentices are nonwhite while less than 10 percent of the carpenters, plumbers, and electricians apprentices are nonwhite. Although recent data is not available for Hispanics and other minority groups, they appear to have even lower representations than blacks in most

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<sup>22</sup>See "The Impact of Participation in Apprenticeship", by Robert Cook and K. Lynn Cairnes, Proceedings of 42nd Annual Meetings of the Industrial Relations Research Association, Atlanta, Ga., 1989, 379-386.

TABLE 8

## CONSTRUCTION APPRENTICESHIPS IN NEW JERSEY: 1972 AND 1990

TYPE	1972	1990	1972	1990	1972	1990	SHARE		1972	1990
	TOTAL	TOTAL	WOMEN	WOMEN	MINORITIES	MINORITIES	1972	1990	WOMEN	MINORITIES
Bricklayer	243	243	0	0	5	30	0	0	0.0206	0.1235
Carpenter	945	1647	0	24	73	181	0	0.0146	0.0772	0.0978
Cement Finisher	25		0				0		0.18	
Cement Mason		77		1		4		0.0130		0.0519
Construction Equip Mechanic		36		2		5		0.0556		0.1389
Electrician	1156	1790	0	25	77	162	0	0.0140	0.0665	0.0905
Glazier	23	15	0	0	2	1	0	0	0.0870	0.0667
Insulation Worker		72		0		2		0		0.0278
Ironworker	267		0		31		0		0.1161	
Mason	75		--		6		0		0.08	
Millwright	78	9	0	0	8	2	0	0	0.1053	0.2222
Operating Eng.		94		31		19		0.3296		0.2021
Painter	111	169	0	5	60	73	0	0.0296	0.5405	0.4320
Pipefitter	162	280	0	0	6	26	0	0	0.0370	0.0929
Plumber	779	778	0	4	26	75	0	0.0051	0.0334	0.0964
Roofer	5	151	--	0	3	84	0	0	0.6	0.5563
Sheetmetal Worker	447	442	1	7	12	120	0.0022	0.0158	0.0268	0.2715
Structural Steel Worker		48		0		13		0		0.2706
Welder	2	15	--	0	1	1	0	0	0.5	0.0667

Source: 1972 figures: Apprenticeship Training in New Jersey, pp. 84-86; 1990 figures: data from the federal Bureau of Apprenticeship and Training

craft programs. The representation of women in apprenticeships is universally below that of all other minority groups. Many trades appear to have no female apprentices and only among operating engineers do women account for as much as 6 percent of all apprentices.

The lack of minority and female representation in apprenticeship programs is attributed to a wide range of phenomena. First, tradition or societal conditioning has discouraged minorities, and women in particular, from joining these trades. The importance of socialization or tradition in encouraging workers to become apprentices was illustrated in a study by the BAT which found that 23 percent of former apprentices were apprenticed in the same trade as their fathers.<sup>23</sup> Another 29 percent said their fathers were in another skilled trade. This tendency to follow in Dad's footsteps was strongest in the construction industry where nearly one third of apprentices were in the same trade as their fathers. Whether it is because of parental influences on tastes or that access is enhanced if a relative is already a craft worker, the absence of these role models or mentors is likely to retard efforts to increase minority and female representation in construction.

A second factor explaining the dearth of minority and women apprentices is past hostility to minorities and women in these trades. Consequently, these groups are unlikely to feel welcome to apply for apprenticeship positions even if current union

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<sup>23</sup>See "Career Patterns of Former Apprentices" by John Schuster in Occupational Outlook Quarterly, vol.3, May 1959.

members are more receptive to them than previous members.<sup>24</sup> Whether attitudes toward minorities males have changed is open to debate but there is ample evidence of continuing sexual harassment in construction of women. The end result of this is to inhibit female applicants to apprenticeship programs in these fields.<sup>25</sup>

Thirdly, many apprenticeship programs require interviews and or a recommendation from a current union member. These subjective admission criteria are thought to have a disparate impact on admissions for minorities. Finally, some unions administer standardized tests which historically have hurt minority applicants.<sup>26</sup>

The evidence clearly suggest that access to training and apprenticeship programs has been denied either actively or through neutral practices that have a disparate impact on minorities. Some of the literature on enhancing minority and female access to apprenticeship program suggest that these "neutral" practices are currently more important than overt discrimination. To overcome these passive barriers, the Department of Labor has found it necessary to adopt variants of the "Philadelphia Plan" approach in which explicit targets and standards are set for the

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<sup>24</sup>See Research in Apprenticeship Training, Center for Studies of Vocational and Technical Education, University of Wisconsin, 1967.

<sup>25</sup>see Sylvia Law, "Girl's Can't be Plumber's--Affirmative Action for Women in Construction: Beyond Goals and Quotas", Harvard Law Journal, no. 24, vol. 45, Winter 1989.

<sup>26</sup> Research studies found that the Workers Defense League in New York had great success getting more minorities into construction programs through the use of a careful tutoring program. In fact, they succeeded in raising minority scores on these standardized tests to the point where minorities had higher pass rates than for whites.

hiring of minorities.<sup>27</sup> If these goals are not being met through union referrals, then contractors are obligated to go around the union hiring hall to insure adequate representation. This "Philadelphia Plan" type approach was used in Chicago, Newark, New York, Indianapolis and other cities in the 1970's when it became obvious that voluntary guidelines had little impact.

In summary, it would appear that there was a pervasive pattern of exclusion of women and minorities from employment and apprenticeship programs in construction. This finding is apparent in the statistical data we have discussed and was recognized by the courts and federal, state, and local governments when they mandated affirmative action guidelines to rectify the problems.

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<sup>27</sup>See Blumrosen, Blair, and Askin (1974), op. cit..

## **5. Apprenticeship and Becoming a Contractor**

The systematic exclusion of women and minorities from apprenticeship programs has precluded them from gaining access to high paying union jobs and to the superior training embodied in them. The question then arises as to whether failure to gain access to these programs also made it less likely that women and minorities subsequently became contractors.

Since not all apprentices become contractors and not all contractors were apprentices, it is difficult to prove that discrimination in apprenticeship programs is directly responsible for the lack of minority and women contractors. There are, however, a number of ways that failure to become an apprentice could hamper a workers ability to become a contractor. First, in New Jersey plumbers and electricians are required to be licensed. In order to gain this license a worker without a college degree must have graduated from an accredited technical school or been an apprentice and have practical experience in the field. Thus, unless one goes to college, serving an apprenticeship becomes a prime way, or in some cases the only way, to garner the necessary experience to become a licensed contractor.

For electricians and plumbers there appears to be an explicit link between apprenticeship and the ability of a worker to become a contractor. For other trades the link is less direct but perhaps no less real. Since access to apprenticeships is generally necessary in order to become a union member, workers who can not serve an apprenticeship are unlikely to receive any experience in the commercial, road, and



government sponsored types of construction dominated by unions. As seen in Appendix tables 1 and 2, commercial construction accounts for about 50 percent of the total expenditures on construction in New Jersey. Without access to this part of the market, women and minorities are relegated to the lower paying, less profitable nonunion housing construction sector. This in turn constrains the range of experiences or projects that they will have undertaken making them less likely to ultimately become successful entrepreneurs.

To my knowledge, there have not been any studies that have tried to empirically examine whether apprenticeships leads to a greater incidence of becoming a contractor by enhancing the range of experiences, knowledge, contacts, and perhaps credit worthiness that a worker obtains. The survey which is being undertaken as one of the tasks of this project will gather data on the prior history and experience of construction contractors and could be of value in establishing more concretely the potential link between apprenticeship experience and subsequent contractor status. This survey should provide the needed longitudinal data to trace out the work histories of those who ultimately became contractors in New Jersey.

There is, however, some evidence indicating that a great many apprentices follow a career path which includes promotion to supervisor and ultimately becoming a contractor. A survey conducted by the BAT found that two-thirds of those who finished their apprenticeships in 1950 were working as journeymen six years later, but 19 percent had already become supervisors and 8 percent were self-employed as

contractors.<sup>28</sup> In construction, they found that 15 percent of those finishing apprenticeship training had become contractors within this relatively short time frame.<sup>29</sup> Since older workers are even more likely to become self-employed than those just six years out of apprenticeship training, it seems likely that an even greater percentage of these apprentices ultimately became contractors. Although this survey was based on nationwide data, there is no reason to believe that contractors in New Jersey deviate significantly from this pattern. Thus, there appears to be some form of link between apprenticeship and eventual contractor status.

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<sup>28</sup>See "Career Patterns of Former Apprentices" by John Schuster in Occupational Outlook Quarterly, vol.3, May 1959.

<sup>29</sup>See Ples McIntyre, "The Effects of Discrimination in Apprenticeship Programs on the Employability of Negro Youth: An Atlanta Study", unpublished MBA thesis, Atlanta University, May 1967.

## **6. Other Barriers to Contractor Status**

Although access to apprenticeship programs is likely to be important, it is not the only nor necessarily the most important impediment to the success of minority and women contractors. The inability to obtain bonding and surety is often cited as a prime reason for the dearth of minority construction contractors.<sup>30</sup> Financing constraints are likely to be particularly important for minority contractors because, as we have found, minority contractors tend to be small and undercapitalized. Obtaining bonding is crucial for contractors who want to do major government or commercial projects. Failure to gain access to credit can lock minority and women contractors out of large segments of the market. For instance, a survey by the Associated Minority Contractors of America found that 24 minority contractors were forced to give up between \$64 and \$99 million of federal contracts because of their inability to get bonding.<sup>31</sup>

Surety firms offer construction bonds for three purposes: bid, performance, and payment. Bid bonds cover the 10 percent earnest money downpayment required to bid on most big jobs. Performance bonds cover the developer or investor in case the firm can not complete its work. Payment bonds insure suppliers that they will be paid. The developer pays the bond premiums as part of the job cost but requires the bonding or surety firm to certify that the contractor can do the work by looking at the

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<sup>30</sup>See "Black Contractors' Dilemma", by Reginald Stuart, Race Relations Information Center, Nashville, Tenn, August 1971, 5-23.

<sup>31</sup>See Roy Betts, "Construction in the 1980's", Hispanic Business, September 1980, p.8.

contractors performance, record, experience, equipment, and financial status. Bonding is required for about 1/3 of all construction activity but almost all major competitively bid projects require it. In public works construction bonding is always required while it is necessary for 20 percent of private work. Often surety companies require that minority contractors have at least 10 percent of the bond value in cash on their balance sheet. Because these type of bonding requirements have a disparate adverse impact on minority contractors, the FHA and HUD adopted guidelines to let unbonded firms bid on jobs of less than \$500,000 in value. Despite this, access to credit and lending remains an important constraint for both women and minority contractors.

Not only do financing constraints affect the ability of minority businesses to compete for major projects, they also affect the likelihood that they exist to begin with. Most studies of entrepreneurship have found that access to credit is an important determinant of success. As seen in table 9 average household income is substantially lower for minorities and women than for white males. Mean black household earnings in New Jersey are about 70 percent of white mean household income. American Indians and Hispanic mean household earnings are also lower than white households, although Asian households have higher average household earnings.

TABLE 9

HOUSEHOLD EARNINGS, SELF-EMPLOYMENT INCOME AND WEALTH EARNING  
NEW JERSEY, 1979

	Households	Mean Earnings	HH with Self-Emp Income	Mean Self Emp Income	HH with Assets Income	Mean Assets Income
White	2175101	24982	191818	15623	1154879	2979
English	136146	24519	11717	14384	75106	4379
French	13331	22618	1087	12943	6223	3075
German	188354	23868	15217	14524	107837	3559
Irish	177867	24570	11475	16771	87767	2526
Italian	340608	23330	33018	15285	167451	2521
Polish	128585	23464	10070	16111	71046	2635
Black	294514	17060	9209	10343	39373	1499
American Indian Eskimo, & Aleut	3445	17982	193	8291	779	1138
American Indian	3397	17936	187	8204	755	1128
Eskimo	35	23463	--	--	17	1496
Aleut	13	19702	6	11005	7	1360
Asian and Pacific Islander	30518	28984	3015	19296	16027	1445
Japanese	3031	29281	195	12447	1453	1607
Chinese	6820	28926	715	12379	4387	1844
Fillipino	6384	31103	486	25200	2778	1075
Korean	2841	26364	629	19384	1113	1571
Asian Indian	9516	29517	894	21850	5718	1301
Vietnamese	607	16744	11	9485	155	939
Hawaiian	279	18829	7	10005	48	2209
Guamanian	31	28314	--	--	14	1464
Samoan	18	25422	--	--	--	--
Other	991	25163	78	35273	361	810
Spanish Origin	2550290	23963	205697	15397	1216295	2903
Mexican	3460	21098	220	17346	905	2560
Puerto Rican	66778	14634	1648	8965	7635	1829
Cuban	28428	20058	2465	11602	8211	1477
Other Spanish	44279	19151	2435	15303	10425	2013

The disparities in household wealth are even greater than those in income or earnings. These differences may be more important than income differences because household assets often serve as important sources of collateral for new businesses. A recent nationwide study found that married black households have average incomes that are 75 percent of their white counterparts but they have only 23 percent of the assets.<sup>32</sup> This is consistent with data from New Jersey where blacks are about half as likely to own their own homes and they have about half as much equity in the homes as whites. As seen in table 10, the lack of housing equity relative to whites poses a problem for all minority groups except Asians. Since second mortgages are a potentially important source of credit, this again means that minorities are less likely to be able to form successful businesses.

Of course these wealth and income differences will have both short and long term effects on the relative incidence of minority contractors. Long run effects arise because of intergenerational transfers which allow wealthier white households to pass along their assets to their children enhancing the likelihood that the next generation will be able to start and run a business. The potential importance of these transfers is fairly obvious since one of the most important assets that can be bequeathed is an existing contracting business. Nationwide over 32 percent of nonminority male construction firms owners had a close relative who owned a business while only 16

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<sup>32</sup>See Francine Blau and John Graham, "Black-White Differences in Wealth and Asset Composition", Quarterly Journal of Economics, vol. 105, no. 4, May 1990, 321-340.

TABLE 10

## Housing Prices and Home Ownership, New Jersey, 1980

	Occupied Housing Units	Persons Per Occupied Housing Units	Percent Owner- Occupied	Median Housing Value
White (Non-Hispanic)	2079300	2.76	68.2	61700
Black (Non-Hispanic)	287733	3.08	36.1	37300
American Indian	2756	3.1	49.3	42900
Eskimo	30	2.37	46.7	43300
Aleut	21	2.9	33.3	77500
Japanese	2979	2.93	33.3	71600
Chinese	6767	3.37	67.8	88100
Fillipino	6266	3.72	53.9	68600
Korean	2754	3.79	47.1	88300
Asian Indian	8811	3.42	48	80800
Vietnamese	556	4.12	21.9	51300
Hawaiian	261	2.55	42.9	37700
Guamanian	59	2.81	32.2	51300
Samoan	21	2.24	47.6	70000
Other	56018	3.5	23.1	40300
Spanish Origin	142330	3.38	27.3	50300
Mexican	3563	3.05	39.8	52400
Puerto Rican	67049	3.56	22.5	39200
Cuban	27569	3	30.8	57400
Other Spanish	44149	3.35	31.3	59800

percent of the black and 23 percent of the Hispanic owners did.<sup>33</sup> Having a preexisting business provides a ready avenue to gain experience and expertise which ultimately increases the likelihood of success for subsequent generations. Advantages achieved by previous generations will thus be perpetuated to a certain degree via inheritance.

Educational differences between whites and minorities may also have contributed to the differential incidence of business formation among older cohorts of workers. Since high school diplomas were often required to enter various skilled construction trades, the lower average schooling levels for minorities placed them at a disadvantage. As seen in table 11, however, median education levels are now the same for blacks and whites. It should be noted that while the lower incidence of high school graduation may have contributed historically to black/white and Hispanic/white differences in business formation, it can not explain the observed differences from women or Asians. These groups had the same or higher educational achievement as white males but still have lower incidence of business formation.

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<sup>33</sup>Interestingly, 41 percent of the women owners of construction firms had a close relative who owned a business in 1982. This suggests that intergenerational transfer have added importance in helping women overcome the cultural and other barriers they face in entering the construction industry.



TABLE 11

NEW JERSEY EDUCATION: MEDIAN YEARS COMPLETED

YEAR	WHITE	BLACK	TOTAL MALE	FEMALE
1940	8.6	7.3	8.6	8.6
1950	9.5	8.1	9.3	9.3
1960	10.8	8.8	10.6	10.7
1970	12.1	10.5	12.7	12.6
1980	12.5	12.5		

Source: U.S. Census

Although overall educational levels are the same for males and females, there are differences in the types of courses taken. A recent nationwide study found that women high school graduates were less likely to take math (algebra and geometry) and industrial arts courses.<sup>34</sup> A study in Wisconsin found that 98.5 percent of the enrollees in high school industrial arts were male in 1973.<sup>35</sup> There is no reason to believe that women accounted for an appreciably higher fraction of enrollees in these programs in New Jersey.

Women were found to be far more likely to take business courses which would leave them less well prepared for craft type work. These differences in the types of course of study for male and female high school student are the result of many factors. There may well be differences in the desires of men and women for jobs with the types of attributes found in the construction industry. Nonetheless, it is clear that socialization and the lack of societal encouragement (if not outright discouragement) plays a crucial role in inhibiting women from acquiring the training and background needed to be employed in these trades.

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<sup>34</sup>see "Sex-Based Differences in School Content and the Male/Female Wage Gap", by Charles Brown and Mary Corcoran, unpublished memo, University of Michigan, June 1991.

<sup>35</sup>see Women in Apprenticeship- Why Not?, by Norma Briggs, Manpower Research Monograph No. 33, U.S. Department of Labor, U.S. Government Printing Office, Washington, D.C., 1974.

Finally, there are regulatory obstacles that minority contractors indicate have had a disparate adverse affect on them. For instance, the National Association of Minority Contractors takes the view that the Davis-Bacon Act has had a large adverse impact on minority contractors. The Act serves to raise their labor and administrative costs and restrict their ability to offer employment to less skilled minority workers by requiring that they pay the union scale.<sup>36</sup> Since small business are generally at a disadvantage when dealing with complex regulatory environments, the notion that this law has an adverse impact on minority and women contractors seems plausible. The magnitude of the effect, however, is as yet unproven.

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<sup>36</sup>See "Davis-Bacon Act Hurts Minority Contractors", Minority Business Enterprise, September/October 1986.

# APPENDIX TABLE 1

## NUMBER AND ESTIMATED CONSTRUCTION COSTS OF AUTHORIZED DWELLING UNITS BY TYPE NEW JERSEY: 1972-1989

YEAR	DWELLING UNITS AUTHORIZED		COST OF RESIDENTIAL CONSTRUCTION	
	TOTAL	PUBLIC	TOTAL (\$000'S)	PUBLIC (\$000'S)
1972	64979	597	1062430	11362
1973	52743	458	1030506	7008
1974	26171	509	588291	11349
1975	23313	250	574101	4139
1976	31355	838	832433	20582
1977	34920	711	998931	17043
1978	38756	1044	1262831	27557
1979	34868	780	1274353	23557
1980	22257	547	1010084	20890
1981	21293	523	1022130	23710
1982	21404	203	1003694	9231
1983	36791	499	1837655	21293
1984	43925	464	2274406	0

APPENDIX TABLE 2

NONRESIDENTIAL CONSTRUCTION BY TYPE  
NEW JERSEY: 1988 & 1989.

	1988		1989	
	Number of Buildings	Estimated Cost (\$000's)	Number of Buildings	Estimated Cost (\$000's)
Amusement, Soical & Recreational	119	38703	135	23361
Chruches & Other Religous	56	24673	44	61788
Industrial	320	154773	225	149162
Parking Garages	22	19151	34	60232
Service Stations	76	12842	89	15746
Hospitals & Institutional	39	101894	25	87433
Offices, Banks & Professional	586	517517	492	665801
Public Works & Utilities	109	60261	147	125577
Schools & Educational	85	122343	78	79756
Stores & Customer Services	775	310399	662	347237
Other Nonresidential Buildings	3328	102604	3143	121481
Structures Other Than Buildings	6766	100955	5697	63169
TOTAL	12281	1566116	10771	1800743

Source: New Jersey Building Permits, 1989 Summary New Jersey Dept. of Labor, Annual July 1990 (P).

# APPENDIX TABLE 3

## TRENDS IN TOTAL EMPLOYMENT AND CONSTRUCTION EMPLOYMENT IN NEW JERSEY BY RACE AND GENDER, 1970 TO 1980

YEAR	PUERTO RICAN			AMERICAN INDIAN*			ASIAN*		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
1970	40439	27741	12698						
1980				4402	2459	1943	49474	28347	21127

YEAR	PUERTO RICAN			AMERICAN INDIAN*			ASIAN**		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
1970	1412	1272	140						
1980				246	225	21	997	928	69

YEAR	PUERTO RICAN			AMERICAN INDIAN*			ASIAN**		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
1970	0.034	0.045	0.011						
1980				0.055	0.091	0.010	0.020	0.032	0.003

Source: U.S. Census of Population, New Jersey, 1940, 1950, 1960, 1970, 1980.

\*Also includes Eskimos and Aleuts

\*\*Also includes Pacific Islanders

## BIBLIOGRAPHY

- (1) Bétts, Roy, "Construction in the 1980's", Hispanic Business, September 1980, p.8.

This article contains a discussion of the construction industry in the 1980's. The focus is on problems of minorities in construction. As part of this, a survey by the Associated Minority Contractors of America is discussed. The survey reported that the inability to get bonding has resulted in a number of minority contractors having to eschew business they had won under competitive bid.

- (2) Blau, Francine and John Graham, "Black-White Differences in Wealth and Asset Composition", Quarterly Journal of Economics, vol. 105, no. 421, May 1990, 321-340.

This article contains an analysis of the level and composition of black and white household assets in 1986. They find that the level of black household wealth is substantially lower than that for white and that this is true even for household with similar income. In addition, the composition of assets differ by race with blacks holding more of their assets in checking and savings accounts and less in stock and other high yield assets.

- (3) Blumrosen, Alfred, Blair, James and Frank Askin, Enforcing Equality in Housing and Employment Through State Civil Rights Laws, Rutgers Law School, 1974.

This report contains a discussion of discrimination in the building trades and housing in New Jersey. The authors discuss the development of a national plan or approach for rectifying discrimination in the construction industry. Evidence on under representation in construction apprenticeships and employment is tied to recommendations for the nature of affirmative action goals. In addition to statistical evidence on discrimination, the article contains court case histories and actual testimony from state officials on affirmative action programs.

(4) Cook, Robert and K. Lynn Cairnes, "The Impact of Participation in Apprenticeship", Proceedings of 42nd Annual Meetings of the Industrial Relations Research Association, Atlanta, Ga., 1989, 379-386.

This study uses data from the National Longitudinal Survey in 1972 to estimate the effect of apprenticeship on earnings and employment. These results are compared to those on the impact of vocational and academic instruction programs. The authors find substantial returns to participation in these apprenticeship programs and conclude that those lucky enough to enter these programs enjoy economic rents. They find that women and minorities would reap especially large returns from being included in the pool of apprentices.



(5) Department of Labor, Occupational Outlook Handbook, Government Printing Office, Washington, D.C., April 1988.

The Handbook contains a detailed description of 225 occupations. It provides information on the nature of work, working conditions, earnings, and employment prospects in these occupations. The training or entrance requirements, in terms of education or apprenticeships, are also discussed.

(6) Greater Newark Urban Coalition, The Local Public Work's II Minority Participation Program, a report, Newark, NJ, April 1980.

This report contains an analysis of Local Public Works construction programs in Newark New Jersey in 1977. The report focuses on whether these projects succeeded in achieving the mandated 10% minority set aside for each grant. The report concludes that these goals were generally not reached and that the government needs to actively develop mechanisms to identify potential minority contractors.

(7) Hamilton, Stephen, Apprenticeship for Adulthood, The Free Press, New York, 1990.

This book looks at how youth are provided with the skills needed for success in the labor market if they do not go onto college. It looks in depth at the American

apprenticeship system and contrasts it to the system present in other countries like Germany. In addition, the history and current state of the vocational school system is analyzed.

(8) Kelley, Charles, Apprenticeship Training in New Jersey, New Jersey Department of Education and Department of Labor and Industry, June 1973.

This report provides an analysis of apprenticeship training programs in the state of New Jersey. It discusses both union and nonunion training programs and minority involvement in those programs. It provides both a general historical overview of apprenticeships and a review of the state of apprenticeships in New Jersey. Finally, a survey is undertaken of the characteristics of apprentices and their views on apprenticeship programs.

(9) Kovarsky, Irving, "The Negro, Apprentice Training Programs, and Testing", in Research in Apprenticeship Training, Center for Studies of Vocational and Technical Education, University of Wisconsin, 1967, p. 180-190.

This article looks at the tensions that arise between the desire to provide access to skilled trades for minorities and laws which allow testing as an admission requirement for apprenticeship programs. The author argues that given the past history of discrimination and exclusion in the skilled trades, that racially neutral testing policies

will not be sufficient to insure access. In addition, the author feels that the use of interviews and other admissions policies that are on the surface race neutral have a disparate impact on minorities given their inferior educational background.

(10) Marshall, Ray and Vernon Briggs, Equal Apprenticeship Opportunities, Institute of Industrial Relations, University of Michigan, 1968.

This article looks at black participation in apprenticeship training programs. They focus attention on the experience in New York City of the Worker Defense League Apprenticeship program. Under this program potential minority applicants to apprenticeship programs had to undergo an extensive screening process and were given tutoring on the skills needed to pass the admission tests for many of the skilled trades. It was found that this program was so successful that it created a situation in which minorities were more successful than whites on the union admission tests.

(11) McIntyre, Ples, "The Effects of Discrimination in Apprenticeship Programs on the Employability of Negro Youth: An Atlanta Study", unpublished MBA thesis, Atlanta University, May 1967.

This Master's thesis contains an analysis of the history and evolution of apprenticeship programs in the city of Atlanta. The author looks at the future role of apprenticeships in our society given the increased need for skilled workers. He also

examines the extent to which discrimination has served to exclude minorities from apprenticeship programs. The author concludes that discrimination has served to directly excluded blacks from unions and hence apprenticeship programs. He further, states that this exclusion deprives black youths of role models and hence makes them less likely to aspire to working in these craft occupations even after discrimination has diminished.

(12) Meyer, Bruce, "Why Are There So Few Black Entrepreneurs?", National Bureau Economic Research, working paper no. 3537, Cambridge, Dec. 1990.

This article provides an econometric analysis of why black and white rates of entrepreneurship vary. The focus is particularly on testing whether it is the absence of financing or liquidity constraints that inhibit black entrepreneurship. They find that blacks do not appear to be any more likely to form businesses in industries with low capital requirements than in those with high requirements. Thus, the lack of assets does not appear to explain the relatively low rate of black business formation.

(13) Rowan, Richard and Lester Rubin, Opening the Skilled Construction Trades to Blacks, University of Pennsylvania Press, Philadelphia, Pa., 1972.

This book provides a study of the Washington and Indianapolis Plans for minority employment in the construction industry. It contains an overview of the history of

blacks in the various construction trades. In addition, special attention is paid to the history and evolution of the state of the industry in Washington and Indianapolis. The structure and record of the affirmative action plans of those cities are also discussed.

(14) Report of the Panel on Equal Employment Opportunities in the Construction Trades in Newark, New Jersey, 1970.

This report contains a summary of the evidence gathered during hearings in Newark New Jersey on the implementation of Executive Order 11246. The hearings were held in 1970 and look at the nature of employment practices on federally funded construction projects. They document a failure on the part of construction unions to admit, refer, or provide apprenticeship training to minorities. It documents this discrimination both statistically and through reference to court cases and administrative decisions where there was a question about the presence or extent of discriminatory behavior.

(15) Shuster, John, "Career Patterns of Former Apprentices", Occupational Outlook Quarterly, vol.3, May 1959.

This article traces the career patterns of apprentices. The analysis is based on a survey of those apprentices who completed their training in 1950. It shows that a substantial portion of them remain in their trades and also advance to become

supervisors and contractors. The article has information on the attitudes of these former apprentices toward their training programs as well as some demographic information on their backgrounds.

(16) Stuart, Reginald, "Black Contractors' Dilemma", Race Relations Information Center, Nashville, Tenn, August 1971, 5-23.

This article looks at the barriers that minority contractors face from banks, bonding firms, other contractors, and from unions. The analysis is based on interviews of contractors, government officials, and surety company agents. The article contains a detailed discussion of the nature of surety contracts and the barriers that the inability to acquire insurance pose for blacks.

(17) Thomas, Ralph, "Davis-Bacon Act Hurts Minority Contractors", Minority Business Enterprise, September/October 1986.

This article discusses the impact of the Davis-Bacon Act on minority contractors. The author is the Executive Director of the National Association of Minority Contractors. He argues that the Davis-Bacon Act tends to reduce the employment of minority laborers and have an adverse impact on minority contractors because they are disproportionately nonunion contractors. The effect on contractors is the result of prevailing wage aspects of the law and because the extra administrative burdens

placed on firms wanting to comply with the law's requirements.