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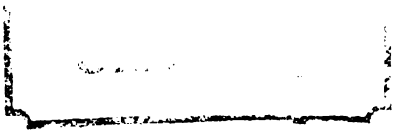

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A COMPARATIVE FOLLOW-UP STUDY OF M.S. AND B.S. GRADUATES IN CRIMINAL JUSTICE TEN YEARS AFTER GRADUATION

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Alan L. Lawson

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A COMPARATIVE FOLLOW-UP STUDY OF M.S. AND B.S. GRADUATES IN CRIMINAL JUSTICE TEN YEARS AFTER GRADUATION

By

Alan L. Lawson

A DISSERTATION

Submitted to
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ABSTRACT

A COMPARATIVE FOLLOW-UP STUDY OF M.S. AND B.S. GRADUATES IN CRIMINAL JUSTICE TEN YEARS AFTER GRADUATION

By

Alan L. Lawson

The purpose of this study was to determine if the attainment of a master's degree in criminal justice made a difference in the success or career progress of its recipients as compared with those who have received a bachelor's degree.

To reduce this question to empirically testable terms, the following dependent and independent variables were identified as significant to the study.

Dependent Variables

1. Current compensation
2. Growth in compensation
3. Level of responsibility
4. Change in relative position level
5. Attainment of top executive status
6. Present job satisfaction
7. Perception of success

Independent Variables

Structural Variables:

1. Socioeconomic status
2. Prior work experience
3. Ability
4. Demographic characteristics (sex/ethnic origin)

Employment Background Variables

1. Size of the organization
2. Type of organization
3. Geographical region of employment
4. Position classification (line/staff)

A questionnaire was mailed to all graduates of Michigan State University's master's program in criminal justice between the years 1969 and 1973. A similar questionnaire was mailed to a random sample of graduates from Michigan State University's undergraduate program in criminal justice during the same time period. Michigan State University's School of Criminal Justice was selected because it is one of the oldest and most stable criminal justice programs in the nation and has been producing significant numbers of graduates for several years.

Descriptive statistics were computed for each variable; inter-relationships among the variables were cross-tabulated; and, where appropriate, simple and partial correlations were computed. A multiple-stage, stepwise regression analysis was performed for each of the dependent variables. The variables were entered into the analysis in the following groups.

Group 1: Background variables

Group 2: Degree program area of concentration

Group 3: Structural variables of the first job after obtaining the master's degree

Group 4: Structural variables of the present job

Group 5: Educational level

The stepwise technique entered the variables within each group in the order of the amount of variance they explain. The variable representing degree group was placed into the equation last so its incremental contribution could be exposed to explained variance.

It was found that the M.S. degree in criminal justice has demonstrated a positive lasting influence in several areas. Persons with the M.S. had higher salaries, a higher level of job satisfaction, were more upwardly mobile, and held more top executive positions than their counterparts with only the B.S. degree. In addition, it appears that persons with both the M.S. and B.S. in criminal justice have achieved greater success than those who have the M.S. but their bachelors is not in criminal justice. The M.S. degree had little influence on the graduates' perceived level of success and was only minimally associated with job mobility. The same general pattern existed for those who had the M.S. degree but did not possess the corresponding B.S. in criminal justice.

ACKNOWLEDGMENTS

The writer wishes to express appreciation to a number of individuals without whose assistance this endeavor could not have been completed.

First of all, a very special thanks to Mr. Manfred Swartz, who provided a tremendous amount of assistance in the research methodology and statistical analysis of the data for this dissertation.

To Dr. Richard Featherstone, chairman of my guidance committee, for his valuable advice and willingness to devote his time. Also, my appreciation extends to Dr. Walter Johnson, Dr. Kenneth Christian, and Dr. George Myers for similar contributions.

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Finally, to my wife, Janet, and daughers, Christine, Michelle, and Dawn, for their patience and assistance, I offer my deepest thanks.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

THE PROBLEM

Two major developments occurred in 1929 that set the stage for the current status of criminal justice education in the United States. The University of Chicago began offering courses in police science for undergraduate students, and the University of Southern California established an advanced degree program in public administration, with a major in law enforcement. In 1935, Michigan State University established a bachelor of science degree program in police administration with a five-year curriculum specifically designed to prepare students for careers in law enforcement. Since that time, hundreds of colleges and universities throughout the nation have established education programs in law enforcement and criminal justice.

Higher education in criminal justice in this country has been stimulated by a number of trends during the late 1960s and early 1970s. First, there has been tremendous growth in monetary support for criminal justice education stimulated by the creation of the Law Enforcement Assistance Administration (LEAA). Second, there has been a marked increase in emphasis on career preparation in higher education. And third, the criminal justice system has experienced a significant

increase in pay scales which has increased the attractiveness of positions in the criminal justice system as a career.[1]

The National Advisory Commission on Criminal Justice Standards and Goals recommended that: "Every police agency should, no later than 1982, require as a condition of initial employment the completion of at least four years of education (120 semester units or a baccalaureate degree) at an accredited college or university."[2]

As a result of this type of emphasis being placed on law enforcement and other areas of criminal justice higher education, the number of graduates possessing undergraduate and graduate degrees has risen dramatically. The 1978-80 Criminal Justice Education Directory reported 589 baccalaureate and 198 master's degree granting institutions in the United States.[3] In comparison, there were only 39 baccalaureate and 14 master's degree granting programs in 1967.

Although research attempting to assess the influence of the undergraduate degree on graduates and the organizations they work for is accumulating, very little research in the criminal justice field has been done to evaluate the influence of the master's degree on its recipients. The tremendous expansion of higher education programs,

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[1]National Advisory Commission on Criminal Justice Standards and Goals, A National Strategy to Reduce Crime (Washington, D.C.: Government Printing Office, 1973), p. 42.

[2]National Advisory Commission on Criminal Justice Standards and Goals, Report on the Police (Washington, D.C.: Government Printing Office, 1973), p. 369.

[3]Criminal Justice Education Directory 1978-80 (Gaithersburg, Maryland: International Association of Chiefs of Police, Inc., 1978), p. 1.

increased demand for graduate degrees in upper-level and top executive positions, higher salaries for graduate degree holders, and the increased complexity of the field have all accelerated the demand for master's degree graduates.

The attempt to ascertain the value of the master's degree in criminal justice may be viewed as a specific example of the long-standing efforts of educators, psychologists, and sociologists to define and measure the benefits of education to the individual and to society. Currently in the field of criminal justice, significant controversy exists as to the objectives and goals of higher education in the field.[4] With the tremendous growth in recent years in the number of programs in criminal justice, spurred by the recommendations of the National Commissions and by the availability of student grants and loans through the Law Enforcement Assistance Administration, it becomes important to examine critically the impact of these program offerings in order to provide guidance and direction to students, to program administrators, and to all the other affected individuals and organizations.[5]

The general question being asked in this study is: Does the attainment of the master's degree in criminal justice make a difference in the success or career progress of its recipients as compared

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[4]Lawrence W. Sherman and the National Advisory Commission on Higher Education for Police Officers, The Quality of Police Education (San Francisco: Jossey-Bass, 1978), pp. 39-41.

[5]National Institute of Law Enforcement and Criminal Justice, Higher Education Programs in Law Enforcement and Criminal Justice (Washington, D.C.: Government Printing Office, 1971), pp. 2-3.

with those who have received a bachelor's-level degree? Specifically, do master's graduates outperform those who have not attained that degree? Do they make more money? Have they attained higher-level positions? Are they more satisfied? Do they perceive themselves as being more successful? The main objective of this study is to provide evidence for answering these questions by comparing the progress of a group of master's degree holders with that of a group of bachelor's degree recipients in criminal justice.

Statement of the Problem

Three significant events have occurred in the past two decades to stimulate major growth in criminal justice higher education programs in this country.

1. The federal government formed the Law Enforcement Assistance Administration to provide major financial support for criminal justice higher education.
2. There has been a marked increase in emphasis on career preparation in criminal justice higher education.
3. Pay scales in the criminal justice field have risen to a level where careers in this area are far more attractive.

Emanating from this growth, a series of problems and unanswered questions have evolved concerning the role and value of higher education in the criminal justice system. Although the literature abounds with assessments of the bachelor's degree, there has been no major effort to analyze the career contribution of the master's degree. If

undergraduates are going to be encouraged to seek advanced degrees, an effort must be made to assess the influence of the degree on their careers.

Purpose of This Study

The purpose of this study is to determine if a significant relationship exists between a group of master's degree graduates and a group of bachelor's degree graduates when compared with the dependent variables identified below:

1. Current compensation
2. Growth in compensation
3. Level of responsibility
4. Change in relative position level
5. Attainment of top executive status
6. Present job satisfaction
7. Perception of success
8. Level of job mobility

Research Questions

The study addresses eight research questions, which are stated below:

1. Is there a relationship between educational level and present compensation?
2. Is there a relationship between educational level and growth in compensation?
3. Is there a relationship between educational level and present position level?

4. Is there a relationship between educational level and change in position level?
5. Is there a relationship between educational level and job satisfaction?
6. Is there a relationship between educational level and perceived level of success?
7. Is there a relationship between educational level and level of job mobility?
8. Is there a relationship between educational level and attainment of top executive status?

Limit and Scope of the Study

The problems inherent in this type of research, as well as in the methodology employed, place several limitations on the conclusions that can be drawn from the findings of this study.

1. All the information gathered in this study was self-reported by the respondents. Therefore, the accuracy of the information is unverified and dependent upon the honesty and accurate memory of each of the respondents. Although it can be argued that the respondents might be reporting higher levels of success than more objective observations would indicate, there is no reason to believe that this phenomenon would occur to any greater extent in one group than another.

2. The fact that this research was based only on graduates from MSU's School of Criminal Justice limits generalization concerning the data to that school.

3. Michigan State University is located in central lower Michigan; it is, therefore, reasonable to assume that a majority of study respondents may be located in the Great Lakes area of the United States. If this assumption proves correct, the conclusions drawn from this study will have to be limited to the geographical areas represented. Economic differences in various parts of the country may have a significant impact on the career progress of individual graduates.

4. The fourth limitation of this study relates to the sample group. Respondents were graduates between 1969 and 1973 and therefore relate to career patterns developing in the past 9 to 14 years. Due to the tremendous increase in graduates since that period of time, different employer hiring patterns and student perceptions may have been created between students graduating now and those graduating during the survey period.

Definition of Terms

In an effort to clarify terms used in a particular manner in this study, the following definitions are provided:

Criminal justice: In the generic sense, criminal justice refers to the entire process or system to which an individual could be exposed from the point of commission of a crime to the point of rehabilitation. This includes the police, the courts, and correctional agencies. These are referred to as the criminal justice system. In terms of academic program, criminal justice refers to a unified program under which all the agencies and the relationships are considered together.

Criminal justice education: The criminal justice system is designed to facilitate the achievement of certain goals, which include: the identification, the accusation, the conviction, the punishment, and the correction of those who offend societal norms. In order to permit achievement of these goals, the criminal justice system has been subdivided into the crime prevention and control process; the protection and enforcement process; the judicial process; the correction process; the administration, management, and organizational change process; and the research, evaluation, and planning process. Criminal justice education, therefore, begins with the scientific study of crime and criminals and ends with a holistic understanding of the criminal justice system and/or each individual subdivision contained therein.[6]

Format of the Study

This study is organized into five chapters.

Chapter I, The Problem, included the need for the study, statement of the problem, purpose of the study, research questions, limit and scope of the study, definition of terms, and format of the study.

Chapter II, A Review of the Literature, contains a review of the research examining factors influencing the relationship between attainment of academic degrees and career growth and development.

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[6]Definition adopted by the American Society of Criminal Justice Arts and Sciences from the Committee on Accreditation and Standards, August 1977.

Chapter III, Research Methodology, includes specification of dependent and independent variables, study population and sample-selection procedures, data-collection procedures, and the methods of statistical analysis employed.

Chapter IV, Analysis of Data, includes the analysis and presentation of the information gathered in this study, as well as commentary regarding its meaning and significance.

Chapter V, Summary and Conclusions, contains a synopsis of the major findings of this study and a discussion of the nature of the conclusions that can be drawn.

CHAPTER II

REVIEW OF THE LITERATURE

In Chapter I the context of this research was defined as dealing with the following problem:

> Does the attainment of the master's degree in criminal justice make a difference in the success or career progress of its recipients as compared with those who have received a bachelor's-level degree?

Based on this problem statement, this study focused on the following eight research questions:

1. Is there a significant relationship between educational level and present compensation?
2. Is there a significant relationship between educational level and growth compensation?
3. Is there a significant relationship between educational level and present position level?
4. Is there a significant relationship between educational level and change in position level?
5. Is there a significant relationship between educational level and job satisfaction?
6. Is there a significant relationship between educational level and perceived level of success?

7. Is there a significant relationship between educational level and level of job mobility?
8. Is there a significant relationship between educational level and attainment of top executive status?

To place this research project into its proper perspective and thoroughly acquaint the reader with the environment within which it is taking place requires a discussion of the following topics: (1) an overview of the history and development of criminal justice education, (2) current perspectives on the relationship between educational achievement and income, (3) the human-capital theory, (4) education as a screening device, (5) educational attainment and its influence on job satisfaction, (6) effects of socioeconomic and environment influences on education and career development, and (7) the effects of the master's degree in criminal justice.

An Overview of the History and Development of Criminal Justice Education

As was pointed out in Chapter I, three major events occurred in the late 1960s and early 1970s that stimulated marked expansion in criminal justice education:

1. The creation of the Law Enforcement Assistance Administration generated large amounts of monetary support for criminal justice education.
2. There was a major increase in emphasis on career preparation in higher education.
3. There were major increases in pay scales for various careers in criminal justice.

As a result of these events, criminal justice education grew and expanded faster during this period than any other academic program. During this period of rapid growth, those concerned with criminal justice education were necessarily involved with activities whose objectives were merely to keep pace with the problem of rapid expansion. Consequently, the qualitative aspects of program development were given less attention than excellence requires. Late in the 1970s, however, massive federal funding was greatly reduced and program expansion was slowed to a reasonable level. It was at this time that criminal justice educators had an opportunity to survey the events and developments of the previous 12 to 15 years. Although numerous projects and articles have treated the subject, the two most significant are the National Advisory Commission on Higher Education's report, The Quality of Police Education, and the report by the John Jay School of Criminal Justice, Criminal Justice Education, funded by a grant by the U.S. Office of Education. The National Advisory Commission report was highly critical of the quality of education being dispensed and stimulated a great deal of controversy and discussion. The latter report was less critical of criminal justice education and presented a more balanced effort at assessing the field. In addition, this report made a considerable effort toward identifying the major trends and directions occurring in criminal justice education.

One long-standing controversy surrounds the question of which approach to criminal justice education is the most effective. There

are currently three general trends or philosophies represented in the various criminal justice programs across the country:

1. Humanistic-social, which attempts to develop the "whole person" who understands the problems of society.
2. Technical-vocational, which stresses development of competency in specific skills deemed essential for criminal justice practitioners.
3. Professional-managerial, which stresses management skills required of agency managers and tends to deemphasize social science and humanities perspectives.

Although these three philosophical designs do exist, Moran and Bonita, in their presentation on the topic at the Annual Meeting of the Academy of Criminal Justice Sciences, suggested that they are not completely distinguishable.[7] The report on criminal justice education prepared by John Jay College further supported this contention and pointed out that their survey results illustrated discrepancies between purported philosophy and actual course offerings. They further suggested that it would be more appropriate to describe existing philosophies on a continuum with agency-training-type programs on one extreme and academic social science or theoretical programs on the other. Finally, the John Jay College report found a strong and recent trend in the field toward the theoretical or

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[7] T. Kenneth Moran and Thomas J. Bonita III, "Models of Criminal Justice Programming" (paper presented at the Annual Meeting of the Academy of Criminal Justice Sciences, New Orleans, Louisiana, March 8, 1978).

academic end of the continuum.[8] Michigan State University is clearly representative of the current trend and therefore strengthens the usefulness of these research findings.

One of the recommendations outlined by the report, The Quality of Police Education, called for research tracing the careers of criminal justice graduates to answer some of the basic questions concerning the value of their education. In addition, the report, Criminal Justice Education, by John Jay College stressed the needs and concerns of educators in the field of quality program research for future development in the field. This research project represents an attempt to provide research data to serve as a foundation upon which sound decisions in this area can be made.

Current Perspectives on the Relationship Between Educational Achievement and Income

Educators were interested in the relationship between educational achievement and earnings as early as 1917. The U.S. Department of Interior published a report indicating that "the figures show conclusively that the schools are giving their pupils a greater earning power than even the strongest advocates of education had claimed."[9] Bridgman, in another early study of American Telephone and Telegraph employees, found that rank in class, campus

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[8]Pearson et al., Criminal Justice Education, John Jay College Report, pp. 131-33.

[9]A. C. Ellis, The Money Value of Education (Washington, D.C.: Department of the Interior, 1917), p. 44.

achievements, and early graduation, respectively, were significant indicators of success in the company.[10]

The positive influence of education on earnings appears to permeate most levels of education. In 1956, Wolfe and Smith conducted a national survey of superior high school students and found a significant relationship between class rank and earnings. The top-ranking students in the class consistently reported higher salaries than their classmates. Additionally, when the males were compared by the amount of education they had acquired after high school, the differences in income were greater for those with higher levels of education and less for those with lower levels.[11]

Interest in the study by Wolfe and Smith is intensified when their findings on this relationship between education and individual ability are examined. They reported that when incomes of individuals with the same educational level were compared by level of intelligence, those persons with higher intelligence also received higher earnings. This suggests that not only does there exist a relationship between education and earnings, but also a relationship between education and individual abilities. Wolfe and Smith also found that within each educational group, sons of professional men had higher earnings than sons of nonprofessionals. This suggested the possibility of an interrelationship between education and occupational status or type.

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[10] D. S. Bridgman, "Success in College and Business," The Personnel Journal 9 (1930): 1-19.

[11] "Security Directors: How Much Are They Earning?" Security World, December 1980, pp. 19-23.

Although these early studies may lack modern statistical method, they do provide a foundation for further study of the above-mentioned relationships.

The 1980 salary survey report by Security World's Bureau of Marketing Research revealed more current data specific to the criminal justice system that supports early findings associating earnings with educational success. The survey reported that the largest salaries were being received by security directors working in the manufacturing sector. This sector also reported having the highest percentage of college-educated personnel. This again suggests a positive interrelationship between education and earnings.

Finally, there has been an abundance of research in the police area of the criminal justice system investigating the relationship between education and police performance. An overview of the subject reveals several research weaknesses and conflicting results. A major sophisticated study by Cohen and Chaiken found, however, that college-educated police officers generally rose through the ranks faster than non-college-educated officers.[12] Since higher salaries are associated with promotions, it is reasonable to assume an interrelationship between education and earnings in this area.

The Human-Capital Theory

Hunt, in 1963, was one of the first to study the effects of education on income in relation to other possible sources of

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[12]B. Cohen and J. M. Chaiken, Police Background Characteristics and Performance: Summary Report (Washington, D.C.: U.S. Law Enforcement Assistance Administration, 1972).

variance.[13] Using multiple-regression analysis, he gathered alumni-record data from nearly all four-year colleges and universities in the United States. The resulting data demonstrated a significant relationship between income and ability, experience, and size of college. The study also suggested that the prestige of the particular college was of relatively minor significance when individual ability was held constant.

Another major study in this area was undertaken by Becker in 1975 to estimate the money rate of return to college- and high-school-educated students in the United States.[14] Building on the findings of Hunt, he and Schultz were instrumental in conceptualizing the human-capital theory, which attempted to explain the relationship between education and earnings.[15] Thinking in terms of individual prosperity, they suggested that education should be treated as an investment in human capital. Education enhanced the productivity of the individual, and this increase in productivity subsequently reflected an increase in earnings. Therefore, a person contemplating ways of enhancing his future income should consider an investment in education as one of his alternatives.

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[13] S. J. Hunt, "Income Determinants for College Graduates and the Return to Educational Investment," Yale Economic Essays 3 (1963): 305-57.

[14] G. S. Becker, Human Capital: A Theoretical and Empirical Analysis With Special Reference to Education, 2nd ed. (New York: National Bureau of Economic Research, Inc., 1975).

[15] T. W. Schultz, "Investment in Human Capital," The American Economic Review 51 (1961): 1-17.

Becker and Schultz measured the magnitude of the relationship between education and income by calculating internal rates of return from education using expected lifetime earnings. After calculating lifetime earnings, they deducted the costs of the education and the "opportunity cost" of wages foregone while engaged in the educational process and applied a discount rate that equated the present value of net earnings. Becker's analysis of census data indicated that the rate of return for the average college student was 10% to 12% per annum. The rate was higher for urban, white, male college graduates and lower for nonwhites, women, and rural persons. In a related study, Denison[16] estimated that about three-fifths of the income differential between educational groups was actually due to education differences with the other two-fifths being attributed to differences in ability, socioeconomic background, and structural variables in the labor market. Additionally, in a monograph surveying rate-of-return findings at that time, Innes, Jacobsen, and Pellegrin reached these conclusions: (1) Education yielded a high rate of return on investment, i.e., the monetary returns exceeded the costs of education by a considerable margin; (2) this rate of return remained high at all educational levels; and (3) the college graduates who earned more than those with less education at any age level were increasingly advantaged as they grew older. This last finding might be hypothesized to be an indication of the power of increased productivity to affect earnings over an entire career.

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[16]E. F. Denison, The Sources of Economic Growth in the United States and the Alternatives Before Us (New York: Committee on Economic Development, 1962).

In a more recent study, Duncan used canonical correlation to identify the variance in a combined group of dependent variables (wages, fringe benefits, and nonpecuniary benefits) explained by a linear combination of predictors.[17] His major finding was that education's well-documented importance on earnings carried over to fringe benefits and nonpecuniary benefits as well. When wages and nonpecuniary benefits were combined into a single composite-earnings measure, the estimated coefficient on education was considerably greater than when earnings were measured by wage rate alone. This added importance of education persisted even when cognitive ability, achievement motivation, and socioeconomic background were taken into account.

These studies suggest that education might operate to increase the productivity of the worker as Becker and other human-capital theorists claimed, thereby resulting in a significant return from the investment that persists over the span of the career. If these findings are correct, one might hypothesize that a master's in criminal justice would also demonstrate this kind of effect on productivity and on measures of career progress.

Education as a Screening Device

A number of researchers have challenged the concept that education has a positive relationship with productivity. The countering theory holds that education acts primarily as a screening device for assuring that the more capable persons are placed in the

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[17] G. J. Duncan, "Earnings Functions and Nonpecuniary Benefits," The Journal of Human Resources 11 (1976): 462-83.

higher-paying jobs and by so doing the less capable are thereby effectively screened or barred from these positions.

It is generally assumed that organizations are arranged in a hierarchical fashion. Therefore, positions within this structure are also arranged in hierarchical or pyramidal order. Coinciding with this order of things further implies that as a person rises within the hierarchical structure, the degree of responsibility and initiative required of the position increases. Those favoring the screening-device hypothesis argue that employers are not certain they can measure the particular skills or attributes required to rise successfully to the top of the pyramid. Employees do agree, however, that a certain positive relationship does exist between educational achievements and these attributes. Therefore, education becomes a proxy for qualities the employer values and predicts a higher level of performance without necessarily making any direct contribution to it. As a result, students are required to seek high degrees in education because the resulting paper credentials serve as "union cards" for entry into upper levels of the pyramid.

Blaug suggested,

> This explanation neatly accounts for the fact that education and earnings are positively correlated; even explains why so many educational qualifications appear to be unrelated to the type of work that individuals take up and why returns to the terminal year of a cycle of education are frequently disproportionately larger than the returns to earlier years, the so-called "sheepskin effect."[18]

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[18]M. Blaug, "The Correlation Between Education and Earnings: What Does It Signify?" Higher Education 1 (1972): 70-71.

Blaug further suggested that if the screening-device theory is correct, then education is not an investment in economic growth nor does it add anything to productivity. Education, in effect, then represents "a service, the supply of which automatically creates its own demand by virtue of the flexibility of hiring standards for jobs."[19]

Other authors such as Berg, Taubman, and Wales offered similar arguments supporting Blaug. Arrow, on the other hand, presented a more rigorous version of the screening hypothesis by suggesting that individual productive ability is totally unaffected by education.[20]

Berg, in another study, cited data suggesting that some organizations reward managers and professionals by their educational achievement rather than their performance. He concluded,

> A search of the considerable literature on productivity, absenteeism, and turnover has yielded little concrete evidence of a positive relationship between workers' educational achievement and their performance records in many work settings in the private sector.[21]

However, at another point in his analysis, Berg conceded that many employers did not even bother to record permanently a worker's educational attainments, thus calling into question the extent to which the screening theory could be used to explain differential performance after initial hiring.

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[19] Ibid., p. 71.

[20] K. Arrow, "Higher Education as a Filter," Journal of Political Economy 2 (1973): 193-216.

[21] I. Berg, Education and Jobs: The Great Training Robbery (New York: Praeger Publishers, 1970), p. 104.

Taubman and Wales devised a test of the screening hypothesis by estimating predicted occupational distributions by educational level under the assumption of free choice into occupations and comparing those with the actual distributions. They found that people with less education were disproportionately underrepresented in high-paying occupations and suggested that screening accounted for a substantial portion of educational-earnings differentials (perhaps 50% or more). Research by others, however, cast some questions about the extent of screening and its effect on earnings.[22]

Layard and Psacharopoulos tested three predictions of the screening hypothesis. First, their study of college dropouts showed that, while allowing for ability, the rate of return to dropouts exceeded that of graduates. This cast serious doubt on the extent of the "sheepskin effect." Second, they found that the effect of education on earnings rose both proportionately and absolutely with age, contrary to what the screening hypothesis would suggest. Finally, the hypothesis suggested that education took the place of more expensive tests of ability for the employer in determining the most desirable to hire. However, the authors suggested that if screening were the main function of education, it could probably be done more cheaply by standardized testing.[23]

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[22]P. Taubman and T. Wales, "Higher Education, Mental Ability and Screening," Journal of Political Economy 81 (1973): 28-55.

[23]R. Layard and G. Psacharopoulus, "The Screening Hypothesis and the Returns to Education," Journal of Political Economy 82 (1974): 985-98.

Similarly, in a 1978 study, Leigh, using 1970 census sample data, studied the racial differences in occupational advancement. He found that no large and systematic racial differentials existed. Furthermore, the evidence led him to conclude that sufficient industry and geographic mobility existed among both black and white workers to make the effects of initial industry and region unimportant relative to the effects of human-capital variables. He suggested that these findings reinforced the productivity theory rather than the screening hypothesis.

The conflicting information obtained by different researchers suggests that neither major theory fully explains the consistent relationship between education and occupational success. Wolpin perhaps expressed the major conclusion to be reached:

> The possibility that schooling performs some identification function with respect to initial capabilities is as difficult to deny as the proposition that schooling enhances those innate capabilities. The real issue concerns not the mere existence of one or the other effect, but the extent to which schooling performs each of these roles.[24]

From the research available it seems reasonable to conclude that the earnings advantage enjoyed by college graduates over persons with less formal education can be attributable to the following three factors as stated by Wolfe:

1. Higher educational credentials that give admission to occupational fields that offer higher financial rewards.

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[24]K. I. Wolpin, "Education and Screening," The American Economic Review 67 (1977): 957.

2. The higher average level of intellectual ability (and probably also the higher rank in some other personal characteristics) of persons who continue further up the educational ladder.
3. The specific or general applicability to job performance of the knowledge and skills developed in college or university.

The relative importance of these three factors depends on the professional occupational field involved and to some extent also on the length of experience. No study has been sufficiently comprehensive to show the detailed relationships with precision.[25]

The present study dealt with the question of the value of the master's in criminal justice in increasing the productivity and performance level of its recipients. If the human-capital theory is valid with regard to the master's degree, then those receiving such training would be expected to outperform those who had not been so trained. If, on the other hand, the screening-hypothesis theory is more valid, then the master's graduates would likely enter the job market with an initial advantage due to the power of the credential itself. This would not guarantee, however, that the master's recipients would outperform those whose training had ended with the bachelor's degree.

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[25]D. Wolfe and J. G. Smith, "The Occupational Value of Education for Superior High School Graduates," Journal of Higher Education 27 (1956): 73.

The Effects of Ability and Graduate-Level Education

The theoretical work on human capital by Hunt, Becker, Schultz, and others leads to several statistical studies to determine how family background, ability, and quality of school affected the education-income relationship. Weisbrod and Karpoff, in a 1969 study, analyzed the earnings histories of a large group of AT&T employees and found a strong relationship between college grades and earnings. They concluded that about one-fourth of the observed difference in income levels between high school and college graduates resulted from differences in ability and other personal characteristics.[26] Hines, Tweeten, and Redfern, in another study, reported that a rate of return from higher education adjusted for ability dropped from 16.2% (unadjusted) to 13.2% per year (a 20% rate reduction).[27] These and other studies were similar in their conclusion that comparisons of earnings of college graduates versus high school graduates overestimated the return attributed to higher education by 16% to 33%. From these studies it seems reasonable to conclude that the actual economic benefit of higher education is about three-fourths of the gross income differential. The rest of the difference must be attributed to other factors such as ability, socioeconomic background, and motivation.

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[26] B. A. Weisbrod and P. Karpoff, "Monetary Returns to College Education, Student Ability, and College Quality," The Review of Economics and Statistics 50 (1968): 491-97.

[27] F. Hines, L. Tweeten, and M. Redfern, "Social and Private Rates of Return to Investment in Schooling by Race, Sex Groups and Regions," The Journal of Human Resources 5 (1970): 318-40.

Griliches and Mason conducted a more detailed study probing the relationship of ability to income. If education and ability are positively related, then any estimate of the effect of education on earnings would be biased upward if ability were not controlled. The researchers attempted to identify this bias by establishing income-generating equations with and without a measure of ability. Their findings suggested that schooling had a strong statistical significance in explaining differences in income, while ability contributed a relatively low independent effect to income variance. Hause, in reviewing several major data sets, concluded that this modest contribution of measured ability in explaining differences in earnings was due to its strong association with educational attainment. He also concluded that ability contributed a greater amount to earnings differentials at the higher levels of schooling.[28]

Taubman and Wales analyzed a large data set of Army Air Corps personnel who were given a battery of ability and skills tests in 1943, then followed up to ascertain subsequent vocational success in 1955. They concluded that mathematical ability was a significant determinant of income. Another striking finding of their study was the general decrease in rates of return with increases in education which held for elementary and secondary teachers. They found no significant differences between the incomes of those with one college degree and those with more than one college degree.[29] These surprising

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[28]J. C. Hause, "Earnings Profile: Ability and Schooling," Journal of Political Economy 80 (1972): 5108-5138.

[29]Taubman and Wales, "Higher Education, Mental Ability and Screening," pp. 28-55.

results were also obtained by Hunt in another independent study. He observed a zero or negative rate of return for graduate education.[30]

If one takes the results of these studies at face value, considerable doubt is cast on the wisdom of investing in advanced levels of education. Since the present research project was concerned with the effects of the master's in criminal justice, a closer look at studies dealing with the economic impact of graduate education is essential.

Using a highly homogeneous sample of Woodrow Wilson Fellows, Ashenfelter and Mooney found that effects of graduate education were highly dependent on field of graduate study, degree level, and profession, since significant interactive effects among these variables were obtained. Second, they found that inclusion of an ability measure affected estimates of the coefficients of the other education-related variables only marginally. They concluded that when working with a highly educated sample like theirs for which there were a number of relevant control variables, one need not worry about the lack of an ability measure. Their population was much more homogeneous with regard to ability than those of other studies cited previously. This probably helped to explain why income differentials were relatively unaffected by differences in ability in their study.[31]

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[30] Hunt, "Income Determinants for College Graduates," pp. 305-57.

[31] O. Ashenfelter and J. D. Mooney, "Graduate Education, Ability and Earnings," The Review of Economics and Statistics 50 (1968): 78-86.

In an attempt to estimate the impact of graduate school education on the earnings of a sample of male electrical engineers, Link found that education was significantly related to income but explained only a small portion of the earnings variations. Additionally, he found that the returns from education were grossly understated if a proxy for experience was left out of the analysis and that inclusion of quality and ability variables reduced the gross returns from education by 25% to 33%. This indicated that accurate estimates of returns to education must control for the quality of education and ability.[32] This finding would seem to be contradictory to the small effect of ability found by Ashenfelter and Mooney. When reviewing the results, however, one must remember that Ashenfelter and Mooney dealt with highly able students in many areas while Link's findings were restricted to a group selected from a highly specialized discipline, thus increasing the relative discriminatory power of ability.

In one of the few studies reporting a relationship between education and income in the criminal justice field, Security World found that persons in the manufacturing area of the security field had the highest average educational level and the highest average salaries. These findings, however, made no reference to commensurate abilities.[33]

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[32]C. R. Link, "Graduate Education, School Quality, Experience, Student Ability, and Earnings," The Journal of Business 48 (1975): 477-91.

[33]"Security Directors: How Much Are They Earning?" Security World, December 1980, p. 23.

In the law enforcement area, a number of studies have attempted to measure actual police performance in relation to higher education. Smith, in a major review of these studies, reported that three studies found more educated officers did better on such measures of performance as arrests and civilian complaints. Another found that more-educated officers were more likely to resign or be dismissed. A third study found that more-educated officers received higher performance ratings, and the remaining studies generally reported findings of no relationship between educational level and the measures of performance they used. It should be pointed out that Smith was critical of the methodology of many of the studies and that performance does not represent a valid index of ability.[34] Numerous factors such as morale, working conditions, seniority, peer pressure, and so on, have been recognized as strong influences on an individual's ability to demonstrate his/her abilities.

The modest rates of return from graduate education found by the investigations already cited have led some critics to recommend reduction in the supply of graduate-degree holders and a shift in resources from graduate to undergraduate education. Curtis and Campbell, however, in 1978, suggested that analysis of the data bases, methodology, and interpretation of results in these studies using the rate-of-return methodology accounted for most of the

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[34]Dennis C. Smith, "Empirical Studies of Higher Education and Police Performance" (a consulting report prepared for the Police Foundation National Advisory Committee on Higher Education for Police Officers, 1977), pp. 7-38.

variation. They suggested that the methodological problems and differences make policy recommendations very difficult.

In summary, these studies suggested that graduate education might offer the individual less of a return for his/her investment than lower levels of education. They also concluded that, for the most part, ability played a significant role in the explanation of income differentials and, therefore, needed to be taken into account when studying the effects of educational attainment on income. The present study used this conclusion as a basis for including reported grade point averages as a proxy for ability.

The Effects of Socioeconomic Background

In addition to ability, researchers have found that socio-economic background does have an effect on occupational success. A review of this topic revealed several interesting studies probing the relationship of background to education.

Reed and Miller, in a 1970 study of college graduates using census data, found that family-background variables accounted for only a small variance in earnings (.1%-.4%) at the bachelor's and master's degree levels. The researchers employed multiple-regression analysis to determine the additive effect when controlling for age, college rank, field of specialization, and race. Family-background variables were father's occupation, current region of residence, and father's education and residence when in high school.[35]

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[35]R. H. Reed and H. P. Miller, "Some Determinants of the Variation in Earnings for College Men," Journal of Human Resources 5 (1970): 177-90.

In another study, Coleman, Blum, and Sorensen found family background, represented by father's occupational status, to be important for job growth among whites but much less significant for blacks. Regardless, family background was still secondarily important when compared to educational attainment.[36]

Bowles, in a later study, criticized Coleman, Blum, and Sorensen by arguing that the relatively small observed effect of socioeconomic background was due to improper measurement. He claimed family factors should be based on family income instead of father's occupational status or education. Bowles, in his own study using U.S. census data, demonstrated that a significant relationship existed between family income and earnings. He also showed that the partial correlation of schooling to income was only 60% as large when socioeconomic background was controlled. Bowles concluded that a significant portion of demonstrated financial return from education was really a return from socioeconomic status.[37]

In a very recent study, Pfeffer found that socioeconomic background explained a significant amount of variance in the compensation of Stanford University business graduates. He used a social-class designator as his measure of socioeconomic background. Therefore, the effects of socioeconomic level are somewhat dependent upon

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[36]J. S. Coleman, Z. D. Blum, and A. B. Sorensen, Occupational Status Changes Whites and Blacks During the First Ten Years of Occupational Experience. Report No. 76, rev. ed. (Baltimore: The Johns Hopkins University Center for Social Organization of Schools, October 1971).

[37]S. Bowles, "Schooling and Inequality From Generation to Generation," Journal of Political Economy 80 (1972): S219-51.

the measure used. Measures accounting for family income level or general class level seem to have yielded more positive results. In Pfeffer's study, the effect of social class on variance in current compensation was much greater for bachelor's degree holders than those receiving an MBA degree, but the pattern was reversed for variance in starting compensation with social class, having a larger influence on MBA graduates.[38]

In a related analysis of the same data, Pfeffer found that the significant effect of social class held for Stanford graduates working in manufacturing as well as financial service organizations, and for line and staff jobs alike. Similarly, it was significantly related to compensation in small as well as large organizations. Pfeffer's measure of social class was adopted as one of the independent variables of the present study.[39]

The Effects of Occupational Variables

A number of studies have researched the effects of "structural variables" including the occupation, industry, and geographical location of employment on earnings. Wachtel and Betsey found substantial variation in wages across industry and occupation categories after the effects of personal characteristics had been

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[38]J. Pfeffer, "Effects of an MBA and Socioeconomic Origins on Business School Graduates' Salaries," Journal of Applied Psychology 62 (1977): 698-705.

[39]J. Pfeffer, "An Examination of Stratification in Organizations," Administrative Science Quarterly 22 (1977): 553-67.

eliminated.[40] Rees and Schultz and Eckaus, in similar studies, obtained substantially the same results.[41,42]

In an earlier study concerning income benefits of public education in the St. Louis, Missouri, area, Hirsch and Segelhorst found that occupation and self-employment status both explained a significant amount of independent variance in annual income.[43] However, Leigh, using a large 1970 census sample, indicated that

> although the results on the effect of industry structure are not as clear as one might like, the estimated effect of initial industry and region do not appear to indicate that industry structure has a systematically important effect on occupational upgrading.[44]

These contradictory results may be the result of different populations, methods of statistical analysis, and criterion measures (earnings versus "occupational status"). Apart from the Leigh study, the clear conclusion from this body of research is that occupational characteristics significantly modify the relationship between education

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[40]H. M. Wachtel and C. Betsey, "Employment at Low Wages," The Review of Economics and Statistics 54 (1972): 121-29.

[41]A. Rees and B. P. Schultz, Workers and Wages in an Urban Labor Market (Chicago: University of Chicago Press, 1970).

[42]R. S. Eckaus, Estimating the Returns to Education: A Disaggregated Approach (Berkeley, Calif.: The Carnegie Commission on Higher Education, 1973).

[43]W. Z. Hirsch and E. W. Segelhorst, "Incremental Income Benefits of Public Education," The Review of Economics and Statistics 47 (1965): 392-99.

[44]Duane E. Leigh, An Analysis of the Determinants of Occupational Upgrading (New York: Academic Press, 1978).

and occupational attainment. Accordingly, an attempt was made to account for them in the present study.

From the large body of research highlighted thus far, certain basic conclusions can be reached. First, the most persistent finding in the literature is that education affects future earnings. This holds true especially at lower levels of schooling, but persists through undergraduate training as well. Positive rates of return of up to 33% have been found. Additionally, regression analyses on earnings consistently indicate that education accounts for a significant proportion of variance even after the effects of ability, socioeconomic background, school quality, and structural variables have been controlled. Second, it is less clear whether or not there are positive economic returns to the individual from graduate education. Studies differ in their findings and have methodological problems that make their results difficult to interpret. In the third place, there is sufficient evidence to suggest that other variables also affect earnings and must be controlled when studying the benefits of education. These variables include socioeconomic background, ability, quality of school, age and prior work experience, kind and size of organization, occupation, and geographical location.

Education and Job Satisfaction

Up to this point, this review has discussed the relationship between education and occupational success in terms of "external" factors of either earnings or occupational status as the criterion measure. The discussion will now expand to treat an "internal" indicator of occupational success, specifically, job satisfaction.

Scholars, workers, administrators, and a host of others have devoted a substantial amount of time and attention to the discovery, measurement, and analysis of workers' satisfaction with their jobs. While abatement of those analytic efforts would not appear to be likely in the future, the results of completed work in the field have been--despite all of the attention--somewhat disappointing. They have, more often than not, produced contradictory findings that have proven quite frustrating for those seeking answers to pressing administrative or operational problems.

The body of research on police officers and job satisfaction provides a case in point. Some findings exist to indicate that police officers are moderately satisfied with their jobs,[45] and others suggest the opposite.[46] Findings have also varied widely with regard to the amount of "job involvement" discovered in officers. Some have found that police officers' security and social needs are well satisfied by their jobs and their esteem, autonomy, and self-actualization needs only poorly so;[47] others have come through their research to precisely the opposite conclusions.[48]

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[45]Paul M. Whisenand, "Work Values and Job Satisfaction: Anyone Interested?" Public Personnel Review 32 (1971).

[46]J. W. Sterling, Changes in Role Concepts of Police Officers (Gaithersburg, Md.: International Association of Chiefs of Police, 1972).

[47]Joel Lefkowitz, "Attitudes of Police Toward Their Job," in The Urban Policeman in Transition, ed. J. R. Snibbe and H. M. Snibbe (1973).

[48]John Van Maanen, "Police Socialization: A Longitudinal Examination of Job Attitudes in an Urban Police Department," Administrative Science Quarterly 20 (1975).

Problems such as these stem from causes peculiar neither to criminal justice research nor to the topic of job satisfaction. One is the simple fact that different researchers often use different research techniques and measuring instruments that provide noncomparable results. Another is the fact that police officers' attitudes vary widely across different types of police departments, which variance often accounts for apparent discrepancies in the research findings. A third problem stems from the fact that the theories upon which many of those research efforts are based are often very general and abstract, providing only minimal direction for those engaged in empirical inquiry.[49]

Kalleberg, in a study of 656 male office and factory workers, found that the direct effect of education on job satisfaction was negative (-.23 to -.31) while its indirect effect through occupational status and income was positive (.27 to .35). This pattern produced a total effect that was small and positive (.03 to .04). Kalleberg, in his conclusion, offered an explanation of the complexity of the relationship involved:

> A substantive interpretation for this is that education has two types of effects on job satisfaction--a positive one in that the higher one's education the more likely he is to have high occupational status and income and a negative one in that the higher one's education the more likely he is to be overtrained and to have a discrepancy between his skills and those required to perform his job. These two types of effects may tend to cancel each other out, yielding a small zero-order relationship between education and job satisfaction. When occupational status and income are controlled, however, the sources of the positive

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[49]Jeffrey S. Slouak, "Work Satisfaction and Municipal Police Officers," Journal of Police Science and Administration 6 (1978): 462.

relationship are removed, resulting in a negative relationship between them produced by such discrepancies.[50]

Perhaps the most convincing explanation to the question in relation to the criminal justice system was offered by Swanson.[51] Agreeing with the general finding in this area that education raises expectations, he pointed out that two significant impediments to effective use of the college educated are encountered. First, as one rises in the hierarchical structure the number of positions available in these higher ranks decreases. Second, the career path associated with the perceived sense of success may not provide commensurate satisfaction. The college-educated police officer will often find great intrinsic satisfaction in the job; it is in the lack of status associated with uniformed work that the principal source of dissatisfaction is found.

One of the most consistent findings that emerged from the research is that education raises expectations. Therefore, the higher the job level and pay, the higher the satisfaction of more-educated people. In the aggregate, however, after controlling for job level and income, education was a negative influence on job satisfaction, probably the result of unmet expectations.

The present study included job satisfaction as one of its measures of success.

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[50]Arne L. Kalleberg, "A Causal Approach to the Measurement of Job Satisfaction," Social Science Research 3 (1974): 316.

[51]Charles R. Swanson, "An Uneasy Look at College Education and the Police Organization," Journal of Criminal Justice 5 (1977): 317.

The Effects of the Master's Degree in Criminal Justice

Most of the discussion thus far has been directed at identifying the general relationship between education and both internal and external indicators of occupational attainment. The specific case of the master's degree in criminal justice and its effect on the progress of the careers of its recipients is now considered.

Although the criminal justice field abounds with opinions, suggestions, and ideas, no competent research has been done to date that specifically attempts to assess the influence of the master's degree on career attainment. Since 1967, the number of institutions granting master's degrees in criminal justice has increased 15-fold.[52] During the early periods of this rapid growth, the major focus of research was on settling conflicts and confusion on such topics as manpower needs, articulation of program goals, curriculum recommendations, impact of education on the field, performance evaluation, and so on. Although these interests still exist, during the mid-1970s, emphasis shifted to the growing concern in the quality of criminal justice education being dispensed as evidenced by research conducted by the Police Foundation's National Commission on Higher Education for Police Officers.[53] Currently, attention appears to be turning away from the enormous problems of rapid growth to the qualitative aspects of program development and future maturation. In the 1980 report on criminal justice education by the John Jay College of Criminal

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[52] Criminal Justice Education Directory 1978-80, p. 10.

[53] Sherman and the National Advisory Commission on Higher Education for Police Officers, The Quality of Police Education.

Justice, surprising agreement was found among faculty nationwide concerning issues such as desired program policies, curriculum offerings, relations with the field agencies, desirable faculty backgrounds, and so on.[54] A portion of the John Jay research project summary focused on the goals of the research project:

> The challenge of the next ten years in criminal justice education will be to educate criminal justice students of the 1980's and beyond. What kinds of skills should these students acquire? What kinds of critical questions should they be posing? These questions will need specific, authoritative answers.[55]

The Present Study

Since no specific research assessing the value or impact of the master's degree in criminal justice currently exists, this research project represents a first logical step in that direction. This research project attempted to place some light on the following questions: Do master's graduates in criminal justice outperform in terms of career success those who have not attained that degree? Specifically, do they make more money? Have they attained higher-level positions? Are they more satisfied? Do they perceive themselves as being more successful? The main objective of this study was to provide evidence for answering these questions by comparing the progress of a group of master's degree holders with that of a group of bachelor's degree recipients in criminal justice.

In the process of answering these questions, previous investigations clearly indicated the need to study and control for various

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[54]Richard Pearson et al., Criminal Justice Education: The End of the Beginning (John Jay Press, 1980), pp. 44-45.

[55]Ibid., p. 101.

background and structural influences. Therefore, other questions needed to be answered by the study. Do those with master's degrees work at different kinds of jobs or in different types or sizes of organizations than do bachelor's degree recipients? Do they stay in the same geographical area? Do their patterns of mobility differ? Do the two groups display the same proportion of individuals who have attained top executive status? Are they equivalent in their representation of owners and entrepreneurs? Do they differ with regard to age, socioeconomic level, ability, or years of previous work experience? This study attempted to answer these questions and to control for the confounding influences of these variables in determining the differences in career attainment of the two groups.

Summary

In this chapter the substantial body of related research was summarized. A strong relationship between education and occupational attainment as measured by income, position level, and satisfaction was established. It was also shown that this relationship is obscured by a large number of confounding demographic and occupational influences. The relationship was studied specifically in the case of the holder of the master's degree. The present study was viewed as the next step in identifying relative career attainment of master's graudates. In Chapter III the methodology employed to answer the questions raised here is detailed.

CHAPTER III

METHODOLOGY

The general question asked in this study was: Does the attainment of a master's degree in criminal justice make a difference in the success or career progress of its recipients as compared with those who have received a bachelor's degree? In order to reduce this question to empirically testable components, the following design was applied.

First, in order to define success or career progress, this study identified seven dependent variables that previous researchers identified as being significant measures of career progress. Second, seven independent variables were identified that must be controlled to compensate for the effects of the individual and environmental attributes of the respondents. Finally, the specific group with which the master's graduates were compared was identified, along with the period of time in the careers the observation would be made.

Specification of Dependent Variables

Defining success is a difficult task. Webster's Third New International Dictionary (1971) defined success as "the attainment of wealth, position, esteem, favor or eminence." All of these terms are open to interpretation, depending on the circumstances involved. In addition, success often is defined differently, depending on the

judgments and perceptions of the person doing the assessment. The complexity of this concept suggests that judgments concerning whether one is successful or not would be more sound if based on several criteria rather than one measure. Therefore, in this study, the effect of the master's in criminal justice was tested on each of the following dependent variables to provide a measure of career success.

1. Current compensation. Level of compensation is the most widely used gauge for success in the research literature. Currently in our society no other measure has a more potent impact on the method persons use to define their own or other people's success. Gutteridge perhaps best expressed the justification employed by most researchers for utilizing compensation. "This choice was based on the ready availability of salary data, the objective nature of salary as a criterion, and the belief that most businessmen would accept salary as a valid measure of success."[56]

2. Growth in compensation. Growth in compensation refers to the rate of growth of compensation beginning with the starting pay on the first job after graduation to the present. By using rate of growth in compensation, differences in starting pay between master's and bachelor's degree graduates can be eliminated. This study used the following formula developed by Crooks and Campbell in a study of career progress of Master of Business Administration graduates as an index of salary growth:

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[56]T. G. Gutteridge, "Predicting Career Success of Graduate Business Alumni," Academy of Management Journal 16 (1973): 131.

$$G = \frac{CC - CS}{CS}$$

where CC = current compensation, CS = starting compensation in the first job after receiving the degree, and G = the growth of compensation.[57]

3. Level of responsibility (relative position level). It is well documented that promotions to higher levels in an organizational hierarchy are associated with positive career progress. Specifically, the assumption is that level of responsibility captures the "esteem" and "eminence" aspects of success that may not be directly related to level of compensation. This study used the following formula employed by several previous researchers to measure relative position level:

$$RPL = 1 - \frac{Lb}{Lo}$$

where RPL = relative position level, Lb = the number of levels one's position is below chief executive, and Lo = the total number of levels of management from the first line supervisor to the chief executive officer. RPL, then, is a ratio that reflects one's relative vertical position within any hierarchically designed organization. This measure has the advantage of taking into account to a certain extent differences in size of various organizations. For example, a person who occupies a position one level below the top executive officer in a large organization with ten levels of management would have a

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[57] L. A. Crooks and J. T. Campbell, Career Progress of MBAs: An Exploratory Study Six Years After Graduation, PR 74-8 (Princeton, N.J.: Educational Testing Service, 1974).

RPL = .9. A person in the same position level but at a smaller organization with only four levels of management in the organization would have a RPL = .75.

4. Change in relative position level. This index measures the rise within hierarchies made by the individual over a period of time and takes the following form:

$$^{C}RPL = RPL\ (current) - RPL\ (first\ job)$$

where ^{C}RPL = the change in the relative position level, RPL (current) is the current relative position level, and RPL (first job) = the relative position level the individual had in his/her first job after receipt of the degree. This measure has the same advantage as the growth-in-compensation index explained before in that it accounts for differences in starting point and measures only the progress made since beginning employment after receiving the degree.

5. Attainment of top executive status. Steele and Ward, in their study of MBA's, suggested that achieving chief executive status epitomizes success as a manager.[58] In the present study, the chief executive level and the next lowest level (vice-president or equivalent) were combined to create a category labeled top executive. Attainment of this level is another indicator of success.

6. Present job satisfaction. Job satisfaction has been used consistently in the literature as a criterion measure of success at various stages of career progress. While attainment of high levels of compensation and position level or status represent externally visible

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[58] J. E. Steele and L. B. Ward, "MBAs: Mobile, Well-Situated, Well Paid," Harvard Business Review 52 (1974): 99-110.

measures of success, they do not necessarily reflect one's perception of his/her own success. In that regard, job satisfaction may logically be construed as a proxy for internal perception of success. The literature on job satisfaction is extensive and yields a variety of instruments worthy of consideration for use in the present study.

This study used the Porter Needs Satisfaction Questionnaire for the following reasons: (1) it was patterned after a specific widely accepted theory of human behavior, (2) it was designed to measure satisfaction in administrative or managerial positions, (3) it has been tested by Porter on several different occasions and has been shown to have a high positive relationship to level of management, and (4) its construction readily lends itself to examination of expectations as they affect satisfaction. The last property is particularly significant due to the abundance of literature in the field relating educational expectations with job satisfaction. The Need Satisfaction Questionnaire is based on Maslow's hierarchy of needs. Scores are reported by a total overall satisfaction score plus a series of subscores ranging over each of Maslow's need levels. The following example represents a sample of the type of item format Porter and Lawler used.

> The opportunity for independent thought and action in my position:
>
> a. How much is there now? (min) 1 2 3 4 5 6 7 (max)
>
> b. How much should there be? 1 2 3 4 5 6 7

Porter and Lawler reported that responses to question (a) represent attitudes that express the degree of need fulfillment that an individual perceives himself/herself receiving from a particular aspect

of the job. Question (b), on the other hand, represents a measure of the respondent's attitude toward the level of expectation he/she has concerning the practical job component. The need satisfaction score is represented by the difference in answers between questions (a) and (b). Therefore, if the scores for (a) and (b) were the same, a high degree of satisfaction in this particular dimensional area would be indicated. Conversely, the greater the amount by which the "should be" question (b) exceeds the "is now" question (a), the greater the dissatisfaction. Job satisfaction resultantly becomes a measure of the degree of perceived equity a respondent possesses between expectation and reality.

The feasibility of using the Need Satisfaction Questionnaire is increased further when considered with the current research discussed in Chapter II. Using the questionnaire provides the opportunity to observe directly the respondent's expectations in several specific areas, thereby making it possible to relate the observations to the master's degree and previous research findings.

It should be pointed out that the need satisfaction questionnaire as used in this study was modified by changing minor wording to enhance readability and by excluding question (c), which was part of Porter and Lawler's original questionnaire. Question (c) read, "How important is this to me?" Several studies conducted by Porter and Lawler consistently revealed a high correlation between overall need satisfaction scores and the sum of the numerical differences between questions (a) and (b) on the individual items. However, Wanous and Lawler found in subsequent research that question (c), which adjusts

for importance, has little or no significance to the correlation.[59] It was subsequently eliminated for the purposes of this research, and the scores reported do not adjust for importance.

7. Perception of success. All respondents were asked to judge their own degree of success (1) as they perceived it and (2) as they thought other people perceived it. These two scores were combined to provide a summary measure of perceived success.

The above seven criterion measures of success were used to identify the impact or effect of the master's in criminal justice. Another question identified in the literature as suggesting attention pertained to the phenomenon of job mobility. Are master's graduates more mobile than other groups, and if so, does mobility have any effect on success? Bell, in his research on the value of the MBA, used the following process to analyze the mobility question.[60]

A formula was devised to measure relative stability-mobility over the entire work history. The formula incorporates a baseline value or middle area for a stability-mobility continuum with one employer of two years. Bell assumed that two years was a reasonable amount of time for a new employee to be performing at a sufficiently high level to be producing equitable return on the investment for training and adjustment to the position.

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[59]J. P. Wanous and E. E. Lawler, "Measurement and Meaning of Job Satisfaction," Journal of Applied Psychology 56 (1972): 95-105.

[60]Donald Robert Bell, "A Comparative Follow-Up Study of the Career Progress of MBA and BABA Graduates Ten Years After Graduation" (Ph.D. dissertation, University of Iowa, 1980), pp. 46-47.

The general form of the equation is:

$$S = \frac{.5\ (yrs) - jobs}{Emps} \times 100$$

where S = the level of job-history stability, yrs. = the number of years of employment since receiving the degree, jobs = the number of positions held in that period of time, and Emps = the number of employing organizations.

Therefore, a job involving less than two years' tenure was considered rather mobile, while a job with tenure more than two years was considered relatively stable. Bell emphasized that large differences exist in the complexity of different types of employment; however, two years was considered to be a reasonable average when considering the entire spectrum.

Resultantly, higher scores using the formula indicate a more stable work history in addition to accounting for mobility across time and differences between and within organizations. For example, if Manager A has been employed for ten years since receiving his degree, at two different organizations in four different positions, the formula would be as follows:

$$Sa = \frac{(.5)\ 10 \div 4}{2} = .625 \times 100 = 62.5$$

If, on the other hand, Manager B has also been working for ten years since graduation in four different positions but at four different organizations, his score would appear:

$$Sb = \frac{(.5)\ 10 \div 4}{4} = .3125 \times 100 = 31.25$$

Consequently, the fewer organizational changes an individual makes, the higher his stability index score. To clarify further the relationship, consider the following third example where Manager C, as Manager A, has held four positions in two organizations but with only five years' tenure:

$$Sc = \frac{(.5)\ 5 - 4}{2} = .3125 \times 100 = 31.25$$

Analysis of the results illustrates that shorter tenure has an influence on the equation similar to having more employers. Therefore, an employee who retains only one employer and changes positions every two years will have an S score of 100. Scores below 100 will reflect relative mobility and those above 100 reflect relative stability.

Specification of Independent Variables

When preparing a research project investigating the relationship of education to careers, one is confronted with a considerable number of independent variables that must be considered. In this study the independent variables were broken down into two groups labeled as background variables and structural variables.

Background Variables

Socioeconomic class, the first variable considered, refers to a person's rank in society in terms of his/her income, prestige, education, or power. Sociologists generally use between three and six categories. This study used five categories of socioeconomic status. (Refer to questionnaire item 4.)

Pfeffer, in a study of business graduates, found earnings to be significantly related to master's degree graduates.[61] Each respondent in the present study was asked to place himself/herself in a socioeconomic category from lower to upper class.

A second variable to be considered is previous work experience. Several studies have shown that previous work experience has a powerful effect on the success of an individual. This study used the number of years of full-time work in the field before receiving the degree.

The third and most difficult independent variable related to background that must be considered is ability. Although several methods exist for measuring native or demonstrated abilities, this study used grade point average (GPA). A primary concern in selecting this method was the reliability of reported responses. Benton, in his research of self-reported grade point averages of university and college students, found that when compared with official records no significant differences were discovered. Consequently, he concluded that students can and will accurately report their GPA's.[62]

Finally, the demographic characteristics of sex and ethnic origin must be considered. Since differences in these areas could obscure the effects of education on success, an attempt was made to control these variables.

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[61]J. Pfeffer, "Effects of an MBA and Socioeconomic Origins on Business School Graduates' Salaries," Journal of Applied Psychology 62 (1977): 698-705.

[62]Sidney E. Benton, Southern Journal of Educational Research 14,2 (Spring 1980): 145-50.

Structural Variables

It is highly likely that the characteristics of the work environment will have an influence on the effects of education and must be taken into account. The size of an organization has been shown by several researchers to be related to earnings. This study measured the size of the organization by the number of employees and by its relative size in relationship to organizations of similar purpose. Similarly, it is reasonable to assume that not all jobs provide the same career opportunities. It is well established in police organizations, for example, that the potential for promotion is far greater in the patrol divisions than in investigative sections.

Another independent structural variable that must be considered pertains to the geographical area in which the person is employed. Specifically in relation to salary, geographical region will have a significant effect. This study used the nine-region delineation employed by the U.S. Bureau of Census to control for geographical influence. Those respondents now living outside the U.S. were identified as a separate group.

Finally, several studies have shown that persons in line positions display career patterns different from those in staff positions. Because positions often integrate both line and staff responsibilities, this study used three position categories: specifically, primarily line, both line and staff, and primarily staff.

Study Population and Sample-Selection Procedures

The study population consisted of all recipients of a master's in criminal justice from Michigan State University's School of Criminal Justice between the years 1969 and 1973. Those who had received another graduate or professional degree since graduation from Michigan State were removed from the study.

The control group contained recipients of the bachelor's degree in criminal justice from the same school during the same years. From this population a stratified random sample was taken by year of graduation so both groups would be equal in size. All those who had subsequently received other undergraduate, graduate, or professional degrees were deleted from the study. There were three reasons why criminal justice undergraduates were chosen as opposed to a cohort more representative of all undergraduate majors:

1. If the master's degree has a differential effect on success between its recipients and their counterparts exposed to the same faculty, curriculum, and learning environment on the undergraduate level, then it is likely to have an even greater difference when compared to non-criminal-justice degree holders.

2. There is research evidence to suggest that criminal justice majors are representative of all bachelor's degree majors. Kearney, in his study of Michigan State University liberal arts, science, and business administration graduates, found no significant relationship between type of degree and career advancement when

measured by earnings and position level.[63] These findings suggest that using criminal justice undergraduates as a control group is reasonable.

3. By using criminal justice undergraduates, the Michigan State University School of Criminal Justice will be able to use the data for valuable comparative information about its graduates.

Most vocational theorists would agree that ten years is a sufficiently long time for career patterns to have stabilized since graduation. Doyle, in a major study of career patterns of male college students, found that graduates at the ten-year point in their careers did, in fact, exhibit highly stable occupational patterns.[64] Since the number of master's degrees awarded in a one-year period is small, restricting the study to one graduating class would severely limit the generalizability of the study. Therefore, it was necessary to select graduated groups that cluster around the ten-year period (8 to 12 years).

Data-Collection Procedures

The questionnaire used was prepared and mailed to the respondents via first-class mail along with a cover letter. The questionnaire requested all necessary information concerning general background data, employment history, present position, job and career

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[63] W. J. Kearney, "A Comparison of the Level of Career Advancement in Business Between Selected Liberal Arts and Science Graduates and Business Administration Graduates" (Ph.D. dissertation, Michigan State University, 1965).

[64] R. E. Doyle, "Career Patterns of Male College Students," Personnel and Guidance Journal 44 (1965): 410-15.

satisfaction, and undergraduate grade point average. The two forms were identical except for minor differences in wording of the instructions for a few items and the addition of Question 6 on the master's format, which requests undergraduate grade point average.

A review of the literature concerning mailed questionnaires was undertaken to insure a favorable response rate. The majority of studies in this area have strongly agreed that persistence is the key to success. Repeated efforts to enlist the cooperation of nonrespondents must be employed to maximize the response rate. Other steps to promote a more favorable response have been shown to be less lucrative. Simon found no significant advantage of a personalized typed letter over a mimeographed copy.[65] Similarly, no studies have shown any significant increase in response rate using an advance-notice technique.[66] Finally, Dillman, in one of the more comprehensive treatments of the topic, found that favorable response rates probably result from a combination of effective techniques.[67]

Bell, in a major follow-up study of MBA graduates, used a color-coded questionnaire that was both aesthetically pleasing and useful for organizing data. He followed the original questionnaire with a reminder postcard and then a second questionnaire after a

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[65]R. Simon, "Responses to Personal and Form Letters in Mail Surveys," Journal of Advertising Research 7 (1967): 28-30.

[66]R. J. Parsons and T. S. Medford, "The Effect of Advance Notice in Mail Surveys of Homogeneous Groups," Public Opinion Quarterly 36 (1972): 258-59.

[67]D. A. Dillman, "Increasing Mail Questionnaire Responses in Large Samples of the General Public," Public Opinion Quarterly 36 (1972): 254-57.

sufficient waiting period. The second questionnaire mailed contained a stronger appeal for participation.[68]

Statistical Analysis of Data

The characteristics of the study had definite implications for the type of statistical analysis employed. This study was nonexperimental in that it was an investigation of the effect of education on subsequent occupational success. Since the data were collected in a "natural" setting by soliciting voluntary responses to a questionnaire, the independent variables could not be controlled. Therefore, this research represented an ex-post-facto field study according to the classification system by Kerlinger.[69]

The long-term goal of this study was to aid in the development of an explanatory model of occupational success, placing into perspective the causal contribution of educational attainment as well as background and structural factors. Because the researcher had little or no control over the independent variables, inferences made from the nonexperimental data must be viewed with caution.

The objective of the data analysis was to establish the existence of the relationship between education at the master's level (as opposed to the bachelor's level) and several measures of subsequent occupational success. Strong causal or explanatory inferences were not appropriate. The analysis of data should be viewed as

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[68]Bell, "A Comparative Follow-Up Study," p. 58.

[69]F. N. Kerlinger, Foundations of Behavioral Research, 2nd ed. (New York: Holt, Rinehart and Winston, Inc., 1973).

establishing a basis for discussing the explanatory implications of the current research and developing future studies that can address the issues more precisely.

The selection of the statistical method depends, in part, on the level of measurement of the variables that Kerlinger described as nominal (lowest), ordinal, interval, and ratio (highest).[70] The primary emphasis of this study involved relating the dependent variables which are at the interval and ratio levels to the independent variables which are at all four levels of measurement.

Given the set of conditions present in this study, Kerlinger and Pedhazur suggested the use of multiple-regression analysis using dummy variables. This particularly holds true given the nonexperimental nature of the data and the large numbers of variables to be controlled at the different levels of measurement desired.[71]

Multiple-regression analysis is a method of analyzing the contribution of two or more independent variables to one dependent variable. In the present study, for example, the combined and separate effects on current compensation of age, years of previous work experience, socioeconomic background, grade point average, size of employing organization, and so on, can be analyzed. Multiple-regression analysis was also particularly useful to the present study because it can evaluate the influence of a specific variable such as

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[70] Ibid., pp. 435-41.

[71] F. N. Kerlinger and E. J. Pedhazur, Multiple Regression in Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1973), p. 150.

M.A. versus B.S. on the dependent-variable measures of success while controlling for other confounding factors. Applying this to the general research question, one could ask: Does educational level have any effect on any of the measures of success once the effects of the other independent variables are adjusted for?

It is appropriate at this time to point out the basic assumptions or rationale behind regression analysis. First, in regression analysis it is assumed that the dependent Y scores are normally distributed at each value of the independent variable X. This is particularly relevant when using the stepwise method because the validity of an F-test requires dependent variable Y scores to be normally distributed in the population. The second assumption is that the Y scores have equal variance at each X point. The Y scores, then, are assumed to be normally distributed and to have equal variances at each X point. Note the following equation:

$$Y = a + B_1X_1 + \ldots b_kX_k + e$$

where e = error, or residual. These errors are assumed to be random and normally distributed, with equal variances at each X point. Consequently, the distribution of the deviations from regression (the residuals) are the same at all X points. In general, Kerlinger and Pedhazur indicated that it is ordinarily safe to proceed with multiple-regression analysis without undue concern about assumptions.[72] They cautioned, however, that serious violation of the assumptions, and especially combinations of them, can distort results. They advised

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[72]Ibid., p. 47.

researchers to examine their data carefully, especially by plotting, and if violations of the assumptions appear, to be particularly cautious of the results.[73] The researcher may also elect to use one or more of the transformations that are available to make the data more amenable to analysis and inference.

Kerlinger and Pedhazur also cited some important weaknesses of multiple regression that should be reported and discussed below:

1. There is a strong tendency of researchers to interject variables indiscriminately into the multiple regression and resultantly obscure research design patterns and rely completely on the regression analysis and related statistics. Although the number of independent variables in this study was not small, it was also not excessive, and all the measures were chosen for good reason.

2. Regression weights can be unreliable. In the present study the sample size was large and the number of independent variables was not excessive. Consequently, the influence of this factor was minimal. The general rule suggests sample sizes of over 200 and low intercorrelations between independent variables.

3. The nature of squared semipartial correlations changes with different orders of entry of independent variables in the regression equation. The influence of this limitation is minimized by entering variables according to the dictates of the theory and the research problem. In the present study all relevant relationships on the data were identified and analyzed. The analysis was based on the plan

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[73] Ibid., p. 48.

outlined below, which was tested and used in a similar study by Frakes, and again by Bell, who had essentially the same statistical problems.[74]

4. There is no one and only way to estimate the presumed importance of independent variables to the variance of the dependent variable. This limitation epitomizes the world of the behavioral sciences. In real life, independent variables are correlated, and much or most research in the behavioral sciences has to be ex post facto in nature. Consequently, independent and dependent variables have a messiness about them that controlled experimentation does not have. Judicious use of sound research methods mentioned earlier is the only means of minimizing the effects of this limitation.

If the assumptions and limitations are carefully considered and effectively managed, multiple-regression analysis provides a powerful tool to approach the explanation of natural phenomena. It is often the best method of analysis of nonexperimental data, particularly when several independent variables are involved. Therefore, the following plan was used for the data analysis.

1. Descriptive statistics were computed for each variable so that the characteristics of the variables could be assessed.

2. Correlation tables for each dependent variable were constructed.

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[74]A. H. Frakes, "Achievement of Selected Educational Objectives in Introductory Accounting and Other Variables as Predictors of Performance in the First Intermediate Accounting Course" (Ph.D. dissertation, University of Washington, 1974).

3. The three variables with the highest correlations with the dependent variables were selected for inclusion into the multiple regression.

4. Stepwise multiple-regression analysis was performed for each dependent variable using three selected independent variables plus degree.

5. Modifications, if any, were made to the models as dictated by the data.

6. The evidence generated by the preceding analysis was evaluated in relation to the research questions being asked.

The primary objective of the data analysis was to adjust the dependent variables indicating success for differences in the structural and background variables of the respondents so that the hypotheses about the effect of the M.A. degree could be tested.

The data collected were analyzed by the technique of multiple-regression analysis using the BMDP Statistical Program. This package was designed to accommodate files of data and has routines for accomplishing exploratory data analysis as well as performing multiple-regression analysis, making it well suited to the objectives of this research.

A multiple-stage, stepwise linear regression analysis was performed on the data for each of the dependent variables. Variables were entered into the analysis in several groups in the general temporal sequence of the various confounding influences. Specifically, the groups of variables were entered into the analysis in the following order:

Group 1: Background variables (age, years of previous work experience, socioeconomic background, undergraduate grade point average)

Group 2: Area of concentration in degree program

Group 3: Structural variables of the first job after obtaining the master's degree (functional area, type and size of organization, line-staff orientation, position level, compensation)

Group 4: Structural variables of the present job (functional area, type and size of organization, line-staff orientation, geographical location)

Group 5: Educational level (master's versus bachelor's)

The stepwise technique entered the variables within each group in the order of the amount of variance they explain. This procedure also removed variables at each step of the analysis that failed to yield an F-value of 2.0. The variable representing degree group was placed into the equation on the last step so its incremental contribution could be exposed to explained variance.

Next the master's degree group was divided into subgroups by undergraduate area of concentration (police, correction, etc.). The purpose of this exercise was to determine if there were differences in career progress depending upon the major area. Separate regressions were then performed on each of the criterion variables for each of the subgroups as they were compared with graduates of the bachelor's degree program.

Summary

The research methodology employed in this study has been outlined in Chapter III. The discussion (1) defined the term "success" and identified the dependent and independent variables, (2) defined the population to be studied and explained the sample procedures used, (3) specified the data-collection procedures, (4) identified the method of statistical analysis, and (5) presented the rationale for the selection of this procedure, along with a detailed explanation of its application.

CHAPTER IV

ANALYSIS OF DATA

The study was designed to evaluate the influence of the master's degree in criminal justice on the success or career progress of its recipients when compared with those criminal justice graduates receiving only a bachelor's degree. The methodology for this analysis was presented in Chapter III.

The analysis of the data presented in this chapter is presented in the following format: (1) survey response and data preparation, (2) descriptive analysis of background characteristics, (3) descriptive analysis of measures of career progress, (4) multivariate analysis of the research questions, and (5) summary.

Survey Response and Data Preparation

Michigan State University's School of Criminal Justice graduated 213 students with master's degrees from fall term 1968 through summer term 1973. From this group, addresses were available through the Alumni Relations and Registrar's Offices on 158 master's graduates. Questionnaires were mailed to 158 master's and 158 bachelor's recipients on September 14, 1981. The two forms of the questionnaire are included in Appendix A. They are identical except for minor differences in wording in the instructions for completion

of the form and the addition of Question 6 on the master's questionnaire.

Of the 316 questionnaires mailed, 198 were returned, yielding a response rate of 66%. Of these, 94 were master's graduates (63%) and 104 were bachelor's graduates (68%). Fifteen questionnaires (nine master's, six bachelor's) were returned by the U.S. Postal Service as undeliverable. The percentage response by degree and year of graduation is shown in Table 1. A chi-square analysis indicated that the small differences in the distribution were probably due to chance.

Table 1.--Distribution of responses of master's and bachelor's graduates by year of graduation.

Year of Graduation	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
1969	6%	10%	13%
1970	17%	19%	13%
1971	30%	23%	28%
1972	15%	29%	17%
1973	32%	19%	30%
N	49	32	25

Chi-square = 4.59, df = 8, $p > .05$.

The high response rate can probably be attributed to the desire of graduates to know how their career progress compares with other graduates. This explanation is supported by the fact that almost all respondents requested a copy of the findings.

Of the 198 questionnaires returned, 55 of the bachelor's recipients and 37 of the master's recipients had obtained advanced degrees and were deleted. This left 106 respondents--49 bachelor's recipients and 57 master's recipients--to be the target of the study.

Descriptive Analysis of Background Characteristics

The MSU graduates were first analyzed on the basis of age and previous work experience. As would be expected, master's graduates in both groups were approximately seven years older than the bachelor's group (Table 2). In addition, as is illustrated in Table 3, both groups of M.S. holders entered the job environment after receiving their degrees with a great deal more previous work experience than did the B.S. holders.

Table 2.--Distribution of master's and bachelor's graduates by age.

Age Group	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Over 41	2	13	11
38-41	2	9	5
34-37	12	9	6
30-33	33	1	3
$\bar{X}$	33.33	41.78	41.04
Median	32	39.50	41
N	49	32	25
Standard deviation	3.7	6.6	8.0

Table 3.--Distribution of master's and bachelor's graduates by years of previous work experience.

Years of Work Experience	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
None	35	3	5
1-3	9	7	3
4-10	4	8	8
Over 10	1	14	9
$\bar{X}$	1.67	10.28	11.30
Median	2.00	10.00	10.00
N	49	32	25
Standard deviation	5.4	7.5	7.6

When the area of socioeconomic background was examined, it was found that both M.S. and B.S. graduates came from similar socioeconomic backgrounds. The vast majority of graduates in all groups were clustered in the middle and lower middle class areas (Table 4).

Another area demonstrating a high degree of similarity was ethnic background. Of the 106 respondents examined, only 7 were of other than Caucasian extraction (Table 5). All groups were at least 88% Caucasian. Again, these findings are consistent with what could be expected. The criminal justice system has long been troubled by its inability to attract minorities.

There were strong similarities among the three groups in the distribution of area of concentration, as illustrated in Table 6. The overwhelming majority of students in both the M.S. and B.S.

Table 4.--Distribution of master's and bachelor's graduates by socioeconomic class level.

Socioeconomic Class	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Upper	0	0	0
Upper middle	8	4	2
Middle	31	10	12
Lower middle	8	14	8
Lower	1	4	3
N	48	32	25

Table 5.--Distribution of master's and bachelor's graduates by ethnic group.

Ethnic Group	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Caucasian	48	29	22
Asian	0	0	0
Chicano	0	1	0
Black	1	1	3
American Indian	0	1	0
Total Non-Caucasians	1	3	3
N	49	32	25

groups favored the law enforcement concentration. Seventy-eight percent of the B.S. group concentrated in law enforcement, with delinquency prevention and control second with 12%. The M.S. with the B.S. in criminal justice group illustrated the next strongest law enforcement concentration with 72%. The second strongest area of concentration in the M.S./BSCJ group was correctional administration with 13%. The M.S. group without the B.S. in criminal justice illustrated the smallest interest in the law enforcement concentration with only 58%. As with the B.S. group, this group also showed delinquency prevention and control as the second strongest area of concentration (17%).

Table 6.--Distribution of master's and bachelor's graduates by area of concentration.

Area of Concentration	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Law enforcement administration	38	23	14
Correctional administration	0	4	0
Security administration	2	1	2
Delinquency prevention & control	6	2	4
Criminalistics	3	1	2
Highway traffic administration	0	1	2
N	49	32	24

In summary, the data indicated that the bachelor's group was generally much younger when entering the work force and had less previous work experience. All groups were similar, however, in that they consisted primarily of Caucasians from middle or lower middle class backgrounds and preferred the law enforcement concentration.

Descriptive Analysis of Structural Characteristics of the Work Environment

The various characteristics of the work environment that may influence career progress are examined in this section. Two aspects of job mobility in which previous researchers, as described in Chapter II, have had an interest are shown in Tables 7 and 8. The number of jobs the subjects of each group have held since receiving their MSU degree are noted in Table 7. Both M.S. groups had a higher mean number of jobs than the B.S. group. A similar result, where the M.S. groups showed a higher average number of employers since receiving the MSU degree, is shown in Table 8. In addition, an examination of the distribution of the mobility index, shown in Table 9, indicated a significant difference in the mean scores. The M.S. group without the bachelor's in criminal justice was particularly more mobile, with a mean index value of 114.8 as compared with the B.S. group's mean average of 193.7. Other indications of differences in mobility patterns appear in Tables 10 and 11. The M.S. group without the bachelor's in criminal justice showed a much shorter tenure in their first job after graduation than did the remaining groups. Similarly, the M.S. group without the bachelor's in criminal justice reflected the shortest tenure in their present employment (3.11) when

Table 7.--Distribution of master's and bachelor's graduates by number of jobs held since receiving MSU degree.

Number of Jobs	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
5 or more	8	7	7
4	4	6	3
3	9	8	7
2	13	8	6
1	12	3	1
$\bar{X}$	2.72	3.28	3.54
Median	2.0	3.0	3.0
N	46	32	24
Standard deviation	1.59	1.46	1.53

Table 8.--Distribution of master's and bachelor's graduates by number of employers since receiving MSU degree.

Number of Employers	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
6 or more	0	0	0
5	1	1	2
4	1	2	3
3	8	9	2
2	12	8	7
1	24	12	10
$\bar{X}$	1.76	2.12	2.17
Median	1.0	2.0	2.0
N	46	32	24
Standard deviation	.97	1.08	1.34

Table 9.--Distribution of master's and bachelor's graduates by relative job mobility.

Percentile Rank	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
95	516.5	429.0	333.0
75	288.8	200.0	141.8
60	219.3	126.0	113.0
50	122.5	78.8	104.3
40	96.8	62.0	76.8
25	55.1	48.0	40.0
5	23.3	19.1	15.7
$\overline{X}$	193.7	135.69	114.8
Median	122.5	79.4	106.3
N	46	32	24
Standard deviation	163.0	123.56	95.19

Table 10.--Distribution of master's and bachelor's graduates by number of years in the first job after graduation.

Number of Years	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
10 or more	0	6	1
6-9	0	3	3
4-5	10	4	2
3	8	4	3
2	5	8	6
1 or less	19	4	8
$\overline{X}$	5.32	5.03	3.39
Median	4.00	3.00	2.00
N	42	29	23
Standard deviation	6.11	4.28	3.63

Table 11.--Distribution of master's and bachelor's graduates by number of years in the present job.

Number of Years	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
10 or more	3	4	1
6-9	7	6	3
4-5	1	5	2
3	6	2	2
2	7	1	2
1	6	3	8
$\bar{X}$	4.38	6.00	3.11
Median	3.00	5.00	2.00
N	30	21	18
Standard deviation	3.33	3.89	2.74

compared with both the B.S. group (4.38) and M.S. group with the CJ bachelor's (6.00). All the mobility-related comparisons indicated the M.S. group without the CJ bachelor's was the most mobile, followed by the M.S. group with a bachelor's in criminal justice. The B.S. group overall was by far the least mobile.

Turning to the functional area of the jobs held by the respondents, there was a preference, as noted in Table 12, by all three groups for the law enforcement area in the initial job. Training and education, however, also seemed important to the M.S. group with the bachelor's in criminal justice. This could very likely be explained by the 10.28 mean average in years of previous experience in the field (Table 3) possessed by this group. Jobs in the training/education area

Table 12.--Distribution of master's and bachelor's graduates by functional area of initial job.

Functional Area	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Proprietary security	2%	0	9%
Private security	5%	7%	0
Public law enforcement	59%	34%	30%
Adult correction	7%	14%	4%
Juvenile correction	0	3%	13%
Forensic science	7%	3%	0
Planning	0	7%	4%
Research & development	0	3%	9%
Education, training	0	24%	4%
Consulting	0	0	9%
General management/administration or policy	2%	0	9%
Other	17%	3%	9%
N	41	29	23

characteristically require previous field experience as a prerequisite to employment. This explanation was further supported when the functional area of the present job was examined (Table 13). Here it is shown that not only had the training/education functional area become the number-one priority of the M.S. with a CJ bachelor's group, but it was now equal in importance to the law enforcement area in the M.S. group without the CJ bachelor's. The B.S. group's strong orientation toward law enforcement remained stable in the present job. The low response of the B.S. group in the education/training area

can probably be attributed to graduate degree requirements usually associated with employment in this area.

Table 13.--Distribution of master's and bachelor's graduates by functional area of present job.

Functional Area	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Proprietary security	6%	0	6%
Private security	9%	5%	0
Public law enforcement	44%	24%	28%
Adult correction	6%	14%	6%
Juvenile correction	0	0	0
Forensic science	9%	5%	0
Planning	0	0	6%
Research & development	0	5%	11%
Education, training	3%	33%	28%
Consulting	0	0	0
General management/administration or policy	6%	14%	11%
Other	15%	10%	6%
N	34	21	18

The functional-area differences between the B.S. and M.S. groups also appeared in the line/staff orientation to the job (Table 14). Here the differences between the B.S. and M.S. groups were more pronounced. Looking at the first job after graduation, 81% of the B.S. group occupied primarily line positions, whereas the M.S. with a CJ bachelor's group had 31% in the primarily line positions and the M.S. without a CJ bachelor's group had only 24% in the primarily line

Table 14.--Distribution of master's and bachelor's graduates by line-staff orientation.

Orientation	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
First Job After Graduation			
Primarily line	81%	31%	24%
Line and staff	10%	34%	32%
Primarily staff	10%	34%	36%
Don't know	0	0	0
N	48	32	25
Present Job			
Primarily line	43%	16%	20%
Line and staff	39%	29%	36%
Primarily staff	18%	52%	40%
Don't know	0	3%	4%
N	49	31	25

positions. As the careers of all three groups progressed, however, the differences in line/staff orientation decreased. In the present job, a significant reduction in primarily line orientation was evident in the B.S. group, with a strong shift toward line/staff and primarily staff. Both M.S. groups demonstrated a continued propensity toward the staff positions, particularly by the M.S. group with the CJ bachelor's, where 52% of the respondents were in primarily staff positions. This observation was supported by the figures in Table 15, which shows the largest change to have been from line to staff.

Table 15.--Distribution of master's and bachelor's graduates by change in line/staff orientation.

Direction of Change	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
From staff to line	0	6%	15%
No change	82%	72%	62%
From line to staff	18%	22%	23%
N	33	18	13
Standard deviation	1.08	1.16	1.15

In summary, it is clear that as the careers of all groups progressed, there was a pronounced shift away from line functions to either a primarily staff position or at least a staff-related function with some line responsibilities. The M.S. groups, however, clearly demonstrated the strongest trends in this direction.

Another major factor of the work environment accounted for in this study was the type of organization in which the graduates were employed. The distribution in the type of organization of the initial job by graduate group is shown in Table 16. As with the functional area of the initial job, the B.S. group was highly oriented toward police departments, which is in the law enforcement functional area. The same similarities were also present in the M.S. groups. The M.S. group with the CJ bachelor's was highest in the police department area and again showed a strong second preference for the college or university organization. The M.S. group without the CJ bachelor's was also again highest in the police department area and was rather

Table 16.--Distribution of master's and bachelor's graduates by type of organization of initial job.

Type of Organization	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Police department (local, county, state)	63%	32%	29%
Private investigative agency	0	4%	0
Probate court	0	0	10%
Juvenile correctional agency	0	0	4%
Adult correctional agency	0	11%	0
Planning or research agency	0	10%	4%
Contract security agency	0	0	0
Proprietary security organization	3%	0	10%
College or university	0	25%	10%
Federal law enforcement or investigative agency	3%	0	0
Military	3%	11%	13%
State investigative or enforcement agency	13%	4%	10%
Consulting service	0	0	4%
Other	15%	10%	13%
N	40	28	24

evenly dispersed through the other organizational types. A shift in the type of organization of the present job away from police departments to colleges and universities is shown in Table 17. The B.S. group's heavy concentration in the police-department area declined and distributed itself among the other areas, with none being particularly predominant. The M.S. group with the CJ bachelor's again shifted from police departments as the strongest to colleges or

Table 17.--Distribution of master's and bachelor's graduates by type of organization of present job.

Type of Organization	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Police department (local, county, state)	38%	23%	18%
Private investigative agency	0	0	0
Probate court	0	0	0
Juvenile correctional agency	0	0	0
Adult correctional agency	6%	10%	10%
Planning or research agency	0	0	12%
Contract security agency	0	0	0
Proprietary security organization	12%	0	10%
College or university	3%	32%	24%
Federal law enforcement or investigative agency	6%	10%	10%
Military	0	10%	12%
State investigative or enforcement agency	12%	10%	12%
Consulting service	0	0	0
Other	24%	23%	10%
N	34	22	17

universities, with police departments as a strongly represented second. The M.S. group without the CJ bachelor's also shifted its primary cell from police departments to colleges or universities, which again represented a shift consistent with observations in the job-function area. No substantial difference existed in movement between the B.S. group or the M.S. group with the CJ bachelor's, as shown in Table 18. The M.S. group without the CJ bachelor's, however,

showed a substantially higher percentage (63%) change in organization type.

Table 18.--Distribution of master's and bachelor's graduates by change in type of organization.

Condition	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Change	39%	44%	63%
No change	61%	56%	37%
N	49	32	24

Another variable having a potential influence on career progress in relation to the work environment is the size of the organization where employed. The majority of persons in all three groups were employed in an average-size or larger organization on their initial job, as shown in Table 19. The M.S. group with the CJ bachelor's was more highly represented in the large organizations initially; however, when the present job was analyzed, all three groups were similarly distributed. The change from the larger to the smaller organization by the M.S. with a CJ bachelor's group is also reflected in Table 20.

The last aspect of the working environment to be analyzed was geographical region. The East North Central region (Ohio, Indiana, Illinois, Michigan, and Wisconsin) was by far the most highly represented of all three groups, as shown in Table 21. The distribution

of all three groups in both the initial and present job was very similar.

Table 19.--Distribution of master's and bachelor's graduates by size of organization.

Size Category (Questionnaire Item 14)	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Organization of Initial Job			
Very small	2%	6%	4%
Small	15%	6%	12%
Average	36%	28%	52%
Large	23%	38%	12%
Very large	23%	22%	20%
N	47	32	25
Organization of Present Job			
Very small	25%	3%	0
Small	16%	13%	20%
Average	43%	41%	44%
Large	20%	25%	24%
Very large	18%	19%	12%
N	49	32	25

Table 20.--Distribution of master's and bachelor's graduates by change in size of organization.

Direction of Change	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
From smaller to larger	16%	25%	32%
No change	65%	38%	48%
From larger to smaller	18%	38%	20%
N	49	32	25

Table 21.--Distribution of master's and bachelor's graduates by geographical area.

Geographical Area	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Geographical Area of Initial Job After Graduation			
New England	0	0	0
Middle Atlantic	0	3%	8%
East North Central	88%	70%	75%
West North Central	2%	7%	4%
South Atlantic	5%	10%	13%
East South Central	0	0	0
West South Central	5%	0	0
Mountain	2%	3%	0
Pacific	2%	7%	0
Outside United States	2%	3%	0
N	42	30	24
Geographical Area of Present Job			
New England	0	0	6%
Middle Atlantic	0	0	11%
East North Central	76%	74%	44%
West North Central	6%	13%	6%
South Atlantic	6%	9%	11%
East South Central	0	0	0
West South Central	6%	0	6%
Mountain	3%	4%	11%
Pacific	3%	0	0
Outside United States	0	0	6%
N	34	23	18

Two final variables that are almost certain to affect judgments of career progress are position level and compensation. The distribution of salaries of the three groups in their initial jobs is shown in Table 22. Clearly the M.S. groups were similar in their distributions and more highly represented in the upper salary ranges. In addition, the mean salary for the M.S. group was nearly $4,000 higher than the B.S. group. The only variable examined thus far that may have accounted for some of this variance would be the years of previous work experience. It is doubtful, however, that the previous experience factor could account for such a large difference in initial salary. It would appear that the M.S. degree did have a strong positive influence on compensation on the initial job after graduation. The M.S. groups' advantage over the B.S. group also appeared to carry over to relative position level in the initial organizational hierarchy, as noted in Table 23. The M.S. group with the CJ bachelor's again was highest (.43), followed by the other M.S. group (.32). The B.S. group was significantly lower with only .13.

Descriptive Analysis of Measures of Career Progress

In Chapter III, several measures of career progress or achievement were described. This section presents a descriptive analysis of each of these measures which constitutes the criterion variables of the study. The distributions and summary statistics presented do not adjust for differences in background or structural characteristics and only present a general view of the differences.

Table 22.--Distribution of master's and bachelor's graduates by compensation in initial job.

Compensation Level	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
$17,000 and above	4%	25%	28%
$15,000-16,999	4%	9%	8%
$13,000-14,999	4%	16%	4%
$11,000-12,999	27%	16%	16%
$ 9,000-10,999	18%	16%	32%
$ 7,000- 8,999	27%	6%	4%
Under $7,000	16%	13%	8%
$\bar{X}$	$9,875.75	$13,441.88	$13,075.00
Median	9,600.00	13,000.00	11,800.00
N	49	32	25
Standard deviation	3,297.34	5,427.99	5,703.15

Table 23.--Distribution of master's and bachelor's graduates by initial position level of responsibility.

Percentile Rank	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
95	.68	.88	.72
75	.14	.74	.43
60	.07	.15	.21
50	.03	-.10	.14
40	-.03	-.14	.05
25	-.16	-.19	-.09
0-5	-.30	-.27	-.38
$\bar{X}$	.06	.09	.13
Median	0	0	.14
N	49	32	25
Standard deviation	.25	.39	.41

Note: The tabular data were developed from the formula for determining position level of responsibility found on page 43.

See Appendix B for the key defininining variable abbreviations used in Tables 23-71.

Present compensation is probably the most popularly used gauge of a person's success. The distributions for present compensation of the three groups are presented in Table 24. Clearly, the initial differences observed in compensation (Table 22) have remained. An examination of the mean scores showed that the M.S. group with the CJ bachelor's held a distinct advantage, followed by the other M.S. group and finally the B.S. group. The difference in salary between the B.S. group and the M.S. group with the CJ bachelor's increased by over $1,500. Since the subjects had now been working several years, it was fair to assume that the influence of previous work experience had been reduced in the present compensation data. These differences, however, appeared quite small when examined in terms of change in compensation, as reported in Table 25.

Table 24.--Distribution of master's and bachelor's graduates by present annual compensation.

Compensation Level	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
$38,000 and over	6%	19%	4%
$33,000-37,999	4%	16%	16%
$28,000-32,999	29%	38%	28%
$23,000-27,999	33%	13%	28%
$18,000-22,999	22%	9%	20%
Under $18,000	6%	6%	4%
$\bar{X}$	$25,893.00	$31,052.00	$27,501.00
Median	26,000.00	30,750.00	27,000.00
N	49	32	25
Standard deviation	6,910.78	7,771.04	5,840.87

Table 25.--Distribution of master's and bachelor's graduates by growth in compensation since receiving MSU degree.

Growth in Compensation	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
500% or more	6%	6%	8%
400%-499%	12%	9%	0
300%-399%	16%	8%	12%
200%-299%	47%	41%	40%
100%-199%	16%	20%	40%
Less than 100%	2%	0	0
$\bar{X}$	286.14%	272.31%	276.84%
Median	250.00%	241.50%	233.00%
N	49	32	25
Standard deviation	113.64	146.64	227.99

Note: The tabular data were developed from the formula for determining growth in compensation found on page 43.

When present relative position was examined (Table 26), the M.S. group with the CJ bachelor's again held the advantage over the other groups, particularly the B.S. group. When the change in position level was viewed (Table 27), the differences became more evident. The M.S. group with the CJ bachelor's clearly demonstrated stronger growth within the organizational hierarchies, followed by the other M.S. group and finally the B.S. group. It is clear that the M.S. groups experienced greater success in rising through the organizational hierarchies in which they were employed, with the M.S. group with a CJ bachelor's enjoying the greatest success.

Another measure of success is the respondent's personal opinion of his/her own success. All three groups shared similar

Table 26.--Distribution of master's and bachelor's graduates by present position level of responsibility.

Percentile Rank	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
95	.68	.88	.78
75	.28	.73	.62
60	.13	.56	.50
50	.08	.43	.43
40	.02	.34	.29
25	-.11	.25	.14
5	-.29	-.27	-.54
$\bar{X}$	.13	.43	.33
Median	0	.50	.43
N	49	32	25
Standard deviation	.28	.34	.36

Note: The tabular data were developed from the formula for determining position level of responsibility found on page 43.

Table 27.--Distribution of master's and bachelor's graduates by change in position level of responsibility.

Percentile Rank	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
95	.74	1.06	1.14
75	.17	.66	.61
60	.03	.38	.32
50	.01	.30	.18
40	-.01	.17	-.17
25	-.05	.04	-.26
5	-.38	-.45	-.44
$\bar{X}$	.06	.34	.19
Median	0	.30	.18
N	49	32	25
Standard deviation	.31	.41	.50

Note: The tabular data were developed from the formula for determining change in position level of responsibility found on page 44.

perceptions of themselves in relation to success, with the M.S. groups showing a small advantage (Table 28). The same results were observed when the respondents were asked about their level of satisfaction with their career progress (Table 29). Again the majority in all three groups appeared satisfied or somewhat satisfied with their career success, with the M.S. groups showing only a slight advantage. The slightly higher average in both of the above areas could quite possibly be accounted for by the salary advantage shown by the M.S. groups.

Job satisfaction was more closely examined by use of the Porter Need Satisfaction Questionnaire, which was previously discussed in Chapters II and III. As was pointed out, Porter's questionnaire represents a measure of the difference between one's expectations and reality. The lower the score on the survey, the higher the respondent's satisfaction. The distribution of these scores for the three groups is shown in Table 30. It can be seen that the M.S. group with the CJ bachelor's was more satisfied than either of the remaining groups.

The next criterion measure of career success to be considered is attainment of top executive status. The percentage of graduates to reach top executive status in the M.S. group with the CJ bachelor's was dramatically higher than the remaining groups, with 44% reaching this position (Table 31). The M.S. group without the CJ bachelor's was second with 20%, and the B.S. group was last with only 8% of the graduates attaining top executive status. Although the lack of control over extraneous variables made firm judgments premature, it

Table 28.--Distribution of master's and bachelor's graduates by level of perceived success.

Perceived Success	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Extraordinarily successful	0	3%	0
Very successful	27%	52%	44%
Moderately successful	58%	39%	44%
Minimally successful	10%	3%	12%
Not at all successful	4%	3%	0
N	48	31	25

Table 29.--Distribution of master's and bachelor's graduates by level of satisfaction with career progress.

Level of Satisfaction	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Extremely satisfied	13%	23%	16%
Satisfied	38%	39%	44%
Somewhat satisfied	23%	26%	16%
Neither satisfied nor dissatisfied	6%	6%	8%
Somewhat dissatisfied	10%	3%	12%
Dissatisfied or extremely dissatisfied	8%	3%	4%
N	48	31	25

Table 30.--Distribution of master's and bachelor's graduates by level of job satisfaction.[a]

Percentile Rank	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
95	50.30	34.56	48.64
75	26.50	18.00	24.64
60	20.50	10.88	16.20
50	18.14	1.43	14.50
40	15.08	1.32	12.34
25	12.90	3.00	8.67
5	3.20	.01	1.50
$\bar{X}$	20.91	11.47	17.84
Median	18.00	7.50	15.00
N	49	32	25
Standard deviation	12.71	10.43	13.54

[a]Larger values indicate dissatisfaction; smaller values indicate satisfaction.

Table 31.--Distribution of master's and bachelor's graduates by attainment of top executive status.

Executive Status	Graduate Group		
	BSCJ	Master's (With BSCJ)	Master's (Other)
Top executive	8%	44%	20%
Not top executive	92%	56%	80%
N	49	32	25

would appear that the attainment of the M.S. degree in criminal justice did have a significant positive influence on one's chances of reaching top executive status in the field, particularly with a bachelor's in criminal justice.

Although a great deal of similarity existed between the various groups, analysis of the descriptive statistics appeared to indicate that persons with the M.S. and B.S. in criminal justice did enjoy higher salaries and more job satisfaction. In addition, the data seemed to indicate that the same group experienced an advantage in upward mobility in the hierarchical structure of the organizations with which they were employed.

Multivariate Analysis of the Research Questions

In this section each of the research questions posed in Chapter I was investigated by use of stepwise multiple-regression analysis. Since the sample size of each group was smaller than necessary to disregard the limitations to the use of multiple-regression analysis, correlation matrices were constructed for each dependent variable. From the independent variables identified in Chapter III, three of the variables with the highest correlation were selected and included with the degree variable in the multiple regression. This step was taken to provide an N of at least 15 for each independent variable. The following comparisons were made on each dependent variable:

1. B.S. group with the M.S. group with the CJ bachelor's
2. B.S. group with the M.S. group without the CJ bachelor's
3. Both M.S. groups, with the B.S. group
4. Both M.S. groups

These variables were then entered into the stepwise multiple-regression analysis. The order of entry of the variables into the regression was controlled so that degree was the last variable entered. This step was taken to isolate the influence of the degree after the other background and structural variables had been accounted for. For the purposes of this study, an increase in R^2 of 1% was considered minimal for judging as significant the increase in variance explained by degree between the third and fourth steps.

Present Compensation

Are there any significant relationships in the present compensation of those receiving master's degrees in criminal justice and those obtaining only a bachelor's degree? The correlation matrix constructed for present compensation (Table 32) revealed that previous work experience, size of organization, and position within the organization (line/staff) provided the highest correlations. Regression analysis between the B.S. group and the M.S. groups produced a multiple R of .4289 and R^2 of .184, with degree accounting for an increase of .004 (Table 33). This increase was exceedingly small and below the desired increase of 1%. Therefore, it appeared that the background and structural variables were dominant in explaining the variance related to current compensation.

The second analysis between the B.S. group and the M.S. group with a CJ bachelor's revealed a multiple R of .5090 and an R^2 of .259 (Table 34). Degree level accounted for an increase in R^2 of .015 between steps 3 and 4. Again, a significant relationship existed between present compensation and the control variables. However,

Table 32.--Correlation matrix for present compensation.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major	0.00	0.00	0.00	-0.25	0.23	0.32	0.09
SES	-0.10	0.06	-0.26	-0.12	-0.03	0.03	0.12
Work Exp.	0.14	0.09	0.03	0.07	0.19	0.27	0.11
Ability	-0.06	0.02	0.01	0.04	0.04	0.05	0.02
Sex	-0.09	0.00	-0.45	-0.27	-0.18	0.13	0.18
Ethnic	-0.06	0.14	0.17	0.16	0.06	0.01	0.04
Org. Size	0.27	0.46	0.37	0.38	0.34	0.35	0.31
Geog. R-11	0.00	0.00	0.27	-0.10	-0.10	0.00	0.16
R-12	0.00	0.00	0.45	0.29	0.19	0.00	0.23
R-13	0.08	0.48	-0.11	0.20	0.17	0.25	0.03
R-14	-0.19	-0.20	-0.45	-0.29	-0.26	0.22	0.27
R-15	0.14	-0.05	0.25	0.08	0.07	0.01	0.17
R-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R-17	-0.13	0.00	-0.20	-0.07	-0.07	0.04	0.15
R-18	-0.33	-0.09	0.18	-0.06	-0.08	0.21	0.09
R-19	0.03	0.00	0.00	0.00	0.05	0.05	0.04
R-20	0.00	0.00	-0.09	-0.01	-0.03	0.00	0.06
R-21	0.10	-0.34	0.01	-0.20	-0.06	0.08	0.08
Pos (L,S.B)	0.26	-0.04	0.03	-0.01	0.16	0.21	0.19

Table 33.--Stepwise regression on present compensation; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SIZ ORG	1597.055	422.863	14.264	.118
2	WORK EXP	131.733	98.935	1.773	.160
3	POSLSB	944.590	755.343	1.564	.180
4	DEGREE	1113.764	1532.512	.528	.184

Multiple R = .4289 ($p < .01$)

Change in R^2 Associated with Degree = .004

Analysis of Variance

	SS	df	MS	F
Regression	.888	4	.222	5.636
Residual	.394	100	.394	

Table 34.--Stepwise regression on present compensation; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SIZ ORG	1700.499	466.631	13.280	.124
2	WORK EXP	189.055	127.939	2.184	.207
3	POSLSB	1209.677	876.940	1.903	.244
4	DEGREE	2318.213	1868.845	1.539	.259

Multiple R = .5090 ($p < .01$)

Change in R^2 Associated with Degree = .015

Analysis of Variance

	SS	df	MS	F
Regression	.104E +10	4	.259E +09	6.557
Residual	.296E +10	75	.395E +08	

since the amount of explained variance attributed to degree increased, it appeared that the magnitude of the relationship with the B.S. group was stronger when one had a M.S. with a B.S. in criminal justice. This conclusion was further supported in the third analysis between the B.S. group and the M.S. group without the B.S. in criminal justice (Table 35). Although the relationship remained significant ($p > .05$), the difference in R^2 attributable to degree was .006, below the desired 1% level.

Finally, both M.S. groups were compared (Table 36). In this case, multiple R revealed a value of .5003 and an R^2 of .250 with degree producing a strong increase in variance of .095, well above the desired criterion of 1%.

These analyses revealed that a significant relationship existed between present compensation and the various degree groups after controlling for the effects of previous work experience, position in the organization (line/staff), and size of the organization. This difference was largest between the M.S. graduates with a B.S. in criminal justice and the B.S. group.

In all four comparisons the multiple R was statistically significant. The contribution of the degree was greatest in the comparison between the two M.S. groups, followed by the B.S. group compared with the M.S. group with the B.S. in criminal justice. Degree explained little variance in current compensation for the B.S. versus M.S. (other) and B.S. versus All M.S. comparisons. It appeared that a B.S. in criminal justice in combination with an M.S.

Table 35.--Stepwise regression on present compensation; degree group comparison: B.S. versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SIZ ORG	1457.318	485.208	9.021	.096
2	POSLSB	1558.450	863.426	3.258	.142
3	WORK EXP	106.637	122.490	0.758	.146
4	DEGREE	-641.269	876.229	0.536	.1529

Multiple R = .3911 ($p < .01$)

Change in R^2 Associated with Degree = .006

Analysis of Variance

	SS	df	MS	F
Regression	.3898E +09	4	.9745E +08	3.069
Residual	.2158E +10	68	.3174E +08	

Table 36.--Stepwise regression on present compensation; degree group comparison: M.S./BSCJ Versus M.S. (Other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SIZ ORG	2124.398	594.552	12.767	.144
2	WORK EXP	88.548	109.764	.651	.154
3	POSLSB	-206.922	992.823	.043	.155
4	DEGREE	9999.999	1739.847	6.638	.250

Multiple R = .5003 ($p < .01$)

Change in R^2 Associated with Degree = .095

Analysis of Variance

	SS	df	MS	F
Regression	.718E +09	4	.179	4.339
Residual	.215E +10	52	.413	

in criminal justice had a strong positive influence on the compensation one could expect to receive.

Growth in Compensation

Are there any significant relationships in the growth in compensation of those receiving the master's in criminal justice and those obtaining a bachelor's in criminal justice only? The correlation matrix constructed for growth in compensation revealed that previous work experience, ability, and socioeconomic status provided the highest correlations (see Table 37).

Regression of these variables between the B.S. group and all M.S. respondents produced a multiple R of .2418 and R^2 = .059 with degree accounting for .004 of the variance between the two groups between steps 3 and 4 (Table 38). Neither the multiple correlation coefficient nor the difference attributed to degree was significant.

All remaining comparisons produced similar results (Tables 39 and 41) except between the B.S. group and the M.S. group without the B.S. in criminal justice. Here multiple R reached a value of .4255 ($p < .01$) and R^2 = .18 (Table 40) with degree accounting for .034 of the explained variance between steps 3 and 4. Both the multiple R value and the increase in variance after adding degree to the regression indicated significance.

From the analysis, multiple R was statistically significant in only one comparison (the B.S. group and the M.S. group without the B.S. in criminal justice). The amount of variance explained by the degree was judged significant also. Only the M.S. group without the

Table 37.--Correlation matrix for growth in compensation.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major		.00	.00	.02	-.05	-.08	-.03
SES	-.15	.13	.21	-.17	-.17	-.16	-.18
Work Exp.	.21	.34	.45	.11	-.08	-.17	.30
Ability	-.08	.34	.13	-.06	.08	-.23	.04
Sex	.12	.00	.09	-.07	.03	.09	.03
Ethnic	-.06	.17	.12	-.00	.01	-.07	.10
Org. Size	.03	.06	.12	-.02	-.01	.04	-.05
Geog. R-11	.00	.00	.04	.03	.03	.00	.04
R-12		.00	.08	.06	.06	.00	.08
R-13	.13	.05	.22	-.13	-.05	.04	-.05
R-14		.06	.07	.06	.03	.01	-.00
R-15		.17	.13	.01	-.02	-.08	.11
R-16		.00	.00	.00	.00	.00	.00
R-17		.00	.04	-.04	.02	.00	-.01
R-18		.12	.10	.02	-.01	-.13	.02
R-19		.00	.00	.00	.04	.06	.05
R-20		.00	.11	.09	.08	.00	.10
R-21		.16	.04	.04	-.01	.01	-.07
Pos (L,S.B)	.10	.21	.06	.06	.05	.12	.00

Table 38.--Stepwise regression on growth in compensation; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SES	-0.349	.194	3.244	.020
2	WORK EXP	.047	.026	3.287	.039
3	ABILITY	-0.251	.190	1.739	.055
4	DEGREE	-0.217	.373	.338	.059

Multiple R = .2418

Change in R^2 Associated with Degree = .004

Analysis of Variance

	SS	df	MS	F
Regression	15.742	4	3.936	1.568
Residual	253.438	101	2.509	

Table 39.--Stepwise regression on growth in compensation; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	ABILITY	-.315	.183	2.951	.050
2	SES	-.142	.175	.653	.060
3	WORK EXP	-.017	.027	.400	.063
4	DEGREE	-.184	.358	.264	.066

Multiple R = .2565

Change in R^2 Associated with Degree = .003

Analysis of Variance

	SS	df	MS	F
Regression	8.489	4	2.12	1.338
Residual	120.530	76	1.59	

Table 40.--Stepwise regression on growth in compensation; degree group comparison: B.S. versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	WORK EXP	.124	.034	13.531	.095
2	SES	-.411	.236	3.049	.144
3	ABILITY	-.114	.227	.254	.147
4	DEGREE	-.392	.233	2.836	.180

Multiple R = .4255 ($p < .01$)

Change in R^2 Associated with Degree = .034

Analysis of Variance

	SS	df	MS	F
Regression	36.00	3	12.00	5.055
Residual	166.19	70	2.37	

Table 41.--Stepwise regression on growth in compensation; degree group comparison: M.S./BSCJ versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SES	-0.511	.316	2.623	.030
2	WORK EXP	0.045	.035	1.680	.048
3	ABILITY	0.312	.297	1.103	.068
4	DEGREE	-0.010	.519	.000	.068

Multiple R = .2160

Change in R^2 Associated with Degree = 0.0

Analysis of Variance

	SS	df	MS	F
Regression	14.120	4	3.530	.952
Residual	192.804	52	3.708	

CJ bachelor's outperformed alumni with a B.S. in criminal justice with regard to growth in compensation, relative to starting income at entry into the field after obtaining the degree.

Present Position Level

Are there any significant relationships in the present relative position level of criminal justice M.S. degree holders and graduates with a B.S. only? Previous work experience, ability, and type of position (line/staff) correlated the highest with present position level (Table 42). When all M.S. recipients were compared with the B.S. recipients, a multiple R of .4927 ($p < .01$) and an $R^2 = .243$ were reported (Table 43). The variance explained by degree was .047, well above the .01 criterion. The control variables explained a significant amount of the variance between the groups in relation to present position level, with degree alone controlling almost 4.7% of the variance.

The B.S. group was then compared with only the M.S. group with the B.S. in criminal justice (Table 44). This comparison revealed a multiple R of .4720 and $R^2 = .223$, with degree accounting for .076 of the total variance in present position level. Again the multiple correlation coefficient was significant ($p < .01$), with degree explaining an even larger portion of the variance.

The large increase in explained variance associated with degree when the M.S. group without the CJ bachelor's was removed clearly indicated a dominance by the M.S. group with the B.S. in criminal justice. This observation was further supported by the

Table 42.--Correlation matrix for present position level.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major	.00	.00	.00	.14	.37	.43	.29
SES	.05	.25	.01	-.14	.02	.01	.05
Work Exp.	.29	.18	.03	-.08	.20	.25	.26
Ability	.05	.03	.43	-.23	.21	.12	.24
Sex	.28	.00	.06	.02	-.21	.29	-.21
Ethnic	.07	.25	.07	.17	.07	-.08	.00
Org. Size	.00	.04	.29	.11	.09	.03	.15
Geog. R-11	.00	.00	.19	.15	.08	.00	.07
R-12	.00	.00	.11	-.04	.08	.00	-.14
R-13	.16	.22	.02	.10	.15	.17	.16
R-14	.50	.41	.10	-.30	-.36	-.45	-.32
R-15	.00	.07	.13	-.09	-.10	-.08	-.11
R-16	.00	.00	.00	.00	.00	.00	.00
R-17	.16	.00	.38	.27	.07	-.05	.05
R-18	.07	.20	.30	.10	.05	-.07	.14
R-19	.07	.00	.00	.00	.08	.08	.07
R-20	.00	.00	.24	-.14	-.14	.00	-.20
R-21	.07	.13	.16	.00	.04	.10	-.01
Pos (L,S.B)	.45	.08	.56	.20	.38	.31	.54

Table 43.--Stepwise regression on present position level; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	.120	.037	10.492	.143
2	ABILITY	.073	.037	3.913	.187
3	WORK EXP	-.001	.005	.086	.196
4	DEGREE	.185	.074	6.251	.243

Multiple R = .4927 ($p > .01$)

Change in R^2 Associated with Degree = .047

Analysis of Variance

	SS	df	MS	F
Regression	3.070	4	.768	8.095
Residual	9.577	101	.948	

Table 44.--Stepwise regression on present position level; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	.075	.043	3.002	.095
2	WORK EXP	.000	.006	.002	.143
3	ABILITY	.002	.045	.235	.147
4	DEGREE	.025	.091	7.506	.223

Multiple R = .4726

Change in R^2 Associated with Degree = .076

Analysis of Variance

	SS	df	MS	F
Regression	2.083	4	.521	5.465
Residual	7.242	76	.925E.01	

findings reported in Table 45, where the B.S. group is compared with the M.S. group without the B.S. in criminal justice. Although multiple R = .6056 ($p < .01$) was statistically significant, the amount of variance associated with degree was only .008. In addition, a comparison of the two M.S. groups (Table 46) revealed a multiple R of .3536, not sufficient to establish a significant statistical relationship. However, the variance attributable to degree (.012) did meet the minimum criterion of 1%.

The above comparisons show that persons with an M.S. and B.S. degree in criminal justice generally held higher position levels within their employing organization than did persons with only the B.S. degree in criminal justice, when controlling for the other background and structural variables mentioned above. The same was true for M.S. holders without the B.S. in criminal justice; however, the value of the M.S. degree appeared not to be a significant factor.

Change in Position Level

Are there any significant relationships between changes in position level from initial to present job attributable to degree level? The correlation matrix for change in position level (Table 47) showed the highest correlations to be associated with position level (line/staff), size of the organization, and previous work experience. The same four comparisons were made as with the present position level with identical findings. Regression analysis comparison between the B.S. group and the M.S. groups resulted in a multiple R of .4647 and R^2 = .216, with degree accounting for 4.4% of the

Table 45.--Stepwise regression on present position level; degree group comparison: B.S. versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	.202	.041	24.641	.292
2	ABILITY	.093	.038	5.829	.353
3	WORK EXP	.001	.006	.036	.359
4	DEGREE	.038	.040	.896	.367

Multiple R = .6056 ($p < .01$)

Change in R^2 Associated with Degree = .008

Analysis of Variance

	SS	df	MS	F
Regression	2.839	4	.710	10.006
Residual	4.895	64	.709E-01	

Table 46.--Stepwise regression on present position level; degree group comparison: M.S./BSCJ versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	ABILITY	.099	.052	3.639	.053
2	POSLSB	.078	.053	2.186	.100
3	WORK EXP	-.006	.006	1.027	.113
4	DEGREE	-.078	.092	.711	.125

Multiple R = .3536

Change in R^2 Associated with Degree = .012

Analysis of Variance

	SS	df	MS	F
Regression	.877	4	.219	1.857
Residual	6.136	52	.118	

Table 47.-- Correlation matrix for change in position level.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major	.00	.00	.00	-.16	.26	.36	.16
SES	.18	.24	.11	-.07	-.02	-.07	.00
Work Exp.	.04	.31	.21	-.25	-.03	.04	.04
Ability	.16	.18	.09	-.11	-.09	-.09	-.11
Sex	.14	.00	.20	-.16	-.17	-.17	-.16
Ethnic	.03	.14	.18	.16	.08	.03	.09
Org. Size	.24	.10	.05	-.06	.07	.08	.18
Geog. R-11	.00	.00	.19	.16	.11	.00	.11
R-12	.00	.00	.05	.07	.02	.00	-.00
R-13	.03	.07	.27	.13	.09	.00	.13
R-14	.28	.22	.04	-.16	-.20	-.26	-.16
R-15	.03	.04	.28	-.12	-.12	-.03	-.20
R-16	.00	.00	.00	.00	.00	.00	.00
R-17	.13	.00	.20	-.12	-.09	-.04	.16
R-18	.03	.30	.30	.07	.04	-.14	.17
R-19	.03	.00	.00	.00	.04	.05	.04
R-20	.00	.00	.23	-.14	-.14	.00	-.20
R-21	.19	.16	.20	-.02	.07	.17	.02
Pos (L,S.B)	.51	.04	.46	.23	.40	.38	.52

variance (Table 48). The B.S. group was then compared with the M.S. group with the B.S. in criminal justice. Multiple R was .4871 and R^2 = .237, with a large increase in variance attributable to degree (.083). Third, the B.S. group was matched against the M.S. group without the B.S. in criminal justice (Table 50). Multiple R was .5985 and the corresponding change in R^2 attributable to degree between steps 3 and 4 was .004. As with present position level, the analysis for change in position level indicated that persons with an M.S. and B.S. in criminal justice experienced the greatest success in achieving upward mobility.

The M.S. group without the B.S. in criminal justice was again second in achievement in this area, with a statistically significant relationship, however, with less strength than the other M.S. group. Finally, a nonsignificant multiple R of .3712 ($p < .05$) was found when the two M.S. groups were compared (Table 51). The variance explained by degree, however, was 2%. Again, this result corresponded to the findings reported for the analysis of the present-compensation dependent variable.

Job Mobility

Are there any significant relationships between job mobility attributable to differences in degree level? Socioeconomic status, ability, and position level (line/staff) produced the highest correlations with job mobility (Table 52). A review of Table 53 shows a significant multiple R of .3159 ($p < .05$). The change in R^2 attributed to degree between the third and fourth steps of .014 was significant by the prescribed criteria; however, the relationship was not

Table 48.--Stepwise regression on change in position level; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	.161	.044	13.614	.157
2	SIZ ORG	.016	.024	.412	.165
3	WORK EXP	-.012	.006	4.225	.172
4	DEGREE	.210	.088	5.664	.216

Multiple R = .4647 ($p > .01$)

Change in R^2 Associated with Degree = .044

Analysis of Variance

	SS	df	MS	F
Regression	3.664	4	.916	6.953
Residual	13.307	101	.132	

Table 49.--Stepwise regression on change in position level; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	.119	.046	6.536	.143
2	SIZ ORG	.020	.025	.667	.154
3	WORK EXP	-.010	.007	2.286	.154
4	DEGREE	.284	.099	8.248	.237

Multiple R = .4871 ($p > .01$)

Change in R^2 Associated with Degree = .083

Analysis of Variance

	SS	df	MS	F
Regression	2.625	4	.656	5.912
Residual	8.437	76	.111	

Table 50.--Stepwise regression on change in position level; degree group comparison: B.S. versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	.269	.048	31.020	.269
2	SIZ ORG	.057	.027	5.534	.322
3	WORK EXP	-.013	.007	3.689	.354
4	DEGREE	.032	.049	.416	.358

Multiple R = .5985 ($p > .01$)

Change in R^2 Associated with Degree = .004

Analysis of Variance

	SS	df	MS	F
Regression	3.832	4	.958	9.627
Residual	6.868	69	.995	

Table 51.--Stepwise regression on change in position level; degree group comparison: M.S./BSCJ versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	WORK EXP	-.014	.007	3.558	.064
2	POSLSB	.110	.067	2.709	.111
3	SIZ ORG	-.019	.040	.238	.118
4	DEGREE	-.128	.117	1.201	.138

Multiple R = .3712

Change in R^2 Associated With Degree = .020

Analysis of Variance

	SS	df	MS	F
Regression	1.550	4	.388	2.078
Residual	9.716	52	.187	

Table 52.--Correlation matrix for job mobility.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major	.00	.00	.00	-.16	.08	.13	-.01
SES	-.24	-.32	-.10	-.22	-.19	-.21	-.19
Work Exp.	-.16	.06	-.35	-.12	-.06	.05	-.20
Ability	-.12	-.12	-.29	-.18	-.14	-.09	-.18
Sex	.12	.00	-.16	-.13	.01	.06	.06
Ethnic	.17	.19	.08	.14	.13	.14	.11
Org. Size	.09	-.09	.05	-.06	.03	.02	.07
Geog. R-11	.00	.00	-.11	-.05	-.04	.00	-.06
R-12	.00	.00	.06	.07	.04	.00	-.06
R-13	-.11	.13	.27	.15	.02	-.02	.00
R-14	-.06	-.16	-.52	.29	-.19	-.11	-.20
R-15	-.20	-.08	-.27	-.17	-.17	-.16	-.22
R-16	.00	.00	.00	.00	.00	.00	.00
R-17	-.05	.00	-.37	-.22	-.12	-.03	-.15
R-18	-.10	-.41	-.19	-.26	-.20	-.22	-.13
R-19	-.23	.00	.00	.00	-.16	-.17	-.19
R-20	.00	.00	-.16	-.08	-.06	.00	.08
R-21	.36	.15	.47	.29	.32	.29	.39
Pos (L,S.B)	.29	.04	-.03	.02	.16	.22	.17

strong. A review of the remaining three comparisons for job mobility reported in Tables 54, 55, and 56 indicated no significant relationships for the multiple-regression coefficients. These findings suggest that although the preliminary observations (Table 9) showed the B.S. group to be noticeably more stable than the M.S. groups, after the above-identified structural and background variables were controlled, there appeared to be little difference between the various degree groups. Only when the two M.S. groups were combined was there sufficient strength in the relationship to establish statistical significance, and then the contribution of the degree, although significant, was marginal. These results suggest that after the influence of the structural and background variables was controlled, the differences in job mobility among the groups were not large.

Perceived Level of Success

Are there any significant relationships in a graduate's perceived level of success between M.S. and B.S. criminal justice degree recipients? The correlation matrix constructed for perceived level of success (Table 57) demonstrated that previous work experience, geographical region, and position level (line/staff) showed the highest correlations. Controlling for the influence of background and structural variables did not change the previously observed lack of variation in perceived success levels among the three groups. Regression analysis of all M.S. groups with the B.S. degree (Table 58) yielded a nonsignificant multiple R of .2541, with degree accounting for only 0.8% of the variance. Similarly, regression analysis of the M.S.

Table 53.--Stepwise regression on job mobility; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SES	-74.837	30.075	6.192	.037
2	POSLSB	37.515	29.953	1.569	.065
3	ABILITY	-49.987	28.964	2.979	.086
4	DEGREE	68.568	54.942	1.535	.100

Multiple R = .3159 ($p > .05$)

Change in R^2 Associated with Degree = .014

Analysis of Variance

	SS	df	MS	F
Regression	692029.56	4	172007.4	2.799
Residual	6242281.0	101	61804.76	

Table 54.--Stepwise regression on job mobility; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	45.091	35.477	1.615	.049
2	SES	-79.007	35.098	5.067	.091
3	ABILITY	-32.085	35.503	.817	.095
4	DEGREE	99.765	66.793	2.231	.121

Multiple R = .3475

Change in R^2 Associated with Degree = .026

Analysis of Variance

	SS	df	MS	F
Regression	661938.75	4	165484.7	2.609
Residual	4820926.0	76	63433.23	

Table 55.--Stepwise regression on job mobility; degree group comparison: B.S. versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SES	-80.437	38.295	4.412	.037
2	ABILITY	-67.059	36.612	3.355	.080
3	POSLSB	62.643	38.313	2.673	.119
4	DEGREE	8.955	68.448	.017	.119

Multiple R = .3452

Change in R^2 Associated with Degree = 0

Analysis of Variance

	SS	df	MS	F
Regression	601551.06	4	150387.7	2.334
Residual	446275.0	69	64438.77	

Table 56.--Stepwise regression on job mobility; degree group comparison: M.S./BSCJ versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SES	-75.565	37.540	4.052	.047
2	ABILITY	-62.492	34.408	3.299	.092
3	POSLSB	- 1.488	36.085	.002	.092
4	DEGREE	-95.777	63.145	2.301	.131

Multiple R = .3612

Change in R^2 Associated with Degree = .039

Analysis of Variance

	SS	df	MS	F
Regression	428196.75	4	107049.2	1.950
Residual	2853978.0	52	54884.19	

Table 57.--Correlation matrix for perceived level of success.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major	.00	.00	.00	.15	.20	-.25	-.12
SES	.30	.17	.14	.15	-.11	-.16	-.19
Work Exp.	.05	.14	.17	-.15	-.18	-.19	-.11
Ability	.16	.03	.20	-.08	-.14	-.12	-.18
Sex	.02	.00	.10	.08	.05	.04	.02
Ethnic	.02	.04	.01	.02	.04	.05	.02
Org. Size	.13	-.16	.01	-.08	.00	.00	.08
Geog. R-11	.00	.00	.10	-.08	-.04	.00	-.03
R-12	.00	.00	.08	.01	.03	.00	.07
R-13	.16	.33	.18	-.11	-.15	-.23	-.09
R-14	.03	.04	.21	.10	.06	.03	.04
R-15	.02	.13	.36	-.07	-.03	.08	-.14
R-16	.00	.00	.00	.00	.00	.00	.00
R-17	.22	.00	.10	-.08	.07	.13	.12
R-18	.15	.09	.14	-.04	.05	.13	.04
R-19	.02	.00	.00	.00	-.04	-.04	-.03
R-20	.00	.00	.21	.09	.08	.00	.12
R-21	.06	.24	.03	.13	.09	.12	.03
Pos (L,S.B)	.05	.09	.27	-.05	-.11	.07	-.15

group with a B.S. in criminal justice resulted in another nonsignificant multiple R of .3337; however, degree did contribute to 2.0% of the variance (Table 59). Comparison of the M.S. group without the B.S. in criminal justice again produced a nonsignificant R of .1836 with degree accounting for a very marginal .001 of the variance (Table 60). Finally, the lack of a significant relationship between the two M.S. groups is shown in Table 61. The results of the above four comparisons suggested that this sample of graduates perceived themselves to be at about the same levels of success regardless of the degree they had obtained.

Job Satisfaction

Are there any significant relationships between recipients of the M.S. degree in criminal justice and those with only a B.S. degree in the amount of job satisfaction they have received from their careers? The correlation matrix constructed for job satisfaction is represented in Table 62. A review of the figures shows that position level (line/staff), geographical region of employment, and previous work experience produced the highest correlations. Regression analysis of all M.S. alumni with all B.S. graduates yielded a multiple R of .3968 ($p < .01$) and a corresponding $R^2 = .158$ (Table 63). The difference in variance observed between the third and fourth steps showed degree accounting for 4% of the variance. Both the multiple-correlation coefficient and variance associated with degree were significant. Similarly, further analysis first with the B.S. versus M.S./BSCJ group and second with the B.S. versus M.S. (other) groups produced significant multiple R's of .5188 (Table 64) and

Table 58.--Stepwise regression on perceived level of success; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	WORK EXP	-.010	.013	.566	.029
2	R 13	-.235	.162	2.124	.048
3	POSLSB	-.067	.099	.463	.057
4	DEGREE	-.178	.198	.806	.065

Multiple R = .2541

Change in R^2 Associated with Degree = .008

Analysis of Variance

	SS	df	MS	F
Regression	4.695	4	1.174	1.743
Residual	68.031	101	.674	

Table 59.--Stepwise regression on perceived level of success; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	R 13	-.411	.193	4.520	.055
2	WORK EXP	-.001	.018	.004	.076
3	POSLSB	-.020	.118	.027	.082
4	DEGREE	-.400	.251	2.533	.111

Multiple R = .3337

Change in R^2 Associated with Degree = .029

Analysis of Variance

	SS	df	MS	F
Regression	6.826	4	1.706	2.381
Residual	54.457	76	.717	

Table 60.--Stepwise regression on perceived level of success; degree group comparison: B.S. versus M.S./B.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	-.119	.122	.958	.022
2	R 13	-.134	.192	.490	.030
3	WORK EXP	-.005	.017	.083	.033
4	DEGREE	-.024	.123	.038	.034

Multiple R = .1836

Change in R^2 Associated with Degree = .001

Analysis of Variance

	SS	df	MS	F
Regression	1.549	4	.387	.602
Residual	44.410	49	.644	

Table 61.--Stepwise regression on perceived level of success; degree group comparison: M.S./BSCJ versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	WORK EXP	-.014	.014	1.069	.022
2	R 13	-.238	.225	1.119	.031
3	POSLSB	-.075	.127	.349	.038
4	DEGREE	.284	.220	1.669	.067

Multiple R = .2592

Change in R^2 Associated with Degree = .029

Analysis of Variance

	SS	df	MS	F
Regression	2.428	4	.607	.936
Residual	33.712	52	.648	

Table 62.--Correlation matrix for job satisfaction.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major	.00	.00	.00	.26	.16	-.38	-.12
SES	.10	.22	.10	.14	.05	-.10	-.06
Work Exp.	.09	.31	.56	.13	.05	-.30	.20
Ability	.07	.23	.04	-.15	.15	-.20	-.07
Sex	.09	.00	.12	-.05	.01	.02	-.07
Ethnic	.09	.14	.23	-.19	.05	.04	-.05
Org. Size	.09	.17	.14	-.10	.04	.02	-.00
Geog. R-11	.00	.00	.04	-.01	.02	.00	.05
R-12	.00	.00	.20	.08	.09	.00	.14
R-13	.22	.40	.07	-.17	.21	-.27	-.19
R-14	.11	.03	.14	-.01	.05	.10	.02
R-15	.05	.02	.18	.10	.11	.07	.13
R-16	.00	.00	.00	.00	.00	.00	.00
R-17	.29	.00	.06	.00	.14	.17	.21
R-18	.06	.15	.34	-.17	.06	.10	-.12
R-19	.00	.00	.00	.00	.03	-.03	-.01
R-20	.00	.00	.10	.04	.05	.00	.08
R-21	.03	.35	.02	.18	.10	.12	.02
Pos (L,S.B)	.22	.22	.06	-.15	.25	-.32	-.19

Table 63.--Stepwise regression on job satisfaction; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	-3.063	1.450	4.463	.062
2	R 13	-5.766	2.364	5.950	.118
3	WORK EXP	.243	.189	1.664	.118
4	DEGREE	-6.317	2.898	4.752	.158

Multiple R = .3968 ($p < .01$)

Change in R^2 Associated with Degree = .040

Analysis of Variance

	SS	df	MS	F
Regression	2722.423	4	680.606	4.720
Residual	14565.234	101	144.210	

Table 64.--Stepwise regression on job satisfaction; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	-3.806	1.553	6.005	.100
2	R 13	-7.192	2.540	8.017	.194
3	WORK EXP	-0.162	.230	3.228	.238
4	DEGREE	-5.926	3.298	3.228	.269

Multiple R = .5188 ($p < .01$)

Change in R^2 Associated with Degree = .031

Analysis of Variance

	SS	df	MS	F
Regression	3458.8	4	864.70	6.998
Residual	9391.2	76	123.57	

.4326 (Table 65), respectively. The changes in R^2 attributed to degree were .031 and .037, respectively. Finally, both M.S. groups were compared. Multiple R yielded a value of .4191, and the change in R^2 associated with degree was .096.

The above four comparisons suggested that degree level was significantly related to the need fulfillment or job satisfaction one received from his/her employment. As reported in previous analyses, the data suggested that persons who possessed M.S. and B.S. degrees in criminal justice were more satisfied with their employment than their counterparts without the B.S. in criminal justice. In addition, both M.S. groups seemed to possess more satisfaction than those persons with the B.S. only.

Top Executive Status

Are there any significant relationships between M.S. and B.S. graduates in criminal justice in their attainment of top executive status? The correlation matrix for top executive status is shown in Table 67. Organizational position level (line/staff), size of the organization where employed, and previous work experience were the independent variables yielding the highest correlations. This final regression analysis of all M.S. alumni with all B.S. alumni produced a significant multiple R of .5264 ($p < .01$) (Table 68). Degree level had a corresponding significant contribution to explained variance. The increase in R^2 was .044. Analysis of the M.S. subgroup with the B.S. in criminal justice and the B.S. group continued to demonstrate a significant relationship, with a multiple R of .5504 and a change in R^2 associated with degree of .037 (Table 69). Similarly,

Table 65.--Stepwise regression on job satisfaction; degree group comparison: B.S. versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	WORK EXP	.811	.260	9.734	.043
2	POSLSB	-3.532	1.834	3.708	.110
3	R 13	-4.146	2.879	2.074	.150
4	DEGREE	-3.293	1.851	3.167	.187

Multiple R = .4326 ($p < .01$)

Change in R^2 Associated with Degree = .037

Analysis of Variance

	SS	df	MS	F
Regression	2308.465	4	577.116	3.971
Residual	10027.312	69	145.323	

Table 66.--Stepwise regression on job satisfaction; degree group comparison: M.S./BSCJ versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	R 13	-6.984	3.226	4.687	.028
2	POSLSB	-2.598	1.814	2.051	.063
3	WORK EXP	.221	.197	1.262	.080
4	DEGREE	7.741	3.148	6.047	.176

Multiple R = .4191 ($p < .01$)

Change in R^2 Associated with Degree = .096

Analysis of Variance

	SS	df	MS	F
Regression	1470.65	4	367.66	2.771
Residual	6900.36	52	132.70	

Table 67.--Correlation matrix for top executive status.

Independent Variables	Bach.	M-CJ	M-Oth	M-All	B.S. All M.S.	B.S. M-CJ	B.S. M-Oth
Major	.00	.00	.00	.11	.29	-.32	-.24
SES	.16	.06	.09	-.07	-.07	-.05	.00
Work Exp.	.26	.16	.14	.14	-.12	-.18	.17
Ability	.02	.15	.18	-.17	-.15	-.14	.10
Sex	.09	.00	.10	.07	.13	.13	.12
Ethnic	.08	.13	.06	-.06	-.01	-.05	.04
Org. Size	.39	.45	.04	.33	.31	.39	.24
Geog. R-11	.00	.00	.10	-.07	-.03	.00	-.01
R-12	.00	.00	.05	-.05	.00	.00	.03
R-13	.18	.22	.05	.18	-.01	.00	.16
R-14	.39	.29	.03	.23	.29	.35	.26
R-15	.25	.21	.05	.11	-.11	-.18	-.06
R-16	.00	.00	.00	.00	.00	.00	.00
R-17	.01	.00	.10	.07	-.05	-.03	-.02
R-18	.17	.16	.05	.04	.00	.01	-.06
R-19	.01	.00	.00	.00	-.03	-.02	-.01
R-20	.00	.00	.30	.15	.13	.00	.20
R-21	.15	.39	.08	.27	-.09	-.09	.07
Pos (L,S.B)	.49	.01	.50	.17	-.37	-.33	-.53

Table 68.--Stepwise regression on top executive status; degree group comparison: B.S. versus all M.S.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	-.612	.195	9.862	.131
2	SIZ ORG	.440	.108	16.488	.231
3	WORK EXP	.021	.026	.683	.233
4	DEGREE	-.978	.395	6.141	.277

Multiple R = .5264 ($p < .01$)

Change in R^2 Associated with Degree = .044

Analysis of Variance

	SS	df	MS	F
Regression	101.545	4	25.386	9.678
Residual	264.942	101	2.623	

Table 69.--Stepwise regression on top executive status; degree group comparison: B.S. versus M.S./BSCJ.

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SIZ ORG	.510	.123	17.058	.158
2	POSLSB	-.511	.234	4.776	.252
3	WORK EXP	.007	.034	.037	.266
4	DEGREE	-1.003	.497	4.067	.303

Multiple R = .5504 ($p < .01$)

Change in R^2 Associated with Degree = .037

Analysis of Variance

	SS	df	MS	F
Regression	92.653	4	23.163	8.256
Residual	213.22	76	2.806	

comparison of the remaining M.S. group with the B.S. group produced a significant multiple R of .5821 (Table 70). A look at the variance explained by degree was again significant according to established criterion; however, the magnitude of the contribution was reduced considerably (.018). The results of the comparison of both M.S. groups are noted in Table 71. The resultant multiple R of .4139 confirmed the suggested superior advantage enjoyed by persons possessing both the M.S. and B.S. degree in criminal justice. Degree failed to explain any significant variance (.002) between the two M.S. groups.

Summary of Results of Multiple Regression Analysis

The preceding analysis suggested that persons with a master's degree in criminal justice in combination with a B.S. in the same curriculum had an almost universal advantage over the other groups. The only exception was in the area of growth in compensation, where the M.S. group without the bachelor's in criminal justice was superior. M.S. graduates with the B.S. in criminal justice had the highest current salaries, held the highest positions within their employing organizations, experienced more upward mobility, enjoyed greater job satisfaction, and were more likely to possess top executive positions. Persons with only the master's in criminal justice were generally below the other M.S. group. The M.S. group without the B.S. in criminal justice did, however, achieve higher results with all the variables than persons with only the bachelor's degree.

Table 70.--Stepwise regression on top executive status; degree group comparison: B.S. versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	POSLSB	-.993	.219	20.600	.272
2	SIZ ORG	.308	.122	6.372	.321
3	WORK EXP	.021	.031	.454	.321
4	DEGREE	-.304	.222	1.876	.339

Multiple R = .5821 ($p < .01$)

Change in R^2 Associated with Degree = .018

Analysis of Variance

	SS	df	MS	F
Regression	72.209	4	18.502	8.841
Residual	140.885	69	2.042	

Table 71.--Stepwise regression on top executive status; degree group comparison: M.S./BSCJ versus M.S. (other).

Step	Variable Entered	B in Last Step	Std. Error B	F in Last Step	R^2
1	SIZ ORG	.438	.163	7.209	.111
2	POSLSB	.358	.272	1.733	.144
3	WORK EXP	.038	.030	1.579	.169
4	DEGREE	.191	.476	.160	.171

Multiple F = .4139 ($p < .01$)

Change in R^2 Associated with Degree = .002

Analysis of Variance

	SS	df	MS	F
Regression	33.396	4	8.349	2.687
Residual	161.586	52	3.107	

On the other hand, graduates in all three groups perceived themselves as relatively successful. In addition, persons possessing only the bachelor's degree appeared to change jobs more frequently; however, the higher job mobility did not appear to be positively associated with any of the other dependent variables considered in this study.

Summary

The major findings of this study were presented in Chapter IV. It was shown that persons with the M.S. in criminal justice differed from graduates with a B.S. only on a wide variety of background and structural variables, which made a direct comparison of their relative career progress complex and difficult. Using multiple-regression analysis to control for these confounding influences, M.S. graduates were significantly higher than B.S. graduates on several measures of success, including present compensation, growth in compensation, present position level, change in position level, job satisfaction, and attainment of top executive status. No difference was found in the area of perceived success, and persons with only a bachelor's degree were found to be more job mobile. These findings are discussed in Chapter V, along with implications for further research.

CHAPTER V

SUMMARY AND CONCLUSIONS

In Chapter IV the major results of the study were presented. Descriptive distributions of the important variables were shown, as well as the summary findings of the regression analysis of the criterion variables. This chapter contains (1) a summary of the project, (2) discussion of the major findings, (3) conclusion, (4) recommendations for further research, and (5) final discussion.

Project Summary

The purpose of this study was to determine if a significant relationship existed between a group of master's degree graduates and a group of bachelor's degree graduates when compared with the dependent variables identified below:

1. Present compensation
2. Growth in compensation
3. Level of responsibility
4. Change in relative position level
5. Attainment of top executive status
6. Present job satisfaction
7. Perception of success
8. Level of job mobility

In addition, the following eight independent variables were identified that must be controlled to compensate for the effects of individual and environmental attributes of the respondents:

1. Socioeconomic class
2. Years of previous work experience

3. Native ability
4. Demographic characteristics (sex/ethnic origin)
5. Size of the organization
6. Type of organization
7. Geographical region of employment
8. Position classification (line/staff)

Graduates of Michigan State University's School of Criminal Justice were selected as the source of the sample groups. Graduates from fall term 1968 through summer term 1973 were identified. All available master's graduates and a like random sample of bachelor's graduates were surveyed. Descriptive statistics were computed for each variable so that the characteristics of the variables could be assessed. Multiple-regression analysis was then performed on each of the criterion variables to analyze its effects on each group. The results of this analysis were presented in Chapter IV. The following section discusses findings.

Discussion of the Major Findings

Compensation

One of the major findings of this study was that individuals with the M.S. degree received significantly higher salaries than graduates with only the B.S. degree. Graduates with the M.S. degree initial salary was between three and four thousand more than the B.S. graduates. This margin increased over the years to a present mean difference of $5,159 for persons with both the M.S. and B.S. in criminal justice (Table 24). It is also important to note that persons with the M.S. degree but not the B.S. in criminal justice had mean salaries only $1,608 higher than the B.S. group. The significance of the magnitudes of this difference persisted after accounting

for the effects of previous work experience, size of the organization, and the type of position (line/staff) that one occupied within the organization. This finding suggests that the power of the M.S. degree in the area of compensation had its greatest effect when the recipient had a corresponding B.S. degree in criminal justice. In this situation, the compensation advantage was substantial over those who possessed the M.S. without the corresponding B.S. in criminal justice. The M.S. (other) group shared only a marginal nonstatistical significant advantage over the graduates with the bachelor's only (Table 40).

Some qualifications to the above conclusion should be mentioned. The overall amount of variance explained by degree was modest, which suggests that other factors were influencing initial and growth in compensation. Furthermore, changes in other variables that might have happened in concurrence with changes in salary were not taken into account. Therefore, the variances attributable to degree could be the result of some unknown changes in other unaccounted for circumstances.

Position Level

Another major indicator of career progress is position level. As with compensation, persons with both the M.S. and B.S. in criminal justice demonstrated greater career success or progress than their counterpart with the B.S. in criminal justice (Tables 43, 44, 45). In addition, persons without the M.S. degree again demonstrated the least amount of success. Persons with both criminal justice degrees

clearly demonstrated superior performance in their upward mobility through the organization after their initial job and now held significantly better positions (Table 49). This conclusion was perhaps the strongest and most constant in the entire project. Both descriptive analyses of these data and the subsequent regression analysis across the variables reported the greater success of the graduate possessing both criminal justice degrees. In addition, the regression analysis data reporting the influence of the degree were high (.076). These findings were totally consistent with the compensation data.

A possible explanation for the significant differences between the two M.S. groups may be associated with previous work experience. Charting the career progress of degree recipients began after receiving the degree. Although the number of years of previous work experience was controlled and was a factor in all compensation and position analyses, the nature and content of the previous experience was not addressed. Persons with both criminal justice degrees presumably had a longer history of association with the criminal justice field. Differences may have existed in previous work experiences that had a significant influence on subsequent career progress. Compare, for example, two M.S. alumni, one with the B.S. in criminal justice and one without. The former had seven years of police experience, three of which were in a supervisory capacity. The latter also had seven years of previous work experience, but as an elementary school teacher. The veteran police officer with the supervisory experience would obviously possess a large advantage over the teacher at the initial

job after graduation. In addition, because of the previous field experience, it is reasonable to assume the police officer would, at least for a few years, rise in the organization faster.

Two other factors deserve consideration. First, it was shown that the vast majority of graduates in all three groups found initial employment after graduation in the law enforcement field. It has been a long-accepted notion in this area that practitioners place strong emphasis on previous experience when considering persons for employment. A cursory review of the job bulletins in the area will quickly substantiate the point. Second, the law enforcement area has traditionally been characterized by its lack of lateral mobility within the field. If one desires to change police organizations, usually the only alternatives are to transfer either as an entry-level patrolman or as chief. Opportunities within these boundaries are rather rare. Consequently, the interaction of the various factors discussed could have significant implications on the findings of this report.

Perceived Level of Success

The results of the analysis concerning perceived level of success varied from the preceding pattern. The impressions communicated in Table 28 were clearly confirmed by the regression analysis. Graduates from all three groups viewed themselves as equally successful, in spite of the already observed differences in compensation and position level. This may have been a result of both degree groups viewing themselves as successful by this society's standards. They earned good average annual incomes and enjoyed good positions within

managerial hierarchies of their employing organization. Clearly, the significant differences in compensation and position level had not affected the overall perception of equal success reflected by both groups.

Job Satisfaction

The findings of this study in the area of job satisfaction yielded a return to the previous pattern of M.S. graduates with the B.S. in criminal justice maintaining an advantageous position over the remaining groups, as discussed in previous sections. Regression analysis of the variables indicated that the M.S. group with the B.S. in criminal justice was the most satisfied, followed by the remaining M.S. groups and then the B.S. group. As discussed in Chapter II, the proliferation of contradictory findings can be nothing but frustrating for those seeking answers to pressing administrative or operational problems. This research has done nothing to add clarification to the issue.

Kalleberg indicated that job satisfaction's relationship with education was not uniform. On the one hand, it was positive in that the higher one's education, the more likely one is to have high occupational status and income. On the other hand, the more education one has, the more likely he/she will be overtrained and not using skills to capacity. The positive influence of education on job satisfaction found in this study may have been a result of the rapid expansion of the criminal justice system during the past two decades. This growth of criminal justice programs may have had the effect of providing jobs to be absorbed by graduates into the rapidly expanding system.

Now that the system's growth has stabilized, future studies of a similar nature may result in conflicting findings.

It is well known that as a person rises in the hierarchical structure, the number of positions available decreases. This condition may have been offset by the rapid system expansion in the criminal justice field. Growth in the criminal justice field could easily have created a situation in which the pinch for high-ranking positions does not occur.

Finally, as reported in Chapter II, one of the most consistent findings in the area of job satisfaction is support for the research that education raises expectations. Had this study not systematically removed all respondents progressing beyond the master's level, the results of this study might have been altered. Apparently, expectations created at the master's level have not exceeded opportunities to meet them.

Top Executive Status

As with all the previous variables studied, except perceived level of success, M.S. alumni who also had the B.S. in criminal justice demonstrated a clear advantage in obtaining top executive status. The present study identified graduates who had attained top executive status as those with tenure in a chief executive position or at the next lowest level. The M.S. group with the B.S. had the highest percentage of persons in top executive status (Table 31). Reference to regression analysis (Tables 68-71) supports this contention. Regression-analysis comparison of the M.S. groups, however, indicated

that very little of the relationship was associated with degree. Similarly, there appeared to be little difference in the groups in the size of organization for which they were employed.

The two remaining variables, previous work experience and type of position, whether line or staff, were the only two factors remaining that could account for the variance between the two M.S. groups. As previously discussed, the B.S. group and the M.S. groups varied significantly in the area of previous work experience. In addition, the significance of type of previous work experience may have accounted for some of the variance between the M.S. groups.

The B.S. group and both M.S. groups also differed in the types of positions they held. The M.S. groups occupied a significantly higher number of staff positions (Table 14). Although a definitive explanation is not possible with the available data, the above may suggest that top executives are frequently recruited from staff-related functions.

Job Mobility

As previously discussed, much of the research completed on the relationship between career progress and educational achievement has involved the question of job mobility. This study found that educational level had only a marginal influence on job mobility. Preliminary findings (Tables 7, 8, 9) showed the B.S. group to be more mobile. However, after a multiple-regression analysis treatment of the data, only marginal differences remained. The correlation matrix constructed for job mobility indicated position level (line/staff), socioeconomic status, and ability produced the highest

correlations with mobility. Analysis of the descriptive statistics for ability and socioeconomic status revealed very little difference between the groups. From the data available from this report, it would appear that the line/staff relationship would logically account for the majority of the variance between the groups. Reference to the regression tables, however, does not support this suggestion.

The evidence in this study suggested that job mobility played a relatively minor role in predicting one's career achievement. The graduate sample studied here exhibited a relatively high level of career attainment and satisfaction, regardless of the amount of job mobility. It must be pointed out that this research did not thoroughly investigate several important aspects of job mobility, such as why the persons moved. Consequently, conclusions from this study concerning the influence of job mobility are limited and should be viewed with caution.

Conclusions

At this point, 8 to 13 years into the careers of the graduates observed in this study, the M.S. degree had demonstrated its lasting value in several important areas. It appeared that the influence of the M.S. degree combined with the B.S. in criminal justice had raised the present income, increased the level of job satisfaction, advanced the upward mobility, and placed more of its holders in top executive positions than those alumni possessing only the B.S. degree. The M.S. degree had little influence on one's perceived level of success and was only minimally associated with job

mobility. These same general patterns existed for those who had the M.S. degree but did not possess the corresponding B.S. in criminal justice. The only difference was that the latter group's relationships were statistically significant but were not as strong. It remains to be seen what the influence of the M.S. degree will be in another 10 to 15 years.

Recommendations for Further Study

The evidence from this study suggested that the M.S. degree has a lasting effect on various measures of career progress. The most obvious question to ask is whether or not these relationships are unique to Michigan State University graduates or whether they are generalizable to a larger population. It would be interesting to compare the findings of similar studies on different institutions.

Further analysis is also needed in the area of previous work experience. This study failed to dissect this variable to an adequate degree. Future studies in this area should be careful to include more complete information on the topic.

Longitudinal comparative studies of M.S. graduates need to be performed on the same group of individuals at more than one point in their careers in order to assess career patterns over an entire career. Do graduates reach a plateau, or is growth continuous? Follow-up studies at five- or ten-year intervals would provide a more complete view of these patterns.

Closer examination should be made in the area of top executive status. An expanded look at this topic should produce a more definitive explanation of the interaction of the various variables associated

with top executives. It goes without saying that a reliable indication of what factors or skills are associated with the attainment of top executive positions certainly is relevant.

Finally, it is suggested that future studies of M.S. graduates focus on male versus female career patterns. The increasingly significant contribution of females in the criminal justice field should certainly be monitored. It was regrettable that so few women were available for study in this project. Future studies should be able to obtain a more representative sample of females for inclusion.

Final Discussion

The present study has provided new evidence of the lasting value of the M.S. degree in criminal justice. Such evidence should be valuable to Michigan State University in assessing the success of its alumni. Similarly, it should be valuable to counselors as they advise students about educational decisions and probable career outcomes. It supplies information to those who are trying to determine whether the investment of the time and money necessary to obtain the M.S. degree is worthwhile. Finally, it is hoped that the results of this study will serve as a stimulus for further research of the patterns of career progress of M.S. graduates in criminal justice as they relate to graduates of other degree programs.

APPENDICES

APPENDIX A

COVER LETTERS AND QUESTIONNAIRES

Original Explanatory Letter

x
x
x

Dear

I am currently undertaking a major research project to gather information about the career activities of bachelor's and master's degree graduates from Michigan State University's criminal justice program between the years 1969-1973. The purpose of this project is to analyze and assess the careers of these two groups and compare the results. I would like to personally invite your participation in this important research by completing the enclosed questionnaire and returning it in the envelope provided.

The questionnaire is easy to complete and takes just 10 to 15 minutes of your time. You are free not to answer any questions. Please be assured that your responses will be held in absolute confidentiality with only aggregate information being reported in the findings of the study. The number written on the bottom of the first page of the questionnaire identifies you only for the purpose of indicating your return of the questionnaire so that you will not be bothered by unnecessary follow-up reminders.

Your participation in this study is voluntary. Returning the completed questionnaire will provide you access to a detailed profile of the career patterns of those who graduated at the same time you did. In this way, you will be able to get a uniquely accurate and usable barometer of your own career progress as it compares with that of your peers. If you wish to receive this profile information, fill out the enclosed address card and return it along with the completed questionnaire.

I urge you to participate in this exciting project. Should you have any questions about the responses to questionnaire items, please give me a call at (616) 796-0461, x 5835.

Many thanks for your cooperation and support of this research.

Sincerely,

Alan L. Lawson
Criminal Justice Programs

ALL:bb
Enclosures

Follow-Up Post Card

Dear Alumnus,

About a week ago I sent you an alumni survey. This is part of a very important follow-up study, the first of its kind in the country, which will give you valuable information about your career patterns as they relate to those of your peers.

I have not yet received your survey. Won't you please take the few minutes it takes to fill it out and drop it in the mail? I think you will find the results to be of great personal interest. If you have already sent in the survey, please disregard this reminder.

Thank you for your help and cooperation.

Sincerely,

Alan L. Lawson
Criminal Justice Programs

bb

Second Follow-Up Letter

x
x
x

Dear

A couple of weeks ago you received a Graduate Follow-Up Survey from me. You were chosen to be part of a nation-wide sample of graduates of the Michigan State University School of Criminal Justice. At this time I have not received your survey.

I hope this is just an oversight. I am enclosing a duplicate questionnaire and return envelope for your convenience. Won't you please take just a few minutes to complete it and drop it in the mail? You will be making a very large contribution to your School. Since this project is also my dissertation in completing the requirements for the Ph.D. degree, I add my personal plea for your participation. I need your help and your cooperation.

Remember that you will benefit by receiving career-pattern information about your peers that you cannot get anywhere else. Take those few minutes now and return the questionnaire. You will have my heartfelt appreciation. If you have already returned the questionnaire, please disregard this reminder and accept my thanks.

Gratefully yours,

Alan L. Lawson
Criminal Justice Programs

AL/bb
Enclosures

MICHIGAN STATE UNIVERSITY
SCHOOL OF CRIMINAL JUSTICE

GRADUATE FOLLOW-UP SURVEY
(Mailed to Master's Graduates)

Part A: Background

1. Sex (1)

____ 1. Male
____ 2. Female

2. What will be your age on August 1, 1981? _____ (2-3)

3. Are you a member of an ethnic minority group? (4)

____ 1. Yes
____ 2. No

If yes, of what group are you a member? (5)

____ 1. Black
____ 2. Asian
____ 3. Hispanic
____ 4. American Indian
____ 5. Other _____

4. What is your perception of the socioeconomic background and environment in which you were raised? (6)

____ 1. Upper class
____ 2. Upper middle class
____ 3. Middle class
____ 4. Lower middle class
____ 5. Lower class

5. Were you employed on a full-time basis prior to obtaining your M.S. degree? (7)

____ 1. Yes
____ 2. No

If yes, how many years were you employed full time? _____ (8-9)
(Do not include summer jobs.)

6. Please complete the following information about your bachelor's degree: (10-11)

college or university name_____ major_____ (12-13)
year received_____ (14-15)

7. In what year did you receive your M.S. degree from MSU? _____ (16-17)

8. (a) What was the area of concentration in your M.S. degree program? (18)

____ 1. Law Enforcement Administration
____ 2. Correctional Administration
____ 3. Security Administration
____ 4. Delinquency Prevention & Control
____ 5. Criminalistics
____ 6. Highway Traffic Administration

(b) Have you received a graduate or professional degree other than the M.S. degree? (19)

____ 1. Yes
____ 2. No

If yes, complete the following:

degree____ major_____ school_____ year_____ (20-27)

degree____ major_____ school_____ year_____ (28-35)

(c) What program plan did you complete: (36)

____ 1. Plan A (thesis)
____ 2. Plan B (paper)

____ ____ ____ (78-80)

MICHIGAN STATE UNIVERSITY
SCHOOL OF CRIMINAL JUSTICE

GRADUATE FOLLOW-UP SURVEY
(Mailed to Bachelor's Graduates)

Part A: Background

1. Sex (1)

____ 1. Male
____ 2. Female

2. What will be your age on August 1, 1981? _____ (2-3)

3. Are you a member of an ethnic minority group? (4)

____ 1. Yes
____ 2. No

If yes, of what group are you a member? (5)

____ 1. Black
____ 2. Asian
____ 3. Hispanic
____ 4. American Indian
____ 5. Other _____

4. What is your perception of the socioeconomic background and environment in which you were raised? (6)

____ 1. Upper class
____ 2. Upper middle class
____ 3. Middle class
____ 4. Lower middle class
____ 5. Lower class

5. Were you employed on a full-time basis prior to obtaining your bachelor's degree? (7)

____ 1. Yes
____ 2. No

If yes, how many years were you employed full time? _____ (8-9)
(Do not include summer jobs.)

6. In what year did you receive your bachelor's degree from MSU? _____ (16-17)

7. What was the area of concentration in your criminal justice bachelor's degree program? (18)

____ 1. Law Enforcement Administration
____ 2. Correctional Administration
____ 3. Security Administration
____ 4. Delinquency Prevention & Control
____ 5. Criminalistics
____ 6. Highway Traffic Administration

8. Have you completed a graduate or professional degree beyond the bachelor's degree? (19)

____ 1. Yes
____ 2. No

If yes, complete the following:

degree____ major_____ school_____ year_____ (20-27)

degree____ major_____ school_____ year_____ (28-35)

degree____ major_____ school_____ year_____ (36-43)

____ ____ ____ (78-80)

Part B: Employment History

9. Please describe each full-time position you have held, including promotions or transfers and moves to a different organization since receiving your master's degree in criminal justice. Begin with your first or entry job after your degree and list your present position on the bottom line as directed. For most items you will need to refer to the lists in item 10. (Enter the code number.)

	Title	Employer Type (List A)	Employment Region (List B)	No. of Years in Job	Function Area (List C)	Reason for Leaving (List D)	Kind of Organiz. (List E)
1st job	_____	_____	_____	_____	_____	_____	_____ (1-12)
2nd job	_____	_____	_____	_____	_____	_____	_____ (13-24)
3rd job	_____	_____	_____	_____	_____	_____	_____ (25-36)
4th job	_____	_____	_____	_____	_____	_____	_____ (37-48)
5th job	_____	_____	_____	_____	_____	_____	_____ (49-60)
Present job	_____	_____	_____	_____	_____	_____	_____ (61-72)

(___) 78-80

10. List A Employer type

01. City
02. County
03. State
04. Federal
05. Private
06. Self-employed

List B Employment Region

01. New England
Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut

02. Middle Atlantic
New York
New Jersey
Pennsylvania

03. East North Central
Ohio
Indiana
Illinois
Michigan
Wisconsin

04. West North Cent.
Minnesota
Iowa
Missouri
North Dakota
South Dakota
Nebraska
Kansas

05. South Atlantic
Delaware
Maryland
Dist. of Col.
Virginia
W. Virginia
N. Carolina
S. Carolina
Georgia
Florida

List B Employment Region (cont'd)

06. East South Central
    Kentucky
    Tennessee
    Alabama
    Mississippi

07. West South Central
    Arkansas
    Louisiana
    Oklahoma
    Texas

08. Mountain
    Montana
    Idaho
    Wyoming
    Colorado
    New Mexico
    Arizona
    Utah
    Nevada

09. Pacific
    Washington
    Oregon
    California
    Alaska
    Hawaii

List C Functional Areas

01. Proprietary security
02. Private security
03. Public law enforcement
04. Adult correction
05. Juvenile correction
06. Forensic science
07. Planning
08. Research & development
09. Education, training
10. Consulting
11. General management/ adminst. or policy
12. Other (specify) _____

List D Reasons for Leaving Job

Within organization

01. Better location
02. Promotion
03. Transfer
04. Other

Move to new organization

05. Better opportunities
06. More money
07. General dissatisfaction
08. Better location
09. Other
10. Underutilization of training or skills
11. Return to school
12. Married or followed spouse

List E Kind of Organization

01. Police department (local, county, state)
02. Private investigative agency
03. Probate court
04. Juvenile correctional agency
05. Adult correctional agency
06. State planning or research agency (SPA)
07. Private criminal justice research agency
08. Contract security agency
09. Proprietary security organization
10. College or university
11. Federal law enforcement or investigative agency
12. Military
13. Federal research or planning agency
14. State investigative or enforcement agency
15. Consulting service
16. Other (specify) _____

The following items ask for specific information about the first position you held after receiving your M.S. degree.

11. How many levels of management were there in the organization in which you held your first job from the first line supervisor to the chief executive? _____ (number of levels) (1-2)

12. At what level of management were you from the chief executive officer in the organization when you began your first job? (3)

____ 1. I was chief executive
____ 2. I was at first level below chief executive
____ 3. Second level
____ 4. Third level
____ 5. Fourth level
____ 6. Fifth level
____ 7. Sixth level
____ 8. Seventh level or below

13. How many people were employed by the organization in which you held your first job? (4)

____ 1. 1-50
____ 2. 51-250
____ 3. 251-1000
____ 4. 1001-5000
____ 5. 5001-10,000
____ 6. Over 10,000

14. Compared with other organizations in the same industry, what approximate size was the organization in which you held your first job? (5)

____ 1. One of smallest
____ 2. Smaller than most
____ 3. About average
____ 4. Larger than most
____ 5. One of largest

15. What was the beginning annual compensation of your first job? (Annual compensation is defined as total before-tax income including base salary, bonus, commissions, fees, royalties, honoraria, incentive pay, cost of living, and profit sharing. Not included are deferred income, stock options, and income not related to occupation.) $_____ (compensation) (6-11)

16. What was the nature of your first job? (12)

____ 1. Mainly line
____ 2. Both line and staff
____ 3. Mainly staff
____ 4. Can't say

Part C: Present Position

The following items ask for specific information about your present position.

17. How many levels of management are there in your present organization from the first line supervisor to the chief executive? (Count first line supervisor as 1 and chief executive as last level.) _____ (number of levels) (13-14)

18. At what level of management are you from the chief executive officer in your present organization? (15)

____ 1. I am chief executive
____ 2. I am at first level below chief executive
____ 3. Second level
____ 4. Third level
____ 5. Fourth level
____ 6. Fifth level
____ 7. Sixth level
____ 8. Seventh level or below

19. How many people are employed by your present organization? (16)

____ 1. 1-50
____ 2. 51-250
____ 3. 251-1000
____ 4. 1001-5000
____ 5. 5001-10,000
____ 6. Over 10,000

20. Compared with other organizations (companies, subsidiaries, etc.) in the same industry, what is the approximate size of your organization? (17)

____ 1. One of smallest
____ 2. Smaller than most
____ 3. About average
____ 4. Larger than most
____ 5. One of largest

21. What is the annual compensation of your present position? (Use the definition of annual compensation you used in item 15.) $_____ (compensation) (18-23)

22. Would you consider your present position to be: (24)

____ 1. Mainly line
____ 2. Both line and staff
____ 3. Mainly staff
____ 4. Can't say

23. In your present position how many people do you supervise directly? _____ (25-26)

indirectly through other managers? _____ (27-28)

24. Are you the sole owner, major partner, or substantial owner of the organization in which you work? (29)

____ 1. Yes
____ 2. No

If yes, how did you acquire ownership? (30)

____ 1. Purchased
____ 2. Inherited
____ 3. Self-initiated
____ 4. Other (specify) _____

If no, are members of your family or your wife's family the sole owners, major partners, or substantial owners of the organization? (31)

____ 1. Yes
____ 2. No

25. If you work for others, do you plan to be in business for yourself some time in the future? (32)

____ 1. Yes
____ 2. No
____ 3. Undecided

Part D: Job and Career Satisfaction

26. Below you will find several characteristics associated with your present position. For each characteristic you will be asked to give two ratings:

a. How much of the characteristic is there now connected with your position?
b. How much of the characteristic should be connected with the position?

Each rating will be on a seven-point scale, which will look like this:

(minimum) 1 2 3 4 5 6 7 (maximum)

You are to circle the number on the scale which represents the amount of the characteristic being rated. Low numbers represent low or minimum amounts and high numbers represent high or maximum amounts. If you think there is "very little" or "none" of the characteristic presently associated with the position, you would circle numeral 1. If you think there is "just a little" you might circle numeral 2, and so on. If you think there is a "great deal" but not a maximum amount, you might circle numeral 6. For each scale circle only one number.

Please do not omit any scales.

1. The feeling of self-esteem I get from being in my position:

a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (33)
b. How much should there be? 1 2 3 4 5 6 7 (34)

2. The authority connected with my position:

a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (35)
b. How much should there be? 1 2 3 4 5 6 7 (36)

3. The opportunity for personal growth and development in my position:

a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (37)
b. How much should there be? 1 2 3 4 5 6 7 (38)

4. The prestige of my position inside the organization (that is, the regard received from others in the organization):

a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (39)
b. How much should there be? 1 2 3 4 5 6 7 (40)

5. The opportunity for independent thought and action in my position:

   a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (41)
   b. How much should there be? 1 2 3 4 5 6 7 (42)

6. The feeling of security in my position:

   a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (43)
   b. How much should there be? 1 2 3 4 5 6 7 (44)

7. The feeling of self-fulfillment I get from being in my position (that is, the feeling of being able to use my own unique capabilities, realizing my potentialities):

   a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (45)
   b. How much should there be? 1 2 3 4 5 6 7 (46)

8. The prestige of my position outside the organization (that is, the regard received from others not in the organization):

   a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (47)
   b. How much should there be? 1 2 3 4 5 6 7 (48)

9. The feeling of worthwhile accomplishment in my position:

   a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (49)
   b. How much should there be? 1 2 3 4 5 6 7 (50)

10. The opportunity in my position to give help to other people:

    a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (51)
    b. How much should there be? 1 2 3 4 5 6 7 (52)

11. The opportunity in my position for participation in setting of goals:

    a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (53)
    b. How much should there be? 1 2 3 4 5 6 7 (54)

12. The opportunity in my position for participation in the determination of methods and procedures:

    a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (55)
    b. How much should there be? 1 2 3 4 5 6 7 (56)

13. The feeling of being informed in my position:

    a. How much is there now? (min) 1 2 3 4 5 6 7 (max) (57)
    b. How much should there be? 1 2 3 4 5 6 7 (58)

14. The opportunity to develop close friendships in my position:

a. How much is there now?	(min) 1 2 3 4 5 6 7 (max)		(59)
b. How much should there be?	1 2 3 4 5 6 7		(60)

15. The feeling of pressure in my position:

a. How much is there now?	(min) 1 2 3 4 5 6 7 (max)		(61)
b. How much should there be?	1 2 3 4 5 6 7		(62)

16. The pay for my position:

a. How much is there now:	(min) 1 2 3 4 5 6 7 (max)		(63)
b. How much should there be?	1 2 3 4 5 6 7		(64)

27. Overall, how satisfied are you with the progress of your career so far? (65)

____ 1. Extremely satisfied
____ 2. Satisfied
____ 3. Somewhat satisfied
____ 4. Neither satisfied nor dissatisfied
____ 5. Somewhat dissatisfied
____ 6. Dissatisfied
____ 7. Extremely dissatisfied

28. As <u>you see yourself</u> now, what is your level of success? (66)

____ 1. Extraordinarily successful
____ 2. Very successful
____ 3. Moderately successful
____ 4. Minimally successful
____ 5. Not at all successful

29. As you think others see you, what is your level of success? (67)

____ 1. Extraordinarily successful
____ 2. Very successful
____ 3. Moderately successful
____ 4. Minimally successful
____ 5. Not at all successful

<u>Part E: Self-Description Inventory</u>

The purpose of this inventory is to obtain a picture of the traits you believe you possess and to see how you describe yourself. There are no right or wrong answers, so try to describe yourself as accurately and honestly as you can. <u>Please do not omit any pairs</u>.

In each pair of words below, check the one you think <u>most</u> describes you.

1. __capable	2. __understanding	3. __cooperative	(1)
__discreet	__thorough	__inventive	(2)
4. __friendly	5. __energetic	6. __persevering	(1)
__cheerful	__ambitious	__independent	(2)

7.	__loyal	8.	__determined	9.	__industrious	(1)
	__dependable		__courageous		__practical	(2)
10.	__planful	11.	__unaffected	12.	__sharp-witted	(1)
	__resourceful		__alert		__deliberate	(2)
13.	__kind	14.	__efficient	15.	__realistic	(1)
	__jolly		__clear-thinking		__tactful	(2)
16.	__enterprising	17.	__affectionate	18.	__progressive	(1)
	__intelligent		__frank		__thrifty	(2)
19.	__sincere	20.	__thoughtful	21.	__poised	(1)
	__calm		__fair-minded		__ingenious	(2)
22.	__sociable	23.	__appreciative	24.	__pleasant	(1)
	__steady		__good-natured		__modest	(2)
25.	__responsible	26.	__dignified	27.	__imaginative	(1)
	__reliable		__civilized		__self-controlled	(2)
28.	__conscientious	29.	__logical	30.	__sympathetic	(1)
	__quick		__adaptable		__patient	(2)
31.	__stable	32.	__honest			(1)
	__foresighted		__generous			(2)

In each of the pairs of words below, check the one you think <u>least</u> describes you.

33.	__shy	34.	__unambitious	35.	__noisy	(1)
	__lazy		__reckless		__arrogant	(2)
36.	__emotional	37.	__immature	38.	__unfriendly	(1)
	__headstrong		__quarrelsome		__self-seeking	(2)
39.	__affected	40.	__stubborn	41.	__conceited	(1)
	__moody		__cold		__infantile	(2)
42.	__shallow	43.	__unstable	44.	__defensive	(1)
	__stingy		__frivolous		__touchy	(2)
45.	__tense	46.	__dreamy	47.	__changeable	(1)
	__irritable		__dependent		__prudish	(2)
48.	__nervous	49.	__careless	50.	__apathetic	(1)
	__intolerant		__foolish		__egotistical	(2)
51.	__despondent	52.	__distractable	53.	__weak	(1)
	__evasive		__complaining		__selfish	(2)

54.	__rude	55.	__rattle-brained	56. __funny	(1)
	__self-centered		__disorderly	__submissive	(2)
57.	__opinionated	58.	__shiftless	59. __hard-hearted	(1)
	__pessimistic		__bitter	__self-pitying	(2)
60.	__cynical	61.	__dissatisfied	62. __undependable	(1)
	__aggressive		__outspoken	__resentful	(2)
63.	__sly	64.	__irresponsible		(1)
	__excitable		__impatient		(2)

THANK YOU!

Your participation in this survey is greatly appreciated.

APPENDIX B

VARIABLE DESIGNATORS

The following key identifies the variable designators referred to in Tables 32-71.

SES	Socioeconomic status
Work exp	Work experience
Ability	Ability
Sex	Sex
Ethnic	Ethnic origin
Siz org	Size of organization where employed
R-11 through R-21	Each geographic region used in the questionnaires was treated as a single variable. The number following the R refers to the geographic region where employed.
POSLSB	Position in organization (line/staff)

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