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CAREER OUTCOMES AMONG RECENT MSU
BUSINESS GRADUATES

presented by

Robert J. Barbato

has been accepted towards fulfillment
of the requirements for

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Frederick R. Wickert
Major professor

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CAREER OUTCOMES AMONG RECENT MSU BUSINESS GRADUATES

By

Robert J. Barbato

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

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ABSTRACT

CAREER OUTCOMES AMONG RECENT MSU
BUSINESS GRADUATES

By

Robert J. Barbato

The purpose of the research was to illuminate the current confusion over the value of the B.A. degree. Preliminary analysis revealed that this complex confusion could best be settled through taking into account a succession of cohorts over a period of years and an in-depth set of measures on each B.A. recipient extending from Pre-B.A. experiences to job success some time after receipt of the B.A., all these measures obtained in order to understand where the B.A. recipient was coming from and where s/he was going.

Rather than try out such an in-depth approach over many majors, this exploratory study was limited to 931 recent MSU Business graduates who did not receive a degree higher than a B.A. Questionnaires were mailed in December of 1978 and January of 1979, and the usable response rate was 42%.

Current job success was measured by income, job status, job potential, and job satisfaction. Seven surveys of college graduates were reviewed in order to form a causal model designed to predict current job success. Five antecedent variables and the dependent variable comprised the model. The five antecedent variables were: Early Career

Choice, The Degree to Which Pre-B.A. Experience Led to a First Post-B.A. Job, Relatedness of Degree to First Job, First Job Success, and Developmental Mobility.

Path analysis was the statistical technique used to test the model. The following were the paths with the path coefficients: Early Career Choice causes Relatedness of Degree to First Job (.25), Degree to Which Pre-B.A. Experience Led to First Post-B.A. Job causes Relatedness of Degree to First Job (.13), Relatedness of Degree to First Job causes First Job Success (.59), First Job Success causes Current Job Success (.71), First Job Success causes Developmental Mobility (-.21), Developmental Mobility causes Current Job Success (.38).

The obtained path coefficients in general support the original model except for the path, First Job Success causes Developmental Mobility. Developmental Mobility turned out to be internally complex. In brief, the path model analysis provided the in-depth information needed to clarify the career experiences of the B.A. recipients in the sample and thereby provide a way of measuring the necessary complexities surrounding the value of the B.A. degree for more extensive samples. The particular sample turned out not to bring in as wide a range of cohorts as was initially envisaged; nevertheless, numbers were sufficient to test the general approach.

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Introduction

This research, called the MSU Business Alumni Study, assumed that the current state of affairs regarding the value of a college degree was in a confused state. While some argued about the economic returns of college, others discussed the influences of college which had less measurable benefits for a democratic society. Conflicting arguments were being tossed about, and this posed a difficulty for interested parties in knowing what to believe. A good example of the recent confusion was illustrated by the cover of Newsweek two years ago, which asked the question, "Who Needs College?" The story inside documented some familiar case studies of Ph.D.'s driving taxis and working in restaurants.[1]

Economists were pointing out that the reason for the decline in value of a college degree was a simple case of supply and demand; i.e., the demand had not kept up with the increasing supply. To see how fast the supply was increasing, one could note that during the late 1950's only 10% of the labor force 25 years and over had four or more years of college. A decade later the figure was almost 14%. If trends in 1978-79 continued, by 1980 it would be 18.5% and by 1990 almost one-fourth of the labor force over 25 would be college educated.[2]

The decline in value was seen most visibly in the earnings of the college educated as compared with those with less education. While the college educated continued to earn more than those with less education, their advantage diminished recently.[3] Others countered with the argument that college had benefits for the individual and for society which were not measured in yearly income.[4] There has been some evidence that a college education would result in a more satisfying job, and this seemed to be as true at the time of this writing as it was earlier.[5] Still others argued that the "horror stories" of underemployed college graduates were an exaggeration. Their feeling was that when college graduates were surveyed immediately after graduation, their career had not had a chance to take shape. More appropriate data could only be gathered after the graduate has had a chance to tap the job market.[6]

Progress on settling the above conflicting arguments could take place only if an analysis of the value of a college education was made that was based on adequate measurement including the timing of the measures. First, which measures and which combination of several possible outcome measures should be used? Second, with what frequency should the outcomes be measured and at what points in the graduate's career? Third, how many graduating classes should be studied, and which ones should be included?

The approach used here to make progress toward understanding this confused and complex matter was to analyze one purposely limited sample of college graduates on which extensive standard data have been collected. In other words, rather than trying to handle an enormous

mass of data covering many majors and many colleges and universities, the author decided to limit himself to the B.A.'s in business from a large and fairly representative university, Michigan State University. Unusually extensive data on these graduates were available, and it was also possible economically to supplement these already existing data by collectirg additional questionnaire information that included career attainment.

The analysis to be discussed would do two things. First, it would present descriptive data by measuring four dependent variables and then describing the various populations in terms of these four variables. This would take us further in answering the question of what was happening to the careers of business graduates. Second, it would help us answer the question of why these outcomes were occurring. It would do this through the technique of path analysis. In this way we could infer causal relationships between career success and its antecedents.

Dependent Variables

The first of the four dependent variables or measures of career attainment was income. This dependent variable had the advantage of easy measurement and quantifiability. Besides its ease of measurement, income would be an appropriate measure of success in a free market system.[7] Another advantage was the high frequency of use of this measure in other reported studies. Income also had some disadvantages. Like all self-reported data, there was a danger of falsification. Speculation would suggest that income was especially vulnerable to falsification, because it could be integral to one's self-esteem.

Another common outcome measure was job satisfaction. Although in some ways harder to measure, job satisfaction has always been a very important goal for college students,[8] and success could at least partially be measured by the amount of satisfaction reported.

A third measure of career attainment was the degree to which the graduate perceives his or her job as having career potential. Cappeto[9] used this measure, as did Young.[10] In both cases the researchers used career potential as a standard by which to compare different graduates, and stated that those having a job with high career potential are on a more advantageous career path than those who see themselves in temporary jobs.

A fourth measure was the degree to which the graduate feels underemployed, i.e., the degree to which the skills and knowledge acquired in college were not being fully utilized in the performance of his or her job. Underemployment was a major concern of many who felt that the growing "surplus" of college graduates was forcing many graduates into jobs which did not make use of their college education.[11]

Literature Review Leading to the Identification of Antecedent Variables

The literature review covers seven surveys of college graduates. These surveys have been selected because they focus on the effect of college on the graduate's current occupation. These surveys differed from each other in three ways. First, these seven surveys collected data from different cohorts ranging from the class of 1958 to the class of 1977. Second, the seven surveys differed in

terms of their populations. Third, the surveys differed in terms of content.

The following paragraphs have taken into account the above similarities and differences among the surveys, identified the major variables examined by each survey, and then brought out each survey's conclusions. Finally, the seven surveys were compared with each other in terms of the variables studied and conclusions reached.

Solmon

This survey conducted in 1974 involved over 4,000 1961 freshmen sampled from a population of 125,000 freshmen from 248 colleges. Most had graduated in 1965, and had been employed for nine years.

Solmon studied the variable, Relationship. This variable he defined as the degree to which one's work was related to the degree (major) which he or she received. The variable was measured by asking the question, "How closely related is your job to your major field?" Respondents checked one of three responses: "closely related," "somewhat related," "not related."

The respondents of this survey indicated that about half of them were working in closely related jobs, 25% were working in jobs that were somewhat related, while 25% were working in unrelated jobs. In analyzing the "relationship" variable in terms of job satisfaction, Solmon concluded at first that "relationship" does little to explain differences in "job satisfaction." However, upon further analysis, when those who were in somewhat related or unrelated jobs voluntarily were separated from those who held somewhat related or unrelated jobs

involuntarily, then differences in job satisfaction became evident. Table 1.1 reveals this finding.

As can be seen from Table 1.1, of those graduates who held unrelated jobs voluntarily, more than half are very satisfied. However, of those graduates who held unrelated jobs involuntarily, only 26% are very satisfied.

Another variable Solmon studied was Time of Career Selection. This variable was measured by asking the question, "At what point in your life did you select your current occupation?" Respondents selected one of the following five responses: "before entering college," "during college," "around graduation time," "within five years after graduation," "more recently."

Solmon reported that the time of career selection often played an important role in determining the degree of relationship of current job to major in college. He pointed out that occupations which required specific college training (accounting or engineering, for example) had to be chosen either during or prior to entering college.

A third variable studied by Solmon was Recent Inter-Company Mobility. This variable was measured by asking the question, "How long have you been with the same employer?" Respondents chose one of the following four answers: "less than one year," "between one and two years," "between two and three years," "more than three years." When this variable was related to income, it was found that those who had been with their current employer longer were earning a higher salary. Job hopping tended not to increase income.

Table 1.1.--Relatedness by Job Satisfaction from Solmon study.

Job Satisfaction	Relationship				
	Not At All Related		Somewhat Related		Closely Related
	Involuntary	Voluntary	Involuntary	Voluntary	
Very Satisfied	26%	57%	33%	59%	61%
Somewhat Satisfied	49%	39%	58%	39%	37%
Not At All Satisfied	26%	4%	9%	2%	3%

Harrell

This study involved four consecutive cohorts of Stanford MBA's beginning with the graduating class of 1961 and going through the class of 1964. The population studied here was considerably different from the population which the MSU Business Alumni Study surveyed. However, two aspects of the Harrell study warranted its inclusion in this literature review. First, its purpose was to gather information about those who had chosen a career in management. In this aspect it was closer to the MSU Business Alumni Study than other surveys. Second, several cohorts which Harrell studied allowed for strong inferences to be made about both the effects of a business degree and the effects of later career phenomena.

Harrell concluded from his study that the best prediction of success was the personality of the individual. Since the MSU Business Alumni Study did not examine personality variables, this review did not concern itself with these findings.

Another variable studied by Harrell was Earnings. He found that first-year earnings was not a good predictor of fifth-year earnings. However, fifth-year earnings was a good predictor of tenth-year earnings.

A third variable which Harrell studied was Cross-Functional Mobility. Those graduates who had succeeded in achieving a general management position after ten years had changed functional areas twice as often as others. Harrell concluded that this type of mobility was predictive of managerial success.

University of California
at Irvine (UCI)

This study surveyed all bachelor's recipients from the UCI beginning with the graduating class of 1967 and ending with the class of 1974, eight cohorts in all. Like the MSU Business Alumni Survey, the UCI study gathered data about both initial full-time employment and current full-time employment.

One of the variables studied was Employment Found in Chosen Career Field. This variable could be considered similar to the relationship variable studied by other researchers, although it clearly was not the same variable. For example, a student might not consider his or her major field of study to be a field where he or she would pursue a career. However, it should be noted that students who majored in career-oriented fields such as Engineering or Computer Science reported substantially more success finding employment in their chosen field. This confirmed results reported by other researchers who showed that students majoring in these fields had more success finding employment related to their major. The same held true at the other end of the spectrum, where graduates who majored in non-career-oriented fields such as fine arts and humanities were involved. At UCI these students had difficulty finding employment in their chosen career, and this finding confirmed the results of other researchers who found that students majoring in these areas also had difficulty finding employment related to their major. The variable was measured by asking the question, "Was this (initial employment) in the career field of your choice at the time you accepted it?" Respondents

checked one of three boxes: "yes," "no," "you had not chosen a career field." Results of the survey suggested that the percentage of graduates finding initial employment in their chosen field decreased steadily in recent years. For example, 61% of the 1970 respondents indicated that they found initial employment in their chosen field as compared with only 46% of the 1974 respondents.

Another variable studied was Significance of Previous Work Experience. This variable was measured by a question which asked, "To what extent did part-time or summer work experience during the time you were a student contribute to your success in finding a job in the career field of your choice?" Respondents checked one of five boxes ranging from "directly responsible" to "not at all." The results of this question were that recent graduates reported a significantly greater increase in the importance of previous work experience in finding a job in their career choice. The following numbers indicate the percentage of graduates who said that previous work experience was directly or partially responsible for helping them find a job in their career choice:

1969 - 13.3%

1970 - 22.6%

1971 - 24.6%

1972 - 29.0%

1973 - 32.3%

1974 - 43.7%

Young

This survey consisted of 873,000 degree recipients who received their degree in June 1972 and who were not enrolled in school by October 1972 when the survey was conducted. Three-fourths of these had received bachelor's degrees, and for the present research we were most concerned about this group. Because of the short time involved between graduation and the survey, most of the conclusions reached had relevance only to the first full-time employment of college graduates.

Young's study examined the variable, Relationship. This variable was measured by the question, "We would like to know whether your work on the job you held the week of October 8-14 was related to your major field of study and how much of your training you used." Respondents checked one of the following three boxes: "directly related," "somewhat related," "not related at all." It should be noted that each of the three boxes required the respondent to make a choice between two additional responses. The two additional responses for the "directly related" answer were: "I used much of my training" and "I used some of my training." The two additional responses for both the "somewhat related" answer and the "not related at all" answer were: "I used some of my training" and "I used little or none of my training." Looking only at those who received bachelor's degrees, the following percentages apply:

directly related - 61.4%

somewhat related - 15.0%

not related at all - 23.5%

However, when those who reported that their work was not directly related were asked, "What was the main reason you took a job not directly related to your field?" 49.8% checked the response, "could not find a job in my field."

Another variable measured was Career Potential. The question was asked, "Which statement best describes how you regarded that job at the time you accepted it?" Seven choices were given: "job with definite career potential," "job with possible career potential," and other choices which were collapsed into the response, "temporary job." The author then looked at "career potential" as it was affected by "relationship." Table 1.2 shows the percentages that were reported.

Table 1.2.--Relatedness by Career Potential from Young study.

Relationship	Career Potential		
	Temporary Job	Possible Career Potential	Definite Career Potential
Directly related	15	30	55
Somewhat related	43	35	22
Not related	71	25	4

"Earnings Expectations" were also assessed by the study. The following question was asked: "How did these earnings compare with the earnings you expected when you received your latest degree?" Five responses were given, ranging from "substantially lower" to

"substantially higher." The effect of "relationship" on "earnings expectations" is shown in Table 1.3.

Table 1.3.--Relatedness by Earnings Expectations from Young study.

Relationship	Earnings Expectation				
	Substantially Lower	Somewhat Lower	About the Same	Somewhat Higher	Substantially Higher
Directly related	11	23	53	13	-
Somewhat related	24	24	42	8	1
Not related	46	31	14	5	4

Titley

This survey was limited to graduates who had received their bachelor's degree in psychology. However, it warranted inclusion in this literature review because it was the only study which looked at graduates at three different points in time, and, also, looked at three different cohorts which represented substantially different economic situations. Specifically, this study looked at the cohort of 1967 graduates one year, five years, and ten years after graduation, and the 1972 graduates one year and five years after graduation, and the 1977 cohort one year after graduation. Respondents were all graduates of Colorado State University and numbered 138.

The major variable of interest to the MSU Business Alumni Study measured by Titley was Underemployment. He measured this variable by classifying different jobs into three levels. Level 1 jobs

included those jobs which required no formal education beyond high school and little training. Some examples of level 1 jobs were: bartender, bookkeeper, fire-fighter, secretary, and waiter. Level 2 jobs were jobs where a college degree would be preferable but not mandatory or where moderate to extensive training would be necessary. Included among level 2 jobs were: library assistant, teacher's aide, insurance broker, executive secretary, and management trainee. Level 3 jobs were those which required a college degree. Some examples were: psychologist, counselor, teacher, account executive, and computer analyst. Titley reported the data shown in Table 1.4.

Table 1.4.--Job Level by Year of Graduation by Years Since Graduating from Titley study.

Year of Graduation	# of Years Since Graduating	Level 1 (%)	Level 2 (%)	Level 3 (%)
1967	1	36	12	52
	5	8	21	71
	10	0	21	79
1972	1	62	33	5
	5	7	53	40
1977	1	53	33	13

From these data Titley concluded that the outlook for psychology graduates was optimistic. He reasoned that the percentage of 1972 graduates who were employed in level 3 jobs jumped from 5% to 40% when they were surveyed five years after graduating. However, he failed to note that 40% is considerably lower than the 71% of 1967

graduates who were employed in level 3 jobs five years after graduation. He did not study the reasons behind the lower status of the 1972 graduates five years later. He did mention that 80% of those graduates who were working in level 3 jobs had completed formal education beyond the bachelor's degree. The fact that so many subjects received higher degrees made it difficult to trace the career attainment of these graduates back to their undergraduate degree. We could, however, draw two conclusions from this study. First, the initial employment situation for these graduates changed dramatically between 1967 and 1972. A majority of the 1972 graduates obtained first employment in level 1 jobs. In 1967 the first job of a majority of the graduates was at level 3. The situation had not changed much in 1972 and 1977. Second, we could conclude that the employment situation of college graduates continued to change after their initial employment. We had little information with respect to what might have brought about these changes.

Sharp (1970) and Sachdeva (1977)

These two studies did not provide a great deal of information on variables pertinent to the MSU Business Alumni Study. They were not selected for that purpose; rather, they were selected to provide further evidence of the changes which occurred during the last two decades and the need to study and compare a wide range of cohorts in order to assess these changes.

The first study by Sharp (1970) was a survey of over 20,000 1958 B.A. recipients. These graduates were surveyed in 1963, five

years after graduating. From the data Sharp concluded that "business majors are least likely to see a connection between their undergraduate studies and the work they do after graduation."[12] This finding was a dramatic contrast to more recent surveys. An example was the survey by Sachdeva (1977). This was a survey of 258 business graduates between the ages of 25 and 29. When these individuals were asked about the usefulness of their college degree, 92.5% described it as useful. More than 70% reported that their degree prepared them for a vocation in the business world. The author concluded that "Most of a sample of former (business) graduates felt that university education is both essential and useful for their professional career."[13]

This section of this dissertation considered seven major surveys of college graduates. They differed in terms of cohorts studied, output measures, and major conclusions. Figure 1.1 summarizes these studies.

Cohorts and Career Stages

Many surveys of college graduates occur within one year of graduation. For example, each year Michigan State University surveys their graduates for that year and has been doing this for more than 20 years. Another approach is to survey some one cohort of graduates two or more times during their careers. This second analysis allows inferences about the value of a degree at different stages of the graduate's career. The ideal would be a combination of the above two types of studies; this ideal would survey each of several cohorts who obviously would have graduated at different times when socioeconomic

Name of Study	Population Surveyed	Cohorts & Date of Survey	Output Measures	Main Conclusions
1. Solmon	125,000 college freshmen from 248 colleges	1961 freshmen surveyed in 1974	earnings & job satisfaction	1. higher relationship increased job satisfaction 2. an early career selection increased relationship 3. recent inter-company mobility increased earnings
2. Young	873,000 who received bachelor's and advanced degrees and were not going to school full-time four months later	June 1972 graduates surveyed in October 1972	employment earnings career potential	1. recent graduates are taking jobs in unrelated fields 2. higher relationship increased career potential 3. higher relationship increased earnings expectations
3. UCI	2,431 graduates of the UCI	1966-74 graduates surveyed in 1975	earnings and job satisfaction	1. recent graduates are taking first jobs in unrelated fields 2. a greater significance of previous work experience increased relationship
4. Harrell	266 Stanford MBA's	1961-64 graduates surveyed in 1969 & 1974	earnings, job satisfaction, attainment of general management position	1. higher firth-year earnings increased tenth-year earnings 2. a greater amount of cross-functional mobility increased job success
5. Titley	212 Psychology B.A.'s from Colorado State University	1967, 1972, & 1977 graduates surveyed in 1978	employment status measured by "level 1, 2, or 3"	1. recent graduates are taking first jobs which are low status 2. the job status of graduates increases between the first and fifth year
6. Sachdeva	400 Business B.A.'s from California State University, Long Beach	aged 25-29 surveyed in 1977	importance of college for job	1. there is a significant change in the perceptions of college graduates toward the effect of college on their careers
7. Sharp	20,000 degree recipients from several colleges	1958 graduates surveyed in 1963	importance of college for job	1. there is a significant change in the perceptions of college graduates toward the effect of college on their careers

Figure 1.1.--Summary of seven surveys reviewed.

conditions were markedly different, who would be in different career stages. In addition, this ideal study would survey each of these cohorts upon graduating, and then survey them every year afterwards indefinitely. The ideal study would then allow an assessment of the extent to which and in what dimensions changing socioeconomic conditions were impacting career outcomes at different stages in a graduate's career.

Including these socioeconomic changes would be especially important given the changes that have occurred since the late 1960's and early 1970's. Freeman[14] cites data from the College Placement Council's Salary Surveys that show that this period was the peak in salary offers made to college graduates. Similar data collected by Michigan State University verified this phenomenon for MSU graduates.[15] Also, certain previous research studies suggested that the effect of education on one's career was moderated by the career stage of an individual. For example, Blau and Duncan reported that the effect of education on occupational status decreased with the passage of time.[16] In reviewing relevant research, Bowen[17] stated that the opposite is true; i.e., the effects of higher education on earnings and occupational status increased over one's lifetime. A second look at three previously cited studies helps us see the different approaches taken by other researchers. Limitations of these three studies will be discussed. Then all seven studies will be compared in terms of the cohort for each study and the number of years since graduation. These will then be compared to the MSU Business Alumni Study.

The study which came closest to the ideal was the Harrell study. This Stanford study looked at MBA's who left school five years previously and ten years previously. The surveys began in 1971 and continued at one-year intervals. One limitation of this study was its parochial nature. Clearly, findings concerning Stanford MBA's do not generalize very far. Another limitation was that the sample did not include individuals who were better established in their career. The MBA student who was about 25 years old upon receiving his degree was then 30 or 35 upon being surveyed. Thirty-five might not be far enough along to allow for inferences concerning executives at the peak of their career or beyond.

The Sharp study surveyed large groups of bachelors and masters degree recipients from several universities. Questionnaires were sent in 1958 to over 65,000 graduates who received their degree that year. Sixty-five percent returned these questionnaires. A more detailed questionnaire was sent to a stratified sample of the original 1958 graduates five years later in 1963. Of the 23,000 in the stratified sample who received this questionnaire, 83% responded. This survey was valuable in that it made possible inferences about the changes in careers of college graduates. Also, it had very good generalizability. However, it did not go far enough in assessing the value of the degree in the later periods of one's career, and it only gave us information about those who entered the labor force in 1958.

The Solmon study was similar to the Sharp study except that the Solmon-study graduates entered the labor force in 1965 and were surveyed at a later stage in their career. Like the Sharp study, this

group was a large one with many majors represented and attending many different colleges. This group was surveyed in 1961 as freshmen, again in 1965, the year of graduation, again in 1971, six years after graduation, and again in 1974, nine years after graduation. The limitations of this survey were that it did not give insights into the value of a degree beyond nine years after graduating, and that it only made possible inferences about graduates who entered the labor force in 1965.

Although the MSU Business Alumni Survey was not set up to be an ideal study, it contributed toward progress dealing with the questions that have been raised but not settled by other writers. It did this in three ways. First, it was designed to look at alumni who were just beginning their careers and compared them with those who received their degree 20 years ago. It also looked at several cohorts which received their degree less than 20 years ago so it was in a position to assess the effect of a business degree at several different career stages. Second, it looked at alumni who obtained their degree recently and compared their career beginning to the career beginning of those who graduated when supply and demand of college graduates was more favorable to the graduates. It did this by looking at the first full-time job after graduation. Even though so much has been written about the recent decline of the value of a college degree, no other study reviewed has looked at the career beginnings of such a large range of cohorts in order to determine the extent to which the declining value affected graduates beginning their careers.

Third, it synthesized previous research into a causal model which generated hypotheses among the six variables which had not been tested before. The MSU Business Alumni Survey was not able to generalize to other universities or to other majors. However, it should be pointed out that a large university like Michigan State came closer to representing other graduates than would a small or very selective college. This assertion is supported by data showing that starting salary offers made to MSU graduates did not differ greatly from the average starting salaries of graduates of other universities.

Hypotheses

In order to reduce the confusion over the value of a college degree referred to at the beginning of this chapter, research that takes into account two sets of factors would appear to be necessary. The first set of factors focused on including in the research the elements of the "ideal model": a long series of cohorts stretching over a long series of years to capture trends in effects of shifting social and economic conditions, and, also, measurements made at different intervals in the career of the college graduate. The second set of factors focused on developing a causal model which explains the career outcomes of a college graduate and which is grounded in the research reviewed which is pertinent to the MSU Business Alumni Study. This model would include the following constructs: the relationship of one's college major to the content of his first job after college, the degree to which one's pre-graduation work experience led to a first post-graduation job, an early career choice, the degree

of success of one's first post-graduation job and the degree of developmental mobility. It will be seen that the question of relevance of college graduation to career success, or value of the college degree, is tempered by other circumstances that should be taken into account. These other circumstances are referred to here as the second set of factors, and are factors that emerged from the survey of literature reported above. Figure 1.2 shows the six constructs which comprise the second set of factors and the manner in which they may be causally related to each other.

"Relationship"

The "relationship" between a graduate's first job and his college degree has been a central concern to many researchers recently. The large survey taken in 1972 by Young showed that many recent graduates, especially social science graduates, were unable to find work directly related to their major.[18] While this finding was not greatly different from studies of graduates in the mid-1960's, there was one major difference, that being the increased percentage who reported that they held unrelated jobs involuntarily. The Solmon study (1977) offers a good comparison.[19] It will be recalled that, like Young's study, this study surveyed a large group of graduates from many different universities. Of those who reported holding jobs not directly related, 90% said that they held these jobs voluntarily. They checked reasons such as "never planned to take a closely related job" and "prefer line of work not closely related." However, when the Young group was asked why their job was not related, the most often checked answer was, "it was the only job I could find."

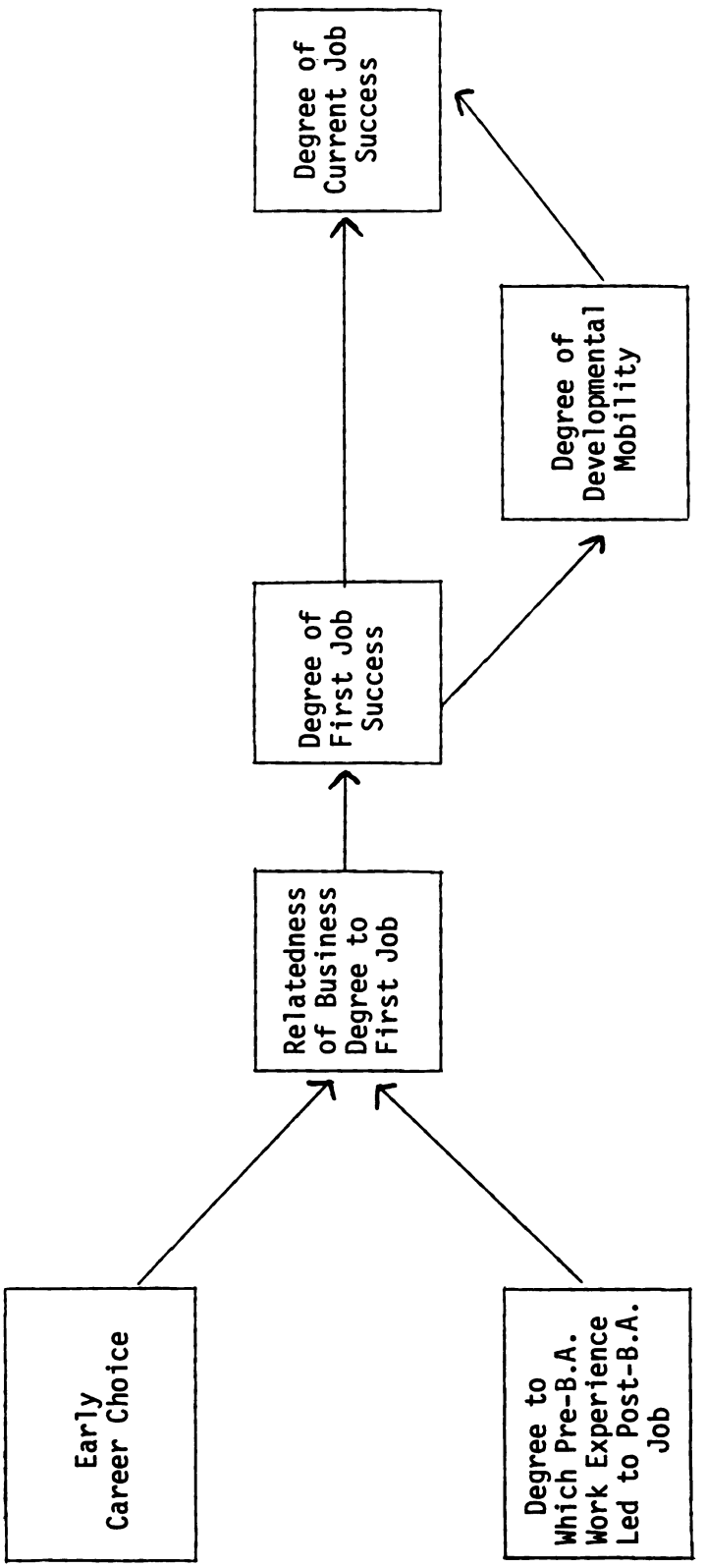

Figure 1.2.--Causal model of Current Job Success and its antecedents.

Results of the UCI study also confirmed this trend. For example, 61% of the graduates found a first job in their chosen career field. Four years later (1974), only 46% had succeeded in finding a first job in their chosen career field.[20]

It seems likely that finding a job which is related to one's major field of study would be a desirable thing for a graduate to do. In fact, research supports this notion. Solmon showed that graduates who are involuntarily employed in work not closely related to their major are significantly less satisfied.[21] Young has shown that unrelated first jobs lead to lower-salary jobs and jobs with less career potential.[22]

H1: A graduate whose first full-time job is related to his business degree will tend to be more successful in his first full-time job.

Early Career Choice

Since the variable, Relationship, is of such practical interest, we can then appropriately ask what factors affect the relationship of a graduate's major to his or her job. Previous research has attempted to answer this question by looking at different majors and concluding that some majors are more likely to lead to a related job than others.[23,24] Usually these majors are considered career-oriented and include engineering, business, packaging, etc. Since the MSU Business Alumni Study surveys only those who majored in business, answering this question in terms of the major loses much of its meaning.

Other factors besides major have been studied. For instance, Solmon studied the impact of when a career is chosen with graduates, surveyed in 1974, who were freshmen in 1961.[25] He found that graduates working in unrelated jobs were more likely to have chosen their career after college. Two explanations exist in this case. First, in order to acquire a job which makes use of specific college training, there needs to be a choice of enrolling in that particular degree program. The second explanation is that a graduate who obtains work after receiving his degree could then choose his current occupation as a career. At any rate, it has been shown that those choosing a career before graduation are more likely to find a first job in a field which is related to their major.

H2: An early career choice will lead to a first full-time job which is related to the business degree.

Previous Work Experience

Along these same lines, other researchers attempted to determine the factors which will increase the graduate's chances of finding work in his chosen field. The UCI study determined that between 1967 and 1974 there was a significant increase in the importance of previous work experience in securing a job in one's chosen field.[26]

H3: A graduate whose pre-B.A. work experience led to his first post-B.A. job will tend to have a first post-B.A. job which is related to his major.

Besides understanding the factors which will contribute to a related job, the MSU Business Alumni Study sought to determine the

effects of a related job on the graduate's career. The MSU Business Alumni Study attempted to show that landing a first job which was related to one's major will have an indirect effect on a graduate's later career success. It will indirectly affect the graduate's current job success through two factors: first job and "developmental mobility."

First Full-Time Job

Research has suggested a strong link between first full-time job success and current job success. Harrell has pointed out that certain entry-level jobs for MBA's but not others will tend to result in general management positions within ten years.[27]

Other studies have shown that salary in the first job can be a predictor of salary in later jobs.[28] However, still others have shown that salary during the first year does not predict salary five years later.[29]

H4: A successful first full-time job will lead to current job success.

Developmental Mobility

Previous research carried out on MBA students has suggested that certain routes through the organization will result in a higher level of career success. In particular, starting out in certain functional areas is advantageous, as is rotating across functional areas. It was found that general managers ten years out of school had changed their functional field twice as often as non-general managers who remained functional specialists.[30]

Other research carried out among executives reached similar conclusions.[31]

H5: Developmental mobility will lead to current job success.

CHAPTER II

METHODOLOGY

This chapter includes the following sections: sample tested, measures used, research design, testable hypotheses, analysis, and summary.

Sample Tested

The population from which this sample came is the bachelor's recipients from the MSU College of Business during the years 1958, 1963, 1968, 1973, 1975, and 1977, who had not subsequently received a higher degree and who were employed full-time in December of 1978. The number and percentage of all bachelor's recipients for the years of interest are shown in the following tabulation:

1958 = 767 (15.6%)

1963 = 533 (10.8%)

1968 = 780 (15.9%)

1973 = 814 (16.6%)

1975 = 843 (17.1%)

1978 = 1179 (24.0%)

Total = 4916 (100%)

The Alumni Association had a record of the addresses for 2,572 of the 4,916 graduates. The following figures indicate the

percentage of graduates for whom current addresses were available by year of graduation.

1958 = 3.2%

1963 = 2.8%

1968 = 2.1%

1973 = 26.1%

1975 = 26.5%

1977 = 39.2%

99.9%

Two hundred twelve names were eliminated from the list of 2,572 names because records showed that these graduates had also obtained a higher degree from MSU.

An initial mailing was sent to the remaining 2,360 graduates during the first week of December, 1978. Each graduate was sent an explanatory letter and a return envelope printed on one side of a sheet of paper with the printed questionnaire on the other side. (See Appendix.) A second mailing was sent out during the first week of January, 1979, to all those who had not yet responded to the first mailing. The second mailing included a slightly different letter (see Appendix) and as before a copy of the questionnaire. Of the 2,360 questionnaires sent out, 144 were returned as bad addresses. Another 226 were unusable for one of the following three reasons. The graduate indicated that he had received a higher degree (179), was not currently employed (32), or returned the questionnaire after the analysis had been performed (15). A total of 931 questionnaires were usable. The

total return rate was 52.2% with the usable response rate at 42% of the 2,216 graduates who were sent the questionnaire.

The 931 respondents who make up the sample for this study range in age from 22 to 52. The percentage of the total for each graduating class is as follows:

1958 = 1.6%

1963 = 1.6%

1968 = .5%

1973 = 18.8%

1975 = 22.6%

1977 = 37.8%

Did not specify = 17.1%*

Total = 100%

They received their degrees in the following major areas:

Accounting = 22.8%

Finance = 3.7%

Hotel & Restaurant Management = 14.3%

Business Education = 2.1%

Economics = 4.0%

Marketing & Transportation = 10.1%

General Business & Office Administration = 18.9%

Personnel = 4.6%

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*A number of graduates removed the address label from the return envelope. This label contained information about their year of graduation and their major. Consequently, this information was not available for these graduates. The responses of this group, fortunately for this study, did not differ in any way from the responses of those graduates who left their address labels intact.

Operations Research = 1.9%

Did Not Specify = 17.6%*

Total = 100%

Ninety-seven and one-half percent were white and 74.3% were male. The graduates described their current occupation as:

Educator = 1.7%

Other Professional = 3.5%

Administrator = 13.9%

Sales Representative = 14.9%

Accountant = 25.7%

Mathematician, Scientist, Analyst = 4.5%

Office Employee = 5.9%

Other = 29.8%

Total = 99.9%

In summary, the sample consists of 931 graduates representing nine different majors within the MSU College of Business. Three-fourths of these were male and approximately 95% graduated after 1972. Because of the low percentages of graduates who received their degree in the graduation years prior to 1972, strong inferences can be made only for the more recent graduates.

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*A number of graduates removed the address label from the return envelope. This label contained information about their year of graduation and their major. Consequently, this information was not available for these graduates. The responses of this group, fortunately for this study, did not differ in any way from the responses of those graduates who left their address labels intact.

Measures

The basic model tested consists of six constructs. Each of these constructs is measured by one or more questionnaire items. For each construct the item(s) will be listed, reliability estimates will be reported, and, if any items were derived from previous research sources, those sources will be identified.

Since the first two constructs could be measured easily, only one item was necessary to measure these constructs. However, in the case of the other constructs, at least two items were used in order to try to obtain greater measurement accuracy.

Construct 1: Time of Career Choice

This construct was measured by one item from the UCI study:

At what point in your life did you select your current occupation or career?

____ Before entering college

____ After starting college, but before senior year of college

____ During senior year

____ Within one year of graduation

____ Later than five years after graduation

Construct 2: Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job

This construct was measured by one item, and this also was from the UCI Study.

To what extent did your work experience during the time you were in college contribute to your success in finding your first job after graduation?

____ Did not have work experience in college

____ Very great effect

____ Significant effect

____ Some effect

____ Very little effect

____ No effect

Construct 3: Relation of First Full-Time Job to Business Degree

These three items have a standard score coefficient alpha of .87 and are from the Solmon Study.

1. My business degree was useful in that it gave me knowledge and skills which I used in my first job.

   ____ Strongly agree

   ____ Agree

   ____ Neither agree or disagree

   ____ Disagree

   ____ Strongly disagree

2. I used the content of my major course in my first job:

   ____ A great deal

   ____ Frequently

   ____ Sometimes

   ____ Very little

   ____ Not at all

3. How closely related was your first job to your degree in business?

____ Very closely related

____ Closely related

____ Somewhat related

____ Slightly related

____ Not related

Construct 4: Success of First Full-Time Job

These four items have a standard score coefficient alpha of .68, and are adapted from the Young study and the Solmon study.

1. How much potential for career success did your first job offer?

____ A great deal

____ A fair amount

____ Some

____ Little

____ None

2. During your first job, did other employees doing jobs similar to yours have a degree as high as yours?

____ All or almost all had a degree as high or higher than mine

____ More than half had a degree as high as mine

____ About half had a degree as high as mine

____ Less than half had a degree as high as mine

____ Few or none had a degree as high as mine

3. All in all, how satisfied were you with your first job?

____ Very satisfied

____ Satisfied

____ Somewhat satisfied

____ Neither satisfied or dissatisfied

____ Somewhat dissatisfied

____ Dissatisfied

____ Very dissatisfied

4. What was your starting annual salary before taxes in your first job job?

____ More than $60,000

____ $40,000-60,000

____ $35,000-39,999

____ $30,000-34,999

____ $25,000-29,999

____ $20,000-24,999

____ $17,000-19,999

____ $14,000-16,999

____ $12,000-13,999

____ $10,000-11,999

____ $ 8,000- 9,999

____ $ 6,000- 7,999

____ Below $6,000

Construct 5: Developmental Mobility

The two items in this construct have a standard score coefficient alpha of .70.

After receiving your degree from MSU:

1. How many times have you changed your functional area (sales, personnel, etc.)?

2. How many promotions have you had (including changing companies which resulted in a higher position)

___ ___ More than 10

___ ___ 8-10

___ ___ 6-7

___ ___ 4-5

___ ___ 3

___ ___ 2

___ ___ 1

___ ___ 0

Construct 6: Success on Current Job

The four items in this construct have a standard score coefficient alpha of .63, and are adapted from the Young study and the Solmon study.

1. How much potential for career success does your current job offer:

____ A great deal

____ A fair amount

____ Some

____ Little

____ None

2. In your current job, do other employees doing jobs similar to yours have a degree as high as yours?

____ All or almost all had a degree as high or higher than mine

____ More than half had a degree as high as mine

____ About half had a degree as high as mine

____ Less than half had a degree as high as mine

____ Few or none had a degree as high as mine

3. All in all, how satisfied are you with your current job?

____ Very satisfied

____ Satisfied

____ Somewhat satisfied

____ Neither satisfied or dissatisfied

____ Somewhat dissatisfied

____ Dissatisfied

____ Very dissatisfied

4. What was your starting annual salary before taxes in your current job?

____ More than $60,000

____ $40,000-60,000

____ $35,000-39,999

____ $30,000-34,999

____ $25,000-29,999

____ $20,000-24,999

____ $17,000-19,999

____ $14,000-16,999

____ $12,000-13,999

____ $10,000-11,999

____ $ 8,000- 9,999

____ $ 6,000- 7,999

____ Below $6,000

Table 2.1 summarizes the six constructs and their measurement.

Testable Hypotheses

This section will list the hypotheses to be tested in both written and symbolic form.

Hypothesis 1: An early career choice leads to a first full-time job which clearly uses the business degree.

Symbolically: $T \rightarrow R$

Legend: T = Time of career choice.

R = Degree to which a graduate obtains a first full-time job which clearly uses the business degree.

Hypothesis 2: Pre-B.A. work experience which aids the graduate in obtaining a first post-B.A. full-time job will lead to the graduate obtaining a first full-time job which clearly uses the business degree.

Symbolically: $P \rightarrow R$

Legend: P = Degree to which previous work experience aided the graduate in obtaining a first full-time job.

Table 2.1.--Summary of six constructs and their measurement.

Symbol	Construct	No. of Items	Reliability (Alphas)	Studies Using Same or Similar Items
T	Time of Career Choice	1	1.00	UCI
P	Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job	1	1.00	UCI
R	Relation of First Job to Business Degree	3	.87	Solmon
F	First Job Success	4	.68	Young & Solmon
D	Developmental Mobility	2	.70	Harrell
C	Current Job Success	4	.63	Young & Solmon

Hypothesis 3: A first full-time job which clearly uses the business degree will lead to first job success.

Symbolically: R → F

Legend: F = Degree of initial job success

Hypothesis 4: A successful first full-time job will lead to job success in the current job.

Symbolically: F → C

Legend: C = Degree of current job success

Hypothesis 5: A successful first full-time job will lead to a greater degree of developmental mobility.

Symbolically: F → D

Legend: D = Degree of developmental mobility

Hypothesis 6: A greater degree of developmental mobility will lead to job success in the current job.

Symbolically: D → C

Analysis

Path analysis will be used to test these hypotheses. As stated by Billings and Wroten, "Path analysis is a technique that uses ordinary least squares regression to help the researcher test the consequences of proposed causal relationships among a set of variables."[32] It should be noted that path analysis does not employ an experimental design, and therefore, cannot "prove" that one variable causes another. Rather, it is used to determine the extent to which data involving several variables fit a proposed causal model.

Billings and Wroten have listed several assumptions of a path analytic technique. These assumptions will be discussed here with the purpose of identifying potential limitations of this model, as well as points of departure for further research. A primary assumption is that the residuals of all endogenous variables in the model are uncorrelated. It is an impossible task to examine all possible causes of each variable in order to test for correlated residuals. A more practical approach is to consider experiences with any variables which have been explored in previous similar studies and have been identified in these studies as potential cuases of more than one endogenous variable.

In Harrell's study of MBA's[33] he found that personality variables were predictive of earnings five years after graduation and also ten years after graduation. This finding suggests that personality variables could also be residuals for both first full-time job success and current job success in the MSU sample. If the graduate's personality was a residual for both initial job success and current job success, then the path between these two might we weakened. Harrell's study also found that second-year GPA was predictive of both five-year earnings and ten-year earnings. Thus, GPA might be a possible residual for both first job success and current job success and the link would be further weakened.

Another possibility of two variables containing correlated residuals is the case involving the relation of the business degree to first job content and success on the first job. It has been shown that a graduate's major affects the relation between his first job and his

major.[34] Also, major affects earnings.[35] In the case of the MSU sample, all graduates were members of the College of Business; however, they received different majors within the College of Business. It will be recalled that Sachdeva[36] examined business graduates who were working and who majored in business education versus more traditional majors such as accounting and marketing. He found little difference between the "education" group and the "business" group. This finding of Sachdeva provides some evidence that the major of a business graduate is not a residual of the Relation variable or the degree of first job success. This finding, of course, adds strength to this assumption of the proposed path model.

Another central assumption of path analysis was one-way causality. Although the data were collected at one point in time, the variables in the MSU model were time-ordered, and therefore this assumption was not violated in the model.

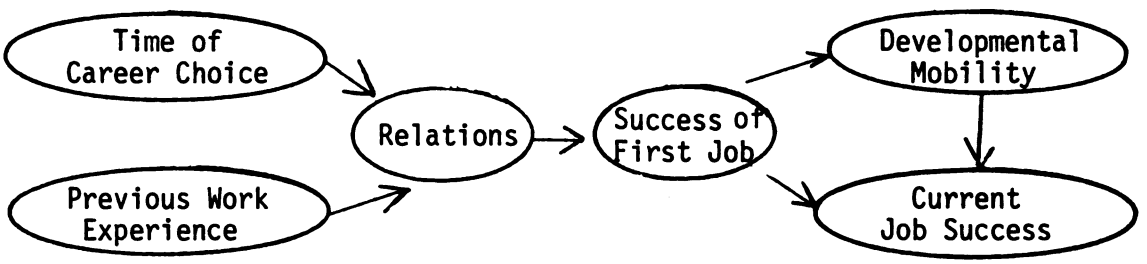
A third assumption of path analysis was that the relationships among the variables were linear. There have been no studies examined which have found a curvilinear relationship among the variables studied. (In the case of the MSU sample, however, scattergrams of relationships were examined as a precaution against non-linearity and none was found.)

A fourth assumption was that variables in the model were additive. Again, no studies have been found which report an interactive effect among variables in affecting a third variable, so that there is no reason seriously to question the additivity assumption.

The final assumption, according to Billings and Wroten, was that interval measures be used to describe variables. As is the case with most psychological measures, this assumption was a difficult one to meet. It should be noted, however, that during the construction of the measuring instrument there was a conscious attempt to logically construct items so that this assumption would not be stretched too far. More positively, however, Billings and Wroten report that the path analytic technique is robust in regard to this assumption.

Summary

Nine hundred thirty-one graduates from the MSU College of Business, most of whom graduated later than 1972, made up the sample for this study. Fifteen items from a questionnaire made up the six variables which reflected the thrust of this study. These variables are arranged into a set of non-recursive structural equations. This model is duplicated here.



The assumptions underlying the applicability of path analysis to these equations were identified and discussed in terms of this study.

CHAPTER III

RESULTS

In this chapter the six hypotheses are stated and now, for the first time in this paper, tested. In each case the frequencies for each item are reported and then a table making the appropriate comparison is presented. Also, both chi square and correlational analysis is applied, and then an accept or reject statement is made in regard to the hypothesis. In addition, some items are collapsed so that the information can be presented in a more concise and comprehensible way. Finally, the path model, essentially a multiple regression technique, is presented with the path coefficients and residuals included. Because of the low percentage of graduates who received their degree in the graduation years prior to 1972, strong inferences can be made only for the more recent graduates.

H1: An early career choice will lead to a first full-time job which clearly uses the business degree.

The 931 respondents made their career choice at the times shown in Table 3.1.

The 931 respondents answered the "relatedness" question as shown in Table 3.2.

Table 3.1.--Responses for Early Career Choice.

Early Career Choice	Number Choosing This Response	% Choosing This Response
Before entering college	163	17.5
After starting college but before senior year of college	350	37.6
During senior year	84	9.0
Within one year after graduation	184	19.8
Within five years after graduation (but more than one year after graduation)	128	13.7
Later than five years after graduation	22	2.4
Total	931	100.0

Table 3.2.--Responses for Relatedness.

Degree of Relatedness	Number Choosing This Response	% Choosing This Response
Closely related	400	43.0
Related	207	22.2
Somewhat related	155	16.6
Slightly related	105	11.3
Not related	64	6.9
Total	931	100.0

When the Early Career Choice is compared to the relatedness of the first-full-time job to the graduate's major, Table 3.3 results.

Table 3.3.--Early Career Choice by Relatedness.

Early Career Choice	Relatedness					Total
	Not Related	Slightly Related	Some-what Related	Closely Related	Very Closely Related	
Before entering college	4	13	22	26	98	161
Before senior year	11	27	41	83	188	350
During senior year	6	7	20	23	28	84
Within one year after graduation	26	38	41	44	35	184
Within five years after graduation	16	19	26	26	41	128
Later than five years after graduation	1	1	5	5	10	22
Total	64	105	155	207	400	931

Raw chi square = 123.65171 with 20 degrees of freedom.
Significance = .0001.

Correlations between the Early Career Choice variable and the three Relatedness items are shown in Table 3.4.

Taken together, the correlation between the variable Early Career Choice and Relatedness is .24 (significant at .01 level).

The estimated correlation between these two variables when corrected for measurement error is .26 (significant at .01 level).

Accept H1.

Table 3.4.--Correlations of Early Career Choice and Relatedness.

	Business Degree Gave Useful Knowledge and Skills	Content of Major Courses Was Used on Job	Job Was Related to Business Degree
Early Career Choice	.15*	.21*	.28*

*Significantly different from 0 at the .01 level.

The Relatedness variable can be dichotomized* into the following parts: related and not related, with the responses very closely related and closely related forming the first part, and the responses somewhat related, slightly related, and not related forming the second part. Likewise, the time of career choice variable can be dichotomized into the following parts: before senior year and after senior year, with the first two responses forming the first part and the last three responses forming the second part. This will result in Table 3.5.

Categorizing the data in this way reveals that of those whose first job was related, 65% had chosen their career before their senior year. However, of those whose first job was unrelated only 33% had chosen their career before senior year.

*All variables in this thesis are dichotomized in such a way that a 50-50 split is obtained, or the closest possible to 50-50.

Table 3.5.--Dichotomized Early Career Choice by dichotomized Relatedness.

Early Career Choice	Relatedness		Total
	Not Related	Related	
Before senior year	118	395	513
After senior year	206	212	418
Total	324	607	931

H2: Pre-B.A. work experience which aids the graduate in obtaining a first post-B.A. full-time job will lead to the graduate obtaining a first full-time job which clearly uses the business degree.

The 931 respondents indicated the degree to which previous work experience led to their first job. (See Table 3.6.)

Table 3.6.--Responses for Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job.

Degree to Which Pre-B.A. Work Experience Led to a First Post-B.A. Full-Time Job	Number Choosing This Response	% Choosing This Response
Very great effect	150	16.1
Significant effect	158	17.0
Some effect	194	20.8
Very little effect	173	18.6
No effect	256	27.5
Total	931	100.0

When the Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job is compared to the relatedness of the first full-time job to the graduate's major, Table 3.7 results.

Table 3.7.--Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job by Relatedness.

Previous Work Experience	Relatedness					Total
	Not Related	Slightly Related	Somewhat Related	Closely Related	Very Closely Related	
Very great effect	12	7	16	27	88	150
Significant effect	3	15	34	43	63	158
Some effect	10	20	32	50	82	194
Very little effect	10	23	34	33	73	173
No effect	29	40	39	54	94	256
Total	64	105	155	207	400	931

Raw Chi Square = 53.81 with 16 degrees of freedom.
Significance = .0001.

Correlations between the Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Full-Time Job variable and the three relatedness items are shown in Table 3.8.

Taken together, the correlation between Degree to Which Previous Work Experience Led to First Full-Time Job and Relatedness is .14 (significant at .01). The estimated correlation between these two variables when corrected for measurement error is .15 (significant at .01).

Accept H2.

Table 3.8.--Correlations of Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job and dichotomized Relatedness.

	Business Degree Gave Useful Knowledge and Skills	Content of Major Courses Was Used on Job	Job Was Related to Business Degree
Previous Work Experience	.09*	.15*	.14*

*Significantly different from 0 at the .01 level.

The Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job variable can be dichotomized into the following parts: significant effect and little effect. The Relatedness variable can be dichotomized in the same way as was done for the Time of Career Choice variable. This resulted in Table 3.9.

Table 3.9.--Dichotomized Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job by dichotomized Relatedness.

Previous Work Experience	Relatedness		Total
	Not Related	Related	
Significant effect	149	353	502
Little effect	175	254	429
Total	324	607	931

Categorizing the data in this way reveals that 70% of those graduates whose previous work experience helped them land their first job began their career in a related job. However, only 59% of those

graduates whose previous work experience had little or no effect on obtaining their first job began their career in a related job.

H3: A first full-time job which clearly uses the business degree will lead to initial job success.

Four measures of initial job success were taken: career potential, job status, job satisfaction, and salary. The 931 respondents formed the distribution among these items as shown in Table 3.10.

Table 3.10.--Responses to four outcome measures of First Job Success.

Outcome Measure	Number Choosing This Response	% Choosing This Response
Career Potential		
A great deal	360	38.7
A fair amount	241	25.9
Some	155	16.6
Little	117	12.6
None	58	6.2
Total	931	100.0
Job Status		
Almost all had a bachelor's degree	434	46.7
More than half had a bachelor's degree	98	10.5
About half had a bachelor's degree	93	10.0
Less than half had a bachelor's degree	96	10.3
Few or none had a bachelor's degree	210	22.6
Total	931	100.0

Table 3.10.--Continued.

Outcome Measure	Number Choosing This Response	% Choosing This Response
Job Satisfaction		
Very satisfied	213	22.9
Satisfied	246	26.4
Somewhat satisfied	177	19.0
Neither satisfied nor dissatisfied	56	6.0
Somewhat dissatisfied	94	10.1
Dissatisfied	75	8.1
Very dissatisfied	70	7.5
Total	931	100.0
Salary (in 1978 dollars)		
$70,000	1	.1
$50,000	0	0
$37,500	0	0
$32,500	2	.2
$27,500	9	1.0
$22,500	25	2.7
$18,500	99	10.6
$15,500	238	25.6
$13,000	254	27.3
$11,000	146	15.7
$ 9,000	97	10.4
$ 7,000	41	4.4
$ 5,000	19	2.0
Total	931	100.0

When the relatedness of the first job to the graduate's major is compared to these four measures of first job success, Table 3.11 results.

Table 3.11.--Relatedness by four outcome measures of First Job Success.

Relatedness	Potential					Total
	None	Little	Some	A Fair Amount	A Great Deal	
Very closely related	9	31	43	94	223	400
Closely related	5	25	37	71	69	207
Somewhat related	12	19	37	47	40	155
Slightly related	12	24	26	20	23	105
Not related	20	18	12	9	5	64
Total	58	117	155	241	360	931

Raw Chi Square = 205.6 with 16 degrees of freedom Significance = .0001

Relatedness	Status					Total
	Low				High	
Very closely related	51	28	32	45	244	400
Closely related	42	23	22	19	101	207
Somewhat related	42	15	22	20	56	155
Slightly related	37	17	12	14	25	105
Not related	38	13	5	0	8	64
Total	210	96	93	98	434	931

Raw Chi Square = 142.2 with 16 degrees of freedom Significance = .0001

Table 3.11.--Continued.

Relatedness	Satisfaction							Total
	Very Dis-satisfied						Very Satisfied	
Very closely related	20	25	33	12	62	109	139	400
Closely related	10	12	20	13	49	67	36	207
Somewhat related	10	12	21	17	34	44	17	155
Slightly related	14	13	14	7	24	17	16	105
Not related	16	13	6	7	8	9	5	64
Total	213	246	177	56	94	75	70	931

Raw Chi Square = 137.9 with 24 degrees of freedom Significance = .0001

Relatedness	Salary (000's)											Total
	5	7	9	11	13	15.5	18.5	22.5	27.5	32.5	70	
Very closely related	11	8	35	52	109	121	5]	10	2	0	0	400
Closely related	1	8	23	25	64	57	21	5	2	1	0	207
Somewhat related	2	6	14	42	38	30	16	6	1	0	0	155
Slightly related	2	10	16	17	27	19	7	2	3	1	1	105
Not related	3	9	9	10	16	11	3	2	1	0	0	64
Total	19	41	97	146	254	238	99	25	9	2	1	931

Raw Chi Square = 89.00 with 40 degrees of freedom Significance = .0001

Correlations among the three relatedness items and the four measures of first job success are as shown in Table 3.12.

Table 3.12.--Correlations of Relatedness and First Job Success.

	Job Potential	Job Status	Job Satisfaction	Salary
Business degree gave useful knowledge and skills	.40*	.35*	.37*	.10*
Content of major courses was used on job	.36*	.35*	.31*	.13*
Job was related to business degree	.41*	.37*	.30*	.09*

*Significantly different from 0 at the .01 level.

The correlation between Relatedness and First Job Success as measured by the above items is .46 (significant at .01). The estimated correlation between these two variables when corrected for measurement error is .59 (significant at .01).

Accept H3.

The four measures of job success can be dichotomized as follows: a great deal or a fair amount of career potential = high potential; some, little, or no career potential = low potential; more than half had a bachelor's degree = high status; about half or less than half had a bachelor's degree = low status.
(Very satisfied or somewhat satisfied with job = job satisfaction.
(Not satisfied or dissatisfied with job = job dissatisfaction.

(More than $15,000 in salary = high salary.

(Less than $15,000 in salary = low salary.

Dichotomizing Relatedness and First Job Success in this way produces Table 3.13.

Table 3.13.--Dichotomized Relatedness by dichotomized First Job Success.

	Salary		Satisfaction		Status		Potential		Total
	Low	High	Dis.	Sat.	Low	High	Low	High	
Related	336	271	145	462	198	409	150	457	607
Not Related	221	103	150	174	201	123	182	144	324
Total	557	374	295	636	399	532	330	601	931

Organizing the data in this way shows that 45% of those graduates who are in related jobs are earning a high salary, while only 31% of those who are in unrelated jobs are earning a high salary. The figures for job potential, job status, and job satisfaction are even more striking. For those graduates whose first job was related, 75% had a job with high potential, 67% had a job with high status, and 76% said they were satisfied with their job. However, of those graduates whose first job was unrelated, 44% had a job with high potential, 37% had a job with high status, and 46% said they were satisfied with their job.

H4: A successful first full-time job will lead to current job success.

The four measures of current job success are the same measures as first job success, but, of course, for the current rather than the first job. The graduates in this study formed the distributions among the four measures of job success as shown in Table 3.14.

Table 3.14.--Responses to four outcome measures of Current Job Success.

Outcome Measure	Number Choosing This Response	% Choosing This Response
Career Potential		
A great deal	322	46.9
A fair amount	118	17.2
Some	88	12.8
Little	69	10.1
None	89	13.0
Total	686*	100.0
Job Status		
Almost all had a bachelor's degree	413	60.2
More than half had a bachelor's degree	189	27.5
About half had a bachelor's degree	47	6.9
Less than half had a bachelor's degree	20	2.9
Few or none had a bachelor's degree	17	2.5
Total	686*	100.0

Table 3.14.--Continued.

Outcome Measure	Number Choosing This Response	% Choosing This Response
Job Satisfaction		
Very satisfied	227	33.2
Satisfied	285	41.5
Somewhat satisfied	99	14.4
Neither satisfied nor dissatisfied	12	1.7
Somewhat dissatisfied	37	5.4
Dissatisfied	15	2.2
Very dissatisfied	11	1.6
Total	686*	100.0
Salary (in 1978 dollars)		
$70,000	4	0.6
$50,000	10	1.5
$37,500	9	1.3
$32,500	18	2.6
$27,500	48	7.0
$22,500	122	17.8
$18,500	139	20.3
$15,500	155	22.6
$13,000	70	13.1
$11,000	53	7.7
$ 9,000	10	1.5
$ 7,000	12	1.7
$ 5,000	16	2.3
Total	686*	100.0

*Because 245 respondents were still currently working at their first full-time job, they were eliminated from this analysis. Their inclusion would obviously have introduced a degree of spuriousness.

When these four current job measures are compared to the four first job measures, Table 3.15 (p. 60) results.

Correlations among the four measures of current and first job success are as shown in Table 3.16.

Table 3.16.--Correlations of First Job Success and Current Job Success.

First Job	Current Job			
	Job Potential	Job Status	Job Satisfaction	Salary
Job potential	.35*	.09	.25*	.17*
Job status	.13*	.44*	.09	.16*
Job satisfaction	.25*	.14*	.27*	.16*
Salary	.21*	.08	.17*	.42*

*Significantly different from 0 at the .01 level.

The correlation between First Job Success and Current Job Success is .43 (significant at .01). The estimated correlation between these two variables when corrected for measurement error is .63 (significant at .01).

Accept H4.

Collapsing these items in the same way as before gives the figures shown in Table 3.17 (p. 63).

Table 3.15.--First Job Success by Current Job Success.

First Job Potential	Current Job Potential					Total
	None	Little	Some	A Fair Amount	A Great Deal	
A great deal	1	1	9	23	204	238
A fair amount	3	2	7	76	96	184
Some	2	3	15	48	55	123
Little	3	9	13	29	40	94
None	8	5	3	13	18	47
Total	17	20	47	189	413	686

Raw Chi Square = 203.1 with 16 degrees of freedom Significance = .0001

First Job Status	Current Job Status					Total
	Low				High	
High	12	14	28	27	200	281
	3	8	7	33	27	78
	4	10	16	15	27	72
	9	19	20	13	20	81
Low	61	18	17	30	48	174
Total	89	69	88	118	322	686

Raw Chi Square = 275.5 with 16 degrees of freedom Significance = .0001

Table 3.15.--Continued.

First Job Satisfaction	Current Job Satisfaction							Total
	Very Dissat.	Dissat.	Some-what Dissat.	Neither Sat. Nor Dissat.	Some-what Sat.	Sat.	Very Sat.	
Very satisfied	2	1	3	0	11	25	81	123
Satisfied	1	1	7	2	16	82	68	177
Somewhat satisfied	1	1	5	1	35	71	29	143
Neither satisfied nor dissatisfied	0	2	4	2	4	22	11	45
Somewhat dissatisfied	0	1	9	1	15	31	18	75
Dissatisfied	1	5	5	4	13	30	8	66
Very dissatisfied	6	4	4	2	5	24	12	57
Total	11	15	15	12	99	285	227	686

Raw Chi Square = 224.6 with 36 degrees of freedom Significance = .0001

Table 3.15.--Continued.

First Job Salary	Current Job Salary (000's)													Total
	5	7	9	11	13	15.5	18.5	22.5	27.5	32.5	37.5	50	70	
70,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32,500	0	0	0	0	0	0	0	0	1	0	0	1	0	2
27,500	0	0	0	0	0	0	1	3	1	1	0	0	0	6
22,500	0	0	0	1	0	3	1	7	2	1	0	0	0	15
18,500	1	0	0	0	1	7	20	13	16	3	1	2	0	64
15,500	4	2	0	6	6	37	42	35	17	3	2	2	3	160
13,000	5	2	2	15	19	56	40	39	7	6	0	1	0	192
11,000	5	1	2	8	27	24	28	18	4	4	5	4	0	130
9,000	1	1	4	15	27	20	1	4	0	0	0	0	0	73
7,000	0	3	1	7	8	5	6	2	0	0	1	0	0	33
5,000	0	3	1	1	2	3	0	1	0	0	0	0	0	11
Total	16	12	10	53	90	155	139	122	48	18	9	10	4	686

Raw Chi Square = 205.6 with 16 degrees of freedom Significance = .0001

Table 3.17.--Dichotomized First Job Success by dichotomized Current Job Success.

		Current Job		Total
		Low Potential	High Potential	
First Job	High Potential	23	399	422
	Low Potential	61	203	264
	Total	84	602	686

		Current Job		Total
		Low Status	High Status	
First Job	High Status	72	287	259
	Low Status	174	153	327
	Total	246	440	686

		Current Job		Total
		Low Salary	High Salary	
First Job	High Salary	21	226	247
	Low Salary	160	279	429
	Total	181	505	686

H5: A successful first full-time job will lead to a greater degree of developmental mobility.

The number of vertical moves (promotions) and the number of functional moves were the measures used to test this hypothesis. For this measure the respondents formed the distributions shown in Table 3.18.

Table 3.18.--Responses to Developmental Mobility.

	Number Checking This Response	% Checking This Response
Number of Vertical Moves		
More than ten	5	.5
Eight through ten	2	.2
Six or seven	17	1.8
Four or five	116	12.5
Three	160	17.2
Two	177	19.0
One	265	28.5
None	189	20.3
Number of Functional Moves		
More than ten	2	.2
Eight through ten	0	0
Six or seven	5	.5
Four or five	3	3.3
Three	85	9.1
Two	120	12.9
One	196	21.1
None	492	52.8

When comparing measures of First Job Success to the number of vertical and functional moves, Table 3.19 (p. 66) results.

Correlations among the four measures of First Job Success and the three measures of Developmental Mobility are shown in Table 3.20.

Table 3.20.--Correlations of Developmental Mobility and First Job Success.

First Job Success	Developmental Mobility	
	Number of Functional Moves	Number of Vertical Moves
Job potential	-.20*	.02
Job status	-.20*	.03
Job satisfaction	-.19*	0
Salary	-.07	.08

*Significantly different from 0 at the .01 level.

The correlation between First Job Success and Developmental Mobility is -.15 (significant at .01). The estimated correlation between these two variables when corrected for measurement error is -.21 (significant at .01). The correlation between First Job Success and the number of functional moves is -.23 (significant at .01). The estimated correlation between these two variables when corrected for measurement error is -.27 (significant at .01).

Reject H5.

Table 3.19.--Developmental Mobility by First Job Success.

	Number of Vertical Moves								
	0	1	2	3	4 or 5	6 or 7	8 Thru 10	More Than 10	Total
First Job Potential									
A great deal	75	105	70	60	42	6	0	2	360
A fair amount	39	69	45	47	33	4	1	3	241
Some	32	44	29	28	20	2	0	0	155
Little	30	29	24	16	14	3	1	0	117
None	13	18	9	9	7	2	0	0	58
Total	189	265	177	160	116	17	2	5	931
Raw Chi Square = 16.9 with 28 degrees of freedom								Not Significant	
First Job Status									
High	92	120	85	73	55	8	0	1	434
	13	30	17	16	14	4	0	4	98
	12	32	19	21	7	1	1	0	93
	19	29	20	16	11	1	0	0	96
Low	53	54	36	34	29	3	1	0	210
Total	189	265	177	160	116	17	2	5	931
Raw Chi Square = 49.39 with 28 degrees of freedom								Significance = .01	
First Job Satisfaction									
Very satisfied	52	56	35	37	28	4	0	1	213
Satisfied	45	79	46	38	30	5	0	3	246
Somewhat satisfied	30	44	45	33	23	2	0	0	177
Neither satisfied nor dissatisfied	18	12	9	9	6	1	1	0	56
Somewhat dissatisfied	18	35	12	18	8	2	0	1	94
Dissatisfied	12	21	13	13	9	1	1	0	75
Very dissatisfied	14	18	12	12	12	2	0	0	70
Total	189	265	177	160	116	17	2	5	931
Raw Chi Square = 43.63 with 42 degrees of freedom								Not Significant	

Table 3.19.--Continued.

	Number of Functional Moves								
	0	1	2	3	4 or 5	6 or 7	8 Thru 10	More Than 10	Total
First Job Potential									
A great deal	236	60	27	23	12	2	0	0	360
A fair amount	124	50	35	23	6	3	0	0	241
Some	67	47	23	14	3	0	0	1	155
Little	44	30	25	14	4	0	0	0	117
None	21	9	10	11	6	0	0	0	58
Total	492	196	120	85	31	5	0	2	931
Raw Chi Square = 83.3 with 24 degrees of freedom Significance = .0001									
First Job Status									
High	278	81	35	28	9	3	0	0	434
	45	27	15	8	2	1	0	0	98
	40	25	17	7	4	0	0	0	93
	37	19	19	15	5	1	0	0	96
Low	92	44	34	27	11	0	0	2	210
Total	492	196	120	85	31	5	0	2	931
Raw Chi Square = 67.4 with 24 degrees of freedom Significance = .0001									
First Job Satisfaction									
Very satisfied	147	32	16	11	6	1	0	0	213
Satisfied	142	46	27	24	6	1	0	0	246
Somewhat satisfied	91	38	25	15	6	2	0	0	177
Neither satisfied nor dissatisfied	19	13	9	11	4	0	0	0	56
Somewhat dissatisfied	41	30	14	7	2	0	0	0	94
Dissatisfied	27	20	16	8	2	1	0	1	75
Very dissatisfied	25	17	13	9	5	0	0	1	70
Total	492	196	120	85	31	5	0	2	931
Raw Chi Square = 81.6 with 36 degrees of freedom Significance = .0001									

H6: A greater degree of developmental mobility will lead to current job success.

When the number of vertical and functional moves is compared to the measures of Current Job Success, Table 3.21 (p. 69) results.

Correlations among the four measures of Current Job Success and the two measures of Developmental Mobility are shown in Table 3.22.

Table 3.22.--Correlations of Developmental Mobility and Current Job Success.

Developmental Mobility	Current Job Success			
	Job Potential	Job Status	Job Satisfaction	Salary
Number of functional moves	-.07	-.09	0	0
Number of vertical moves	.23*	.16*	.17*	.32*

*Significantly different from 0 at the .01 level.

The correlation between Developmental Mobility and Current Job Success is .16 (significant at .01). The estimated correlation between these two variables when corrected for measurement error is .24 (significant at .01). The correlation between vertical mobility and Current Job Success is .32 (significant at .01). The estimated correlation between these two variables when corrected for measurement error is .39 (significant at .01).

Accept H6.

Table 3.21.--Developmental Mobility by Current Job Success.

Number of Vertical Moves	Current Job Potential					Total
	None	Little	Some	A Fair Amount	A Great Deal	
More than 10	0	0	0	1	4	5
8 thru 10	0	0	0	0	2	2
6 or 7	0	0	2	3	11	17
4 or 5	0	3	6	24	83	116
3	1	2	6	42	109	160
2	1	5	11	46	114	177
1	10	5	20	87	143	265
0	11	14	25	44	95	189
Total	23	29	70	248	561	931

Raw Chi Square = 64.5 with 28 degrees of freedom Significance = .0001

Number of Vertical Moves	Current Job Status					Total
	Low				High	
More than 10	0	1	1	0	3	5
8 thru 10	0	0	1	0	1	2
6 or 7	1	0	1	2	13	17
4 or 5	9	12	13	20	62	116
3	14	13	21	31	81	160
2	25	16	25	20	91	177
1	35	22	37	44	127	265
0	42	17	14	20	96	189
Total	126	81	113	137	474	931

Raw Chi Square = 40.0 with 28 degrees of freedom Significance = .06

Table 3.21.--Continued.

Number of Vertical Moves	Current Job Satisfaction							Total
	Very Dissat.	Dissat.	Some-what Dissat.	Neither Sat. Nor Dissat.	Some-what Sat.	Sat.	Very Sat.	
More than 10	0	0	0	0	0	0	5	5
8 thru 10	0	0	0	0	1	1	0	2
6 or 7	9	9	1	0	4	7	5	17
4 or 5	1	3	2	2	11	47	50	116
3	1	1	4	2	20	73	59	160
2	1	3	11	2	19	90	51	177
1	6	7	17	4	45	98	88	265
0	6	11	15	7	29	53	68	189
Total	24	34	50	17	129	339	326	931

Raw Chi Square = 67.5 with 42 degrees of freedom Significance = .007

Number of Vertical Moves	Current Job Salary (000's)													Total
	5	7	9	11	13	15.5	18.5	22.5	27.5	32.5	37.5	50	70	
More than 10	1	0	0	0	0	0	0	0	2	1	0	0	1	5
8 thru 10	0	0	0	0	0	0	0	0	1	1	0	0	0	2
6 or 7	0	0	0	2	0	2	2	6	1	2	1	1	0	17
4 or 5	3	1	1	4	4	23	18	26	19	6	5	5	1	116
3	4	0	0	10	19	39	35	37	9	4	0	3	0	160
2	2	4	1	9	24	40	52	24	15	2	2	1	1	177
1	6	3	7	23	48	74	53	38	6	3	1	2	1	265
0	19	7	10	20	31	50	18	25	8	0	1	0	0	189
Total	35	15	19	68	126	228	178	156	61	19	10	12	4	931

Raw Chi Square = 295.7 with 84 degrees of freedom Significance = .0001

Table 3.21.--Continued.

Number of Functional Moves	Current Job Potential					Total
	None	Little	Some	A Fair Amount	A Great Deal	
More than 10	1	0	0	0	1	2
8 thru 10	0	0	0	0	0	0
6 or 7	0	0	1	1	3	5
4 or 5	2	0	0	11	18	31
3	3	2	10	20	50	85
2	2	3	9	38	68	120
1	5	6	15	51	119	196
0	10	18	35	127	302	492
Total	23	29	70	248	561	931

Raw Chi Square = 32.7 with 24 degrees of freedom Not Significant

Number of Functional Moves	Current Job Status					Total
	Low				High	
More than 10	2	0	0	0	0	2
8 thru 10	0	0	0	0	0	0
6 or 7	0	1	1	1	2	5
4 or 5	3	2	4	10	12	31
3	13	9	18	10	35	85
2	19	13	20	20	48	120
1	22	20	26	41	87	196
0	67	36	44	55	290	492
Total	126	81	113	137	474	931

Raw Chi Square = 61.1 with 24 degrees of freedom Significance = .0001

Table 3.21.--Continued.

Number of Functional Moves	Current Job Satisfaction							Total
	Very Dissat.	Dissat.	Somewhat Dissat.	Neither Sat. Nor Dissat.	Somewhat Sat.	Sat.	Very Sat.	
More than 10	0	1	0	0	0	0	1	2
8 thru 10	0	0	0	0	0	0	0	0
6 or 7	0	0	0	1	0	2	2	5
4 or 5	0	0	1	1	6	12	11	31
3	1	2	4	2	13	31	32	85
2	1	2	6	2	19	55	35	120
1	4	7	12	5	27	73	68	196
0	9	13	27	6	64	196	177	492
Total	15	25	50	17	129	369	326	931

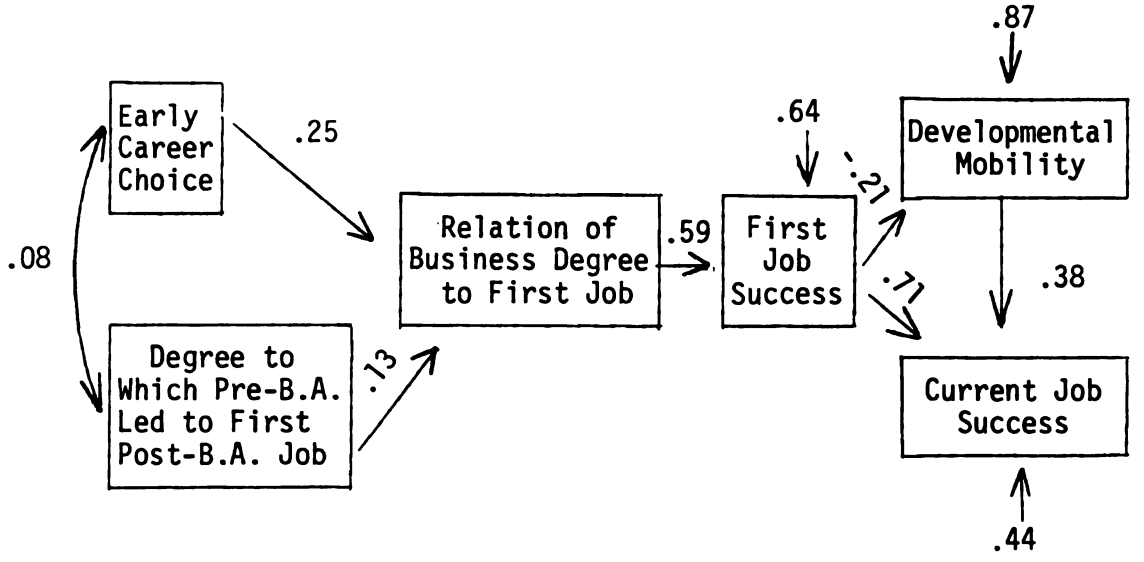
Raw Chi Square = 38.8 with 36 degrees of freedom — Not Significant

Number of Functional Moves	Current Job Salary (000's)													Total
	5	7	9	11	13	15.5	18.2	22.5	27.5	32.5	37.5	50	70	
More than 10	1	0	0	0	0	0	0	1	0	0	0	0	0	2
8 thru 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 or 7	1	0	0	0	1	0	0	2	0	1	0	0	0	5
4 or 5	4	1	0	2	2	4	7	6	3	1	1	0	0	31
3	2	1	1	7	9	22	15	15	5	4	2	1	1	85
2	0	2	4	10	21	31	18	19	9	1	2	2	1	120
1	5	4	2	14	31	42	40	30	12	8	1	5	2	196
0	22	7	12	35	62	129	98	83	32	4	4	4	0	492
Total	35	15	19	68	126	228	178	156	61	19	10	12	4	931

Raw Chi Square = 83.6 with 72 degrees of freedom — Not Significant

Path Diagram

The reproduced correlations among the six main variables yield the following path diagram (Figure 3.1):



The sum of squared deviations is .11.

Figure 3.1.--Path diagram of six constructs with path coefficients and residuals.

In summary, significant relationships were found among all six main variables. In the case of a related first job causing first job success, and also the case of first job success causing current job success, the relationships are very strong (path coefficients = .59 and .71, respectively). In the case of Pre-B.A. work experience which led to a first Post-B.A. job causing the first job to be related, the relationship is not as strong (path coefficient = .13), but is positive and statistically significant. The two factors which make up developmental mobility (functional mobility and vertical mobility) worked in opposite directions. A successful first job had a negative

effect on functional mobility and no effect on vertical mobility. Also, vertical mobility had a positive effect on current job success, but functional mobility had a slight negative effect. The findings suggest that further research would benefit by not combining these two factors into one construct.

Summary

Figure 3.2 summarizes the hypotheses along with the decision statement about each.

H1:	An early career choice tends to lead to a first full-time job that clearly uses the business degree.	Accept
H2:	Pre-B.A. work experience which aids the graduate in obtaining a first Post-B.A. full-time job will tend to cause the graduate to obtain a first full-time job which is related to the business degree.	Accept
H3:	A first full-time job which is related to the business degree will tend to lead to initial job success.	Accept
H4:	A successful first full-time job will lead to a successful current job.	Accept
H5:	A successful first full-time job will lead to a greater degree of developmental mobility.	Reject
H6:	A greater degree of developmental mobility will lead to current job success.	Accept for Vertical Mobility but not for Functional Mobility

Figure 3.2.--Hypotheses with decision statements.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FURTHER RESEARCH

Summary

This study hypothesized that the value of a college degree has changed in very recent years. Evidence of this change comes from economic analysis of supply and demand for college graduates, salary surveys, and alumni follow-up surveys.[37] Because of the obviously changed college graduate supply and demand situation, there is a need to answer the following two questions: (1) What are the "career outcomes" of recent college graduates, and (2) What are the antecedents of these outcomes?

Four measures were used to assess career outcomes: salary, job satisfaction, job status, and job potential. A review of seven studies which surveyed college graduates uncovered evidence which supported five antecedent variables of possible career success. These antecedent variables were: Time of Career Choice, Degree to Which Pre-B.A. Work Experience Led to First Post-B.A. Job, Relatedness of Degree to First Job, First Job Success, and Developmental Mobility. The dependent variable, Current Job Success, and its five antecedent variables then formed a causal model. This model was tested by a sample of MSU Business graduates who received a B.A. degree, but not a higher degree. The sample of graduates was made up of the following

cohorts: 1958, 1963, 1968, 1973, 1975, 1977. The 931 graduates who made up the sample were 42% of those to whom the questionnaire was sent. Three-fourths of the respondents were male, and approximately 95% of the 931 graduated after 1972.

The list of hypotheses and the causal model are summarized at the end of the preceding chapter.

Conclusions

The major findings of this study were:

1. In this study the average business college graduate's starting salary (in 1978 dollars) upon graduation was $13,482. He/she was satisfied with his/her current job (three out of four said they were satisfied or very satisfied). He/she had a job with relatively high status (50% were working in jobs where all or almost all their peers were college educated, while only one out of four said that fewer than half their peers were college educated). He/she had a job with career potential (85% said that their job had a great deal or a fair amount of career potential).

2. Those graduates whose first job was successful were much more likely to have a current job which was also successful. For example, of those graduates whose current salary was in the top one-third, more than half started their career with a salary which was in the top one-third. Of those graduates who reported that they were at least somewhat satisfied in their current job, two-thirds started their career in a job in which they said they were at least somewhat satisfied. Of those graduates who were currently in a job with a

great deal or a fair amount of potential, two-thirds started in such a position.

3. Functional mobility did not increase the graduate's chances of current job success. However, vertical mobility increased the degree of current job success in each of the four outcome measures.

4. Those graduates who landed a first job which clearly used the business degree achieved a significantly higher level of success in the first job. Of those graduates whose jobs were closely related or very closely related, 45% earned more than $15,500 in the first job. This compares to 30% of those in unrelated or slightly related jobs who are earning this high a salary. Of those graduates whose first job was closely related or very closely related, 75% had a job with a great deal or a fair amount of potential, 67% worked with peers of whom more than half were college educated, and 58% said they were satisfied or very satisfied with their job. These figures compare with those who said their first job was unrelated or slightly related. Only 34% had a job with a great deal or a fair amount of potential. Only 28% worked with peers more than half of whom were college educated, and this same percentage (78%) was satisfied or very satisfied with their job.

5. Choosing a career before graduation helped a graduate obtain a first job which clearly used his business degree. Also, obtaining Pre-B.A. work experience which led to a first job helped a graduate obtain a first Post-B.A. job which clearly used the business degree, but this strategy did not have as great an effect as an early career choice. Of those graduates who chose their career before senior

year of college, more than three out of four landed a first job that was closely or very closely related to the business degree. Of those graduates whose previous work experience had a very great or significant effect on obtaining their first job, 72% began their career in a closely or very closely related job. However, only 59% of those graduates whose previous work experience had little or no effect on obtaining their first job began their career in a job which was closely or very closely related to the business degree.

Discussion

Contrary to findings by Solmon,[38] the relationship between a graduate's degree and his job had importance for job success. These findings are not contrary to those of Young[39] and UCI,[40] however. One possible reason why this conclusion was different from Solmon's is that the MSU Business graduates were more recent entrants into the labor pool. Most of Solmon's group entered in 1965 when the demand for graduates was not as saturated by the supply. It will be remembered that only 10% of the graduates in Solmon's sample who took unrelated jobs did so because they were unable to find related jobs. This is contrasted to Young's sample of more recent graduates, more than half of whom were unable to find related jobs. This would suggest more recent graduates were not able to use their diplomas in the same way as graduates of the sixties could. That is, the diploma of today needs to represent skills and knowledge which are useful on the job. It is not as valuable when it is used to represent general knowledge. Another possible explanation is the more select sample

used for the MSU study, i.e., business graduates only rather than graduates of all disciplines. An unrelated business degree may be less valuable than a related business degree; however, an unrelated education degree may not be less valuable than a related education degree. A third possible explanation is that Solmon measured the relationship of the graduate's current job to his degree, while the MSU study measured the relationship of the graduate's first job to his degree. Since most of the graduates in the Solmon sample had been working for up to nine years when they were surveyed, it is possible that the effect of the college degree had been weakened over the passage of time, i.e., that other factors (such as mobility) explained the level of job satisfaction or income.

The importance of a successful first job for the graduate's current job was demonstrated by the strength of the relationship between a graduate's first job and his current job. It should be pointed out, however, that most of these graduates had been working for no more than six years and, therefore, the influence of their first job on their current job was greater than if they had been working for a longer period of time. This finding was predicted by other researchers such as Harrell.[41]

A finding that was not predicted was that functional and vertical mobility do not act in the same way. Vertical mobility is developmental in the sense that it leads to a better job. Functional mobility, however, does not have this effect. Those graduates who made one or more functional moves did not currently have a better job than the graduates who made no functional moves. Once again, the

fact is that most of these graduates had been working six years or less, and possibly this relatively short time period was not long enough for any positive effects of functional mobility to materialize. In Harrell's study[42] the graduates who benefited from functional mobility had been working for ten years. Also, the graduates in Harrell's study were MBA's rather than bachelor's recipients, and this difference may account for the increased importance of functional mobility, since entry-level positions for the MBA are at a higher level in the organizational hierarchy than entry-level positions for the B.A.

Another unexpected finding was that those graduates who landed a successful first job did not necessarily enjoy more vertical mobility. Evidently those graduates who happened to get the better first jobs were not necessarily promoted any faster than those who didn't do too well with respect to the first job they landed; the study provides no data to tell why such results emerged.

A most important question in light of the previous discussion is, "What makes some graduates land first jobs which are related and others do not?" This study provides some answers to this question. As predicted, both an early career choice and obtaining the first job through Pre-B.A. work experiences helped the graduate obtain related work. However, neither of these strategies is a particularly powerful predictor of obtaining related work. Other studies have usually focused on the graduate's major as a primary factor in obtaining related work; i.e., some majors like engineering tend to lead to engineering work but other majors like liberal arts have few jobs that

specifically call for liberal arts to apply for. Because this study involved only business graduates, the student's major could not be an element in this study.

Implications for Further Research

Further research could improve on this study by extending the sample in two important ways: First, the sample needs to include a greater range of cohorts. Since almost all the graduates in the MSU study were recent graduates, inferences cannot be made about the differences which have occurred since the sixties. Second, the sample needs to represent a broader sampling of majors, especially those less vocationally oriented, e.g., liberal arts, social science, and others, vocationally oriented in as much or greater demand, e.g., engineering graduates, if the study is to meet the ambitious goals stated on the first page of Chapter I.

There are several issues that could not be adequately explored in this study, but which would offer valuable insights into the process of the attainment of career outcomes. One of these issues is the different ways of attaining mobility. Jennings[43] and others have explored this question but did not specifically focus on the recent college graduate. It would be especially illuminating to determine the influences of vertical mobility on graduates in the first few years. Personality variables as well as situational variables (for example, organization size, industry, and so forth) would be factors worth exploring.

Finally, the question of what strategies should be followed (in order to obtain a related first job) is partly answered. As was

shown, an early career choice and obtaining pre-B.A. work experiences which then led to a first post-B.A. job were two strategies which are effective. However, more progress needs to be made on this very important question. As was suggested before, the graduate's major should be factored into this answer. Further research should look into the feasibility of ordering different majors along a continuum, perhaps from very career-oriented to not career-oriented, in order to incorporate it into the model developed in the MSU study.

In conclusion, this study has proposed and then tested a model which accounts for some of how college graduates obtain career outcomes. Careful and systematic research could further develop this model as well as retest it among broader samples of college graduates. Path analysis turned out to be an effective statistical technique. The successful experience with this technique in this study points the way for its use in future studies of college graduate career development over time and with a series of cohorts.

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[35]Ibid.

[36]Sachdeva, op. cit.

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[38]Solmon et al., op. cit.

[39]Young, op. cit.

[40]UCI, op. cit.

[41]Harrell and Harrell, op. cit.

[42]Ibid.

[43]Jennings, op. cit.

APPENDIX

MICHIGAN STATE UNIVERSITY

PLACEMENT SERVICES · OFFICE OF THE DIRECTOR EAST LANSING · MICHIGAN · 48824
(517) 355-9510

December 6, 1978

Dear MSU Alumnus:

The Placement Services and the College of Business at Michigan State University are seeking information on the career experiences of business graduates. This information will be used to help us better understand the whereabouts of our alumni and their career successes. The final results of this study will be used to guide current and future students in their career planning and job campaign efforts. This study will also be used as a model for studying the career experiences of graduates of other colleges at Michigan State and other universities throughout the United States.

All the information collected from this survey will be kept strictly confidential and will only be reported in summary, statistical form. A final report of these results will be published by Placement Services and distributed to staff and academic advisors at Michigan State. Since we have selected a representative sample of business graduates, a high response rate is necessary to give us confidence in our results.

Your cooperation with this survey will be greatly appreciated.

Sincerely,

John D. Shingleton
Director of Placement

Richard J. Lewis
Dean, College of Business

JDS/psc

MICHIGAN STATE UNIVERSITY

PLACEMENT SERVICES · OFFICE OF THE DIRECTOR
(517) 355-9510

EAST LANSING · MICHIGAN · 48824

January 5, 1979

← NOTE: Please do not remove this label. Thank you.

Dear MSU Alumnus:

About two weeks ago we sent you a survey which will provide us with information on the career experiences of our business graduates. If you have already returned this survey, we thank you.

As we mentioned in our earlier letter, this information is crucial to our research effort. We need your response, along with the responses of other selected alumni, to confidently implement the findings of this study. Our pilot tests indicate that it will take about five minutes to complete this survey. If you have not already done so, please return the questionnaire within the next few days so we can include your response in our analysis.

Thank you.

Sincerely,

John D. Shingleton
Director of Placement

Richard J. Lewis
Dean, College of Business

JDS/psc

Please mark an X beside the answer(s) that best describes your situation.

1. Which one of the following occupations or careers best describes your current position:

___Educator
___Other Professional (doctor, lawyer, etc.)
___Administrator
___Sales Representative
___Accountant
___Mathematician, Scientist, Analyst
___Office Employee
___Other (specify_____)

2. At what point in your life did you select your current occupation or career?

___Before entering college
___After starting college, but before senior year of college
___During senior year
___Within one year after graduation
___Within five years after graduation
___Later than five years after graduation

3. Which of the following work experiences did you have while you were in college? (Check all that apply)

___ No work experience at all
___ Summer job(s)
___ Part-time job(s)
___ Internship
___ Volunteer
___ Other (specify_____)

4. Have you worked at a full-time job since graduating from MSU?

___Yes (continue)
___No (skip to question 29)

The following questions refer to your first full-time job since graduating from MSU.

5. What was the title of your first job?

(specify_____)

6. To what extent did your work experience during the time you were in college contribute to your success in finding your first job after graduation?

___Did not have work experience in college
___Very great effect
___Significant effect
___Some effect
___Very little effect
___No effect

7. What is the title of your current job?

(specify_____)

My business degree was useful in that it gave me knowledge and skills which.

8. I used in my first job.
9. I use in my current job.

___ ___ Strongly agree
___ ___ Agree
___ ___ Neither agree or disagree
___ ___ Disagree
___ ___ Strongly disagree

10. I used the content of my major courses in my first job.
11. I use the content of my major courses in my current job.

___ ___ A great deal
___ ___ Frequently
Sometimes
___ ___ Very little
___ ___ Not at all

12. How closely related was your first job to your degree in business?
13. How closely related is your current job to your degree in business?

___ ___ Very closely related
___ ___ Closely related
___ ___ Somewhat related
___ ___ Slightly related
___ ___ Not related

14. If your first job was not closely related to your business degree why is this?
15. If your current job is not closely related to your business degree why is this?

___ ___ My job is closely related or very closely related to my business degree
___ ___ I didn't want a job closely related to my business degree
___ ___ I wanted a closely related job, but wasn't able to find one
___ ___ I wanted a closely related job and probably could have found one, but taking one would have meant making other sacrifices which I didn't want to make

16. How much potential for career success did your first job offer:
17. How much potential for career success does your current job offer:

___ ___ A great deal
___ ___ A fair amount
___ ___ Some
___ ___ Little
___ ___ None

18. During your first job, did other employees doing jobs similar to yours have a degree as high as yours?
19. In your current job, do other employees doing jobs similar to yours have a degree as high as yours?

___ ___ All or almost all had a degree as high or higher than mine
___ ___ More than half had a degree as high as mine
___ ___ About half had a degree as high as mine
___ ___ Less than half had a degree as high as mine
___ ___ Few or none had a degree as high as mine

20. All in all, how satisfied were you with your first job?
21. All in all, how satisfied are you with your current job?

___ ___ Very satisfied
___ ___ Satisfied
___ ___ Somewhat satisfied
___ ___ Neither satisfied or dissatisfied
___ ___ Somewhat dissatisfied
___ ___ Dissatisfied
___ ___ Very dissatisfied

After receiving your business degree from MSU:

22. How many full-time jobs have you had (including different jobs in the same company)?
23. How many times have you changed your functional area (sales, personnel, etc.)?
24. How many promotions have you had (including changing companies which resulted in a higher position)?
25. How many years have you spent not working full-time?

___ ___ ___ ___ 0
___ ___ ___ ___ 1
___ ___ ___ ___ 2
___ ___ ___ ___ 3
___ ___ ___ ___ 4-5
___ ___ ___ ___ 6-7
___ ___ ___ ___ 8-10
___ ___ ___ ___ More than 10

Note: All salary information will be kept strictly confidential and will appear only in summary, statistical form.

26. What was your starting annual salary before taxes in your first job?
27. What is the annual salary before taxes in your current job?

___ ___ Below $6,000
___ ___ $6,000-7,999
___ ___ $8,000-9,999
___ ___ $10,000-11,999
___ ___ $12,000-13,999
___ ___ $14,000-16,999
___ ___ $17,000-19,999
___ ___ $20,000-24,999
___ ___ $25,000-29,999
___ ___ $30,000-34,999
___ ___ $35,000-39,999
___ ___ $40,000-60,000
___ ___ More than $60,000

28. When did you start your first job?

___1958 ___1964 ___1969 ___1974
___1959 ___1965 ___1970 ___1975
___1960 ___1966 ___1971 ___1976
___1961 ___1967 ___1972 ___1977
___1962 ___1968 ___1973 ___1978
___1963

29. Sex:

___Male ___Female

30. Race:

___White ___Minority

31. Besides your bachelors degree in business, what other degrees have you earned?

___ None
___ Other Bachelors
___ MBA
___ Other Masters
___ PhD or other professional degree

32. If I were just graduating from high school, I would major in the same area.
33. My career progress is mainly the result of my own efforts.
34. My career progress is mainly the result of luck and other uncontrollable events.

___ ___ ___ Strongly agree
___ ___ ___ Agree
___ ___ ___ Neither agree nor disagree
___ ___ ___ Disagree
___ ___ ___ Strongly disagree

35. Father's education level:
36. Mother's education level:

___ ___ Does not apply
___ ___ Grade school only
___ ___ Some high school
___ ___ High school graduate
___ ___ Some college
___ ___ College graduate
___ ___ Graduate or professional degree

37. In what year were you born? _____

After you have completed this survey, please refold it, staple or tape it, and drop it in a mailbox at your earliest convenience. Thank you very much for helping with this research!

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