

EVALUATING THE EFFECTIVENESS OF THE JOB CORPS IN THE SOUTH: DOES IT
WORK WHERE IT MATTERS THE MOST?

By

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To my Family

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Abstract of Thesis Presented to the Graduate School
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EVALUATING THE EFFECTIVENESS OF THE JOB CORPS IN THE SOUTH: DOES IT
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This research evaluates the effectiveness of Job Corps in the state of Florida and the Southeast region of the United States. Job Corps is a federal job training program that provides academic and vocational training to disadvantaged youth. Using data from the National Job Corps Study, which is based on a randomized social experiment, we assess if there is a positive effect of the program on participants in comparison to non-participants. Specifically, we focus on the effects of the program on outcomes such as weekly earnings and employment rates.

CHAPTER 1 INTRODUCTION

A Brief History of Job Corps

The Job Corps program was created as a major initiative of President Lyndon B. Johnson's War on Poverty. It was enacted through the Economic Opportunity Act, which was signed into law on August 20, 1964. The program's directives were to help underprivileged youth break the cycle of hopelessness they faced in their lives of menial work, frequent unemployment, crime, and deprivation (Levitan and Johnston, 1975). This was done by removing underprivileged youths aged, 16 to 21, from their poverty stricken environments to distant residential centers. At these centers, they were provided educational and vocational training to improve and develop their skill set for employability.

This program was not based on an innovative effort, but rather on prior social/economic initiatives and studies conducted by the Civilian Conservation Corps (CCC) and the Farm Security Administration of the 1930s. In addition, community outreach and development programs established by the Ford Foundation in the 1950s and the welfare reforms by the U.S. Department of Health, Education, and Welfare helped lay a foundation for the fledgling Job Corps. Furthermore, previous studies, social experiments, social policies, and agencies helped establish frameworks and parameters for the new agency. Job Corps was also influenced by scholarly studies that found variables such as economic growth, mental health, racial and ethnic biases, illiteracy, and family lifestyles were inextricably linked to the development and well-being of constructive members of society (Levitan and Mangum, 1969). Job Corps shares similarities with the CCC, which was used during the Great Depression as a job-creation tool that put 1.5 million enrollees from a cross-section of society to work. However, one main difference between CCC and Job Corps is the focus on training. The enrollees in CCC were youthful and

were involved in projects that worked toward conservation, such as improving millions of acres of federal and state lands and parks during a time of unemployment. They also built roads, telephone lines, and planted over a million trees. Job Corps' genesis did not come during a time of great unemployment, but rather during a time when overall unemployment was low, however, youth unemployment was rising (Levitan and Mangum, 1969).

Awareness of the problem of youth unemployment and its associated problems kept the idea of Job Corps alive. In 1963, President John F. Kennedy's Task Force on Manpower Conservation published a report, One-Third of a Nation, which stated that the armed forces rejected one out of three draftees during World War II because of mental and physical deficiencies. Most telling of the report was that the rejected came from underprivileged areas and homes. This gave strength and interest in making Job Corps a viable way to improve disadvantaged youths' chances of entering the labor market (Levitan and Johnston, 1975). There was much debate on what type of centers would be established. Ultimately, three were established, two for men and one for women. Rural centers were catered to youths with educational difficulties, who would receive basic educational instruction and work experience on conservation projects. Urban centers provided vocational training to youths that had at least a sixth grade education. The third type of center for young women provided training that was clerical in nature (Levitan and Johnston, 1975).

In 1966, Job Corps came under fruition under the control of the Office of Economic Opportunity (OEO). The program consisted of six large men's centers each serving 1,000-3,000 individuals, more than 80 small conservation centers (exclusively for men), and 17 women's centers of medium size where each served 300-1,000 individuals. These centers, in addition to providing training and housing, provided health care and counseling. The combined centers had

a peak of 42,000 enrollees in 1966 (Levitan and Johnston, 1975). Job Corps was never without controversy. During Johnson's presidency it was continuously challenged by problems such as having a "high dropout rate, misbehavior at the centers, managerial disputes, community hostility toward nearby centers, difficulty in finding suitable locations for centers, high financial costs, and congressional and political opposition (Levitan and Mangum, 1969)." When President Richard M. Nixon took office in 1968, he began a process that closed many Job Corps Centers and cut the program's budget. In 1969, he announced the closure of 50 of 82 conservation centers, two of six men's urban centers and seven of 17 women's centers, which reduced overall enrollment to 22,000. The agency was later absorbed into the Manpower Administration of the Department of Labor. After the absorption, there was a shift from one of the founding assumptions: disadvantaged youths have to be removed from an environment that was not conducive to their personal growth. Job Corps Centers that had distant residential areas were closed and replaced with centers that were within commuting distance of the participants' homes. Over the next four years, Job Corps added 25 new centers to replace those which had been closed. New centers were dubbed Residential Manpower Centers (RMCs) and Residential Support Centers (RSCs). Residential Manpower Centers provided educational and vocational training, with enrollees drawn from the local areas. Whereas Residential Support Centers were located in urban residential areas, and offered counseling without in-house educational and vocational training (Levitan and Johnston, 1975). In addition, vocational and technical training largely replaced general education or remedial education classes (McCarron, 2000).

Currently, Job Corps provides food, shelter, job training, work clothes, stipend, and healthcare to teenagers and young adults at 123 campus centers in the United States. It is broken into six regions: Atlanta, Boston, Chicago, Dallas, Philadelphia, and San Francisco. The Job

Corps provides general and vocational education, technical training, and useful work experience at residential centers for youths from impoverished backgrounds (McCarron, 2000).

While 46 states have at least one center, the Job Corps program capacity differs among the states because the number and size of Job Corps centers vary from state to state. For example, 19 states have one Job Corps center, whereas four states have six or more centers. Moreover, Job Corps program capacity in a state is not related to the number of state residents enrolled in Job Corps and participants are not necessarily trained or assigned to a center in their home state (U.S. Government Accounting Office, 1996).

Within these six regions, the U.S. Department of Labor (DOL) contracts out center operations, recruiting and screening of new students, and placement of students in jobs and other educational opportunities after they leave the program. The U.S. Departments of Agriculture and Interior operate 30 centers, called Civilian Conservation Centers (CCCs). About another 80 centers are operated by private contractors and are administered through contracts with Job Corps' regional offices. Recruitment and placement are also administered within the regional offices (Burghardt et al., 1999).

Underlying Goal of Job Corps

The aim of Job Corps is to impart undereducated and low-skilled youths the necessary skills to be marketable in the work place (U.S. Department of Labor, 2006). This, in turn, should lead to positive outcomes for Job Corps participants be it in increased earnings, reductions on the dependence of public assistance, or a decline in anti-social behavior (Long et al., 1981).

Job Corps participants are selected on some of the following eligibility criteria: age (16-24), residency status (citizen and/or permanent resident), low income, a high school dropout, requires additional education and/or vocational training, homeless, runaway, foster child, or a parent (U.S. Department of Labor, 1999).

Each year, it serves more than 70,000 new participants at a cost of about \$1.5 billion, which is more than half of all funds spent by the U.S. Department of Labor (DOL) on youth training programs. The typical Job Corps student is a minority (70 percent of all students), 18 years of age, has dropped out of high school (80 percent), and reads at a seventh grade level.

The services that Job Corps provides are basic education, vocational training, job placement assistance, residential living (including social skills training), counseling, and healthcare. Each of these components are tailored to each participant. The following descriptions draw heavily from the National Job Corps Study: Report on Study Implementation (Burghardt et al., 1999).

- Education: “The goal of the education component is to enable students to achieve educational attainment as fast as their individual abilities permit. Education programs in Job Corps are individualized and self-paced and operate on an open-entry and open-exit basis. The programs include remedial education (emphasizing reading and mathematics), world of work (including consumer education, driver education, home and family living, health education, and programs designed for individuals whose primary language is not English), and a General Education Development (GED) program of high school equivalency for students who are academically qualified. Some centers also offer some students the opportunity to attend postsecondary education while enrolled in Job Corps. Students are assigned to classes based on the results of diagnostic tests administered during the first few weeks (Burghardt et al., 1999).”
- Vocational Training: “The vocational training programs at Job Corps are individualized and self-paced and operate on an open-entry and open-exit basis. Each Job Corps center offers training in several vocational trades, typically including business and clerical occupations, health occupations, construction trades, culinary arts, and building and apartment maintenance. National labor and business organizations provide vocational training at many centers. In many trades, students gain hands-on experience by working on supervised work projects, such as the construction or rehabilitation of buildings either on center or in the community (Burghardt et al., 1999).”
- Health Care and Education: “Students receive comprehensive health services, including medical examinations and treatment; immunizations; dental examinations and treatment (for participants who remain in the program at least 90 days); counseling for emotional and other mental health problems; and instruction in basic hygiene, preventive medicine, and self-care (Burghardt et al., 1999).”
- Residential Living: “Residential living is the most distinctive component of the Job Corps program and distinguishes it from most other employment and training programs. The

idea behind residential living is that, given the disadvantaged environments from which most participants come, the students require a new and more supportive environment to derive the maximum benefits from education and vocational training. All students must participate in five formal social skills training activities. The residential living component also includes meals, dormitory life, entertainment, sports and recreation, center government, center maintenance, and other related activities (Burghardt et al., 1999).”

- **Counseling and Other Ancillary Services:** “Job Corps centers provide counselors and residential advisers. These staff help students plan their educational and vocational curricula, offer motivation, and create a supportive environment. Support services are also provided during recruitment, placement, and the transition to regular life and jobs after Job Corps (Burghardt et al., 1999).”
- **Placement:** “The final step in the Job Corps process is placement. The placement component focuses on helping students find jobs in training-related occupations with prospects for long-term employment and advancement. Placement contractors are state employment offices or private contractors, and some centers perform placement activities. Placement agencies help students find jobs by providing interviewing and resume-writing assistance and job development and referral services. They are also responsible for distributing the readjustment allowance, a stipend students receive after leaving Job Corps (Burghardt et al., 1999).”

Previous Studies About Job Corps

There have been several studies of the Job Corps program. The most comprehensive study, before the National Job Corps Study in 1999, was the one conducted by Mallar, Kerachsky, Thornton, and Long (1982). This study provides the impact of Job Corps on a participant’s post-program employment and earnings by comparing the experiences of a sample of participants with the experiences of a sample of disadvantaged youth who did not attempt to enroll in the Job Corps. Their findings indicate that Job Corps students worked an average of three additional weeks per year and had higher earnings than non-participants by approximately \$600 per year during the four-year post-program observation period. The baseline surveys in this study were conducted in May 1977 on two groups. The two groups of comparison were youths that were participants in Job Corps and those who never applied. The group of youths that never applied to Job Corps did not know about the program, however, they were similar in socio-economic status to participants. The baseline survey obtained detailed information on the

youths concerning: demographic characteristics, socio-economic backgrounds, work histories, and related activities beginning six months before Job Corps enrollment and continuing up to the date of the interview. Additionally, three follow-up surveys conducted 9, 24, and 54 months after the baseline survey, which contained detailed information on work histories and related activities during the post-program period after Job Corps participants had been out of the program from 42 to 54 months.

In a related study utilizing the same data, Long et al. (1981) suggests that the Job Corps program yielded net benefits to Job Corps participants and to society. The increase in post-program output of \$3,896/year for each participant and the reduction in crime were the most important benefits. The stipend and room and board that Job Corps participants received \$1,208, greatly aided in their post-program output. Although, society had to bear the cost of the transfer payments to Job Corps participants, the reductions in Job Corps participants' criminal activities were substantial. Social benefits per participant from reduced criminal activity was \$1,962. Through his methodology, they estimated Job Corps to be socially efficient in its use of resources to society and participants. In addition, Long et al. (1981) found the estimated value of the reductions in criminal activity, dependence on social programs, and other activity in measured benefits were approximately \$7,300 per Job Corps participant in 1977 dollars. The total cost of the program to society was estimated to be \$5,070 per participant. Therefore, the net benefit was worth approximately \$2,230.

In 1995, the U.S. Government Accounting Office sent a report that questioned the effectiveness of Job Corps in its efforts to use independent National contractors to provide training to the U.S. Senate (U.S. Government Accounting Office, 1995). The study was based on a 1993 survey administered to a random sample of 413 Job Corps students from six centers,

who had previously obtained jobs. The study found that, almost half the jobs obtained by students were low-skill jobs not related to the training provided. However, the students who completed vocational training at these centers were five times more likely to obtain a training-related job and wages that were 25 percent higher than the average wage paid to individuals who did not obtain training-related jobs, \$6.60 versus \$5.28 per hour in 1993 dollars. About two-thirds of the jobs obtained by students who did not complete their training were in low-skill positions, such as fast food worker, cashier, laborer, assembler, and janitor.

Johnson and Troppe (1992) conducted regression analysis on the employability of Job Corps participants who terminated in 1988, based on the effect of educational gains and other related outcomes of Job Corps enrollment. The sample consisted of 24,594 students who had data on initial and follow-up reading and math tests. The study found that 26.7 percent of the sample had been employed prior to Job Corps participation as compared to 72.5 percent employed within 6 months after Job Corps enrollment. With the attainment of a GED, the likelihood of employment increased by 6 percentage points. It also found that increases in reading ability increased the likelihood of job placement by 1 percentage point, but the relationship between math gains and employment were weaker.

Greenberg et al. (2004) found that the Job Corps program increased earnings by \$808, on average, in the year after the training took place. Greenberg evaluated training programs based on 19 evaluations of 13 voluntary government-funded training programs for the disadvantaged that operated in the United States between 1964 and 1998. In order to appropriately weigh the estimates to account for the varying statistical precision across the studies, the study weighted each estimate by the inverse of its estimated variance.

Another study by Rawlins (1971) focuses on the operations of an urban Job Corps Center in Pleasanton, California. The study was conducted on 239 participants of Job Corps. Multivariate regression analysis was utilized to estimate the impact of training on earnings and employment. The sample used in this analysis consists of a set of individuals whose files were selected at random from those of the participants enrolled at Pleasanton, who terminated before December 1967. From the 450 files that were selected, a sample of 239 remained after incomplete files missing critical information were eliminated. Personal and training characteristics of the participants such as education, entry into the program, length of training, and completion of the training program were utilized as independent variables. The dependent variable is earnings over the six-month period immediately following the training experience. This paper found that there was a highly significant relationship between earnings and participation in the Job Corps program. On average, completion of training translated into an additional \$375.00 in earnings over the six-month follow-up period.

Williams and Cooper (2004) found on average, for every dollar a Job Corps Center spends in its local area, \$1.91 in economic activity results within the local area (the input is local Job Corps Center spending plus local student spending). Also, for every dollar a Job Corps Center spends overall, an average of \$1.53 in economic activity results within its local area (the input is total Job Corps Centers and student spending). This can be seen as a multiplier effect of Job Corps Centers. These monetary values were obtained through economic tools called “input-output models” (Williams and Cooper, 2004). These models define a community’s economy as collections of industries and gauge how active those industries are by measuring the historic flow of money, goods, and services within and between communities throughout the Nation.

Further, Williams and Cooper (2004) conducted an economic impact study that used a non-probability sampling procedure in order to obtain a cross-section of Job Corps Centers. Out of the 118 Job Corps Centers, 20 were chosen to achieve a cross-section along the dimensions of size (student capacity), location (urban or rural setting), region (geographic area of the country), and age (older or newer than 10 years in operation). On average, for every job a Job Corps Center provides, the economic activity it stimulates supports 66 percent of another full-time job in its local area. For every million dollars a Job Corps Center spends overall per year, an average of 23.28 workers are employed in its local area.

In summary, most studies that assess the effectiveness of the Job Corps find a trend that favors it. However, it is hard to synthesize the evidence given the multiplicity of methodologies and samples employed. More importantly, none of the studies employ a randomized approach that, by construction, makes participants and non-participants truly comparable. The National Job Corps Study undertaken by Mathematica Policy Research and the Department of Labor tried to address some of these issues, which will be discussed further in later chapters. Furthermore, we employ data from the National Job Corps Study to analyze the performance of the Program in the Southeast and Florida.

Problem Setting

The main issue this study investigates: Is there a causal relationship between participating in Job Corps and positive outcomes in the Southeast United States and the state of Florida? The National Job Corps Study was carried out during late 1994 and 1995 to answer this question at the National level, which was a mandate by Congress. Results show positive overall effects such as increase in earnings and employment (Schochet et al., 2001). However, does it hold true in the Southeast and in the state of Florida?

This study adds to the literature by focusing on the regional differences that Job Corps participants face Nationally, in the Southeast, and in Florida. The impact of program participation will likely be affected regionally by socioeconomic differences, ethnic/racial concentrations, and levels of industry employment. The National Job Corps Study results may not be necessarily indicative for the Southeast and Florida, since labor market differences may dilute the effects of training programs on employment and earnings at different regional levels.

Research Question

The primary objective of this thesis is to determine whether Job Corps has appreciable impacts on outcomes such as weekly earnings and employment rates. Training programs might affect outcomes other than earnings and employment, such as welfare and unemployment compensation payments, crime rates, and feelings of satisfaction. There is a focus on earnings and employment because a major objective of all government-sponsored training programs is to increase the economic well-being of participants. This will determine the effectiveness of the program on participants in comparison to non-participants at the National level, at the Southeast region, and at the state of Florida level.

In the National Job Corps Study, “National” is defined as the 48 contiguous states and the District of Columbia. For the purpose of our analysis, the Southeast region consists of Alabama, Florida, Georgia, Louisiana, and Mississippi. The justification for focusing on the Southeast and Florida is due to the unique characteristics they share in contrast to the Nation. For example, during the intake period for participants of the study during 1994 and 1995, the National annual unemployment rate was 6.1 percent and 5.6 percent, respectively. On the other hand, it was higher in the Southeast for both years and marginally lower for Florida in 1995 see Table 1-1. There are higher levels of poverty, high school dropout rates, and differing race demographics which adversely affect the earnings and employment characteristics of the Southeast United

States and Florida. In addition, the number of Job Corps Centers varies by state, Florida has four and Alabama has two, while Georgia, Louisiana, and Mississippi each have three centers. This difference in the number of centers may have implications regarding the effectiveness of Job Corps to serve its clients. These characteristics will be discussed further in subsequent chapters.

Study Overview

The current chapter has summarized Job Corps' program elements and the characteristics of youths who are eligible for the program. In addition, it discussed some previous research about Job Corps. Chapter two will discuss the elements of the National Job Corps Study, the data employed, and the regions of interest. The third chapter presents the economical and statistical model used to analyze the data. Chapter four provides results and discussion. Finally, chapter five provides the conclusions and thoughts on the outcome of the research.

Table 1-1. Annual Unemployment Rate: Years 1994-1995

Year	National	Southeast	Florida
1994	6.1%	6.3%	6.7%
1995	5.6%	5.8%	5.5%

Source: U.S. Bureau of Labor Statistics, 1994-1995.

CHAPTER 2
THE NATIONAL JOB CORPS STUDY, THE DATA EMPLOYED, AND THE REGIONS OF
INTEREST

National Job Corps Study

Within the public sphere, there has always been debate regarding the effectiveness of public assistance programs. Critics argue whether public dollars are spent wisely. Therefore, in order to respond this criticism it is important to show that public programs result in positive measurable outcomes to participants (and ideally to society) beyond just anecdotal discussions of their impact. However, to conduct such an assessment is quite costly and monitoring input productivity and metering the outcome is not easy.

In the 1990s, Job Corps faced a number of challenges, threats, and critics. Critics charged that the program was wasteful because it was spending \$26,000 per student, and fewer than 15 percent of participants were completing the program. A 1995 Congressional bill wanted to turn administration of Job Corps over to the states and close a number of centers. Instead, Congress voted that the federal government retain control and close a few of the centers. To determine Job Corps' credibility, Labor Secretary Robert Reich commissioned Mathematica Policy Research, Inc (MPR), the National Job Corps Study. One controversial element of the study was the intentional denial of admission to one in every twelve eligible applicants to use them as a control group. It then paid them \$10 each for follow-up interviews to study their subsequent fate. The cost of the study was \$17.9 million and was conducted over nine years (McCarron, 2000).

The National Job Corps Study Sample Design

The data used for the National Job Corps Study (NJCS) comes from a randomized social experiment carried out during the mid-90's. Applicants to Job Corps between November 1994 through December 1995 were considered for the study. The study is considered a fully National

sample because of its deployment in the 48 contiguous states and the District of Columbia.

Youths were sampled from all outreach and admissions (OA) agencies nationwide (Burghardt et al., 1999).

The sample intake period began on November 17, 1994, and continued for 16 months, until February 29, 1996. During this period, MPR processed information on 113,803 cases in total, of which 80,883 were eligible applicants that met Job Corps criteria. The sample was further narrowed and consisted of 5,977 control group participants (7.4 percent of those randomized), 9,409 treatment group participants (11.6 percent of those randomized), and 65,497 program non-research Job Corps members (Burghardt et al., 1999). Those in the treatment group were allowed to receive Job Corps training and benefits, while those in the control group were not permitted to receive Job Corps training or benefits for a period of three years, although they were able to enroll in other programs. The outcomes of the control group, therefore, represent the outcomes of the treatment group if they had not been given the opportunity to enroll in Job Corps. In the study, the sampling rate was set lower for females who had a high likelihood of being residential students because residential females are difficult to recruit and Job Corps staff were concerned that the study would cause slots for residential females to go unfilled (Burghardt et al., 1999).

NJCS Sample Integrity

In order to draw valid inferences from the random assignment study about the effects of Job Corps on post-program outcomes, MPR, DOL, OA had to implement procedures that maintained the integrity of the sampling. In order to do so, randomization procedures were undertaken to maintain the credibility of the study.

Randomization procedures were determined by Job Corps staff and a process analysis using telephone surveys to OA counselors, mail surveys to Job Corps Centers (JCC), and visits

to 23 centers were used to monitor and confirm the outcome (Flores-Lagunes et al., 2008). The outcome of these procedures were that 265 enrollees of the sample frame enrolled in Job Corps before randomization and only 0.6 percent of program group participants did not enroll in Job Corps because they were not eligible or not accepted into the program. During the intake period, a total of 68 control group members enrolled at Job Corps Centers, which only represents 1.14 percent of all control group members. The crossover of control group members and participation of ineligible enrollees was minimized during the sample frame.

The Job Corps staff implemented the random assignment procedures successfully over the 16 month sample intake period (Burghardt et al., 1999). Through the end of February 1999, only 1.4 percent of control group members enrolled in Job Corps before the end of the three-year period during which control group members were not supposed to enroll. As a result, the research sample is representative of the youths in the intended sample frame and the bias in the impact estimates due to contamination of the control group is likely to be small (Burghardt et al., 1999). Further details about the analysis of randomization process can be found in the National Job Corps Study: Report on Study Implementation (Burghardt et al., 1999).

The National Job Corps Study Estimation Techniques

The original NJCS program evaluation is based on a differences-in-means estimator, modified to account for non-compliance: individuals in the treatment group who never enroll in Job Corps and individuals in the control group that enroll in Job Corps before the three-year exclusion (Flores-Lagunes et al., 2008).

The NJCS employed “difference of means” estimator, which was modified to account for non-compliance such as dropout and crossover of individuals in the treatment group and control group. This can be interpreted from the following equation:

$$DM_{comp} = \frac{\bar{Y}_1 - \bar{Y}_0}{P_{part} - P_{cross}} \quad (2-1)$$

The term outcome DM_{comp} refers to the difference in mean outcomes between the treatment group and the control group, with respect to the proportional differences in participation. In general, $\Delta = \bar{Y}_1 - \bar{Y}_0$, (\bar{Y}_1) refers to the average outcome of the treatment group, (\bar{Y}_0) represents the average outcome for the control group, and the Δ refers to the difference between the two. The non-compliance of individuals is addressed by dividing Δ by the proportion of those individuals in the treatment group who enroll in Job Corps (P_{part}) minus the proportion of those individuals in the control group that enroll in Job Corps before the end of the three-year embargo (P_{cross}) (Flores-Lagunes et al., 2008).

From the 15,386 Job Corps participants in the NJCS, about 11,313 youths (4,485 control group and 6,828 treatment group members) were analyzed that completed the 48th month interview (Schochet et al., 2001). In addition, regression analysis was used to estimate the impact of Job Corps participation. The multivariate regression model was used to control for any unbalances in factors measured at baseline that affect the outcomes. This form of analysis increases the precision of the estimated program participation and the strength of the significance tests can be measured against the differences-in-means estimations.

The study found the differences-in-means estimation and the regression analysis provided similar results. Qualitatively the same conclusions can be drawn from both sets of estimates (Schochet et al., 2001). This was a testament to the sample selection process and procedures that enabled quality inferences to be made.

National Job Corps Study Conclusions

The National Job Corps Study found that Job Corps was a good investment based on increasing employment and earnings of participants. At the 48th month observation period, Job

Corps participants were 5 percent more likely to be employed and earned an average of about 22 cents more per hour (Schochet et al., 2001).

The employment and earning gains were not larger at the inception of the program for treatment group members. They forewent employment and earnings to gain an advantage in education, training, and/or vocational preparation. In year 4 after random assignment, average weekly earnings for program group members were \$16 higher than for control group members (\$211, compared to \$195). The difference was found to be statistically significant at the 1 percent level (Schochet et al., 2001).

Job Corps participation had positive effects on the employment rate and time spent employed beginning in year 3 after random assignment. In year 4 after random assignment, the percentage of employment for Job Corps participants was 71.1 percent for the treatment group, compared to 68.7 percent for the control group. This was statistically significant at the 5 percent level.

Demographic Background of the United States Relative to NJCS

The demographic focus will be primarily on whites, blacks, and Hispanics. The U.S. Census Bureau provides statistics on the composition of the U.S. population. In 1990, the white population accounted for 80.3 percent, black was 12.1 percent, and Hispanic 9 percent. Males accounted for 48.7 percent, while females accounted for 51.2 percent (U.S. Bureau of the Census, 1990). The U.S. Census Bureau (2000) reports that the percent of the population that is white is 75.1, blacks are 12.3, and Hispanic is 12.5. Males accounted for 49.1 percent, whereas females accounted for 50.9 percent. Since the study took place between late 1994 and 1995, we take an average of the two census years of 1990 and 2000 to make a rough estimate of the U.S. population relative to the Job Corps applicants. Whites may account for 77.7 percent, blacks 12.2 percent, and Hispanics 10.7 percent. The male to female composition would be 48.9

percent and 51.1 percent, respectively. Of the eligible applicants to Job Corps, 60 percent were male, whites represented 26 percent, 50 percent were blacks, 18 percent were Hispanic, 4 percent were Native American, and Asian or Pacific Islander represented 2 percent.

Some employment characteristics of applicants to Job Corps are that 65 percent of them were employed in the previous year before they were deemed eligible for Job Corps. On average, the hourly wage they received was about \$5.10, for both males and females. Overall, average weekly earnings equaled about \$180. These characteristics speak to the disadvantage that these youths faced (Schochet, 1998).

Unemployment Rates Nationally, in the Southeast, and in Florida

The National unemployment rate is telling when we categorize the rates by age, gender, and race/ethnicity. From the figures in Table 2-1, the National unemployment rate in 1994 and 1995 was 6.1 and 5.6, respectively. Unemployment figures for ages 16 to 19, which is a target segment for Job Corps participation, is quite high at 17 percent. When labor market participants are segmented by ages greater than or equal to 20 and by gender, qualitatively there is no difference. When we segment the labor participants by ages greater than or equal to 16 by race/ethnicity, Hispanics and blacks have much greater unemployment rates than whites from 4 to 6 percentage points.

Following the National unemployment rates, we present demographic characteristics of the Nation, Southeast, and Florida in Table 2-2 and in Figure 2-1. The Southeast has a higher percentage of blacks (22.3 percent) versus the National level (12.1 percent) and lower numbers of Hispanics (6.0 percent) than nationally (9.0 percent). Meanwhile, Florida has higher numbers of Hispanics (12.2 percent) and marginally higher levels of blacks (13.6) in comparison to the National figures. These differences in racial/ethnic concentrations are made clearer in Figure 2-

1, as blacks are predominant in the Southeast and Hispanics are predominant in Florida. From Table 1-1, blacks and Hispanics fare worse in unemployment levels relative to whites.

Education and Income Levels of the Nation relative to the Southeast and Florida

Income inequality has been on the rise in the U.S. since the 1970s. Evidence of income inequality is the percentage of total income earned by the highest income families and the percentage of total income earned by the lowest income families. According to recent Census Bureau data, the 25 percent highest income families now receive 44.6 percent of U.S. income. The 25 percent lowest income families earn 4.4 percent. This is the widest rich-poor gap since the Bureau revised their data collection methods in 1947 (Robison and Siles, 1999).

The relationship between education and income has been one of the clearest differences in America (Robison and Siles, 1999). The higher the level of education, the better the job one obtains; the higher the income, the lower the rates of poverty and the more money that can be devoted to education. The most important indicator for the decline in poverty was the educational attainment of the head of households. In about 25 percent of families that lived in poverty, the head of household had less than 8 years of schooling. When the head of household attended, but did not graduate from high school, the poverty rate was 20 percent. When the head of household graduated from high school, the poverty rate was only 9 percent. When the head of household had at least one year of college, the rate fell to 3.5 percent. This pattern was true of whites, blacks, and Hispanics (Robison and Siles, 1999).

Table 2-3 further supports this claim when we specifically look at the role educational attainment plays on poverty. In all age categories, the rates for individuals with No High School Diploma were nearly 40 percent and more likely to be living in poverty. What is very salient, noticeable is that the levels of poverty are much higher for Hispanics and blacks in comparison to whites. The importance of this observation is significant because the National Job Corps

Study results do not clarify the regional differences in income levels and the race/ethnicity concentrations.

Increased employment is one of the central goals of Job Corps, and the remedying factors to attain that are increased educational and technical training. One critical factor that deserves scrutiny is high school educational attainment. We present National high school graduation rates by segmenting the target demographic by race/ethnicity and sex seen in Table 2-4 and Figure 2-2. High school completion not only represents a cornerstone of educational achievement for young people, it is also a minimum requirement for pursuing most types of further education or training and for entering the labor force (U.S. Department of Education, 1997).

A high school dropout is a student who was enrolled at the beginning of the year, but was not enrolled at the beginning of the next year or who did not graduate from high school or completes some other district- or state-approved educational program. The event dropout rate measures the percentage of high school students who drop out in a given year. Another measure of the dropout rate is the status dropout rate, which is measured as the percentage of young people aged 18 through 24 who dropped out of grades 10 through 12 in the past year. Status rates are higher than event rates because they include all dropouts in this age range, regardless of when they last attended school (U.S. Department of Education, 1997). Our results will focus on status rates. We can see that at the National level with all races/ethnicities and sex, the dropout rate is 13.9 percent. Once it is segmented by sex, the rates are marginally higher for males and lower for females.

Once we have segmented the target group by race/ethnicity, Hispanics are disparately larger in high school dropout rates; approximately 20 percentage points higher from the all race/ethnicity category rate. Blacks are a little less than 2 percent higher than the all

race/ethnicity category rate. Whites have the lowest dropout rate, 4 percentage points less than the all race/ethnicity category rate. The Hispanic dropout rate may be accounted for by the language barrier they may face and/or the lack of bilingual education to overcome their educational difficulties. The disparities of the dropout rates may speak to the above mentioned demographic characteristics. We can also say that these disparities effect the Southeast and Florida adversely, as black and Hispanic concentrations are greater than that of National levels. In addition, Figure 2-2, provides a graphical representation of the dropout rates by race/ethnicity.

The rates of poverty in the Southeast and Florida, in comparison to the Nation, reflect the overall disadvantage that individuals face in those regions. From Table 2-5, both poverty and high school dropout rates are greater for the Southeast regions by more than four percentage points from the National rate. The composition of the Southeast for poverty and high school dropout rates shows the disadvantage that individuals face in poverty with the exception of Georgia. Alabama, Louisiana, and Mississippi anecdotally have large populations of blacks, who appear to face higher rates of unemployment, poverty, and high school dropout rates. Hispanic populations have been on the rise in Florida, with greater rates of high school dropouts (20 percent greater than National all category rates) from Table 2-4.

In order to delve further into the differences in market conditions, we will focus on industry composition and the corresponding annual pay rates, which can be viewed in Table 2-6 and Figure 2-3 is provided to graphically show the differing industry compositions throughout the regions. There are certain industries that employ great numbers of individuals in all three regions. Therefore, it is not necessary to examine those industries in greater detail. Our focus will be on the industries that differ from the National figures. In the Southeast, mining, construction, and retail trade are slightly larger employers of labor from National results, while,

finance and professional services show slight decreases as employers of labor. In addition, Florida construction, retail trade, business and repair services, financial, personal services, and entertainment show almost 1 to 2 percentage points higher than National figures.

Average annual pay levels for the Nation varied widely by industry. The mining industry, which accounts for less than 1 percent of private sector employment, had the highest average annual pay at \$43,652. The next highest pay level was in finance, insurance, and real estate at \$36,062. The lowest average annual pay, \$14,386, was in the retail trade industry, which employs a large proportion of part-time workers (U.S. Department of Labor, 1995). In the Southeast, the pattern was the same as pay varied by industry: mining (\$36,807), transportation, communications and public utilities (\$32,236), and retail trade (\$13,224). Florida follows a similar wage pattern: mining (\$36,087), wholesale trade (\$32,683), and retail trade (\$14,697).

There are great differences in manufacturing as an employer of labor regionally, with Florida having a seven percentage-point negative difference relative to National figures. For the Southeast, this rate is similar to the National rate. In Florida, what is salient is the number of retail trade positions that employ the labor force, which reflects the unique market conditions of the state, see Figure 2-3.

Workers of all ages are employed in each industry. However, certain industries tend to possess workers of distinct age groups. An example of such industry would be retail trade that employs a relatively high proportion of younger workers to fill part-time and temporary positions. In contrast, the manufacturing sector employs individuals who are older because many jobs in this sector require a number of years of acquired skills. In recent years, manufacturing employment has been declining, which means there are fewer opportunities for younger workers to gain entry into this sector (U.S. Department of Labor, 1995).

Current Study

The National sample used in this study follows closely with the National sample of the NJCS. Nationally, the number of control group participants is 3,976 and the treatment group is comprised of 6,108 participants. The discrepancy in the population samples is accounted for by the removal of ethnicity labeled as “Other” in the dataset of this study, which was comprised of Native American and Asian or Pacific Islander. At the 48th month survey, if the participant had missing information in his or her reported earnings in quarter 16, the data was not included in the data set. The percent of the sample that is white is 28.3, blacks account for 52.9 percent, and Hispanics comprise 18.6 percent.

Employing confidential NJCS data that contains participants’ zip-code of residence, we are able to identify those living in the Southeast United States and in the state of Florida. The Southeast sample consists of 811 control group participants and 1,149 treatment group participants. The percent of the sample that is white is 14.6, blacks account for 77.1 percent and, Hispanics comprise 8.3 percent. The Florida region consists of 233 control group participants and 351 treatment group participants. The percent of the sample that is white is 15.9, blacks account for 62.3 percent, and Hispanics comprise 21.7 percent. From the race/ethnicity concentrations, we can see that there are clear differences in comparison to the National composition. Blacks account for 77 percent of the sample in the Southeast region and Hispanics are 10 percent less from the National makeup. In Florida, blacks comprise 62.3 percent, but that is still 10 percentage points greater than the National composition. Hispanics have a large concentration in Florida with a 21.7 percent composition.

From the previous discussions about unemployment levels, educational attainment, and poverty/income levels, it is reasonable to say that there are clear differences in job market conditions for the different race/ethnicity categories. These figures speak to the disadvantage

that blacks and Hispanics face. Our focus at the regional level follows the expectation that the Southeast and Florida do not have similar trends with the National results.

Table 2-1. National Unemployment Rate: Years 1994-1995 By Ages, Sex, Race/Ethnicity

Year	Age≥16	Age 16 to 19	Age≥20 Male	Age≥20 Female	Hispanic Age≥16	White Age≥16	Black Age≥16
1994	6.1	17.6	5.4	5.4	9.9	5.3	11.5
1995	5.6	17.3	4.8	4.9	9.3	4.9	10.4

Source: U.S. Bureau of Labor Statistics, 1994-1995.

Table 2-2. Population Demographics for 1990

	Nation	Southeast	Florida
Total population	248,709,873	30,249,918	12,937,926
Sex by Percentage			
Male	48.7%	48.3%	48.1%
Female	51.3%	51.7%	51.9%
Race/Ethnicity by Percentage			
Hispanic	9.0%	6.0%	12.2%
White	80.3%	75.4%	83.1%
Black	12.1%	22.3%	13.6%

Source: U.S. Bureau of the Census, 1990.

Table 2-3. Enrollment and Educational Attainment - Poverty Status In 1994 of Persons 16 to 24 Years Old

	All Races/Ethnicity Poverty Level Percent of Total	White Below Poverty Level Percent of Total	Black Below Poverty Level Percent of Total	Hispanic Below Poverty Level Percent of Total
Total	18.1	15.2	31.1	31.4
16 to 17 Years Old	18.2	13.6	37.7	36.0
Enrolled In School	16.3	12.1	34.9	32.8
Not Enrolled	45.0	36.9	68.2	55.6
No High School Diploma	47.1	39.1	69.2	58.1
18 to 21 Years Old	18.9	16.4	30.4	32.8
Enrolled In School	14.4	11.9	25.0	28.2
Not Enrolled	24.0	21.4	35.6	35.6
No High School Diploma	42.2	38.1	58.5	45.6
22 to 24 Years Old	17.0	14.8	27.1	27.0
Enrolled In School	13.9	11.9	21.0	23.4
Not Enrolled	18.0	15.7	28.6	27.7
No High School Diploma	38.9	36.1	53.3	39.3

Source: U.S. Bureau of the Census, 1996. Income, Poverty, and Labor Force Information.

Table 2-4. The National Population 18 to 24 Years Old by High School Graduate Status, Attainment, Sex, and Race/Ethnicity (Numbers in thousands): Year 1995

	Total	Percent High School Graduates	Percent High School Status Dropouts
All Race/Ethnicity Both Sexes	24,900	80.8%	13.9%
Male	12,351	79.3%	14.5%
Female	12,548	82.4%	13.4%
Hispanic	3,603	58.6%	34.7%
White	16,867	86.1%	9.8%
Black	3,625	76.9%	14.4%

Source: U.S. Department of Education, 1997.

Table 2-5. High School Status Dropout Rates and Percent in Poverty by Nation, Southeast, Florida In 1995 (Numbers in thousands)

	All Ages Percent in Poverty	Ages 18 to 24 Percent In HS Status Dropout Rates
National	13.8	13.9
Southeast	18.3	18.3
Florida	16.2	19.3
Composite of Southeast		
Alabama	20.1	16.0
Florida	16.2	19.3
Georgia	12.1	19.7
Louisiana	19.7	19.5
Mississippi	23.5	16.9

Source: U.S. Department of Education, 1997.

Table 2-6. Industry Employment Categories and Average Annual Earnings – 1994 by National, Southeast, Florida

	National	Percentage Employed	Southeast	Percentage Employed	Florida	Percentage Employed
Total	26,496	100.00	23,008	100.00	23,310	100.00
Mining	43,652	0.60	36,807	1.10	36,087	0.20
Construction	28,308	6.20	23,703	7.00	24,236	7.80
Manufacturing	33,527	17.70	27,920	17.60	30,094	10.50
Transportation, communications, and public utilities	34,201	7.10	32,236	7.50	31,472	7.70
Wholesale trade	34,646	4.40	30,674	4.40	32,683	4.60
Retail trade	14,386	16.80	13,224	17.20	14,697	19.60
Finance, insurance, and real estate	36,062	6.90	28,887	6.00	31,097	8.10
Services	25,113	32.70	22,257	31.30	23,305	33.80
Government	29,202	4.80	24,589	5.10	27,260	5.00

Source: U.S. Bureau of Labor Statistics, Industries 1994-1995.

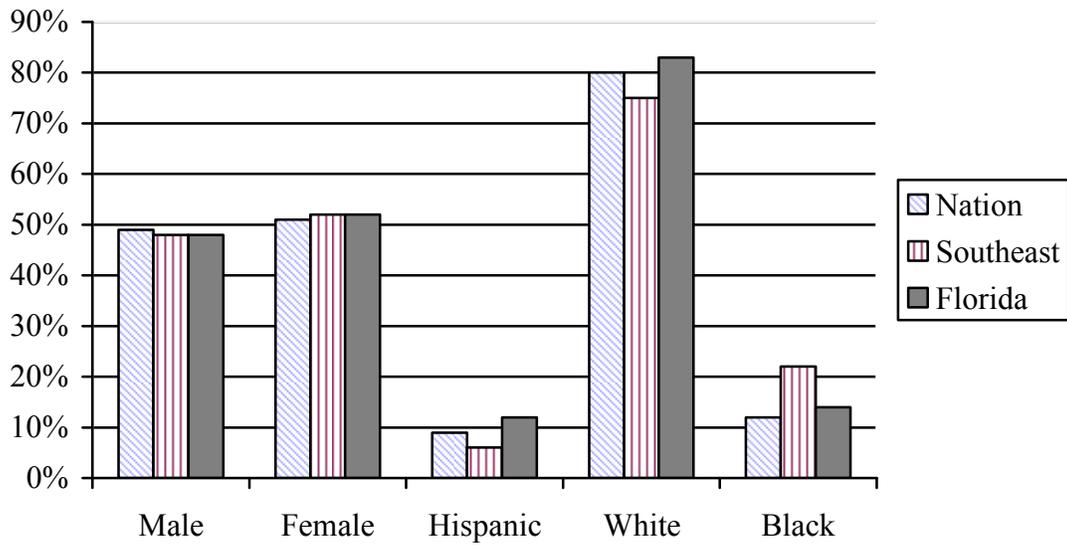


Figure 2-1. Population Demographics - Year 1990

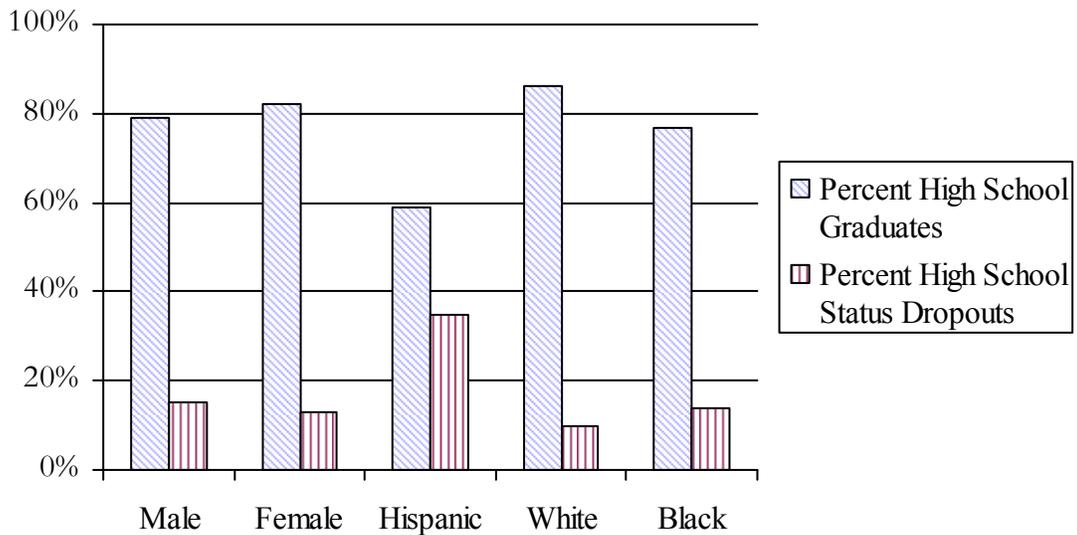


Figure 2-2. The National Population 18 to 24 Years Old by High School Graduate Status, Attainment, Sex, and Race/Ethnicity - Year 1995

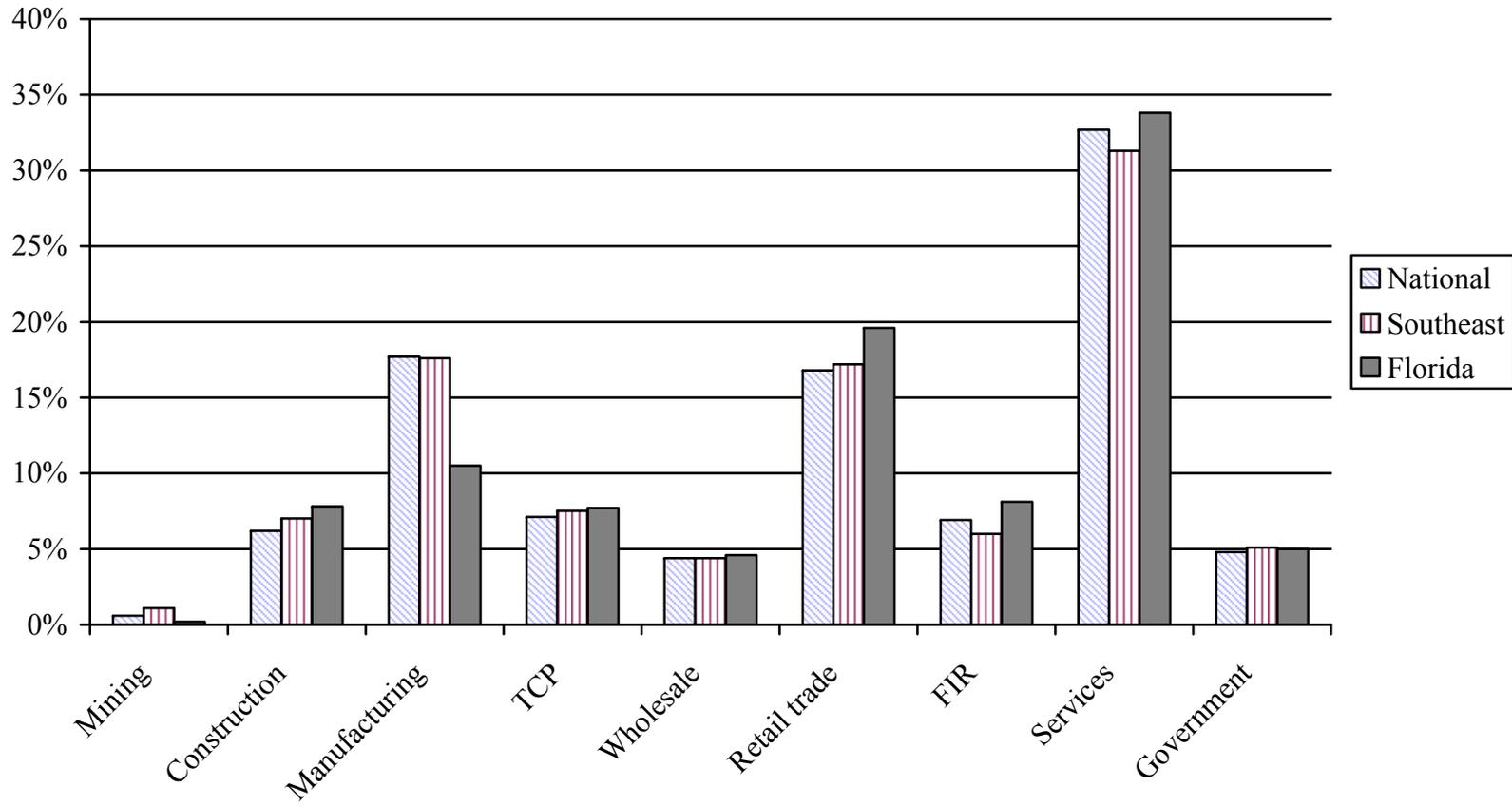


Figure 2-3. Industry Employment Categories – 1994 by National, Southeast, Florida

CHAPTER 3 MODEL

This chapter gives a brief description of the empirical methods used to analyze whether the Job Corps program is effective in the Southeast and in the state of Florida. The main idea behind our methods is to exploit the availability of the randomization employed in the NJCS. By this randomization, the individuals in the treatment and control groups are comparable, on average. This holds true for the National sample, as well as the subsamples of Southeastern states and Florida. Thus, randomization allows us to employ simple methods such as differences-in-mean outcomes. However, given the presence of non-compliance in the form of treatment-group members failing to participate in Job Corps (the reason the NJCS adjusted its estimates), the estimates presented below should be interpreted as “intention-to-treat” effects (Flores-Lagunes et al., 2008).

Intention-to-treat (ITT) is a strategy for the analysis of randomized social experiments that compares participants in the groups to which they were originally randomly assigned. This is generally thought of as including all participants, whether they actually received the treatment and/or they withdrew from the treatment (Hollis and Campbell, 1999). The ITT approach has two main purposes. First, it maintains treatment groups that are similar apart from random variation. This is the reason for randomization, and the proper results may be lost if analysis is not performed on the groups produced by the randomization process. Second, ITT analysis allows for non-compliance and deviations from policy by the experimenter. Some types of deviations from randomized selection may occur only within the experiment setting and would not be expected in routine practice. However, most types of deviations from the experiment that could normally occur should be included in the estimated benefit of a treatment, such as the preceding example of non-compliance by treatment group participants. ITT analysis is suitable

for “pragmatic experiments of effectiveness rather than for explanatory investigations of efficacy” (Hollis and Campbell, 1999).

The difference-in-means model employed is:

$$\Delta = \bar{Y}_0 - \bar{Y}_1 \quad (3-1)$$

STATA is the functional statistical software used to compute the difference-in-means estimator Δ , its standard error, and t-tests of significance. The term Δ refers to the difference-in-mean outcomes between the treatment group and the control group, with respect to the proportional differences in participation. In general, $\Delta = \bar{Y}_0 - \bar{Y}_1$, (\bar{Y}_0) represents the average outcome for the control group, (\bar{Y}_1) refers to the average outcome of the treatment group. Stata’s “ttest” performs the two-group mean-comparison test for variables that have continuous values. Stata’s “prtest” will be utilized for binary variables to perform the two-group test of proportion. Each test will provide the difference-in-means estimate (Δ) and the significance of each variable.

Estimates will be obtained for the Southeast, Florida, and for comparison, Nationally. Given the smaller sample sizes for the Southeast and Florida relative to the National sample, we also present estimates that control for differences in pre-treatment covariates (those covariates measured in the baseline survey). Adjusting for such differences should result in estimates of the effects that have greater efficiency (Flores-Lagunes et al., 2008).

The regression model employed is:

$$Y_i = \beta_0 + \alpha T_i + \beta X_i + \varepsilon \quad (3-2)$$

Y_i is the dependent or response variable i.e. the weekly earnings or employment in Quarter 16. β_0 , α , β are the coefficients of the regression line, T_i is the dummy variable i.e. treatment status (0=control and 1=treatment), X_i is the set of pre-treatment covariates or predictor variables and ε is the “residual.”

In the linear regression model, we regress the dependent variable earnings in quarter 16 on treatment status and additional 18 independent baseline covariates. The pre-treatment covariates included in our baseline specification are: age, gender, whether the individual has children, is married, is head of household, dummy variables for residence in MSA (small city) or PMSA (large city), whether the individual speaks English as native language, has ever been arrested, has a high school diploma, has a GED, has a vocational degree, employment status, ever worked before, his/her pre-treatment weekly earnings, and indicator variables for whether the individual is Hispanic, black or white.

CHAPTER 4 RESULTS

We start with a description of the summary statistics of the data employed. Table 4-1 reports summary statistics of the data for the National, Southeast, and Florida regions, each broken down by treatment status. The table also reports tests of differences-in-means between treatment and control groups.

Given the randomization, we would expect that the observable characteristics at baseline are aligned between treatment and control groups. However, it is possible to observe imbalances given attrition, non-response, or due to chance. The extent to which imbalances are present in our samples are documented by using simple differences-in-means (or proportions) tests. Surprisingly, the National samples' control and treatment groups show more statistically significant differences-in-mean characteristics than the Southeast and Florida samples in Table 4-1. The variables at baseline that have statistically different means between treatment and control groups for the National sample are: age of individual ($p>0.00$), the proportion of females ($p>0.00$), whether individual has children ($p>0.02$), and whether participant has obtained a high school diploma ($p>0.04$). The mean age of participants in the treatment group (18.90) of the National sample is greater than that of the control group (18.76). Moreover, the proportion of females in the control group (38 percent) is smaller than that of the treatment group (46 percent) and treatment group participants are more likely to have children (21 percent) versus the control group (19 percent). Finally, treatment group participants are more likely to have completed their high school diploma (19 percent) than the control (18 percent).

The Southeast region difference-in-means tests that are significant are female participation ($p>0.00$), individuals that have children ($p>0.05$), and the percentage of Hispanics ($p>0.07$). Females have a larger participation proportion, which is also greater for treatment group (45

percent) than for control group (38 percent). Treatment group members have a higher percentage of children (24 percent) than the control group (20 percent). Hispanics compose a greater proportion in the control group (10 percent) versus the treatment group (7 percent).

In Florida, the factors that are significant are: proportion of females ($p>0.08$), completion of a GED at baseline ($p>0.02$), and the percentage of blacks ($p>0.07$) and Hispanics ($p>0.01$) that are participating. The proportion of females is greater in the treatment group (44 percent) than the control (36 percent), and control group members are more likely to have completed their GED at 6 percent and for treatment participants (2 percent). Blacks are in greater numbers in the treatment group at 65 percent and 58 percent in the control group; while Hispanics are in greater proportion for the control group at 27 percent and 18 percent for the treatment group. To account for these imbalances across treatment and control groups, we will undertake a linear regression analysis.

In order to compare the effect of Job Corps participation on earnings and employment Nationally, the Southeast, and Florida regions, we start by presenting simple difference-in-means estimates in Table 4-2. This estimate (the difference in means between treatment and control groups) tells us the return or loss that the individuals acquire on average as a result of undergoing Job Corps training. We concentrate on two outcomes: 1) the average weekly earnings of individuals in quarter 16 after random assignment and 2) the percentage of individuals that are working in quarter 16 after the random assignment (employment).

In similar order to Table 4-1, Table 4-2 reports the summary statistics of the data for the National, Southeast, and Florida regions, which are each broken down by treatment status. The table presents the average weekly earnings and employment percentages in quarter 16. Additionally, it reports the differences in means between treatment and control groups.

Two-tailed statistical tests were performed to test the null hypothesis of no program impact. The null hypothesis is the same for all three tests: there is no difference in earnings of individuals in the control and treatment group. The interpretation of the p-values for National ($p > 0.00$) and Southeast ($p > 0.00$) indicates that the probability of observing an earnings difference between the control group and the treatment group is statistically significant. Florida, has a p-value of $p > 0.29$. Therefore, we fail to reject the null hypothesis and the difference-in-means of earnings is not statistically significant.

Furthermore, the results show that participation in Job Corps is effective Nationally and in the Southeast. The weekly earnings of individuals 48 months after randomization are greater and statistically significant. Nationally, participants in the treatment group, earn \$13.88 per week more in earnings than the control group. In the Southeast, treatment group members earned \$30.04 more than the control. Conversely, Florida does not follow this trend. Although, Job Corps participation is effective in increasing weekly earnings, with the treatment group earning \$17.70 more than the control group, this figure is not statistically significant.

In the case of Job Corps effectiveness on obtaining employment, referring back to Table 4-2, the p-values for National ($p > 0.04$) and Southeast ($p > 0.10$) tells us that the probability of observing an employment difference between the control group and the treatment group is statistically significant and slightly significant, respectively. For Florida, with a p-value of $p > 0.67$, we fail to reject the null hypothesis and the difference in the means of employment is not statistically significant.

In continuing the analysis of Table 4-2, we see the percentage of individuals that were employed in quarter 16 is higher with participation in Job Corps. This is reflected both Nationally and in the Southeast. The employment of individuals 48 months after randomization

is greater and statistically significant Nationally and slightly significant for the Southeast. Nationally, participants in the treatment group are employed two percent more than the control group. In the Southeast, treatment group participants were four percent more likely to be employed at quarter 16. In contrast, the treatment group in Florida is one percent more likely to be employed. However, this figure is not statistically significant.

In continuing our analysis, we test the robustness of our summary statistics results by utilizing linear regression testing for earnings and employment. In Table 4-3 and 4-4, we present the coefficients of our pre-treatment variables and the impact of Job Corps participation.

Based on our linear regression results, 48 months after randomization, the earnings for National, Southeast, and Florida regions showed that participation in Job Corps does have a effect on the earnings of individuals. From Table 4-3, earnings Nationally (\$18.38, $p > 0.00$) and in the Southeast region (\$36, $p > 0.00$) are statistically significant. The effect of Job Corps on individuals earnings in quarter 16 is greater in Florida ($p > 0.10$) than it is at the National level (\$28.50), but only marginally statistically significant.

The linear regression results for the percentage of study participants that were employed in quarter 16 in Table 4-4 also follows a similar outcome to the employment difference-of-means results. While adjusting for the pre-treatment covariates, it seems Nationally and in the Southeast, Job Corps participation has a positive impact on employment in quarter 16. Job Corps participation increases the likeliness of being employed Nationally by two percent ($p > 0.06$) and in the Southeast region by four percent ($p > 0.06$); these results are significant. In Florida, Job Corps increases the likeliness of being employed by 4 percent. However, it is not statistically significant at ($p > 0.23$).

Table 4-1. Summary Statistics for Control and Treatment Groups National, Southeast, and Florida

Characteristics	National			Southeast			Florida								
	Control Mean	SE	Treatment Mean	SE	p-value	Control Mean	SE	Treatment Mean	SE	p-value	Control Mean	SE	Treatment Mean	SE	p-value
Age	18.76	0.03	18.90	0.03	0.00	18.70	0.07	18.78	0.06	0.36	19.16	0.15	19.02	0.12	0.49
Percent Female	0.38	0.01	0.46	0.01	0.00	0.38	0.02	0.45	0.01	0.00	0.36	0.03	0.44	0.03	0.08
Percent Has Child	0.19	0.01	0.21	0.01	0.02	0.20	0.01	0.24	0.01	0.05	0.21	0.03	0.19	0.02	0.63
Percent who are married	0.02	0.00	0.02	0.00	0.67	0.02	0.00	0.02	0.00	0.82	0.01	0.01	0.02	0.01	0.52
Percent who are Household Heads	0.12	0.01	0.13	0.00	0.57	0.11	0.01	0.13	0.01	0.34	0.15	0.02	0.13	0.02	0.49
Percent living in a MSA	0.47	0.01	0.47	0.01	0.85	0.57	0.02	0.59	0.01	0.45	0.44	0.03	0.44	0.03	0.99
Percent living in a PMSA	0.32	0.01	0.32	0.01	0.58	0.13	0.01	0.14	0.01	0.48	0.46	0.03	0.47	0.03	0.82
Percent who speak English	0.88	0.01	0.88	0.00	0.87	0.93	0.01	0.93	0.01	0.84	0.78	0.03	0.81	0.02	0.41
Percent ever convicted	0.26	0.01	0.25	0.01	0.15	0.25	0.02	0.24	0.01	0.75	0.28	0.03	0.28	0.02	0.85
Highest Grade Completed	10.07	0.02	10.11	0.02	0.18	9.94	0.05	9.93	0.05	0.91	10.20	0.10	10.16	0.09	0.75
Percent with High School Diploma	0.18	0.01	0.19	0.01	0.04	0.14	0.01	0.16	0.01	0.26	0.19	0.03	0.19	0.02	0.78
Percent with GED	0.05	0.00	0.05	0.00	0.12	0.04	0.01	0.03	0.01	0.50	0.06	0.02	0.02	0.01	0.02
Percent with Vocational Degree	0.02	0.00	0.02	0.00	0.27	0.01	0.00	0.01	0.00	0.83	0.01	0.01	0.01	0.01	0.55
Percent unemployed at baseline	0.58	0.01	0.59	0.01	0.84	0.54	0.02	0.53	0.01	0.87	0.57	0.03	0.55	0.03	0.60
Percent ever worked before	0.79	0.01	0.80	0.01	0.45	0.74	0.02	0.75	0.01	0.71	0.82	0.03	0.79	0.02	0.44
Avg. weekly Pre-treatment Earnings	\$110.15	1.82	\$115.45	4.30	0.35	\$102.86	3.97	\$128.34	21.44	0.33	\$122.34	7.51	\$184.25	69.95	0.48
Percent White	0.29	0.01	0.28	0.01	0.64	0.15	0.01	0.14	0.01	0.67	0.15	0.02	0.17	0.02	0.63
Percent Black	0.52	0.01	0.53	0.01	0.49	0.75	0.02	0.78	0.01	0.12	0.58	0.03	0.65	0.03	0.07
Percent Hispanic	0.19	0.01	0.19	0.00	0.73	0.10	0.01	0.07	0.01	0.07	0.27	0.03	0.18	0.02	0.01
Sample size	3976		6108			811		1149			233		351		

P-value is the smallest level of significance for which the observed sample statistic tells us to reject the null hypothesis.

Table 4-2. Summary Statistics for Control and Treatment Groups National, Southeast, and Florida: Employment and Earnings

Region	At 48th Month Interview	Average weekly earnings in Quarter 16	Percent who worked in Quarter 16	Sample size
National	Control Mean	\$201.20	69.00%	3976
	S.E.	3.26	1.00%	
	Treatment Mean	\$215.08	71.00%	6108
	S.E.	2.81	1.00%	
	Differ. of Mean	\$13.88	2.00%	
	Diff. of S.E.	0.45	0.00%	
	p-value	0.00	0.04%	
Southeast	Control Mean	\$179.92	66.00%	811
	S.E.	6.58	2.00%	
	Treatment Mean	\$209.96	70.00%	1149
	S.E.	6.63	1.00%	
	Differ. of Mean	\$30.04	4.00%	
	Diff. of S.E.	0.05	1.00%	
	p-value	0.00	0.10%	
Florida	Control Mean	\$208.91	73.00%	233
	S.E.	12.41	3.00%	
	Treatment Mean	\$226.62	74.00%	351
	S.E.	10.93	2.00%	
	Differ. of Mean	\$17.70	1.00%	
	Diff. of S.E.	1.48	1.00%	
	p-value	0.29	0.67%	

P-value is the smallest level of significance for which the observed sample statistic tells us to reject the null hypothesis.

Table 4-3. Linear Regression Results for Earnings in Quarter 16: National, Southeast, and Florida

Treatment Variable	National*				Southeast**				Florida***			
	Coef.	S.E.	t-stat	P> t	Coef.	S.E.	t-stat	P> t	Coef.	S.E.	t-stat	P> t
Baseline Pre-Treatment Variables	18.38	4.35	4.22	0.00	36.00	9.47	3.80	0.00	28.50	17.11	1.67	0.10
Age of the Individual	1.45	1.31	1.10	0.27	1.96	2.90	0.67	0.50	-1.21	4.71	-0.26	0.80
Individual is Female	-65.69	4.63	-14.20	0.00	-57.20	10.27	-5.57	0.00	-38.88	18.37	-2.12	0.04
Individual has Child(ren)	3.50	6.20	0.56	0.57	-4.85	12.80	-0.38	0.71	23.02	23.25	0.99	0.32
Individual is Married	7.94	15.22	0.52	0.60	-31.71	36.34	-0.87	0.38	-6.95	62.50	-0.11	0.91
Individual is Head of Household	10.58	7.02	1.51	0.13	-3.05	15.35	-0.20	0.84	-36.76	26.58	-1.38	0.17
Individual Resides in MSA	12.28	5.73	2.14	0.03	33.51	10.84	3.09	0.00	19.33	30.83	0.63	0.53
Individual Resides in PMSA	24.91	6.28	3.97	0.00	49.18	16.69	2.95	0.00	26.30	31.78	0.83	0.41
Individual Primary Language is English	-10.05	8.68	-1.16	0.25	-13.89	23.24	-0.60	0.55	-3.55	25.88	-0.14	0.89
Individual has Ever Been Arrested	-15.05	5.02	-3.00	0.00	-20.78	11.12	-1.87	0.06	-35.98	19.53	-1.84	0.07
Highest Grade Completed	7.89	1.99	3.96	0.00	4.07	4.10	0.99	0.32	1.00	6.99	0.14	0.89
Individual has High School Diploma	20.35	7.46	2.73	0.01	27.28	16.48	1.66	0.10	65.95	26.88	2.45	0.01
Individual has GED	22.41	10.16	2.21	0.03	4.43	25.05	0.18	0.86	-2.76	44.22	-0.06	0.95
Individual has Vocational Degree	25.09	15.18	1.65	0.10	-0.79	42.37	-0.02	0.99	-42.30	74.54	-0.57	0.57
Individual is Unemployed	-41.31	5.49	-7.52	0.00	-27.47	12.33	-2.23	0.03	-0.97	21.11	-0.05	0.96
Individual has Ever Worked Before	84.43	7.00	12.06	0.00	79.22	14.63	5.42	0.00	36.15	26.42	1.37	0.17
Individual Weekly Earnings	0.04	0.01	4.74	0.00	0.01	0.01	1.45	0.15	0.00	0.01	0.39	0.70
Individual is Hispanic	-36.65	7.99	-4.59	0.00	-62.74	24.01	-2.61	0.01	1.85	33.14	0.06	0.96
Individual is Black	-60.88	5.28	-11.54	0.00	-85.51	13.92	-6.14	0.00	-53.04	25.16	-2.11	0.04
Constant	103.68	27.04	3.83	0.00	139.24	59.23	2.35	0.02	218.95	100.50	2.18	0.03

P-value is the smallest level of significance for which the observed sample statistic tells us to reject the null hypothesis.

* Number of observations = 9405

** Number of observations = 1857

*** Number of observations = 543

Table 4-4. Linear Regression Results for Percent Employed in Quarter 16: National, Southeast, and Florida

Treatment Variable	National*				Southeast**				Florida***			
	Coef.	Rob. S.E.	t-stat	P> t	Coef.	Rob. S.E.	t-stat	P> t	Coef.	Rob. S.E.	t-stat	P> t
Baseline Pre-Treatment Variables												
Age of the Individual	0.00	0.00	-0.50	0.62	0.00	0.01	0.57	0.57	-0.02	0.01	-1.44	0.15
Individual is Female	-0.04	0.01	-4.26	0.00	-0.01	0.02	-0.51	0.61	0.01	0.04	0.29	0.77
Individual has Child(ren)	0.02	0.01	1.39	0.16	0.01	0.03	0.19	0.85	0.10	0.05	2.12	0.04
Individual is Married	-0.02	0.03	-0.74	0.46	-0.10	0.09	-1.09	0.28	0.03	0.13	0.22	0.83
Individual is Head of Household	0.00	0.02	-0.26	0.80	-0.04	0.03	-1.09	0.28	-0.02	0.06	-0.42	0.68
Individual Resides in MSA	0.02	0.01	1.44	0.15	0.09	0.03	3.73	0.00	0.08	0.07	1.07	0.29
Individual Resides in PMSA	0.01	0.01	0.97	0.33	0.10	0.04	2.66	0.01	0.04	0.08	0.47	0.64
Individual Primary Language is English	-0.03	0.02	-1.57	0.12	0.01	0.05	0.20	0.84	0.04	0.06	0.64	0.52
Individual has Ever Been Arrested	-0.04	0.01	-3.97	0.00	-0.05	0.03	-1.88	0.06	-0.06	0.04	-1.34	0.18
Highest Grade Completed	0.01	0.00	2.97	0.00	-0.01	0.01	-1.44	0.15	0.00	0.02	-0.18	0.86
Individual has High School Diploma	0.05	0.02	3.13	0.00	0.06	0.04	1.66	0.10	0.08	0.06	1.40	0.16
Individual has GED	0.06	0.02	2.71	0.01	0.03	0.05	0.57	0.57	0.01	0.10	0.07	0.95
Individual has Vocational Degree	0.03	0.03	1.06	0.29	0.06	0.09	0.73	0.47	-0.06	0.17	-0.33	0.74
Individual is Unemployed	-0.08	0.01	-7.52	0.00	-0.12	0.02	-5.11	0.00	-0.05	0.04	-1.08	0.28
Individual has Ever Worked Before	0.18	0.02	11.70	0.00	0.23	0.03	7.35	0.00	0.14	0.06	2.36	0.02
Individual Weekly Earnings	0.00	0.00	1.51	0.13	0.00	0.00	1.72	0.09	0.00	0.00	0.86	0.39
Individual is Hispanic	-0.07	0.02	-4.36	0.00	-0.02	0.05	-0.40	0.69	0.07	0.07	0.95	0.34
Individual is Black	-0.11	0.01	-10.09	0.00	-0.09	0.03	-2.90	0.00	-0.10	0.05	-1.97	0.05
Constant	0.59	0.06	10.17	0.00	0.61	0.13	4.54	0.00	0.91	0.23	3.92	0.00

P-value is the smallest level of significance for which the observed sample statistic tells us to reject the null hypothesis.

* Number of observations = 9405

** Number of observations = 1857

*** Number of observations = 543

CHAPTER 5 CONCLUSION AND IMPLICATIONS

The Job Corps program was created to take underprivileged youths aged 16 to 21 and remove them from their non-conducive environments to residential centers and campuses to provide them with educational and vocational training to improve and develop their skill set for employability. The major goals of Job Corps are to increase the employment and earnings of the participants.

At the 48th month interview, Job Corps participants Nationally were 2 percent more likely to be employed and earned \$13.88 more per week (control-\$201.20 versus treatment-\$215.08). These figures were found to be statistically significant in the difference-of-means estimations.

In the Southeast, treatment group participants were 4 percent more likely to be employed (slightly significant) and earned \$30.04 more per week (control-\$179.92 versus treatment-\$209.96), which is significant. In Florida, Job Corps participants were 1 percent more likely to be employed and earned \$17.70 more per week (control-\$208.91 versus treatment-\$226.62). Nevertheless, these figures were not found to be statistically significant.

The subsequent linear regression tests were conducted to examine the robustness of the results on employment and earnings at quarter 16 at the National, Southeast, and state of Florida levels, which are qualitatively similar to the difference-of-means results. Nationally and in the Southeast, employment at the 48th month interview improved among Job Corps participants by two percent and four percent, respectively; both are significant. While in Florida, employment increased by four percent, which is not significant. Earnings, Nationally and in the Southeast are improved by Job Corps participation.

The current study has found that there are regional differences, which affect the outcomes of employment and earnings. The Nation and the Southeast follow a similar trajectory while

Florida deviates. However, we must mention the small sample size of Florida relative to the Nation and the Southeast, and that Florida is a more heterogeneous state in terms of population. These observations are important to note because they may explain the differences in results. For instance, the fact that the estimated impacts of Job Corps for Florida are largely similar to those of the Nation and the Southeast, aside from their statistical significance, call for future research that explores this issue in more detail. Also, we have discussed the varying levels of unemployment, high school attainment, poverty levels, racial concentrations, and industry composition. These factors are tied directly to the differences in the years of schooling, poverty status, and socioeconomic conditions that are experienced by whites, blacks, and Hispanics. From the research, blacks and Hispanics face greater wage and employment difficulties. Further, since Florida has higher percentages of blacks and Hispanics, these obstacles are magnified for these two groups in comparison to whites. This ultimately leads us to the conclusion that Job Corps is effective Nationally and in the Southeast, but we do not find this to be the case in the state of Florida.

The above conclusions regarding Florida raise important policy issues. What is the justification for Job Corps training if it is not serving the community effectively? One interpretation of the results in this thesis is that they cast doubt on Job Corps effectiveness in Florida. Following this interpretation, the federally-designed program may have to be re-tooled to better serve the state's unique socio-economic conditions.

An interesting aspect that may contribute to the lack of efficacy of Job Corps in Florida is the potential inability of state Job Corps Centers to serve their target demographic groups. In a 1996 report to Congress that covered Job Corps Centers' 1993-1994 capacity to serve, the U.S. Government Accounting Office found that Job Corps had the capacity to serve 81 percent of

program participants in their home states. Approximately, 59 percent of participants were assigned to centers in their home state, while the remaining participants were sent to centers outside their home state and traveled an average of over four times as far. However, about 83 percent of those participants who obtained jobs were employed in their home state (U.S. Government Accounting Office, 1996).

In relation to the difficulties in placing clients in their home state, there are also insufficient numbers of seats available to serve the community that may contribute to the discrepancy of the lack of effectiveness of Job Corps. Nationally, there are 11,861 insufficient number of seats with approximately 32 percent of those seats are accounted to the Southeast, and Florida accounts for nearly 16 percent of the insufficiency (U.S. Government Accounting Office, 1996). It could be reasoned that in Florida the clients are underserved by Job Corps and need increased capacity to serve underprivileged groups more effectively. This may also address the non-participation of Job Corps selectees, who chose to forego the program because of the lack of capacity or availability of program instruction. More research is needed along these lines to explore the role of insufficient Job Corps resources in the state of Florida.

This study has provided preliminary findings for further research to reanalyze the role that Job Corps plays in the state of Florida. Greater efforts can be invested in this topic in hopes to find out the root causes of why certain groups are not making the same gains in earnings and employment in comparison to other groups. Perhaps there has to be a refinement in the individualized plan relating to training, counseling, and the type of skills provided.

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BIOGRAPHICAL SKETCH

Abu Isa Mansoor is part of the Food and Resource Economics Department (FRED) at the University of Florida. Abu immigrated to the United States at the age of five with his father, mother, and two sisters. They arrived in New York and traveled to Connecticut. They did not find the weather agreeable and headed south to Florida. Abu attended Suncoast Community High School and graduated in 2002. He then attended Florida Atlantic University and later transferred to the University of Florida in 2004, where he was accepted into FRED. He improved greatly in his academic studies and graduated in 2006 with a Bachelors degree in FRE. In 2006, Abu received a Fellowship from the U.S. Department of Agriculture. He thought he was very fortunate and grateful to the people that believed in him. He received his M.S. from the University of Florida in the Spring of 2009.