

DOCUMENT RESUME

ED 297 351

UD 026 275

AUTHOR Patrick, D. C.  
 TITLE The Value of Human Capital Formation: The Perspective of Rural Minority Students.  
 INSTITUTION Cooperative State Research Service (DOA), Washington, D.C.; South Carolina State Coll., Orangeburg.  
 PUB DATE 4 Feb 88  
 NOTE 32p.; Paper presented at the Annual Meeting of the Southern Association of Agricultural Scientists (85th, New Orleans, LA, February 1-4, 1988).  
 PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.  
 DESCRIPTORS Career Choice; \*College Graduates; \*Educational Attainment; \*Education Work Relationship; \*High School Graduates; \*Income; Labor Market; Predictor Variables; Racial Differences; \*Rural Population; Rural Urban Differences  
 IDENTIFIERS South Carolina State College

ABSTRACT

Project Human Capital is a five-year research project designed to examine the impact of the college experience on the upward mobility of rural South Carolina State College students. A total of 5,916 freshmen, seniors, and graduates from three institutions of higher learning were surveyed; some 2,999 students responded for an overall response rate of 51 percent. Among the findings were the following: (1) there is a clear advantage to higher education, especially for youths of low to middle income; (2) white college graduates have a higher income level than do black graduates; (3) college graduates, both black and white, do better in the job market than do high school graduates; (4) the labor market is comprised of 88 percent of all college graduates and 76 percent of all high school graduates; (5) managerial positions are held by 69 percent of college graduates and 13 percent of high school graduates; (6) college graduates have an average of \$300,000 more in career earnings than high school graduates; (7) in career earnings, white college graduates maintain an average pay of about \$2,000 to \$3,000 more than their black counterparts; (8) white graduates tend to marry earlier and choose occupational areas that lead to careers in business and technology while black graduates tend to marry later and choose more service oriented careers. Data are presented on 11 tables and figures. A list of references is included. (BJV)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

6-20-88

ED297051

THE VALUE OF HUMAN CAPITAL FORMATION:  
THE PERSPECTIVE OF RURAL MINORITY STUDENTS



PRESENTED BY  
DR. D. C. PATRICK

IN COOPERATIVE WITH THE  
COOPERATIVE STATE RESEARCH SERVICE  
U. S. DEPARTMENT OF AGRICULTURE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

*D. C. Patrick*  
*S. C. State College*

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SOUTH CAROLINA STATE COLLEGE  
ORANGEBURG, SOUTH CAROLINA

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PRESENTED AT THE 85TH ANNUAL SOUTHERN ASSOCIATION  
OF AGRICULTURAL SCIENTISTS MEETING, FEBRUARY 1 - 4, 1988,  
NEW ORLEANS, LOUISIANA

UD026275

## ABSTRACT

This study is a derivative of a similar follow-up study that researched the socio-economic status of low income students at South Carolina State College. The aim of that study was to determine if there is any relationship between the socio-economic level of the students' parents and the students' social adjustment, academic adjustment, health needs and standardized test performance.

Project Human Capital is a five-year research project designed to examine the impact economically of the college experience of South Carolina State College Students. In accordance with the objectives, the project focuses on three aspects of college education: 1) the economic benefits, 2) projected earnings in comparison to comparable white students at similar colleges, and 3) projected economic gains in comparison to high school graduates.

The project annually surveyed samples of freshmen, seniors and graduates (six months or more after graduation). The researchers investigated such areas as reasons for attending college, career expectations, and job satisfaction.

Additionally, the project sought to examine the monetary rate of return that an individual expected to realize from the time and efforts the students invested in college. Considered were such factors as cost of education, lost income while in school, increase in income due to higher education, and expected income at retirement age. The result showed a two to three thousand dollar difference in black and white salaries upon graduation with a difference of sixty to a little over a quarter million dollars in difference of life time earnings. The disparity in findings depended on the projection model used. An additional comparison was made with high school graduates and their earnings.

## INTRODUCTION

Simple models of investment in higher education suggest that an individual will choose to attend college if the expected net return from college attendance is greater than the return from time spent by the individual in other ways (Manski & Wise 1983). While a number of observers argue strongly that the American educational system perpetuates and reinforces existing social inequalities (Bowles, 1972, Rothbart, 1970), it is still the case that educational attainment is the single best predictor of adult occupational success (Sewell & Hauser, 1975).

The proposed study had two main goals. First, it examined the factors that prompt rural, low-income minority students to go to college. Second, it examined if these students eventually achieve their educational and occupational aspirations in spite of several problems they have to confront after graduation.

South Carolina State College is a predominantly black college with a total enrollment of approximately 6,000 students and is located in Orangeburg, South Carolina. Sixty percent of these students are females and 40 percent are males. Almost 80 percent of the subjects are from low income small town/rural areas.

### LITERATURE REVIEW

The project, "Human Capital," identified some of the similarities and differences between urban and small-town/rural college students before and after entrance into an institution of higher learning.

In view of the educational handicap of rural Americans and the uncertainty about the fate of rural students in college, surprisingly few studies have attempted to contrast university performance and pre-university characteristics of rural and urban college students or to identify the special problems faced by the rural student in a large university. King (1973) found that rural students entered college with lower potential than did urban students, but had similar levels of academic success (measured by grades, drop out rates, and graduation rates).

This study only demonstrated how we proposed to proceed from the known to the unknown, but also how firm our grasp of the field and awareness of recent developments were. Thus, a complete picture of the background of this research is assembled step by step.

In 1970, rural and small-town Americans, or persons living outside of the 247 standard metropolitan statistical areas in the United States comprised 31.4 percent of the U. S. population. These nearly 64 million Americans were characterized, among other things, by a lower level of educational achievement. The median number of years of education for metropolitan Americans age 25 and above was 12.2; for small-town Americans, the median was 11.4. Almost one-fourth (23.5%) of metropolitan Americans age 25 and above had continued their education beyond high school, compared

with only one-sixth (16.7%) of the small-town Americans (U. S. Bureau of the Census, 1971).

In lieu of the above, a better understanding of the educational and vocational goals of South Carolina's youth was needed. Information was also needed about factors that might possibly be related to the level of aspirations which young people have (Powell, 1970). Such factors may be the parents' aspirations and attitude and the variables of sex, socioeconomic status (SES), rural or urban background, family size, and race.

Researchers have found that parents strongly influence the occupational preferences of their children. Educational and vocational goals of boys differ from those of girls, but recent research indicate fewer sex differences in plans to attend college than formerly proposed. However, Girls more often preferred those vocations ascribed by tradition as being feminine.

A direct relationship has been found between Socioeconomic Status (SES), educational and vocational aspirations of youth. Similarly, researchers have found that larger percentages of higher than lower SES youth plan and do continue their formal education. Urban youth generally have shown higher educational and vocational aspirations than rural youths. Yet, rural youths' aspirations have become more and more similar to those held by urban youth.

Most of the studies of youths' aspirations in which family size has been a controlled variable were in agreement that the smaller the size of the family the higher were the youths' aspirations. There were indications that youth from small families valued education more than youths from large families; but, regarding actual educational and vocational plans, family size was not an influencing factor. (Southern Cooperative series, 1976).

### OBJECTIVES

This study examined the following objectives:

1. To estimate the value of higher education from the perspective of low-income rural minority students. This was an ex ante analysis different from the ex post analysis of most economists. An attempt was made to provide comparative analysis with white students of comparable background.
2. To identify, describe and categorize the variables that influence the decision of low-income minority families to invest in college education, and to examine the effects of unrealized career expectations of rural minority graduates and their parents.
3. To develop empirical data on the characteristics and patterns of employment and unemployment among recent graduates from poverty background.

### DEMOGRAPHIC CHARACTERISTICS

The demographic characteristics of this study were used as a general basis to establish comparable and relative characteristics of four small colleges (South Carolina State College, Lander College, Francis Marion College, and Winthrop College) of students of similar urban and rural backgrounds in South Carolina.

South Carolina State College located in Orangeburg, (Orangeburg County, population-82,276, residence-27,823 urban and 54,453 rural and 35,775 whites and 46,082 blacks), South Carolina, forty miles east of the state capital at Columbia-has a physical plant of 150 acres of land. The total value of land, buildings and equipment is \$61,210,172.00. The enrollment is 5,214 students. Camp Daniels in Elloree, South Carolina is comprised of 286 acres of land which is not included in the total amount of land owned by South Carolina State College.

During the years from 1983-86 our project (Project Human Capital) surveyed a total of 1,661 freshmen with a 56.5% participation, a total of 385 seniors with a 30% participation, and a total of 316 graduates with a 70% participation. In surveying a combine total of 2,362 students and graduates (1983-86), we had an over-all participation rate of 51% at South Carolina State College.

During the year 1985-86, Francis Marion, Lander, and Winthrop Colleges participated in our survey. Francis Marion College located in Florence (Florence County, population-110,163, residence-61,287 urban and 48,876 rural and 68,508 whites and 41,306 blacks), South Carolina off interstate

I-95 North, received a total 350 questionnaires (234 freshmen and 116 graduates), and returned a total of 321 (209 freshmen and 112 graduates) questionnaires. We had a 92% participation by Francis Marion College which has an enrollment of 3,232 students.

Lander College located in Greenwood (Greenwood County, population -57,847, residence-25,352 urban and 32,495 rural and 40,904 whites and 16,704 blacks), South Carolina participated also. Lander received 300 questionnaires (125 freshmen, 100 graduates, and 75 seniors), and returned a total of 226 (91 freshmen, 73 graduates, and 62 seniors) questionnaires. We had a 75% participation by Lander College which has an enrollment of 2,281 students.

Lastly, we surveyed Winthrop College located in Rock Hill (York County, population-106,720, residence-63,230 urban and 43,490 rural and 81,418 whites and 23,755 blacks), South Carolina just off-of Interstate 77. Winthrop received a total of 219 questionnaires (140 freshmen and 79 seniors), and returned a total of 90 (45 freshmen and 45 seniors) questionnaires. We received a 41% participation by Winthrop College which has an enrollment of 5,055 students.

In working with the three (3) institutions (Francis Marion College, Lander College, and Winthrop College), the project sent out a total of 869 questionnaires and received a total of 637 questionnaires back for an over all response rate of 73%. The characteristics of the institutions involved were surprisingly consistent, considering the geographical location and background of the students surveyed. Only in the comparison of household income did a difference arise between black and white college graduates.

## METHOD

### Participants

The population used in this study came from the three institutions of higher learning in the State of South Carolina. South Carolina State College, the institution from which this study was devised, was the largest contributor of respondents. There were 1,915 freshmen, 492 seniors, and 710 graduates making a total number of 3,208. The other participants were institutions in the state of similar size and student body composition with the exception of being majority white institutions. In each case the participants were required to be classified as freshmen, graduating seniors or graduates of their particular institutions. There were 331 respondents from Francis Marion College, 226 respondents from Lander College, and 90 from Winthrop College. The total of these participants amount to @ 20%.

These four institutions were chosen primarily because of their locations and the student population that they serve. For instance, South Carolina State College is located in the largest town in Orangeburg county where the population is @ 56% black and total about 20,000 people. The other schools are majority white and their perspective town and county makeup reflect similar ratios in reverse. Additionally, the urban versus the rural population in these counties are quite similar. The urban population ranges from 35% to 59% and the rural population ranges from 41% to 65%. The total sample used consisted of 4,497 students. All were distributed questionnaires.

## Instruments

The instrument used in this study consisted of questionnaires containing some demographic items, career oriented questions and some rank order items. The questionnaires used were modified to 1) accommodate the background and career aspirations of freshmen entering college, 2) examine the orientation and employment preparation of graduating seniors, and 3) evaluate the services rendered to previous graduates in three main areas standard of living academic preparation, and job satisfaction.

There are 28 items in the freshmen questionnaire, 16 items in the graduating seniors' questionnaire, and 28 items in the graduates' questionnaire. In the freshmen survey questions or items relate to high school preparation in terms of GPA, SAT score, and academic rank in high school graduating class. Some items examined highest academic degree expected to achieve as well as the level of education of parents and their perceived aspirations for their children. Persons for attending college was the last group of items in the freshmen survey. The items in the graduating senior survey center around plans after graduation, employment status (looking or have already found), and opinion of services rendered by the institution. The graduate survey items examine three areas 1) general information relating to family income, present employment status, college curriculum and present employment; 2) academic preparation in terms of whether the college prepared the graduates for their jobs; 3) the job satisfaction area seeks to examine the overall satisfaction with current employment.

The questionnaires were developed for usage in this study by the original principal investigator, Dr. Yaw Badu. They were later modified to encompass comparable rural white students at similar size institutions with majority white enrollments. The modifications were made to specify

the institutions of the respondents and to discard possible references of race.

### Procedure

The participants were mailed a packet containing a cover letter from either the student affairs or academic affairs offices of their institutions depending on which office gave the principal investigator permission to survey the students. At the originating institution a letter from the president of the institution accompanied the packet that the participants received. Also included in the packet was the questionnaire and self addressed stamped envelope. After four weeks, if necessary a second packet was mailed to all nonrespondents. In some instances, the surveys were mailed from the student affairs offices of the perspective campuses and returned there. There was overall response rate of 51%. There were 5,916 surveys mailed and some 2,999 students responded. Fifty-seven percent of the freshmen surveyed responded, 30% of the seniors responded and 70% of the graduates responded.

The coding was done primarily in the questionnaire development stage with blue, green and yellow indicating student classifications (yellow for freshmen, green for seniors and blue for graduates).

### Data Analysis

The data were examined in the following ways: descriptive statistics were used to categorize certain data, a Pearson Product Moment Correlation was used to establish certain correlations and an Anova was used to determine the differences between groups.

## RESULTS

### Initial Investigation of Achievement

This study examined urban/rural differences in achievement among college freshmen at South Carolina State College in Orangeburg, South Carolina. Ethnic differences were removed from the urban/rural distribution by restricting the sample to minority students. Income was included as a second factor in the analysis by dividing the sample into two income groups based on the median reported income.

The students who participated in the survey were from a predominantly black four-year college. Questionnaires were administered during freshman seminar classes; there were 21 sections and 760 freshmen. Five hundred ninety students completed the questionnaire, a 77% return rate. One hundred fifty-two of these questionnaires could not be used; 58 out-of-state students were deleted from the sample to conform to the target population of South Carolina minority college students, and 94 questionnaires were deleted due to incomplete reporting of type of residence or parental income. The Office of Admissions and Records provided the SAT scores and grade point averages.

Table 1 presents the number and percent of respondents from rural and urban backgrounds as well as from low income and high income families. The sample is 80% rural, 20% urban and 50% low income, 50% high income, reflecting the general population of the area. The chi-square of 5.33 with one degree of freedom is significant at the .05 level indicating that urban/rural background and income are related. Most of the respondents

from rural areas are from low income families; most of the urban students are from high income families. This relationship is strong enough to require including income in examining urban/rural differences, whether through matching, covarying, blocking, or as in this case, including income as a second main effect in order also to examine interactions.

Table 1  
Frequency of Freshmen by Income and Location

	Rural		Urban		Total	
	N	%	N	%	N	%
Low Income	184	42	34	8	218	50
High Income	166	38	54	12	220	50
Total	350	80	88	20	438	100

$$\chi^2 = 5.33$$

$$p < .05$$

N represents the actual count within each cell.

% represents the approximate percent of the grand total.

Differences in SAT Verbal scores, SAT Math scores, high school grades, and first semester college grades were examined using two-way analysis of variance. The income main effect was significant ( $p < .05$ ) for both SAT Verbal and SAT Math scores with high income students having higher scores than low income students. There is no difference in either high school or college grades between the two income categories.

The urban/rural location main effect was significant ( $p < .005$ ) for SAT Verbal scores and high school and college grades. Rural students have lower SAT Verbal scores than urban students. However, rural students have

higher grade point averages in both high school and college. Examination of the means indicated that rural students complete their first semester of college with grade point averages nearly two-tenths of a point (on a four-point scale) higher than urban students.

### SUMMARY OF FINDINGS

In Table 2 and Figure 1, the earnings information is presented to show the differences in earnings of high school and college graduates. A college graduate nationally stands to earn better than a quarter of a million dollars more during a thirty-year working life. This information is based on an average annual increase of \$942 for the high school graduate and \$1,279 average increase for college graduates. These findings are based on the U. S. Census and S. C. State Labor statistics.

### The Census Projection Model

Based on National averages in inflation, cost of living increases and the nature of the economy, this model originates from the U. S. Bureau of Census. It utilizes the average earnings per capita in 1980 and categorizes income into high school graduates and college graduates. This model comprises all income categories of high school and college graduates throughout the U. S. It does not assume anything other than the expectation that the sample used is representative of the entire population. This model uses a base income for each category and uses as basis for increases, the cost of living percentages averaged over a five- to ten-year period. This mean percentage rate is then used to project the entire working life of the population being examined.

The results of this model are seen in Table 3 and Figure 2. The model suggests that there will be consistent disparity of about two thousand dollars throughout the working life of white and black college graduates in comparable positions.

Table 2  
Projected Salaries of High School and College Graduates

Year	High School Graduate	College Graduate
1983	8,232	
1984	9,174	
1985	10,116	
1986	11,058	
1987	12,000 *	19,000 *
1988	12,942	20,279
1989	13,884	21,558
1990	14,826	22,837
1991	15,768	24,116
1992	16,704	25,395
1993	17,646	26,674
1994	18,588	27,953
1995	19,530	29,232
1996	20,472	30,511
1997	21,414	31,790
1998	22,356	33,069
1999	23,298	34,348
2000	24,240	35,627
2001	25,182	36,906
2002	26,124	38,185
2003	27,066	39,464
2004	28,008	40,743
2005	28,950	42,022
2006	29,892	43,301
2007	30,834	44,580
2008	31,776	45,580
2009	32,718	47,138
2010	33,660	48,417
2011	34,602	49,696
2012	35,544	50,975
2013	36,486	52,254
2014	37,428	53,533
2015	38,370	54,812
2016	39,312	56,091

\*Year graduating college was used as the base year with high school earnings projected backward four years.

High School Total	797,988
College Total	1,112,296
Difference	314,308

Figure 1

Graph of Projected Salaries of High School  
and College Graduates

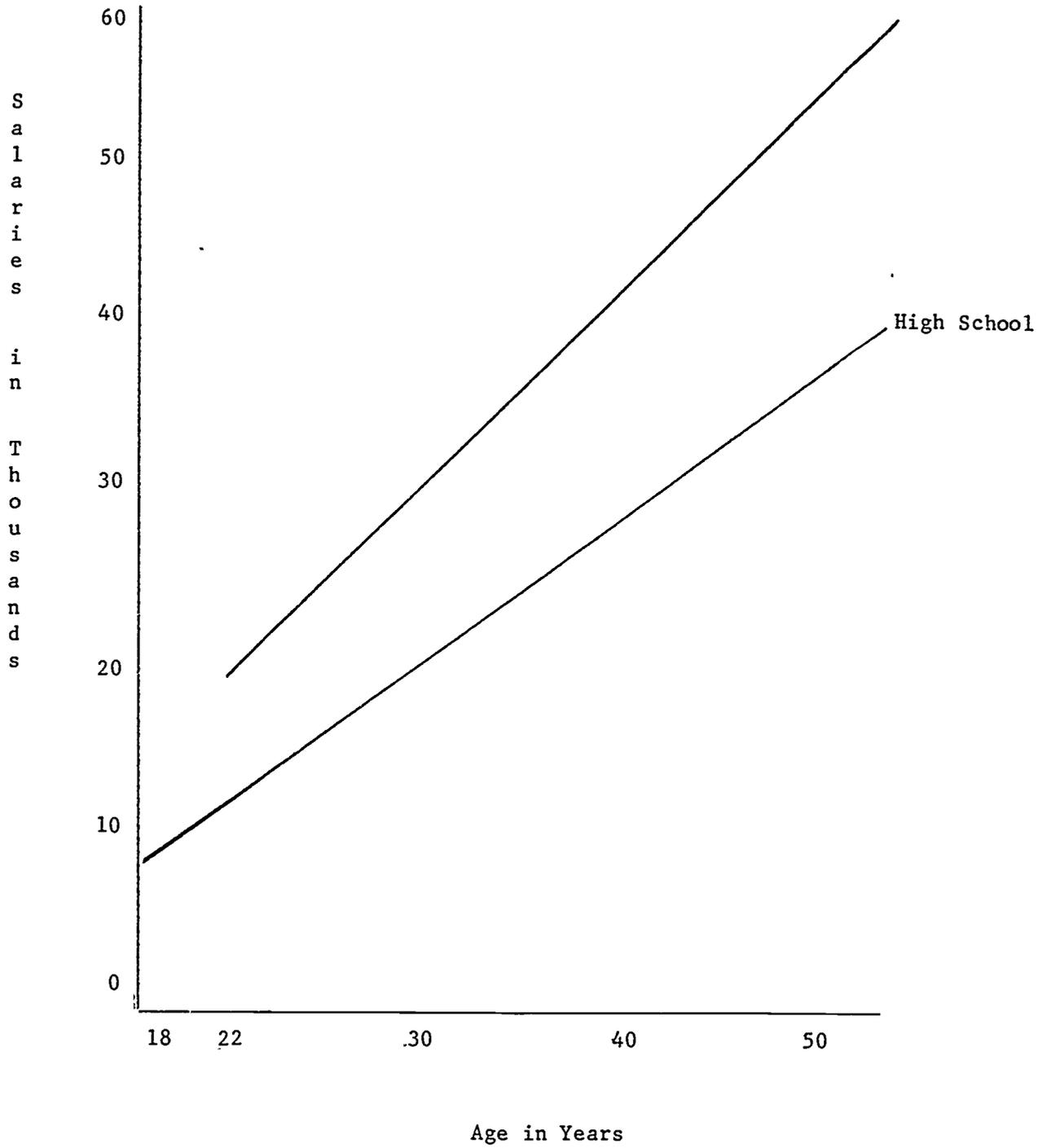


Table 3  
 Projected Salaires of Black and White  
 College Graduates in South Carolina  
 Based on U. S. Census Data

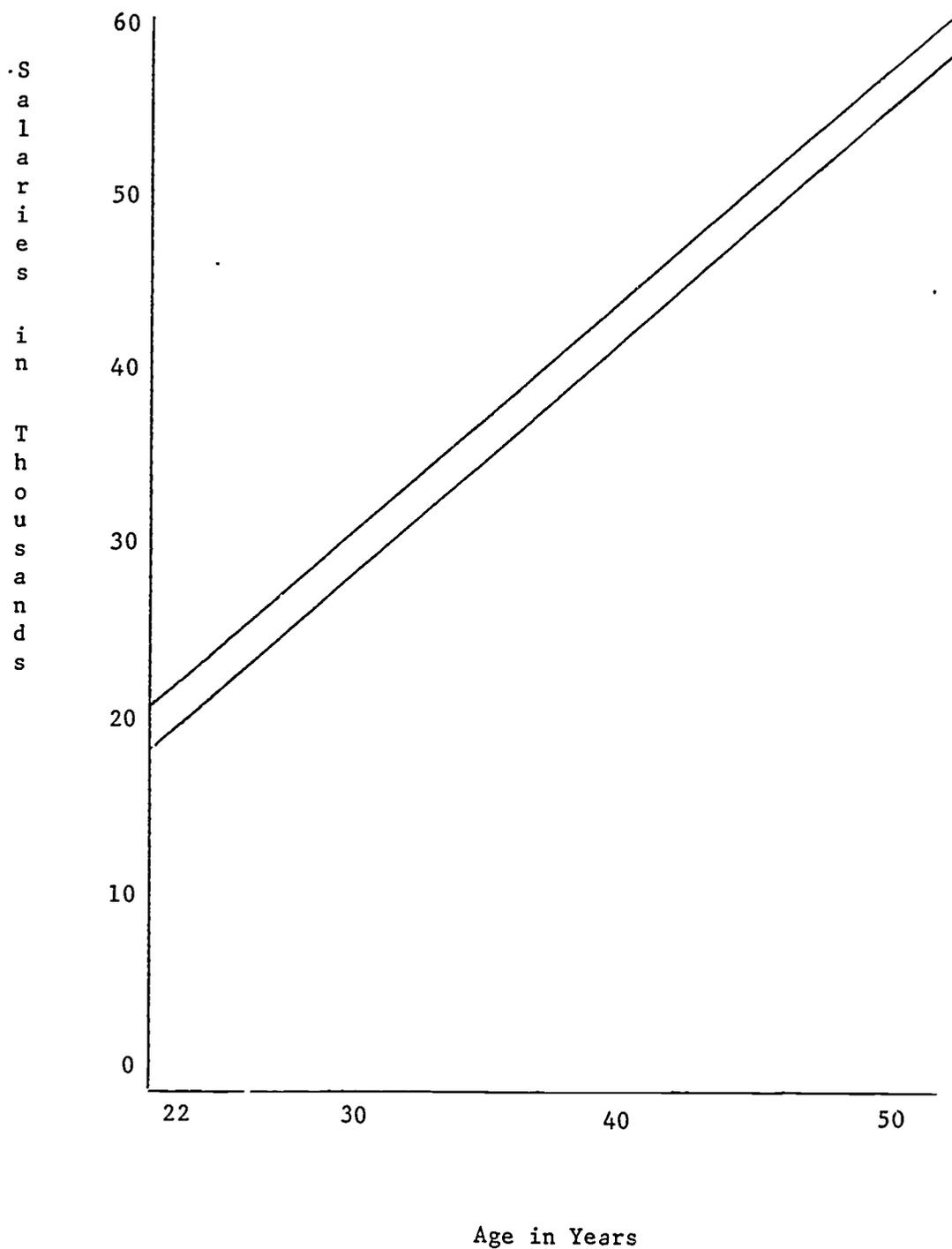
Year	Black Graduates	White Graduates
1987	18,000	20,000
1988	19,279	21,279
1989	20,558	22,558
1990	21,837	23,837
1991	23,116	25,116
1992	24,395	26,395
1993	25,674	27,674
1994	26,953	28,953
1995	28,232	30,232
1996	29,511	31,511
1997	30,790	32,790
1998	32,069	34,069
1999	33,348	35,348
2000	34,627	36,627
2001	35,906	37,906
2002	37,185	39,185
2003	38,464	40,464
2004	39,743	41,743
2005	41,022	43,022
2006	42,301	44,301
2007	43,580	45,580
2008	44,859	46,859
2009	46,138	48,138
2010	47,417	49,417
2011	48,696	50,696
2012	49,975	51,975
2013	51,254	53,254
2014	52,533	54,533
2015	53,812	55,812
2016	55,091	57,091

\* Year graduating college was used as the base year with high school earnings projected backward four years.

Black Graduate Total	1,082,296
White Graduate Total	1,142,296
Difference	60,000

Figure 2

Graph of Projected Salaries of Black and White College Graduates



### The Percentage Raise Model

Using the base rates for recent graduates from South Carolina public institutions, the salaries are projected forward for the expected thirty-year working life of the graduates. The Percentage Raise Model assumes that all graduates will receive raises at the rate of the national average over the past fifteen years as a percentage of their salaries. This model indicates that, given the initially lower salaries of black graduates, blacks will continually fall behind their white counterparts as raises are based on a percentage of perpetually lower salaries.

The results of such a model are seen in Table 4 and Figure 3. Over the years the salaries grow quite large and may seem unrealistic, however, this model is the likely result of a period of sustained inflation. As a result, the salaries in real, or adjusted, dollars would be reduced by the inflation rate.

### The Absolute Raise Model

This model was based on the assumption that there is no reason to believe that over the career lifetime raises will not be equal for black and white graduates. The model projects the national average annual raise in actual dollars for the thirty-year working life. The result of this model is that black graduates will always earn less than their white counterparts by an even dollar amount, which becomes less and less in terms of a percentage of their total salary.

The results are seen in Table 5 and Figure 4. This model leaves the black graduate always behind but by a steady dollar amount. This model might seem reasonable for employees of the same company who started at different salary levels and never changed jobs.

Table 4

Projected Salaries of Black and White  
College Graduates in South Carolina:  
The Percentage Raise Model

Year	Black Graduates	White Graduates
1987	**17,203	20,361
1988	17,891	21,175
1989	18,607	22,022
1990	19,351	22,903
1991	20,125	23,819
1992	20,930	24,772
1993	21,767	25,763
1994	22,637	26,794
1995	23,542	27,866
1996	24,483	28,981
1997	25,462	30,140
1998	26,480	31,346
1999	27,539	32,600
2000	28,640	33,904
2001	29,786	35,260
2002	30,977	36,670
2003	32,216	38,137
2004	33,505	39,662
2005	34,845	41,248
2006	36,239	42,898
2007	37,689	44,614
2008	39,197	46,399
2009	40,765	48,255
2010	42,396	50,185
2011	44,092	52,192
2012	45,856	54,280
2013	47,690	56,451
2014	49,598	58,709
2015	51,582	61,057
2016	53,645	63,499

Black Graduate Total	964,915
White Graduate Total	1,141,962
Difference	177,047

\*Based on S. C. Labor Department Statistics (4% increases)  
\*\*Average salary based on survey data

Figure 3

Graph: Projected Salaries of Black and White College Graduates: The Percentage Raise Model

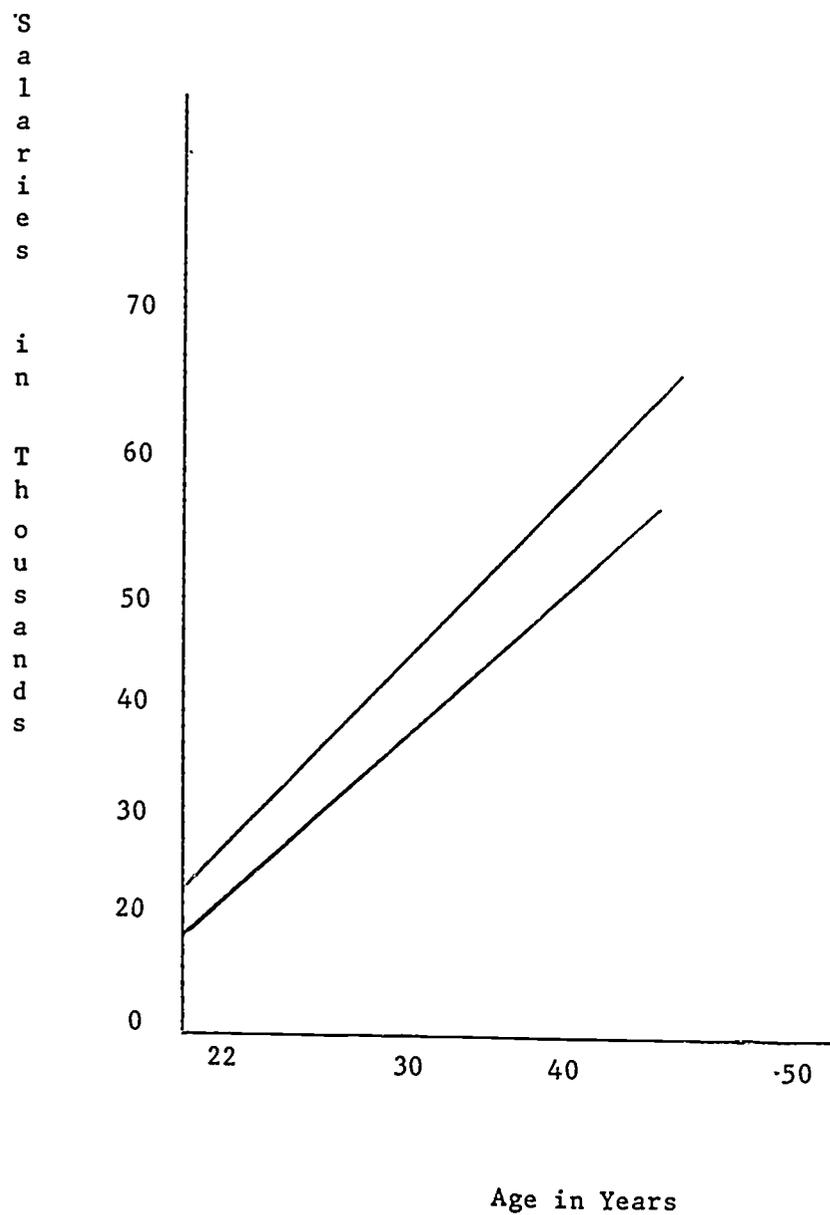


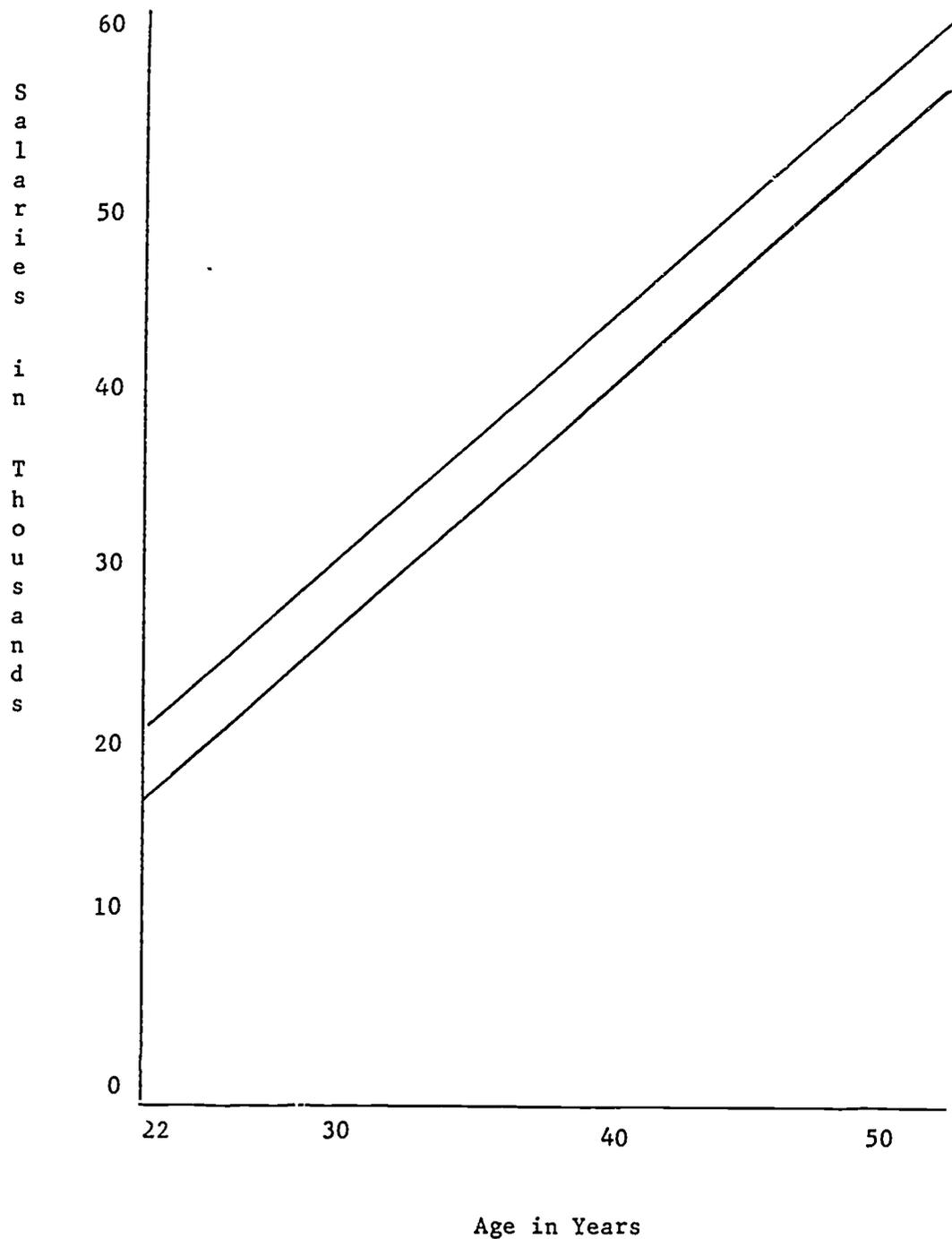
Table 5

Projected Salaries of Black and White  
College Graduates in South Carolina:  
The Absolute Raise Model

Year	Black Graduates	White Graduates
1987	17,203	20,361
1988	18,482	21,640
1989	19,761	22,919
1990	21,040	24,198
1991	22,319	25,477
1992	23,598	26,756
1993	24,877	28,035
1994	26,156	29,314
1995	27,435	30,593
1996	28,714	31,872
1997	29,993	33,151
1998	31,272	34,430
1999	32,551	35,709
2000	33,830	36,988
2001	35,109	38,267
2002	36,388	39,546
2003	37,667	40,825
2004	38,946	42,104
2005	40,225	43,383
2006	41,504	44,662
2007	42,783	45,941
2008	44,062	47,220
2009	45,341	48,499
2010	46,620	49,778
2011	47,899	51,057
2012	49,178	52,336
2013	50,457	53,615
2014	51,736	54,894
2015	53,015	56,173
2016	54,294	57,452
Black Graduates Total	1,072,455	
White Graduates Total	1,167,195	
Difference	94,740	

Figure 4

Graph of Projected Salaries of Black and White College Graduates: The Absolute Raise Model



### The Career Model

This model takes the realistic view that, while black graduates may earn less in their first job after graduation, they will catch up to their white counterparts within the first five years as they find career jobs to replace their initial jobs. Most college graduates change jobs several times in their careers, particularly during the first five years. This model assumes that as people change jobs, their new salaries are less a function of their previous salary and more a function of their degree and experience. The result of this model is that black and white salaries are equal after five years, differing only slightly in the first five years, and that at a decreasing rate.

The results of the career model may be seen in Table 6 and Figure 5. It is clear that this model results in virtually identical lifetime incomes for black and white graduates. This is likely true of graduates who embark on a career goal. This does not, however, address the overall differences remaining in unemployment rates and the percentage getting advanced degrees between black and white graduates.

### Limitations

The data analysis on income had to take into account some unfortunate limitations in scale. First, household income was collected rather than individual income. This was offset by halving the household income when it was indicated that the graduate was working, married, and their income was high under the assumption that such characteristics indicated two working adults. This may on occasion be an incorrect assumption and also indicates that the recent graduates earn as much as their spouses who may have been in the workplace for several years. Second, income was reported only in \$5,000 ranges instead of the actual income. While the midpoint of each

Table 6

Projected Salaries of Black and White  
College Graduates in South Carolina:  
The Career Model

Year	Black Graduates	White Graduates
1987	17,203	20,361
1988	19,114	21,640
1989	21,025	22,919
1990	22,936	24,198
1991	24,847	25,477
1992	26,756	26,756
1993	28,035	28,035
1994	29,314	29,314
1995	30,593	30,593
1996	31,872	31,872
1997	33,151	33,151
1998	34,430	34,430
1999	35,709	35,709
2000	36,988	36,988
2001	38,267	38,267
2002	39,546	39,546
2003	40,825	40,825
2004	42,104	42,104
2005	43,383	43,383
2006	44,662	44,662
2007	45,941	45,941
2008	47,220	47,220
2009	48,499	48,499
2010	49,778	49,778
2011	51,057	51,057
2012	52,336	52,336
2013	53,615	53,615
2014	54,894	54,894
2015	56,173	56,173
2016	57,452	57,452

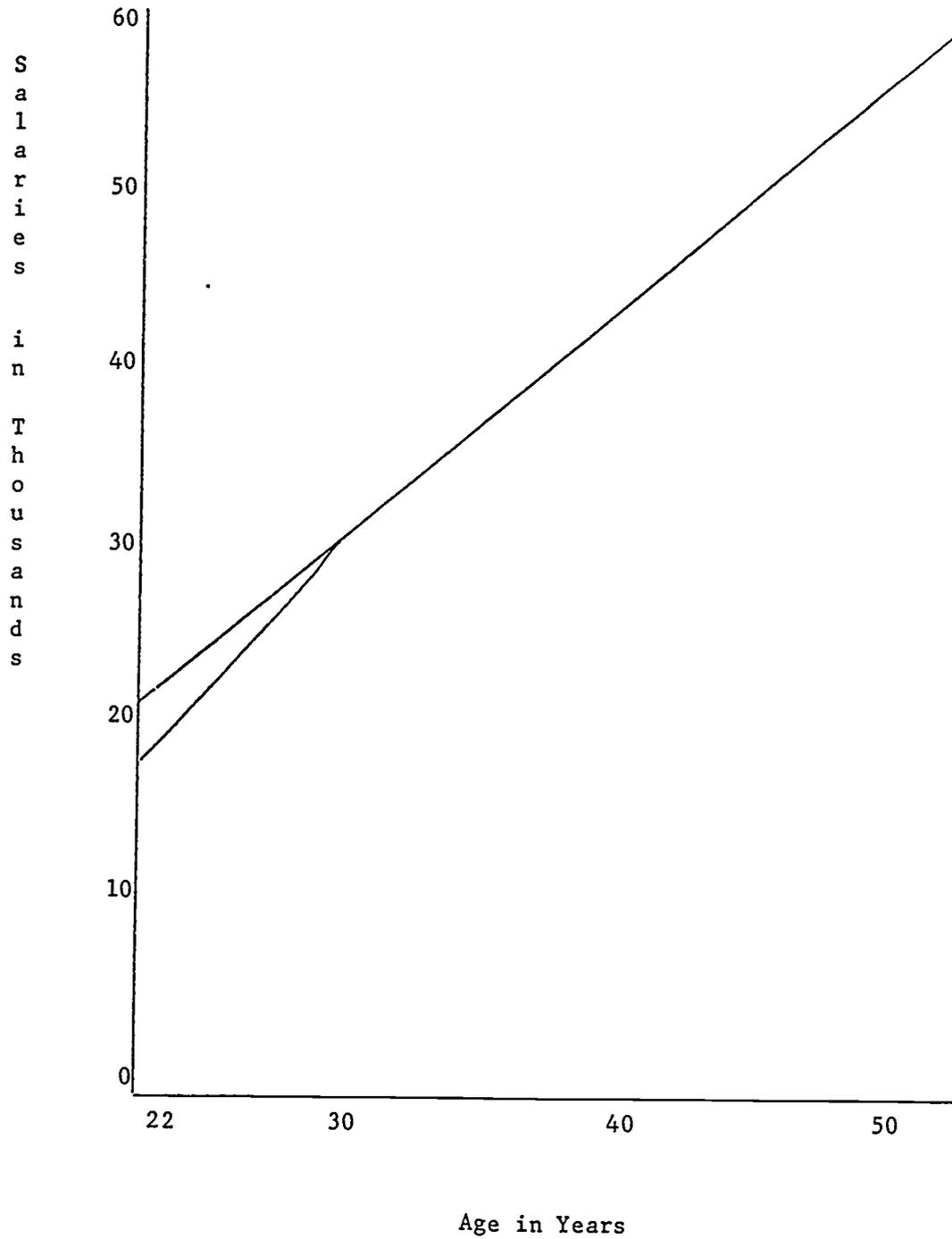
Black Graduates Total 1,157,725

White Graduates Total 1,167,195

Difference 9,470

Figure 5

Graph of Projected Salaries of Black and White College Graduates: The Career Model



range could be used (and was examined) this would seem to create unreasonable spread in the results. According to personnel officials, the lower the salary range the higher the individual is likely to be within the range, and conversely, the higher the range the lower the individual is likely to be within the range. With this in mind, the figure to represent each range was graduated from the top of the lowest range up to the bottom of the highest range. This compromise seems adequate if somewhat inaccurate. Some responses had to be deleted from the income analysis. Graduates who were not working or were in graduate school were deleted, some respondents declined to complete the income question and were deleted, as well as some questionable data. The resulting sample was composed of 64 black graduates and 72 white graduates. The black graduates reported an average income of \$17,203 with a standard deviation of \$2,999 and the white graduates reported a mean income of \$20,361 with a standard deviation of \$5,462. These figures are in line with the estimates used in Table 2, although some explanations for the slightly greater spread are discussed in the limitations section. These figures were used as the basis for the projections in Tables 4, 5, and 6.

### Discussion

Project Human Capital was originated as a research project to examine the socioeconomic status of rural minority students as it relates to their upward mobility upon graduation. In essence, the research sought to examine the impact of higher education on career earnings. Additionally, a comparison was made between minority and white students of comparable backgrounds.

The intent of this comparison was to show and identify what progress if any that had been made in the years since integration and to determine the nature of the difference in earnings between the two groups.

The colleges used (Lander, Winthrop, Francis Marion and South Carolina State College) were quite homogenous in their Liberal Arts orientation and training curricula. In the employment arena, white college graduates have a higher level of income than black college graduates. College graduates, both black and white, do better in the job market than high school graduates. Eighty-eight percent of college graduates are currently in the labor market to seventy-six percent of high school graduates. In 1986, sixty-nine percent of college graduates held managerial and professional positions to thirteen percent of high school graduates. College graduates earn an average of about three hundred thousand dollars more in career earnings.

Therefore, there is a clear advantage to higher education, especially for youths of low to middle income backgrounds. In career earnings, white college graduates still maintain an average pay of about two to three thousand dollars more than their black contemporaries. Yet, there seems to be variables aside from the usual race inferences. This study identified variables such as college major, geographic location, and willingness to move from familiar territory as being more prominent in the black college graduates' considerations. Additionally, white graduates on a whole seemed to marry earlier and chose occupational areas that led to careers in business and technology while black graduates married less at an early age and chose more service oriented careers.

This study, while an initial investigation of this type, has derived a tremendous amount of interest and ideas for further research. State agencies such as the Labor Bureaus, Employment Commission, State Department of Education and the Bureau of Research and Statistics are all interested in participating in future research in this area. Therefore, it is recommended that when all the interested and participating agencies have

digested the research to this point, that a collaborative effort be employed to build on the findings of this study in a meaningful and usable way.

## REFERENCES

- Bachman, J. G. (1967). Youth in transition. Ann Arbor, MI: University of Michigan Press.
- Bachman, J. G. (1971). Dropping out--problem of symptom? Ann Arbor, MI: University of Michigan Press.
- Blau, P. M. and Duncan, O. D. (1967). The american occupational structure. New York: Wiley Press.
- Bowles, S. (1972). Getting nowhere: programmed classroom stagnation. Society, IX, 42-49.
- Bowles, S. (1972). Unequal education and the reproduction of social division of labor. In M. Carnoy (Ed.), Schooling in a contemporary society. New York: McKay Press.
- Carter, C. and Laritt, D. P. (1972). The Northern Ireland problem: essays in honour of G.L.S. Shackle. Oxford: Blackwell Press.
- Coleman, J. S. (1966). Race relations and social change. Baltimore: Johns Hopkins University Press.
- Coleman, J. S. (1968). The concept of educational opportunity. Harvard Educational review, 38 (1).
- Curwood, S. (1986, May 25). Renaissance of black college. The State Newspaper, pp. 1-B, 10-B.
- Gordon, M. S. (1972). Higher education and the labor market. New York: McGraw-Hill Book Co.
- Hout, M. (1983). Occupational mobility-sociological research. Beverly Hills: Sage Publications.
- Johnson, J., Ansig, G. and Sedlacek, W. E. (1986, October 6). SAT-r.i.p. The Times and Democrat Newspaper, p. 3B.
- Kaldor, N. (1960). Value and distribution-collected economic essays. Glencoe, IL: Holmes and Meier Publishers.
- Kaldor, N. (1960). Economic stability and growth-collected economic essays. Glencoe, IL: Free Press.
- Kerckhoff, A. C. (1972). Socialization and social class. Englewood Cliffs, N. J.: Prentice-Hall.

- Kerckhoff, A. C. (1974). Ambition and attainment: a study of four samples of american boys. Englewood Cliffs, N. J.: Prentice-Hall.
- King, R. A. (1973, February 25). The crisis in higher education: facing reduction and financial. The Chronicle of Higher Education. XXIII (14).
- Manski, A. J. and Wise, A. E. (1983). Rich schools, poor schools: the promise of equal education opportunity. Chicago: University of Chicago Press.
- Parelius, A. P., & Parelius, R. J. (1978). The Sociology of Education, Englewood Cliffs, N. J.: Prentice-Hall.
- Peterson, M. W. (1978). Black students on white campuses: the impacts of increased black enrollment. Ann Arbor, MI: University of Michigan Press.
- Powell, K. S. (1970, November). Educational and vocational goals of urban white and Negro youth in South Carolina. Rock Hill, South Carolina: Winthrop College.
- Rothbart, G. S. (1970). The Legitimation of inequality: Objectives scholarship vs. black militance. Sociology of education, 43, 159-174.
- Sewell, W. H. and Hauser, R. M. (1975). Education, occupation and earnings: achievement in the early career. New York: Academic Press.
- Southern Cooperative Series (1976, September). Southern Regional Committee for Family Life. Southern Series Bulletin, 136.
- Treiman, D. J. (1977). Occupational prestige in comparative perspective--quantitative studies in social relations. New York: Academic Press.
- U. S. Bureau of the Census. (1977). County and City Data Book (Library of Congress Card No. 52-4576). Washington, D. C.: U. S. Government Printing Office.
- U. S. Department of Commerce. (1971). Bureau of the Census. Washington D. C.: U. S. Government Printing Office.
- Weiss, R. D. (1970). The effect of education on the earning of blacks and whites. Reviews of Economic and statistics, 52, pp. 150-159.